The Nature and Extent of Bullying at School
Joseph A. Dake, James H. Price, Susan K. Telljohann

ABSTRACT: In elementary schools, the prevalence of bullying ranges from 11.3% in Finland to 49.8% in Ireland. The only United States study of elementary students found that 19% were bullied. Bullying behavior declines as students progress through the grades. School bullying is associated with numerous physical, mental, and social detriments. A relationship also exists between student bullying behavior and school issues such as academic achievement, school bonding, and absenteeism. Prevention of school bullying should become a priority issue for schools. The most effective methods of bullying reduction involve a whole school approach. This method includes assessing the problem, planning school conferences days, providing better supervision at recess, forming a bullying prevention coordinating group, encouraging parent-teacher meetings, establishing classroom rules against bullying, holding classroom meetings about bullying, requiring talks with the bullies and victims, and scheduling talks with the parents of involved students. Finally, this review suggests further studies needed to help ameliorate the bullying problem in US schools. (J Sch Health. 2003;73(5):173-180)

In the past three decades, school bullying gained increased attention in the United States due to media attention on homicide and suicide cases where bullying was a precipitating factor. A report by the US Secret Service\(^1\) investigated characteristics of students involved in school shootings in the United States. Of 37 different school shootings, two-thirds involved attackers who "felt persecuted, bullied, threatened, attacked, or injured by others prior to the incident" (p. 7). While two-thirds of the cases did not directly involve school bullying, "a number of the attackers had experienced bullying and harassment that was longstanding and severe. In those cases, the experience of bullying appeared to play a major role in motivating the attack at the school" (p.7). While pioneering research on school bullying came from Scandinavian countries, only recently have US researchers begun investigating the problem. A dearth of literature from the United States has examined the extent and intricacies of school bullying.

This review describes the prevalence of school bullying behavior and the characteristics of children involved in school bullying, and the review examines the relationship between bullying and academic issues and the role of school personnel in bullying prevention.

EPIDEMIOLOGY OF SCHOOL BULLYING

"Bullying" is an English term used in much of the literature.\(^2\) The most commonly used definition comes from Dan Olweus, considered the pioneer in bullying research. His definition states, "A student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students" (p 1173).\(^3\) Negative actions include attempted or actual intentional affliction of injury or discomfort perpetrated upon another person. These actions can consist of physical contact, by words, through facial or obscene gestures, or through intentional exclusion from a group. For these actions to be considered bullying, an imbalance in strength must exist between the people harasing and the student being harassed. Bullying does not apply to a conflict between two students of nearly equal physical or mental strength.\(^4\)

Research on the prevalence and location of bullying has occurred in diverse settings, including Norway, Sweden, Denmark, Finland, Germany, Spain, Italy, England, Scotland, Ireland, Australia, Japan, Canada, and the United States. The prevalence of victimization in elementary schools (grades 1-5) varies from a low of 11.3% in a sample of 5,813 students in Finland to a high of 49.8% in a nationwide sample (n = 7,290) of students in Ireland.\(^6\) In the United States, the prevalence estimate of victimization in elementary school students was 19%.\(^7\) The highest levels of victimization occurred in elementary schools, with a steady decline in prevalence rates through secondary school.\(^8\) The prevalence of elementary grade students bullying other students ranged from 4.1% in a sample of 510 students from Finland to 49.7% in the aforementioned nationwide study in Ireland.\(^9\) Pellegrini et al.\(^9\) found the prevalence of bullying to be 14% for elementary grade students in their US study. Prevalence estimates for students involved both in bullying and being bullied (bully/victims) ranged from 2.2% in the Finnish study by Olafsen\(^1\) to 18.6% in another Finnish study by Kumpulainen.\(^10\)

Prevalence of victimization in middle schools (grades 6-8) is lower than in elementary schools. Prevalence ranges from 4.7% in a sample of 189 Finnish eighth-grade students to 27% in a sample of 6,758 middle school students in the United Kingdom.\(^11\) A US study found between 9% and 11% of middle school children were bullied "sometimes" or more frequently. Prevalence of bullying other children in middle school is also lower than the prevalence of victimization. These rates vary from 5% in an English study to 14.7% in a sample of Italian middle school students.\(^12\) Regarding middle school students involved both in bullying and being bullied, a survey of two separate samples (n = 4,067 in England; n = 834 in Italy) found a prevalence of 1.2% in the English schools and 7.0% in the Italian schools.\(^13\)

In secondary schools (grades 9-12) prevalence of victimization ranged from 4.2% in a large sample of British students to 25% in a small sample of Australian students.\(^14\) Estimates for bullying others suggest that between 3.4% and 10% of secondary school students engaged in bullying.
others. A study from Scotland that assessed secondary school students who engaged both in bullying and being bullied found that 4.2% of students engaged in both behaviors.18

School bullying problems negatively affect the lives of victims and bullies. Research found significant relationships between bullying behavior and the physical, psychological, and social well-being of children. Relationships between academic issues and school bullying also have been investigated (Figures 1 and 2).

**Physical Characteristics**

Conflicting research exists regarding physical characteristics of students involved in bullying behaviors. Olweus19 found that physical disabilities (problems with sight, hearing, or speech), obesity, personal hygiene, facial expression, posture, and dress were unrelated to victimization. In his research, the only physical characteristic related to victimization was size of the student. Students who were victimized were smaller and weaker than students not involved in bullying behavior. Contrary to these findings, Lowenstein20 found that victims were less attractive, and had more odd mannerisms or physical disabilities than nonvictimized students. No significant differences existed between victimized students and nonvictimized students in relation to size.20

Studies have investigated gender differences in bullying behaviors among children and adolescents. The literature confirms that boys are more likely to be involved in direct physical bullying,1,3,5,14,17,21,26 and that boys and girls are equally likely to become involved in direct verbal bullying.14,17 However, little consensus exists in the literature regarding gender differences with indirect bullying such as social exclusion and subject of rumors.5,12,14,16,17,22 In regard to who bullies whom, several gender differences exist. Boys generally are bullied by boys but not by girls. Girls reported being bullied by both genders equally.12,22

When comparing racial or ethnic groups in the prevalence of bullying or being bullied, studies from the United Kingdom found no significant differences between racial or ethnic groups.12,22 Yet, a cross-national study that included students from England and Germany found a weak, but significant, relationship between ethnicity and bullying with ethnic minorities more likely to become victims of bullying.21 In the United States, three studies investigated this phenomenon. The largest of the three, a national study, found no significant differences in the prevalence of bullying or victimization among African American, Hispanic, and White children.17 Another US study from a large Midwestern state found similar results for African American and White children18 but a decreased likelihood

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**Figure 1**

**Characteristics of Bullies Derived from the Professional Literature**

<table>
<thead>
<tr>
<th>Bullies are likely to:</th>
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<tbody>
<tr>
<td>Suffer symptoms of depression15,30,31</td>
</tr>
<tr>
<td>Experience suicidal ideation30</td>
</tr>
<tr>
<td>Suffer from psychiatric problems10</td>
</tr>
<tr>
<td>Suffer from eating disorders31</td>
</tr>
<tr>
<td>Engage in substance abuse17,24,35,37</td>
</tr>
<tr>
<td>Engage in fighting behaviors17,37</td>
</tr>
<tr>
<td>Engage in criminal misconduct (vandalism, stealing, weapon carrying)24,37,38</td>
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<tr>
<td>Engage in academic misconduct (cheating, skipping school)24,38</td>
</tr>
<tr>
<td>Engage in misconduct (comprised of several items that span criminal and academic)39,41</td>
</tr>
<tr>
<td>Have friends who are bullies79</td>
</tr>
<tr>
<td>Have friends who are large in size79</td>
</tr>
<tr>
<td>Perceive friendship-making as easy17</td>
</tr>
<tr>
<td>Begin dating earlier than other children and at more advanced levels42</td>
</tr>
<tr>
<td>Be physically and socially aggressive toward dating partners42</td>
</tr>
<tr>
<td>Have authoritarian parents37</td>
</tr>
<tr>
<td>Have parents who use punitive forms of discipline37</td>
</tr>
<tr>
<td>Have less-responsive and less-supportive parents17,40</td>
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<tr>
<td>Have poor parent-child communication44</td>
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<tr>
<td>Lack adult role models39</td>
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<tr>
<td>Come from harsh home environments46,48</td>
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<tr>
<td>Have suffered child abuse46</td>
</tr>
<tr>
<td>Have lower academic achievement17,33,41</td>
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<tr>
<td>Have lower school adjustment (doing well on schoolwork, following rules, doing homework)40</td>
</tr>
<tr>
<td>Have lower school bonding (desire to do well at school, be happy at school, take school seriously)31,40</td>
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**Figure 2**

**Characteristics of Victims Derived from the Professional Literature**

<table>
<thead>
<tr>
<th>Victims are likely to:</th>
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<tbody>
<tr>
<td>Suffer symptoms of depression30,32</td>
</tr>
<tr>
<td>Experience suicidal ideation49</td>
</tr>
<tr>
<td>Suffer feelings of loneliness17,27,33,35</td>
</tr>
<tr>
<td>Have low self-esteem6,33</td>
</tr>
<tr>
<td>Suffer from anxiety15,31</td>
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<tr>
<td>Suffer from psychiatric problems10</td>
</tr>
<tr>
<td>Suffer from eating disorders31</td>
</tr>
<tr>
<td>Be less popular than other children41</td>
</tr>
<tr>
<td>Perceive friendship-making as difficult32</td>
</tr>
<tr>
<td>Spend a lot of time alone35</td>
</tr>
<tr>
<td>Have parents who allow few opportunities to control social circumstances (intrusive demandingness)44</td>
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<tr>
<td>Have less-responsive and less-supportive parents42,44</td>
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<tr>
<td>Have a parent-child relationship marked by intense closeness44</td>
</tr>
<tr>
<td>Have parents who are more involved in school activities37,40</td>
</tr>
<tr>
<td>Come from harsh home environments46,48</td>
</tr>
<tr>
<td>Have suffered child abuse46</td>
</tr>
<tr>
<td>Experience physical health problems (sleep problems; bed wetting; stomach aches; neck, shoulder, or back pain; fatigue)49,50</td>
</tr>
<tr>
<td>Have problems with school adjustment (doing well on schoolwork, following rules, doing homework)40</td>
</tr>
<tr>
<td>Have problems with school bonding (desire to do well at school, be happy at school, take school seriously)40</td>
</tr>
<tr>
<td>Have greater rates of absenteeism33,34</td>
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for victimization of Hispanic children. The third study occurred in a California middle school with a minority of White students and a plurality of African American and Hispanic students. This research found White students were significantly more likely than African Americans or Hispanics to be victimized, and African American students were more likely to be the aggressors in peer harassment.

Psychological Characteristics

Research has investigated psychosocial characteristics of bullies and their victims. Such research found that children involved in bullying are at risk for a variety of mental health problems, the most common problem being depression. Compared to children not involved in bullying behavior, bullies were 2.8 to 4.3 times more likely, 15,30,31 victims 4.0 times more likely, 30,32 and bully/victims 6.3 to 8.8 times more likely 30,31 to suffer from depressive symptoms. Bullies also were 4.0 times more likely, victims 2.1 times more likely, and bully-victims 2.5 times more likely to report severe suicidal ideation. 30

Victimization also correlates positively with loneliness 17,27,30,35 and negatively with self-esteem. 6,36 While studies described this relationship as causation, with peer victimization as a cause of children’s subsequent loneliness and diminished self-esteem, these changes also may represent consequence. Egan and Perry, 16 who assessed students at two points in time to determine the reciprocal nature of this relationship, concluded that poor self-concept may play a central role in a vicious cycle that perpetuates and solidifies a child’s status as a victim of peer abuse. 16,33

Anxiety is another issue investigated in relation to victimization from bullying. The relationship between victimization and anxiety is clear: students who were bullied were 3.2 to 4.2 times more likely to report anxiety symptoms compared to noninvolved children. 15,31 While the research on anxiety in bullies remains inconclusive, 13,31 students classified both as bullies and victims were 6.4 times more likely to suffer symptoms of anxiety compared to noninvolved students. 11

While studies that investigate psychosocial aspects of bullying often consider symptoms of depression and anxiety, a Finnish study 10 assessed diagnosable psychiatric disorders through structured interviews by child psychiatrists. Among boys, bullies were most likely to suffer a psychiatric illness (OR = 9.5) followed by students who were both bullies and victims (OR = 7.9), then by victims (OR = 3.0) when compared to noninvolved students. Among girls, psychiatric illness occurred equally for bullies, girls who were both bullies and victims, and victims (ORs = 4.1, 4.1, and 4.3, respectively). To assess this relationship over time, Kumpulainen et al 10 studied children at age eight, then again at age 15. Children involved in bullying at age eight were more prone to report psychiatric symptoms at age 15. Children involved in both bullying and victimization were affected the most. 10

Behavioral Characteristics

A substantial body of literature investigated the relationship between bullying and behavioral misconduct. Behavioral misconduct usually consists of problem behaviors such as conduct problems in school, physical fighting, weapon carrying, theft, property damage, substance abuse, cheating, and breaking the law.

Comparing bullies to students not involved in bullying behavior, bullies were significantly more likely to become involved in self-destructive behaviors such as alcohol use, 24,37 tobacco use, 24,35,37 and fighting. 37 Significant relationships also existed with bullying others and weapon carrying, cheating on tests, 29 stealing, 28,37 vandalism, 27,38 having trouble with the police, and skipping school. 38 Other studies reported significant positive correlations between bullying behavior and misconduct, where misconduct was measured as a scale comprised of several of the aforementioned issues. 29-31 Being a victim also related positively to misconduct 9,41 with students who were both bullies and victims most likely to misbehave. 40

RELATED ISSUES

Interpersonal Relationships

Probably the most intuitive finding pertaining to interpersonal relationships found that students who were rated by other students as popular or who scored higher on a measure of social acceptance were less likely to be bullied by other students. In contrast, bullies record the same level of social acceptance as children not involved in bullying at all. Students involved as bully/victims were at even greater risk than victims for suffering from a lack of social acceptance. 41

Bullying others has been related to the impact on future relationships. 42 Children who bully others began dating at a younger age than other students, and these relationships often evolved at a more advanced level than peers. Bullies characterized these dating relationships as less emotionally supportive and less equitable than dating children not involved in bullying. Bullies also reported more acts of physical and social aggression toward their dating partners. 42

Family/Home Environment

Early socialization of children plays a role in the likelihood they will become involved in bullying behavior. 43 Sourander et al 29 found that parental level of education, socioeconomic status, and family composition (intact/divorced/remarried) were not significantly associated with bullying or victimization. However, Wolke et al 24 found a significant relationship; children of lower socioeconomic status were more likely than non-low socioeconomic students to become involved in bullying others (OR = 1.39) or being the victim of bullying (OR = 1.27). 23 Bond et al 22 found that victimized children were 1.5 times more likely to come from separated or divorced families than from intact families, thereby contradicting Sourander’s findings.

Parenting style also plays a role in the early socialization of children regarding bullying behavior. Students identified as bullies were 1.65 times more likely to come from homes with an authoritarian style of child rearing compared to a participatory style. 44 Bullies also were 1.71 times more likely than nonbullies to have parents who used punitive forms of discipline more often. Being bullied also relates to parenting styles. A significant correlation existed between victimization of the child and high levels of intrusive demandingness by the parent (r = 0.29). 44 This finding shows that parents who allowed the child few opportunities to control social circumstances may foster a passive orientation that could become problematic for the child.

Responsive and supportive parenting has been associ-
ated with decreased levels of bullying and victimization. Father involvement in a child’s life also was associated with a small but significant decrease in likelihood of being bullied. However, extreme parental involvement can cause problems. Parent-child relationships characterized by intense closeness were associated with higher levels of victimization in boys. Parent involvement in school also related to bullying behaviors for victims and bully/victims. Victims and bully/victims each were each 1.55 times more likely than students not involved in bullying behavior to have parents heavily involved in school activities. Regarding bullies, however, no differences occurred for children not involved in bullying behavior. A decrease in the likelihood of childhood bullying related to open parent-child communication and to a positive adult role model in their lives.

Children from harsh home environments engage in more bullying behaviors (as bullies and/or victims) than children from nurturing home environments. Maternal hostility represents a significant predictor of later peer victimization for the child. This prediction of peer victimization was mediated by the number of personal friendships of the student. Children from harsh home environments who had numerous friendships were less likely to suffer peer victimization than students with few personal friends. Child abuse also was a significant predictor for becoming bullies, victims, and students who were both bullied and victimized. Bullies and victims each were 2.2 times more likely than students not involved in bullying behavior to experience child abuse. Students who were both bullied and victimized experienced more physical mistreatment (69% vs 44%) and emotional mistreatment (26% vs 17%) than children not involved in bullying behavior.

Physical Health Issues
While much literature examines the relationship between involvement in bullying and measures of mental health, much less examines the relationship to physical health. A study of 3,000 students from London found significantly greater reporting of physical health symptoms among bullied students than among students not involved in bullying behavior. Victimized children were more likely to have problems sleeping (OR = 3.6), bed wetting (OR = 1.7), experiencing more than occasional head aches (OR = 2.4), and stomach aches (OR = 2.4). Another study found that, compared to noninvolved students, victims were 4.6 times more likely, bullies 5.1 times more likely, and bully/victims 8.7 times more likely to experience psychosomatic symptoms such as neck and shoulder pain, low back pain, stomach ache, feeling tense or nervous, irritation or tantrums, difficulty sleeping or waking, head ache, and fatigue. Finally, a study of Australian high school students found that boys and girls subjected to high levels of victimization early in high school suffered significantly poorer physical health later in high school, even after controlling for physical health during the first assessment.

Academic and School Issues
In addition to personal and family realms, school bullying also relates to academic and school issues. While school characteristics such as class size or school size are not related to bullying behavior in students, school characteristics of the student are related. Studies concur that a relationship exists between bullying behaviors and academic competence, but are not consistent in their findings. A British study of youth aged 8-13 found a significant negative correlation between self-reported level of victimization and level of scholastic competence (r = -0.41). This study also found a significant (but weaker) negative relationship between students involved in bullying others and level of scholastic competence (r = -0.27). For these British students, both bullies and victims showed poorer scholastic competence than noninvolved children, with victims being affected more than bullies. A similar age sample of US children paralleled findings of Mynard and Joseph’s in that victims and bullies experienced lower academic competence. Schwartz also found students who were both bullied and victimized suffered lower academic competence of the same magnitude as bullies. Using grade point average (GPA) as an indicator of academic achievement, Juvonen et al found that the same relationship held true for victimized students aged 12-15 (middle school). Bullied middle school students had lower GPAs than comparison students. In contrast, Nansel et al found no significant relationship between academic achievement and involvement as a victim or bully/victim. However, a significant relationship emerged for bullies. These students were 1.8 times more likely to be below average students as they were to be good students.

Other studies investigated school-related issues such as school adjustment (doing well on schoolwork, following rules, doing homework) and school bonding (desire to do well at school, being happy at school, taking school seriously). Students involved in school bullying were significantly less likely to reflect high levels of school adjustment or bonding. This relationship was strongest for bully/victims, followed by bullies, then by victims. Natvig et al, who investigated these same concepts from a “glass is half empty” perspective, found school alienation (opposite of school bonding) related to students who bullied others, but school distress (opposite of school adjustment) was not related. Bullies were 2.1 times more likely than students not involved in bullying behavior to feel alienated from school. Student adjustment and bonding also were associated with school performance.

School absenteeism and avoidance have been investigated less in the literature. Juvonen et al found a small but significant correlation between perceptions of victimization and absenteeism (r = 0.16). While this study suggested victimized students were absent more often, Forero et al found no significant differences in unexcused absences. This finding indicated that if bullied students missed more school, absenteeism may have occurred with their parents’ permission. A causal investigation, completed by Kochenderfer and Ladd, determined if victimized students were more likely to be classified as “school avoidant” (desire not to be in school). The researchers found significant correlations between victimization and school avoidance (r = 0.33) and that “victimized children tend to become more...school avoidant after they are victimized by peers. Further, no support was found for the counter argument that school adjustment difficulties precede exposure to victimization.
ATTITUDES/PERCEPTIONS REGARDING BULLYING

Just as professionals should understand the epidemiology of bullying behavior and characteristics of bullies and victims, they also should understand people’s perceptions toward the bullying problem. Children’s perceptions of what constitutes bullying may influence the accuracy of reporting to teachers, parents, or researchers trying to determine the magnitude of the problem. Students’ perceptions toward bullies or victims may become contributing factors that help deter or promote negative behavior. Teachers’ perceptions of bullying may influence when and how willing they are to intervene. Parents’ perceptions may influence their willingness to support or advocate for school-based prevention efforts. Perceptions of bullies or victims themselves also should be considered. Why some children bully others, why some children accept being bullied, and why bystanders do not report bullying, represent the core of this problem.

Students can recognize the forms of bullying (direct physical, direct verbal, indirect), but girls are more likely than boys to label activities in these categories as bullying. Across the three types of bullying and both genders, students generally hold negative views toward children who bullied and sympathetic views toward victims. These findings contrast with findings by Mynard and Joseph where children reported negative views toward bullies. The difference between these studies involves whether the students were asked generically about bullies, or whether specific students were identified and rated as popular or unpopular. Apparently, students are opposed conceptually to bullying and bullies. However, when specific students are identified, the negative perception toward bullies is not related to their perceptions of known students identified as bullies. A small US study (n = 207) reported a more detailed investigation into children’s perceptions of bullying behavior. Students tended to agree that victims brought on the bullying behavior themselves, that teasing of victims mostly was done in fun, and that bullying helped people by making them tougher. Students had mixed emotions regarding whether bullies held a higher social status than victims or whether befriending a bully would result in lowering one’s social status.

A large study of Greek elementary students that investigated children’s perceptions of bullies found most students (60%) “don’t keep company with them,” but a substantial portion (26%) “have not thought about” how they feel about students who bully others. Furthermore, 6% liked the bullies “because they are cool.” These perceptions differed based on whether the students themselves were classified as victims, bullies, or both. Intuitively, victims were less likely than bullies to think bullies are cool (3.4% vs. 23.4%) or to not have thought about how they felt about bullies (22.6% vs. 28.1%). Students who engaged both in bullying others and getting bullied themselves felt the same as bullies regarding bullies being cool, but more like victims in how many have not thought about how they felt.

Houndoumadi and Pateraki questioned students who bullied others regarding how they felt after they engaged in the bullying behavior. The top five responses given were: “I felt pity for him/her” (33.7%), “I felt he/she deserved it” (29.7%), “I felt bad” (26.7%), “I was worried about being told off by teachers or parents” (24.7%), and “It was fun” (20.8%). Similar results were found by Borg with 49.8% of bullies “feeling sorry,” 40.6% “feeling indifferent,” and 20.9% “feeling satisfied.” In both studies, more than one in five bullies were pleased with their behavior when questioned, and fewer than one-half felt sorry for what they did.

Given the varied responses to how bullies felt after bullying, why did they bully in the first place? Boulton and Underwood addressed this question in a qualitative investigation. They interviewed 25 children and asked, “What makes bullies pick on other children?” Bullies were more likely to respond that the victim provoked the bully (44% vs. 8%) or that they did not know (20% vs. 8%). Victims were more likely than bullies to respond that the victim was smaller and weaker and did not fight back (36% vs. 8%). When Boulton and Underwood asked if the bullies picked on others because it made them feel good about themselves, they found that 75% of bullies responded in the negative. While this response represents most bullies who responded this way, a significant portion (25%) responded that they picked on others because it made them feel good about themselves.

Bullying behavior also can be examined from the teacher’s perspective. Though teachers reported lower levels of student bullying behavior than the students themselves, teachers still considered bullying a serious student behavior, second only to drug use. Most teachers recognized that bullying took multiple forms, but they considered physical bullying the most severe form compared to verbal or indirect bullying. However, teachers may not know the extent of bullying. A study of Canadian teachers found that 85% reported they intervened often or nearly always to stop bullying; while only 35% of students from the same schools reported that teachers intervened in bullying situations. However, students were still more confident in the teachers’ abilities to intervene in a bullying situation compared to students’ ability to intervene.

Similar to students, teachers generally expressed negative attitudes toward bullying and bullies, and they were sympathetic toward victims. Unfortunately, teachers with the greatest length of service expressed the most negative attitudes toward victims. Most (98.6%) teachers felt a responsibility to prevent bullying in the classroom, but they did not feel confident in their ability to deal with bullying. Furthermore, 87% wanted more training. These results were supported by Nicolaides et al’s findings that preservice teachers also were not confident in their ability to get bullies to stop bullying. The preservice teachers also supported teacher training courses that would include information about how to combat bullying.

PREVENTION MEASURES

Considering the aforementioned issues, prevention of school bullying needs to become a priority to ensure the well-being of youth. Researchers evaluated several methods for preventing school bullying. Peer involvement has been investigated because the bullying process not only involves bullies and victims, but students who take on other roles called participant roles. Salmivalli et al categorized children into various roles. From a sample of 573 sixth graders, students were classified as bullies (8.2%), victims (11.7%), assistants of the bully (6.8%), reinforcers of the bully (19.5%), defenders of the victim (17.3%), and outsiders (23.7%). These additional roles were ascribed to children.
active in bullying in a follower role as opposed to a leader role (assistants of the bully); who reinforced bullying by laughing, coming to watch, and providing an audience for the bully (reinforcers of the bully); who took sides with the victim or active efforts to make others stop bullying (defenders of the victim); who did nothing by staying outside the situation (outsiders).

Regarding these roles, boys were more likely than girls to be reinforcers and assistants whereas girls were more likely than boys to be defenders or outsiders.\textsuperscript{1,11}\textsuperscript{1} This difference by gender may however occur due to self-reporting behavior. In observational studies, boys intervene more frequently than girls.\textsuperscript{62} It remains unclear whether this finding occurred because boys were more likely present in a bullying situation than were girls. Differences also exist by age with upper elementary (grades 4-6) boys more likely to support bullying than lower elementary (grades 1-3) boys.\textsuperscript{63} This effect was not found for girls.

Bullying involves a group process, and as such the group should be considered in the prevention process.\textsuperscript{11} This approach would include the bystanders (outsiders), often overlooked in discussions of bullying.\textsuperscript{63,64} Salmivalli\textsuperscript{64} proposed that, with adult encouragement, peers be trained to take action against bullying through formal helper roles or as peer counselors. Based on naturalistic observation, peer intervention was effective. In a study of Toronto elementary schools, researchers observed that peers were present 88% of the time bullying occurred, and they intervened 19% of the time.\textsuperscript{65} Most (57%) of the time that students intervened, they were effective at stopping the behavior. These interventions were split between aggressive and nonaggressive interventions, with equal efficacy. Boys and girls also were equally effective in their intervening. This observational finding of 19% differed from the 43% of students who indicated they almost always try to help a victim of bullying.\textsuperscript{65}

Attempts to increase peer interventions to decrease bullying yielded modest results. A study in England found that peer-led interventions in schools with high levels of aggression produced no significant decreases in bullying or the likelihood students would intervene.\textsuperscript{66} A Finnish study of seventh- and eighth-grade students found a reduction in bullying for seventh-grade girls but not for boys or eighth graders, after implementing a peer-led intervention campaign.\textsuperscript{66} An Australian study of grades seven through 11 found significant decreases in victimization for seventh graders.\textsuperscript{16}

A more common approach presented in the literature involves a “whole school approach” that incorporates multiple activities to decrease bullying. While several nonevaluated programs exist based on the whole school approach,\textsuperscript{67} several other programs have been evaluated. The most well-known of these evaluations is the Olweus' evaluation of the Norwegian “Bullying Prevention Program,”\textsuperscript{68} which provided the basis for subsequent adapted interventions.\textsuperscript{72} Olweus’ program was evaluated from 1983 to 1985 with 2,500 students aged 11 to 14 in 42 schools in Bergen, Norway.\textsuperscript{65} This longitudinal cohort evaluation confirmed a 50% reduction in the number of students bullying others as well as the number of students being victimized. The program sought to increase awareness of bullying problems in students and adults in the school and to encourage adult involvement in resolving the problems. Methods used to accomplish these goals included assessing the problem, setting school conference days, providing better supervision at recess, forming a bullying prevention coordinating group, scheduling parent-teacher meetings, establishing classroom rules against bullying, convening classroom meetings about bullying, requiring talks with bullies and victims, and inviting talks with parents of involved students.

One program adapted the Norwegian anti-bullying intervention to create a Flemish anti-bullying intervention that included aspects of the Norwegian program but added several features such as anti-bullying video, modeling, role playing, booster sessions, and external support to schools.\textsuperscript{73} The evaluation found decreased bullying in primary schools but not in secondary schools. The study did not report the magnitude of decreases in the primary schools.

Another study adapted from the Norwegian study was the DFE Sheffield Anti-Bullying Project.\textsuperscript{74} The evaluation found mixed results.\textsuperscript{75} Reductions occurred in bullying among boys, but increases in bullying occurred among girls, perhaps because of focused attention on boys due to a male stereotype regarding bullying behavior. By gender, decreases occurred in bullying in two schools, an increase in one school, and an initial reduction then increase in the fourth school. No school found an increase in number of victims who told school staff about being bullied. However, when bullying prevention interventions are implemented, bullying can appear to increase due to heightened awareness and reporting when, in reality, no increase occurred in actual behavior.\textsuperscript{76}

Other programs exist that do not follow the Olweus model. In the United States, an elementary school violence prevention program focused on bullying proved successful.\textsuperscript{76} The program consists of four components including a zero tolerance policy for bullying behavior (including standing by during violent acts), a discipline plan for modeling appropriate behavior, a physical education component designed to teach self-regulation, and a mentoring program where adults and peers assist students in preventing bullying problems. This study focused on the outcome objectives of disciplinary referrals, suspensions, and academic achievement test scores. The program succeeded in decreasing disciplinary referrals by nearly 50% and decreasing suspension rates with additional improvements during each of the three years the program was instituted. Significant gains also occurred in students' scores on standardized academic achievement tests between control schools and intervention schools.

Research found that attitudes toward bullying can significantly predict involvement in bullying.\textsuperscript{77} One bullying prevention program in Belgium focused on changing student attitudes toward bullying.\textsuperscript{77} The program consisted of four group sessions administered by classroom teachers. The sessions included a video about bullying, discussion about roles students can play, effects of bullying, and establishing rules about not tolerating bullying. Peers also were encouraged to develop adaptive techniques to react to bullying situations; role modeling appropriate techniques and role plays also were incorporated. Booster sessions throughout the year were encouraged. The program evaluation found mixed results. For primary schools, no significant changes occurred in students' anti-bullying attitudes, and changes in secondary school students' attitudes were
CONCLUSION

While brief interventions are not effective at reducing the problem of bullying, some methods have been evaluated and found effective in this area. Numerous programs exist that seek to reduce the problems of school bullying. Some of these programs have been evaluated under different circumstances and in different countries. The database of information contains descriptions of programs, evaluations of programs, and evaluations of program components, making it difficult for schools to decide which programs actually reduce bullying. To further complicate the issue for schools, most bullying literature comes from international studies. Social and cultural differences between the United States and other countries make the applicability of the findings challenging.

To assist US schools in the decision-making process regarding reduction of bullying, additional studies need to be conducted. First, we need more research to determine if the epidemiology and consequences of bullying are similar in the United States as in other countries where research already exists. Second, we do not know the level of preprofessional preparation of elementary school teachers regarding bullying prevention. Third, we need to identify methods of preprofessional teacher education regarding bullying that prove effective in getting teachers to implement appropriate interventions in their classrooms. Finally, we need to assess perceptions, barriers, and activities of the appropriate school personnel, such as principals and teachers, regarding school-based bullying prevention activities. This approach will help establish a baseline of activities in schools regarding bullying prevention. This information can help create effective preprofessional training for teachers to promote implementation of effective school bullying prevention programs.

References


