Bullying and Suicide: A Public Health Approach

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Several recent studies have found an association between bullying and depression [1] or bullying and suicide-related behaviors [2], and one study found evidence consistent with a causal link, at least for girls [3,4]. These studies, in conjunction with extensive media coverage of the deaths by suicide of several young people who were victims of bullying, led the Centers for Disease Control and Prevention (CDC) to convene an expert panel focusing on the relationship between bullying involvement and suicide-related behaviors. The purpose of the panel, held in September 2010, was to synthesize the latest research about the relationship between youth involvement in bullying (youth who bully, youth who are bullied, and those who bully and are bullied) and suicide-related behaviors (attempts, fatalities, and risk factors associated with suicide, such as depression). Experts on the topics of bullying and suicide presented their research about the relationship between these two behaviors; their work is contained in this supplement. The panel and this special issue provide clarity around the complicated issues of bullying and suicide among youth. Three key themes emerged: (1) bullying among youth is a significant public health problem; it is prevalent and frequently has detrimental effects; (2) there is a strong association between bullying and suicide-related behaviors, but this relationship is often mediated by other factors, including depression and delinquency; and (3) there are public health strategies that can be applied to the prevention of bullying and suicide.

Bullying: A Significant Public Health Problem

Bullying is a significant public health problem because it is prevalent and harmful. Between 20% and 56% of young people are involved in bullying annually [5–7]. Thus, in a classroom of 30 students, between 6 and 17 students are involved in bullying as a victim, perpetrator, or both (bully-victim). The specific rate of bullying victimization and perpetration varies according to age, type of bullying, time period over which bullying behaviors are assessed,

and by subgroup. Younger (middle school-aged) children are more likely to be involved in bullying than high school-aged children [8]. Verbal bullying is generally more prevalent than physical or cyber-bullying and bullying is more likely to occur over a longer time period—"ever" or over the "past year" as opposed to "the past few months" [9]. Specific subgroups are more likely to be victimized. For example, bullying victimization is more prevalent upon lesbian and gay youth—60% report victimization during the past 30 days prior to the survey compared with 28.8% of heterosexual youth [10].

For young people involved in bullying in any capacity—youth who bully others, who are bullied, or who both bully and are bullied, this involvement is correlated with poor mental and physical health and engagement in other risk behaviors. Youth who are bullied are more likely to be depressed or anxious [11], have lower academic achievement, report feeling like they do not belong at school [12], have poorer social and emotional adjustment, greater difficulty making friends, poorer relationships with classmates, and greater loneliness [13]. Bully-victims are more likely than those who bully, those who are bullied, or their uninvolved peers to report being physically hurt by a family member, to witness family violence, and exhibit suicide-related behaviors [14]. Those who bully others are more likely to drink alcohol and use cigarettes, to have poorer academic achievement and poorer perceived school climate, but to also report greater ease of making friends [13].

Involvement in bullying can also have long-lasting, detrimental effects months or even years after the bullying occurs. Young people who are bullied are more likely than uninvolved youth to develop depression and anxiety and report abdominal pain and feeling tense over the course of a school year [11]. One study examining the impact of bullying victimization of those who were between 9, 11, and 13 years of age when they were victimized found, that over a 7-year period, youth who were bullied were more likely to develop generalized anxiety and panic disorder as adults while bully-victims were more likely to subsequently suffer from depression, panic disorder, and suicidality [15]. Another longitudinal study found that those who were perpetrators of bullying at age 14 were more likely to receive a diagnosis of antisocial personality disorder, to have low job status at age 18 years, and to use drugs at ages 27–32 years [16].

Association Between Bullying and Suicide-Related Behaviors

The articles in this special issue generally show a strong association between involvement in bullying behaviors and suicide-related behaviors. In Espelage and Holt's work with middle school students, suicidal ideation and attempts were significantly more prevalent among victims, bully-victims and perpetrators, with rates of ideation and attempts among those involved as a victim, perpetrator, or bully-victims three to five times higher than the rate of uninvolved youth [17]. Likewise, in Borowsky's study of 6th, 9th, and 12th graders, 1.2% of uninvolved youth made a suicide attempt, compared with 5% for those who frequently bullied others verbally or socially; 6.5% for those who were frequent victims of verbal/social bullying; and 11.1% for those who were frequent bully-victims of verbal/social bullying [6]. In Kowalski and Limber's paper, depression, anxiety, self-esteem, self-reported health problems, absences from school, leaving school because of illness, and grades were, with only one exception, significantly related to students' involvement in cyber-bullying

others, being cyber-bullied, bullying others through traditional means, and being bullied through traditional means [7]. Those who witness bullying but are not directly involved are also at increased risk. Rivers and Noret [18] report that students who observed bullying behavior were significantly more likely than those uninvolved in bullying to report symptoms of interpersonal sensitivity (feelings of being hurt and feelings of inferiority) and greater helplessness.

However, the papers in this issue also convey the complexity of the relationship between bullying and suicide-related behaviors. In Espelage and Holt's work [17], after controlling for delinquency and depression there was no increased risk of suicide-related behaviors for perpetrators; the increased risk did remain for victims. Klomek's [19] comparison of young people with bullying involvement and psychiatric symptoms (depression, suicidality, or substance use) at an initial screen to those with psychiatric symptoms but no bullying involvement found, at 2-year follow-up, that only perpetrators of bullying were significantly more likely to be functionally impaired than bullying-uninvolved students. In King's study of hospitalized suicidal youth, those who reported perpetrating bullying were more likely than uninvolved youth to have severe suicidal thoughts and psychosocial impairment, and to abuse substances. However, at 12-month follow-up, only the difference in psychosocial impairment remained. Interestingly, over the course of 1-year treatment for the suicidality, the rate of bullying perpetration declined [20]. In Karch's analysis of suicide fatalities among youth, bullying involvement was one of a myriad of factors precipitating a death by suicide. A quarter of young suicide victims had school problems, but only 12.4% of these school problems were attributed to bullying [21]. Other salient circumstances included depressed mood and/or other current mental health problems (37%); intimate partner problems (25%); history of suicide attempts (18%); and substance abuse problems (16%). Suicide attempts and substance use were risk factors that co-occurred with suicide ideation in Borowsky et al. as well [6]. Across all groups (victims, perpetrators, and bully-victims) a history of self-harm within the prior year and greater emotional distress (feelings of sadness, hopelessness, worry, stress, or pressure) drastically increased risk for suicide. For victims and bully-victims, a history of sexual abuse, a mental health problem, or running away from home in the past year increased the likelihood of suicidal thinking or behavior [6]. More than half of the youth who were bully-victims and who expressed suicidal ideation or reported making an attempt also witnessed family violence, had a history of physical abuse, smoked cigarettes, used marijuana, skipped school because of safety concerns, or carried a weapon at school. Youth who were involved in bullying and reported suicide-related thoughts or behaviors also had higher mean scores for distractibility/impulsivity and lower mean scores for parent connectedness, connectedness to other adults, perceived caring by teachers, perceived caring by friends, liking school, academic achievement, physical activity, perceived school safety, and perceived neighborhood safety [6]. Across all three bullying-involved groups, parent connectedness (feeling like you can talk to mom/dad about problems; that mom/dad care about you) was protective for suicidal ideation and attempts. Other protective factors for victims included stronger connections to nonparental adults, stronger perceived caring by friends, and liking school. For bully-victims, greater perceived caring by friends was also protective [6].

That there is a relationship between bullying and depression and that this relationship may help to explain the relationship between bullying and suicide is fairly consistent across papers. However, the direction of this relationship is unclear. Do youth who are bullied become depressed or are depressed youth more likely to be bullied? A study from the Netherlands suggests the answer may be "both." Researchers found that victims of bullying had significantly higher chances of developing new psychosomatic and psychosocial problems over the course of a school year compared with children who were not bullied. However, children with preexisting depressive symptoms or anxiety were also significantly more likely to be newly victimized over the course of the school year [11].

Application of Public Health Strategies

Despite the complexity of the relationship between bullying and suicide, there is no doubt that bullying involvement can have detrimental effects and prevention of bullying could improve health and mental health outcomes for many youth. The findings in these articles underscore the complexity of the relationship between bullying and suicide. A critical difference distinguishes an association between bullying and suicide from a causal relationship, with significant implications for prevention. Conveying that bullying alone causes suicide at best minimizes, and at worst ignores, the other factors that may contribute to death by suicide. This neglect may result in too narrow a focus of preventive action.

We echo the call made by others for an integrated approach to preventing suicide and youth violence by focusing on shared risk and protective factors including individual coping skills, family and school social support, and supportive school environments [22]. Strengthening social connectedness and ensuring access to supportive adults may pay dividends in impacting both bullying and suicide behaviors. Supportive home and school environments where young people feel connected are just one overlapping protective factor. Borowksy's findings regarding connection to parents, other adults, school, and friends reflect the need for multiple strategies that focus on both the school and home environments and that move beyond the individual skill-building level to foster supportive environments [6]. The case for a supportive environment on bullying and suicide prevention is supported by Hatzenbuehler's work. In the paper contained in this special issue, he reports findings that lesbian and gay youths living in counties with fewer school districts with antibullying policies that specifically mentioned sexual orientation as a protected group were nearly two times more likely to have attempted suicide in the past year compared with those living in counties where more districts had these policies [10]. Williams and Guerra reported that youth who describe their school climate as being trusting, fair, and pleasant have lower involvement in verbal, physical, and Internet bullying perpetration [23].

As reflected in CDC's strategic direction on suicide [24], approaches intended to build connections between youth and school and home environments, as well as communities, are essential to suicide prevention. Sources of Strength is a school-based suicide-prevention program that trains youth opinion leaders to change the norms and behaviors of their peers by conducting well-defined messaging activities with adult mentoring, as well as increasing perceptions of adult support for suicidal youths and the acceptability of seeking help [25]. Recent work also supports the benefits of strengthening community-wide connections to

support prevention. As an example, the Tennessee Lives Count youth suicide prevention initiative found that gatekeepers who reported a stronger connection to youth in their program were almost twice as likely to accurately identify suicidal youth. Similarly, the research also indicates that the most effective bullying prevention programs are whole-school approaches. A meta-analysis of school bullying strategies concluded that whole school approaches that included multiple disciplines and complementary components directed at different levels of school organization more often reduced victimization and bullying than the interventions that only included classroom-level curricula or social skills groups [26].

Although there is much we know about the prevention of bullying and suicide, there is also much we do not know. European studies over the past two decades have demonstrated the effectiveness of school-wide bullying prevention programs. However, although similar studies have been undertaken in the United States, these results have not been replicated [26]. There is some promising evidence that general youth violence prevention programs that set school-wide expectations for positive behavior, such as Positive Behavioral Interventions and Support, also decrease rates of bullying [27]. More work is needed to identify strategies that will prevent bullying from occurring among youth in the United States. In addition, we know that depression is a significant risk factor for bullying and suicide involvement, as well as a host of other health-risk behaviors. We need to understand better how to promote mental well-being among young people and their families and how to do so in clinical and nonclinical settings.

However, given the prevalence and impact of bullying, it is important to move forward while these strategies are still being developed. We can begin by implementing and evaluating strategies that have demonstrated effectiveness at increasing protective factors and decreasing risk factors associated with both bullying and suicide. It is not inevitable that bullying results in suicide; nor is it inevitable that bullying will occur in the first place. Stakeholders in education and health should consider broadening their focus beyond just providing services to those who are already involved in bullying or suicide-related behaviors, but also in implementing strategies to prevent bullying and suicidal behavior from occurring in the first place.

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