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Bullying victimization and emotional distress: is there strength in numbers for vulnerable youth?

Marla E. Eisenberg [a,*], Barbara J. McMorris [b], Amy L. Gower [a], Debanjana Chatterjee [a]

[a] Division of General Pediatrics and Adolescent Health, Department of Pediatrics, University of Minnesota, 717 Delaware St. SE, Minneapolis, MN 55414, USA
[b] School of Nursing, University of Minnesota, 308 Harvard St. SE, Minneapolis, MN 55455, USA

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ABSTRACT

Objective: The present study examines whether the prevalence of vulnerable peers in school protects the emotional health of youth who are lesbian, gay, bisexual or questioning (LGBQ), overweight, or have a disability, and if the adverse emotional effects of bullying victimization are mitigated by the presence of these peers.
Methods: Survey data come from a large school-based sample of adolescents attending 505 schools. The primary independent variable was the percent of students in school with each vulnerability characteristic. Multilevel logistic regression models estimated the odds of internalizing problems, self-harm, suicidal ideation and suicide attempts among students who were LGBQ, overweight or had a disability. Cross-level interaction terms were added to determine if the association between being victimized and emotional distress was moderated by the presence of vulnerable peers.
Results: Greater presence of similar students was, on average, protective against emotional distress for LGBQ girls and overweight boys. In contrast, greater presence of students with a disability was, on average, a risk factor among girls with a disability. Several tests of effect modification indicated that odds of emotional distress for those who had been victimized were lower in schools with a higher proportion of vulnerable youth.
Conclusions: The presence of a similar peer group may increase the likelihood that a bystander or witness to bullying will react in a helpful way. School personnel, health care providers and other youth service professionals should inquire about social relationships at school, including experiences of harassment and perceptions of peer support, to buffer negative experiences.

1. Introduction

Many adolescents suffer from emotional distress, characterized by chronic sadness, depression, stress, anxiety or suicidal ideation [1], and prevention of distress and suicide involvement among youth is a national health priority [2]. Research has demonstrated that rates of emotional health problems are higher among certain groups of vulnerable youth, including those who are lesbian, gay, bisexual or questioning (LGBQ) [3–6] and those with a disability [7–10]. Bullying and peer harassment are also especially common among these groups as well as those who are overweight; [11–15] and weight, perceived sexual orientation and ability in school are the most commonly observed "reasons" for harassment among students [16,17]. Observed disparities in emotional distress among those in vulnerable groups compared to their peers can be attributed in part to victimization experiences [18–21].

Social ecological models [22–25] describe ways in which individual, family, peer, school, community and cultural factors affect youth health and behaviors, and characteristics of school and peers play an especially important role during adolescence [26]. In the domain of emotional well-being in particular, support from teachers and feelings of connection to school have been shown to be protective among general samples of young people as well as vulnerable groups [27–29]. Among LGBQ youth, additional features of the school environment, including gay–straight alliances (GSAs) and inclusive anti-bullying policies, also protect against emotional distress [30–32]. Interestingly, the presence of a GSA has been found to exert a protective effect even when the individual student is not involved with their school group [32]. Different school-wide characteristics have been related to emotional health for overweight and obese youth. Lampard and colleagues found that a lower school-wide prevalence of weight-related teasing was associated with greater self-esteem, greater body satisfaction and fewer depressive symptoms among students, over and above their own experience of weight-related victimization, with notable differences by gender [33].

A related, growing body of research has demonstrated that characteristics of the student body create an important social context for bullying involvement as well [34–36]. Of particular relevance to the present investigation, our previous work with the same sample used in this analysis has demonstrated that the prevalence of LGBQ youth in a school is associated with significantly lower rates of bullying victimization among LGBQ females, but a greater concentration of overweight youth or youth with

* Corresponding Author.
E-mail address: eisen012@umn.edu (M.E. Eisenberg).

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a disability was associated with higher rates of bullying victimization (Chatterjee et al., submitted).

Perhaps the largest body of work in this area is with the subgroup of youth with disabilities. In educational research, there is increased focus on efforts to integrate students with disabilities into mainstream schools (i.e. "inclusive" education) rather than special education contexts. Evidence is mixed as to whether the prevalence of students with disabilities in a school is a risk or a protective factor with regard to harassment experiences. A few studies suggest that more inclusive educational settings may protect youth with disabilities from bullying involvement, finding that students who attend special schools or schools containing segregated classrooms tend to be bullied more often than those who attend mainstream schools [37,38]. This would suggest that a lower prevalence of youth with disabilities in school might be protective, especially if effective integrative practices are implemented by schools. However, other research indicates that, in some situations, attending mainstream schools may lead to increased peer rejection due to social integration problems or severity of the disability [39,40].

The present study builds on previous studies by examining whether the prevalence of similarly vulnerable peers in a school protects the emotional health of youth in vulnerable groups and if the adverse emotional effects of bullying victimization are mitigated by the presence of these peers. Understanding ways in which the make-up of the student body relates to the emotional distress of young people, particularly those who are at elevated risk for bullying victimization and poor mental health, may generate new insights into appropriate support resources and prevention strategies that can be implemented at the school or district level.

2. Methods

2.1. Population, setting and data collection

The Minnesota Student Survey (MSS) is a surveillance tool which includes data from 8th, 9th and 11th grade students throughout the state. In 2013, 84% of all districts participated. Data collection was anonymous, and passive parental consent was used. Within participating schools, two-thirds of enrolled students completed surveys. Approximately 2% of surveys were excluded after a data cleaning process which identified highly inconsistent responses, a pattern of likely exaggeration, or missing information on gender. Schools with a very small number of respondents (≤20) were also dropped to avoid aggregation bias. The analytic sample includes 61,341 males (50.2%) and 60,839 females (49.8%) attending 505 public schools. For analyses regarding sexual orientation, the sample was further restricted to 9th and 11th grade students, as the 8th grade survey did not include relevant items (detailed below). This analysis was exempted from review by the University of Minnesota's Institutional Review Board due to the use of existing anonymous data.

2.2. Measures

The MSS has been administered every three years since 1989 and was revised in 2013 with input from experts in public health, education, psychology, youth development and survey methodology to add items that have come to be of interest since the previous iteration of the instrument.

Vulnerable group status was assessed in multiple ways on the MSS. Specifically, participants were ask to indicate which best described them of "heterosexual (straight), gay or lesbian, bisexual, not sure (questioning)," and further asked to indicate the number of male and female sexual partners they had in the past year. Participants indicating a non-heterosexual identity and/or same-sex sexual experience were considered LGBQ. Students' self-reported their height and weight, which was converted to body mass index using the standard formula. All students with BMIs at or above the 85th percentile for gender and age were considered overweight, in accordance with recommendations by the Centers for Disease Control and Prevention [41,42]. Two items asked about having "any physical disability or long-term health problem (such as asthma, cancer, diabetes, epilepsy or something else)? Long-term means lasting 6 months or more," and 2) "any long-term mental health, behavioral or emotional problems? Long-term means lasting 6 months or more." [43,44] Those responding yes to either item were considered to have a disability.

LGBQ, overweight and disability status were used to identify relevant vulnerable groups for analysis. In addition, these variables were aggregated at the school level to characterize this social context. Schoolwide percent LGBQ, percent overweight and percent with a disability were used as primary independent variables, as described below.

Four measures of emotional health problems were included. Five survey items measuring significant internalizing problems (e.g. somatic symptoms, anxiety) in the past 12 months were adapted from a validated mental health screener [45]. Participants indicating they suffered from 3 or more problems were compared to those reporting two or fewer, as recommended [45]. Intentional self-harm in the past 12 months was assessed, with examples of self-cutting, bruising or burning; this frequency measure was dichotomized to compare those who reported doing this behavior at all versus not self-harming. Suicidal ideation and suicide attempts were assessed with two separate items asking if the participant had ever "seriously considered attempting suicide" or "actually attempted suicide." The response of "yes, in the past year" was used to indicate suicide involvement.

A variable reflecting any bullying victimization experience was created from four survey items. Students who reported they had been physically bullied (i.e. "other students at school… pushed, shoved, slapped, hit or kicked you when they weren't kidding around" or "threatened to beat you up") or relationally bullied (i.e. "spread mean rumors or lies about you" or "excluded you from friends, other students or activities") in the past 30 days were compared to those who did not report any of these types of victimization [46,47].

Several student-level covariates were assessed by self-report, including gender, grade in school, racial/ethnic group and poverty status. Participants were asked to mark all that applied of the following race groups: American Indian, Asian, Black, Pacific Islander and White. Those who marked Pacific Islander were combined with Asians due to their very small numbers in this dataset, and those indicating two or more race were grouped as "multiple race." The race variable was further combined with one item assessing Hispanic ethnicity (yes/no). Three items were used to determine poverty status, including receipt of free or reduced price lunch, experiencing homelessness in the past year, and experiencing food insecurity in the last 30 days. Students reporting any of these were included in the poverty group. In addition, two school characteristic were used as covariates: location in the Minneapolis/St. Paul metropolitan area versus elsewhere in the state, and district type of mainstream versus charter or tribal schools.

2.3. Statistical analysis

The prevalence of each vulnerable group at each school was used as a continuous variable in multilevel models, with means and ranges calculated for the full sample of 505 participating schools (restricted to 331 schools with 9th or 11th grade students for analyses regarding sexual orientation). In order to generate easily interpretable results, each prevalence distribution was rescaled so that a one unit difference reflected a 5% difference in the presence of LGBQ youth and 10% difference in the presence of overweight youth or youth with a disability. Rescaled variables were based on the different ranges of these variables observed in the dataset.

Analyses were stratified by gender, based on gender differences noted in prior research. Multilevel logistic regression models were used to estimate the odds of each emotional health problem associated