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The Impact of Bullying and Sexual Harassment on Health Outcomes of Middle School and High School Girls

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Header: ADOLESCENT SEXUAL HARASSMENT AND BULLYING

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Abstract

The impact of bullying and sexual harassment on six outcomes (self esteem, mental and physical health, trauma symptoms, life satisfaction, and substance abuse) among middle school girls were compared to the outcomes among high school girls. One hundred seventy-seven middle school and fifty-eight high school girls drawn from suburban schools in the northeast comprised the sample for this study. The bullying and sexual harassment were adapted from Espelage (2001) and AAUW (1998, 2001), respectively. High school girls experienced more bullying and sexual harassment and poorer health outcomes than their middle school counterparts. However, the impact of sexual harassment, and especially bullying, is less for each outcome after middle school. Consequently, poorer health outcomes among high school girls cannot be attributed in a straightforward manner to bullying or sexual harassment since these outcomes are poorer among non-bullied and non-harassed high school girls compared to similar middle schoolers. There were no significant relationships between race, disability status, bullying and sexual harassment. Lesbian girls, however, experienced more public sexual harassment and ridicule, especially in middle school, than their heterosexual counterparts.

Our analyses suggest that girls continue to experience sexual harassment and bullying after middle school as a result of dominance and control strategies used by adolescents, in particular, boys. The fact that health outcomes are less impacted in high school by these behaviors may well be the result of better support systems and coping mechanisms among high school girls and more developmental changes among middle school girls.

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The Impact of Bullying and Sexual Harassment on Health Outcomes of Middle and High School Girls

From kindergarten to high school, bullying and sexual harassment are familiar experiences for many students. These frequently linked, negative behaviors have received much attention over the past decade, but for the most part they have been studied separately. Only two studies have explored and compared sexual harassment and bullying behaviors within the same sample. Both of these explored the characteristics and behaviors of bullies and sexual harassers without examining the characteristics of or impact on bullied and harassed children in Canadian and American schools (Pepler, Craig, Connolly, & Henderson, 2002; Pellegrini, 2001). These problems have placed educators in the uneasy position of trying to study two frequently occurring problems in school without fully understanding the impact of each. Are bullying and sexual harassment damaging for children in different ways? And if so based on what? Gender? Age? Sexual orientation? Disability? There have been studies that highlight the psychosocial outcomes of bullying and sexual harassment but the literature is Balkanized. No studies have combined these two types of behaviors so that mental and physical health outcomes can be compared by differences based on gender, age, sexual orientation or disability.

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Bullying and Sexual Harassment Origins and Definition

Information regarding bullying and sexual harassment has slowly evolved since the 1970's but from two very different origins. Sexual harassment laws and policies developed in the U.S. as a part of civil rights laws where it was viewed as a form of discrimination. Policies on bullying, on the other hand, focused on anti-social, aggressive behavior that had links to criminal conduct. Today, due to a number of school shootings over the past decade, the issue is wed to school safety. Olweus's (1978) study of aggressive children in Norway is considered to be the start of bullying research. Great Britain, Canada and Australia as well as the U.S. have developed this area significantly.

Generally, bullying has been defined in the following way: "Bullying is a specific type of aggression in which (1) the behavior is intended to harm or disturb, (2) the behavior occurs repeatedly over time, and (3) there is an imbalance of power, with a more powerful person or group attacking a less powerful one. This asymmetry of power may be physical or psychological, and the aggressive behavior may be verbal (e.g. name calling, threats), physical (e.g. hitting), or psychological (e.g. rumors, shunning/exclusion) (Nansel, 2001). Typically bullies have been described as "aggressive children who use aggression in a systematic and calculated way with a group of weaker peers (Crick, 1996; Olweus, 1993; Pellegrini, 2001; Schwartz et al., 1997).

In 1997, the U.S Department of Education developed the following definition for sexual harassment that occurs in schools. "Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal, nonverbal, or physical conduct of a sexual nature by an employee, by another student, or by a third party, that is sufficiently severe, persistent, or pervasive to limit a student's ability to participate in or benefit from an education program or

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activity, or to create a hostile or abusive educational environment" (Department of Education 1997, p. 12038).

Students' experience of sexual harassment in a school setting may include the following unwanted or unwelcome behaviors from other students or adult school personnel: sexual comments, jokes, gestures, rumors or looks; showing of sexual pictures, photographs, illustrations; written sexual messages, notes or graffiti on bathroom walls or locker rooms; being called gay or lesbian in a malicious manner; spied on while dressing or showering at school; 'flashed' or 'mooned' by someone; touched, grabbed, or pinched in a sexual way; clothing pulled off or down in a sexual way; intentionally brushed up against by someone in a sexual way; blocked or cornered in a sexual way; and, forced to kiss someone, or experience some other unwelcome sexual behavior other than kissing (AAUW, 1993, 2001). Sexual harassment may also include "spiking" or pulling down someone's pants, "snuggies" where underwear is pulled up at the waist so it goes in between the buttocks, and or being listed in "slam books" which identify student's names and have derogatory sexual comments written about them that are circulated by other students (Strauss & Espeland, 1992).

Incidence of Bullying and Sexual Harassment

Previous research on bullying and sexual harassment conducted in schools confirms that both types of these behaviors are widespread. Three national studies of bullying and SH provide the broadest statistics regarding these behaviors in U.S. schools. The United States Department of Education School Crime Supplement to the National Crime Victimization Survey (2003) reported that in 2001 8% of middle and high school students were bullied (9% males, 7% females) up 3% from 1999. Grade level made a difference: 14 % of 6th graders, 9 % of 9th graders, and 2 % of 12th graders reported that they had been bullied at school. Similarly

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reflecting the student's responses, principals reported bullying as a problem in 25-29% of elementary schools while 43 % of middle school principals reported bullying as a problem. In another study on bullying, the National Institute of Child Health and Human Development (1998) indicated that one third of children in grades 6 through 10 are directly involved in bullying, with 10 % as bullies, 13% as victims and 6% as both. The frequency of bullying was higher among 6th-8th grade students than among 9th-10th graders.

The American Association of University Women (AAUW) conducted two national studies of sexual harassment in U.S. schools in 1993 and 2001. Both had similar results, reporting that 81% of students experienced some form of SH during their school years. Fifty-nine were harassed occasionally and 27% were targeted often (2001). Additionally, 54% of students said they sexually harassed someone during their school lives. Similar to bullying, grade level makes a difference; but in contrast to bullying, sexual harassment increases with age: 55 % of 8-9th graders and 61 % of 10-11th graders reported that they had been physically sexually harassed at school. Girls experienced higher frequency of harassment in both grade categories.

Mental and Physical Health Outcomes of Bullying and Sexual Harassment Victimization

Nansel et al. (2001) state that research on bullies and those bullied has consistently found that "youth who are bullied generally show higher levels of insecurity, anxiety, depression, loneliness, unhappiness, physical and mental symptoms, and low self esteem" (p.2095). Research by the National Institute of Child Health and Human Development (1998) found that students who were bullied experienced greater difficulty making friends, poorer relationships with classmates, and greater loneliness. Additional study by Hawker & Boulton (2000) showed that bullied kids were five times more likely to be depressed. Espelage (2001) investigated depression among children who were bullied and found that 20% of middle school victims scored within the

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clinical range on a standard depression and anxiety measure. Hazler, Hoover and Oliver (1992) found that 90% of bullied students experienced a drop in school grades, while Kochenderfer and Ladd (1996) showed that bullying victimization was related to school absenteeism or dropping out.

According to the AAWW studies (1993, 2001) students experiencing sexual harassment report negative psychosocial effects such as depression, loss of appetite, nightmares or disturbed sleep, low self esteem and feelings of being sad, afraid, scared, or embarrassed (Hand & Sanchez, 2000; Lee et al., 1996). Similar to bullying victims, students also report loss of interest in regular activities, isolation from friends and family, and loss of friends. School performance difficulties include absenteeism, decreased quality of schoolwork, skipping or dropping classes, poor grades, tardiness and truancy (AAUW, 1993, 2001; Corbett, Gentry, and Pearson, 1993; Hand and Sanchez, 2000; Lee et al., 1996; Loreda, Reid, and Deaux, 1995; PCSW, 1995; Roscoe, Strouse, and Goodwin, 1994; Shakeshaft et al., 1995; Stein, Marshall & Tropp, 1993; Stratton and Backes, 1997; Trigg and Wittenstrom, 1996). Students also reported feeling afraid, upset or threatened by the sexual harassment (AAUW, 1993, 2001; Fineran & Bennett, 1999; PCSW, 1995; Stein, Marshall & Tropp, 1993).

Studies That Examined Both Bullying and Sexual Harassment

As mentioned earlier in this article, only two studies have analyzed both bullying and sexual harassment. Pellegrini (2001) and Pepler et al. (2002) focused on the perpetrators of both of these problems. Pellegrini's (2001) longitudinal study of U.S. 6th and 7th grade students, found that "bullies (who tended to be boys) also engaged in sexual harassment, and this relation was mediated by self-reported dating frequency.... That is, bullies who also estimated their frequency of dating to be high...tended to sexually harass their peers"(p. 131). Thus, if bullies become

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interested in opposite-sex dating, this will increase their proclivity to become perpetrators of sexual harassment. Pellegrini also found that sexual harassment behaviors at the end of 7th grade were predicted by bullying at the start of 6th grade. Pepler, et al. (2002) studied four cohorts of students in Canadian schools grades 5-8 and examined the relationship between aggressive behavior and substance use. They found that students who bullied others were at significant risk for substance abuse before entering high school. Results also indicated that girls or boys who acknowledged sexually harassing others were between four and six times more likely to use alcohol than those who did not sexually harass their peers.

Gender, Sexual Orientation and Disability and Bullying and Sexual Harassment

The AAUW (1993, 2001) reports indicate that over 50% of male and female students experienced sexual comments, jokes, gestures or looks. Over 30% of boys and girls experienced being touched, grabbed, pinched or brushed up against in a sexual way from schoolmates. In a study by Fineran & Bennett, (1999) unwanted sexual attention including pressure for dates and sex was reported by approximately 43% of girls and 30% of boys, while in the PCSW (1995) studies, 25% of girls and 5% of boys reported unwanted sexual attention. Gender differences in victimization are common with girls experiencing sexual harassment more frequently than boys and boys perpetrating sexual harassment more frequently than girls (AAUW, 1993, 2001; Fineran & Bennett, 1999; Hand and Sanchez, 2000; Lee et al., 1996; McMaster, Connolly, Pepler & Craig, 2002; PCSW, 1995; Stratton and Backes, 1997; Trigg and Wittenstrom, 1996. Nansel et al. (2001), found that males both bullied others and were bullied significantly more often than females. Results also showed that females experienced being bullied more frequently through the use of rumors and sexual comments while males reported being bullied by being hit, slapped or pushed. Hawker and Boulton (2000), conducted a meta-analysis of studies on peer

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victimization occurring over the past 20 years, and found that bullied boys are four times more likely to be suicidal while bullied girls are eight times more likely to be suicidal.

Current literature on sexual harassment or bullying contributes little insight into the mental and physical health risks of sexual minority or disabled students since research to date has not included information on sexual orientation or disability. However, the limited research to date is compelling. A study in Great Britain found that almost two thirds of children with special needs identified being bullied compared to only one quarter of mainstreamed children (Thompson, Whitney, & Smith, 1994). An annual school survey, The Massachusetts Youth Risk Behavior Survey (Commonwealth of Massachusetts, April 1998) compared gay, lesbian and bisexual students to their peers. Results showed that sexual minority students were four times more likely to have attempted suicide, and five times more likely to have missed school because of feeling unsafe. These behaviors parallel the behaviors of students in the general school population experiencing sexual harassment and bullying. Fineran (2002a, 2002b) found that students with disabilities experienced significantly more sexual harassment in school from classmates than non-disabled. Also, lesbian girls experienced significantly more sexual harassment than heterosexual girls.

Purpose of the Study

Research on sexual harassment and bullying in schools is at a crossroads. At this point in time, these problems have been treated as separate issues by researchers. Standardized measures of health and academic outcomes that have been used in other types of research on adolescents have not been used consistently in bullying or sexual harassment studies. A unique aspect of this study is the use of a survey instrument with a number of psychometrically sound measures of health variables.

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Methods

Sample

Data were drawn from 369 middle school and 199 high school students from four suburban New England schools (two middle schools and two high schools) who completed paper and pencil surveys. Similar to their local communities, the middle and high school demographics reflect a predominantly white population (86%) with little ethnic diversity (0.8% African Americans, 0.9% Asians/Pacific Islanders and 6.7% Latinos). Students were surveyed about their sexual orientation and whether they had a disability. Most students (95%) listed themselves as heterosexual. Nine percent of the respondents reported they had a disability. Participation in the survey was voluntary and followed Institutional Review Board procedures for parental consent and student assent. Questions covered a range of topics including student experiences with sexual harassment and bullying, health and well being, and attitudes towards school and teachers. Grades 10-12 were drawn from vocational high school that had a higher percentage of male students.

Measures

Bullying and Sexual Harassment. Ten survey items developed by Espelage (1993) and fourteen items used in the AAUW survey (2001) to measure bullying and sexual harassment, respectively, were presented. Students were asked to indicate how often they had experienced each behavior (Never, A few times, Many times) during the school, who the perpetrators were (Mostly male, Mostly female) and their reaction (Not upset, Somewhat upset, Very upset). A factor analysis of the bullying items with varimax rotation resulted in a two-factor solution. The factor items were used subsequently to create scales labeled *Intimidation* and *Ridicule*. Ridicule included these individual items: upset you for the fun of it, teased you, picked on you, made fun

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of you, and called you names. Intimidation included: scared you, got into a physical fight with you, pushed, shoved, slapped, or kicked you, and threatened to hurt or hurt you. Each scale had high reliability based on Cronbach's alpha: Intimidation (alpha=.84); Ridicule (alpha=. 91). A factor analysis of the sexual harassment items with a varimax rotation resulted in two factors that produced high reliability scores. These factors tapped two different aspects of experience--one which often occurs before an audience or involves a number of others (wrote sexual messages about you on bathroom walls, locker rooms, class blackboards, etc; listed you in a "slam book" with offensive sexual remarks about you; told offensive, sexual jokes about you; called you gay or lesbian or a name like fag or dyke; and spread sexual rumors about you), and the other which is typically one-on-one and seeks intimacy inappropriately and/or control (kissed or hugged you when you did not want it, pulled your clothing off or down, touched, grabbed, or pinched you in a sexual manner, pressured you for a date, and flashed or mooned you). The individual items of each factor were summed to create two scales, *Public Sexual Harassment* (alpha=.88) and *Unwanted Personal Advances* (alpha=.79).

Health Outcomes. Six outcome variables were used in this analysis because that tapped different dimensions of overall health and well being. *Self Esteem* was measured by four items developed by Bowen and Richman (1995) for use with adolescents: I feel positive about myself; I am satisfied with myself; I have a number of good qualities; and, I am able to do things as well as most other people. The items were summed to produce a scale with a range of 4-12 where $M=6.26$, $SD=2.2$ (alpha=.90). Mental and physical health were assessed by using items developed by Bowen and Richman (1995). The *Mental Health* scale (alpha=.81) consisted of six items which tapped evaluations such as feeling successful, being pleased with self, or feeling lonely or fearful. Students were asked to indicate how often they felt that way in the last week.

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A scale was created by combining these items (range=1-11; M=5.61; SD=2.7) A *Physical Health* scale was developed from a factor analysis of twelve items. Seven items that formed a factor (alpha=.83) were used to create a scale (range=1-12; M=5.81; SD=3.4) These items asked students how often they had experienced such problems as trouble going to sleep, upset stomach/stomach ache, headache, or dizziness in the last seven days. *Impact of Events Scale (Trauma Symptoms)* was based on eight items (alpha=.91) developed by Dyregrov and Yule (1995) to use with children. The respondents were asked how frequently (Not at all, Rarely, Sometimes, or Often) each item applied to them regarding their most upsetting bullying or sexual harassment experience (e.g., I thought about it when I didn't mean to, I had waves of strong feelings about it, pictures of it popped into my mind). The combined items resulted in a scale with 1-10 range where M=5.19 and SD=3.2. *Life Satisfaction* was based on Kunin's Faces Scale. The students were asked to circle one of five faces from happy (1) to sad (5) that "is closest to how you feel about your life in general" (M=2.33, SD=1.0) *Substance Abuse* was measured by a single item in a 13-item instrument developed by Hanisch and Hulin (1991) to measure workplace stress. The wording of the items was changed to reflect school or school activities (range=1-5; M=1.47; SD=1.0)

Results

Bullying and Sexual Harassment Experiences.

In order to provide a general overview of bullying and sexual harassment we thought it would be useful to study the individual items which occur most frequently for each of the bullying and sexual harassment constructs, their impact, and the perpetrators for middle school and high school girls These figures are presented in Table 1.

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Table 1 about here

Several conclusions can be drawn. First, the most common experiences in middle school tend to be the most common experiences in high school--e.g., upsetting someone for the fun of it, spreading sexual rumors, scaring or hurting a person, and grabbing and kissing have similar percentage ranks at both grade levels. Second, the frequency of bullying and sexual harassment increases from middle school to high school as can be seen by comparing the same experience between the two grade levels (e.g., upset for the fun of it (42% to 53%), spreading sexual rumors (33% to 53%)). Also, though girls are the main perpetrators of several types of experiencing--hurting, pushing, and spreading sexual rumors--boys play significant roles as perpetrators, especially in high school. Finally, some types of experiences tend to be more upsetting than others at both grade levels. Having sexual rumors spread about oneself is more upsetting than any other experience. Being picked on or made fun of, as well as having to endure sexual jokes or unwanted kissing are also very upsetting experiences. An analysis (not shown) of the relationships between race, disability, and sexual orientation on each type of bullying and sexual harassment for middle and high school girls yielded disappointing results. Neither race nor disability was significantly related to either bullying or sexual harassment. However, sexual orientation, bullying, and sexual harassment were significantly related in cross-tabulation analysis. Lesbian middle school girls were more apt to experience Ridicule and Public Sexual Harassment than their heterosexual peers ($p < .01$). Among high school students, lesbians experienced more Public Sexual Harassment than their heterosexual sisters ($p < .05$)

Health Outcomes for Middle and High School Girls

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Adolescence presents a number of social, emotional, and academic challenges for both girls and boys. Adolescent sexual development and maturity are other avenues that offer insight into the context of bullying or peer sexual harassment and its effect on adolescent mental health. Current adolescent theorists, as summarized by Hutchison (1999) believe that all adolescents experience biological, psychological, and social change between the ages of 11-20 and students who experience bullying or sexual harassment in the first phase of early adolescence may find it to be a different experience than students who are in the later phases of adolescence. For girls, conformity with peer group, emphasis on beauty/attractiveness, and dating may contribute to excess stress and negative health outcomes regarding their appearance and peer group status. Difference of means tests comparing middle and high school girls on each of the outcomes reveals substantial evidence for a decline in health during high school. (See Table 2).

Table 2 about here

For four outcomes--mental health (M=7.37 vs. 6.15), physical health (M=6.23 vs. 7.32), life satisfaction (M=2.58 vs. 2.19), and substance abuse (M=1.71 vs. 1.31), high schools girls have significantly poorer outcomes than their middle school counterparts. High school girls also report higher levels of trauma and lower levels of self esteem but these differences are not statistically significant.

In the previous section of our analysis we found that high school girls experience bullying and sexual harassment more frequently than their middle school sisters. It is possible that these experiences have a deleterious effect on girls' health in high school. We explore these connections in detail in the next section.

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The Impact of Bullying and Sexual Harassment on Health Outcomes.

An analysis of the impact of bullying and sexual harassment on health was performed by comparing those who had or had experienced two forms of bullying (intimidation and ridicule) or two forms of sexual harassment (public and personal) with each health outcome. The results of these analyses for bullying are presented in Table 3.

Table 3 about here

As the results from our earlier analyses (Table 1) suggest, Ridicule occurs at higher levels in middle (51.5) and high school (58.2%) than Intimidation (25.4% and 34.5 %). Also, the frequency of Ridicule and Intimidation are higher in high school, as Table 1 suggested.

An analysis of t-tests results reveals that bullying has more impact on middle school girls' health outcomes than for high school girls. Intimidation is related to five outcomes for middle school girls (self esteem, mental and physical health, life satisfaction, and substance abuse), but only one (trauma symptoms) for high school girls. Following a similar pattern, Ridicule affects more health outcomes in middle school (self esteem, mental and physical health, trauma symptoms, and life satisfaction) than in high school (self esteem and trauma symptoms). Out of twelve t-tests for each grade group, ten are statistically significant for middle school but only three are for high school. Mental and physical health, life satisfaction, and substance abuse are not related to either form of bullying among high school girls. The results for sexual harassment and health outcomes reveal patterns that are somewhat analogous to bullying and organized in Table 4.

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Table 4 about here

The levels of both public (38.4% vs. 60.3%) and personal --- (33.9% vs. 48.3%) harassment are higher in high school but the impact of each type is greater in middle school. Among middle school girls, public sexual harassment is significantly related to all six health outcomes; unwanted personal advances is related to five. In contrast, among high school students public harassment is significantly related to four outcomes (mental and physical health, trauma symptoms, and life satisfaction) while unwanted personal advances is related to three (physical health, trauma symptoms, substance abuse).

An overview of bullying and sexual harassment and health outcomes (Tables 3 and 4) provides some interesting insights into the school lives of adolescent girls. In general, while both bullying and sexual harassment increase in high school, the impact of these experiences on their well-being seems to diminish comparatively. Among middle school girls, bullying and sexual harassment have nearly the same number of significant relationships to health outcomes (11 and 10, respectively). For high school girls, sexual harassment affects more health outcomes (7) than bullying (3) does. Based on our analyses, poorer health outcomes among high school girls (Table 2) cannot be attributed in a straightforward way to increased levels of bullying and sexual harassment (Tables 3 and 4) since the health outcomes are generally poorer among high school girls who have *not* been bullied or harassed compared to the same outcomes for non-victimized middle schoolers. Because of the relatively small number of non-whites, disabled students, and lesbians, it was not possible to draw meaningful results from data analyses that compared the health outcomes of these students to their peers who had experienced bullying or sexual harassment.

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A final question is: Does bullying or sexual harassment produce worse health outcomes? The data in Tables 3 and 4 reveal that the two types of sexual harassment are significantly related to a larger number of outcomes than are the two types of bullying (18 versus 13). This difference is especially notable in high school where only three of a possible twelve statistical tests are significant (Table 3). If we focus on each bullying and sexual harassment type, which has the poorest score on each outcome among each age group? Public sexual harassment had higher scores (poorer outcomes) than ridicule, intimidation, and unwanted personal advances for both middle and high school girls on five of six outcomes. However, in most cases these worst outcomes were not *significantly* worse. Only five of thirty-six comparisons (4 in middle school, 1 in high school) were significant at $p < .05$.

Discussion and Conclusions

Results from this study and many others leave no doubt that both bullying and sexual harassment have a profound negative impact on girls' health. An interesting finding from this study indicates that the frequency of both bullying and sexual harassment increases from middle school to high school. This is in contrast to the bullying literature that shows bullying decreasing with age (Nansel, 2001). This difference may be attributable in part to the small number of girls in our high school sample. In a number of instances, girls contributed substantially to acts of bullying and sexual harassment, especially during middle school. Some types of behavior--e.g., spreading sexual rumors, trying to hurt someone--are strategies used by girls to control or intimidate other girls. Studies have consistently found that girls are more apt to be injured or to have experienced more negative behaviors than boys, thus leading to more negative outcomes (Lee et al., 1996, Molidor, 1999).

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The later stage of adolescent development for girls may be more problematic and explain why high school girls have significantly poorer outcomes than middle school girls, regardless of whether or not they were bullied or harassed. Our research suggests that high school girls are less vulnerable to the negative impacts of bullying and sexual harassment than their middle school sisters. While in a number of instances higher percentages of high school students say they were upset by a particular experience than were middle school girls (Table 1), the fact that these experiences had less impact on the health outcomes of the former (Tables 3 and 4) suggests that older girls are able to insulate themselves from the potentially adverse health effects of unwanted behavior. While they may have developed coping strategies and peer group support to deal with bullying and sexual harassment, it is likely they face a host of new challenges that negatively impact their health.

In our examination of substance use by students in response to sexual harassment victimization, we found that high school girls reported more frequency of use of alcohol or drugs than middle school girls, but for middle school girls, substance use was related to bullying. This finding would support that both high school students and middle school students may use substances as a coping mechanism for upsetting events thus paralleling substance use by adults under stressful circumstances.

Our sample of girls reporting to be lesbian or bisexual indicated that they experienced significantly more public sexual harassment in high school. Middle school girls experienced significantly more public sexual harassment and ridicule. These results lend support to the need for both middle and high schools to be aware that sexual minority students are at risk and that these issues need to be addressed by school personnel beginning in middle school.

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As attention to the role of bullying and harassment in school violence has increased, it is important to acquire empirical information about victimization experiences. Results from this study indicate that both sexual harassment and bullying negatively affect girls' self esteem and well-being. Although high school girls appear to be better defended against bullying and sexual harassment, their overall well-being appears to be poorer and so any type of contribution to improving their school environment could be potentially rewarding. Middle school girls were found to be more vulnerable to both bullying and sexual harassment thus pointing out the need for school administrators to pay closer attention to eliminating these behaviors from school environments in the lower grades. School administrators should ensure that prevention training addressing both of these behaviors is provided equally. Bullying prevention in schools has by far outpaced sexual harassment prevention training and this may be to the detriment of girls' well-being and educational achievement. There may be some subtle differences in outcomes from these two different experiences for middle school girls and high school girls but having schools remain focused on eliminating both types of behaviors is important.

The small number of adolescents with disabilities or who described themselves as non-heterosexual impeded our ability to conduct meaningful statistical analyses of their experiences and outcomes. Also, our sample was drawn from schools with predominately white populations. A larger and more diverse sample would have enabled us to generalize our findings more widely.

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Notes

¹ The mean scores for each outcome with each bullying and harassment type were compared through t-tests. The mean outcome that was highest (poorest) on a particular type of bullying or sexual harassment was compared with the other three scores on the same outcome. This resulted in 18 t-test (6 outcomes by 3 t-test comparisons) for each grade level. Among middle schoolers, Unwanted personal advances had a significantly higher score on physical health than ridicule did; public sexual harassment had significantly higher scores on trauma symptoms than intimidation and unwanted personal advances; and public sexual harassment had a higher mean score on life satisfaction than intimidation did. Among high school girls, public sexual harassment had a higher mean score on physical health than intimidation did.

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Table 1

Frequency, Severity, and Perpetrators of Bullying and Sexual Harassment in Middle and High School

	Middle School				High School				
	% Experienced	% Upset ^a	Perpetrators Girls	% ^b Boys	% Experienced	% Upset	Perpetrators Girls	% Boys	
<i>Ridicule</i>									
1. Tease	47	59	36	53	1. Upset	53	73	23	63
2. Upset	42	82	33	57	2. Names	53	68	19	52
3. Make fun of	38	73	42	31	3. Pick on	52	73	17	57
<i>Intimidation</i>									
1. Scare	29	60	36	53	1. Hurt	35	69	60	35
2. Hurt	24	65	68	29	2. Scare	33	58	21	58
3. Push	16	56	54	39	3. Push	28	59	56	38
<i>Public Sexual Harassment</i>									
1. Rumors	33	89	70	17	1. Rumors	53	90	61	16
2. Jokes	25	74	46	49	2. Jokes	41	81	48	44
3. Gay/lesbian	19	52	42	31	3. Gay/lesbian	31	67	44	39
<i>Unwanted Personal Advances</i>									
1. Grab	18	54	7	89	1. Grab	29	65	18	73
2. Kiss	16	52	0	100	2. Kiss	16	80	0	100
3. Pressure	15	54	0	94	3. Pressure	20	57	0	100

^a The respondents were asked how much they were bothered or upset by the experience. The three response categories were not upset, somewhat upset, and very upset. The latter categories were combined.

^b There were two response categories, mainly boys and mainly girls. Since a number of respondents circled both categories, a third category, "both," was added during data coding. The percentages for "both" are not shown.

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Table 2
Mean Differences in Outcomes Between Middle and High School Girls

<u>Outcomes</u> ^a	<u>Middle School</u> <u>Mean/SD</u>	<u>High School</u> <u>Mean /SD</u>
Self Esteem	6.43 (2.2)	6.90 (2.4)
Mental health	6.15 (2.6)	7.37 ^c (2.5)
Physical Health	6.82 (4.5)	8.56 ^c (5.0)
Trauma Symptoms	5.84 (3.1)	6.24 (3.2)
Life Satisfaction	2.18 (.97)	2.57 ^c (.93)
Substance Abuse	1.30 (.80)	1.71 ^c (1.0)

a Higher numerical values are associated with poorer health outcomes: low self esteem, poor mental or physical health, high levels of trauma symptoms, low life satisfaction, and high levels of substance abuse.

^b T-test difference is significant at $p < .05$

^c T-test difference is significant at $p < .01$

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Table 3
Impact of Bullying on Health Outcomes (Mean Scores)

<u>Outcomes</u> ^c	<u>Intimidation</u> ^a			
	Middle School		High School	
	Bullied 25.4% <u>Mean/SD</u> ^b	Not Bullied 74.6% (N=177) <u>Mean /SD</u>	Bullied 34.5% <u>Mean/SD</u>	Not Bullied 65.5% (N=58) <u>Mean/SD</u>
Self Esteem	7.08 (2.3)	5.98 ^e (2.1)	6.92 (2.3)	6.87 (2.4)
Mental Health	7.25 (2.5)	5.34 ^e (2.3)	7.66 (2.7)	7.15 (2.3)
Physical Health	7.63 (3.1)	5.24 ^e (3.2)	7.54 (3.6)	7.04 (3.1)
Trauma Symptoms	6.09 (3.1)	5.66 (3.2)	7.17 (2.9)	5.08 ^d (3.0)
Life Satisfaction	2.50 (1.0)	1.96 ^e (.87)	2.63 (.99)	2.50 (.86)
Substance Abuse	1.58 (1.0)	1.10 ^e (.46)	1.78 (1.0)	1.61 (.98)
	<u>Ridicule</u>			
	51.5%	48.5% (N=177)	58.2%	41.8% (N=58)
Self Esteem	6.86 (2.3)	6.01 ^e (2.0)	7.51 (2.3)	6.08 ^d (2.2)
Mental Health	6.72 (2.6)	5.54 ^e (2.3)	7.81 (2.7)	6.73 (2.2)
Physical Health	7.08 (3.2)	5.38 ^e (3.3)	8.03 (3.0)	6.88 (3.6)
Trauma Symptoms	6.50 (1.0)	5.13 ^e (.88)	7.43 (1.0)	4.75 ^e (.69)
Life Satisfaction	2.40 (1.0)	1.95 ^e (.88)	2.78 (.98)	2.29 (.66)
Substance Abuse	1.41 (.87)	1.19 (.71)	1.90 (1.1)	1.44 (.76)

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^a A respondent experienced at least one of the behaviors that comprised the composite variable

Intimidation or Ridicule.

^b Standard deviations are in parentheses below means.

^c High numerical values are associated with poor health outcomes.

^d Significance level based on difference of means test is $p < .05$

^e Significance level based on difference of means test is $p < .01$

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Table 4
Impact of Sexual Harassment on Health Outcomes (Mean Scores)

	Middle School		High School	
	Harassed	Not Harassed	Harassed	Not Harassed
	<u>Public Sexual Harassment</u> ^a			
	23.1%	76.9% (N=177)	46.3%	53.7% (N=58)
	<u>Mean/SD</u> ^b	<u>Mean /SD</u>	<u>Mean/SD</u>	<u>Mean/SD</u>
<u>Outcomes</u> ^c				
Self Esteem	7.30 (2.4)	6.25 ^d (2.1)	7.53 (2.5)	6.58 (2.3)
Mental Health	7.43 (2.6)	5.88 ^e (2.5)	8.42 (2.6)	6.84 ^d (2.4)
Physical Health	7.62 (3.3)	5.95 ^e (3.4)	9.02 (2.9)	6.52 ^e (3.3)
Trauma Symptoms	7.39 (3.1)	5.52 ^e (3.0)	7.87 (2.3)	5.53 ^e (3.0)
Life Satisfaction	2.75 (1.1)	2.06 ^e (.90)	2.94 (1.1)	2.39 ^d (.78)
Substance Abuse	1.86 (1.2)	1.20 ^e (.64)	1.84 (1.1)	1.64 (.95)
	<u>Unwanted Personal Advances</u>			
	21.1%	78.9%	30.9%	69.1%
Self Esteem	6.94 (2.4)	6.17 ^d (2.1)	7.07 (2.4)	6.73 (2.4)
Mental Health	7.08 (2.4)	5.66 ^e (2.5)	7.39 (2.6)	7.35 (2.5)
Physical Health	8.02 (2.9)	5.30 ^e (3.2)	8.48 (3.0)	6.24 ^d (3.3)
Trauma Symptoms	6.11 (3.2)	5.70 (3.1)	7.48 (2.5)	5.03 ^e (3.2)

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Life Satisfaction	2.44 (1.0)	2.05 ^e (.92)	2.73 (1.1)	2.43 (.72)
Substance Abuse	1.62 (1.0)	1.14 ^e (.60)	2.07 (1.1)	1.37 ^e (.76)

^a Respondents who had more than one experience or who had the same experience more than once were categorized as "sexually harassed."

^b Standard deviations are in parentheses below the means.

^c High numerical values are associated with poor health outcomes.

^d Significance level based on difference of means tests is $p < .05$.

^e Significance level based on difference of means test is $p < .01$.