Sexual Risk Taking and Bullying Among Adolescents

AUTHORS: Melissa K. Holt, PhD,[a] Jennifer L. Matjasko, PhD,[b] Dorothy Espelage, PhD,[c] Gerald Reid, MA,[a] and Brian Koenig, MS[d]

[a]*School of Education, Boston University, Boston, Massachusetts;* [b]*Division of Violence Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia;* [c]*College of Education, University of Illinois at Urbana-Champaign, Champaign, Illinois; and* [d]*K–12 Associates, Madison, Wisconsin*

KEY WORDS
bullying, sexual behavior, sexual orientation

ABBREVIATION
GLBTQ—gay, lesbian, bisexual, transgendered, or questioning

Dr Holt conceptualized the research questions, conducted analyses, and drafted the initial manuscript; Dr Matjasko contributed to developing the research questions, provided input about analyses and helped to conduct analyses, and reviewed and revised the manuscript; Dr Espelage contributed to study design and protocol development, provided input about analyses, and reviewed and revised the manuscript; Mr Reid assisted with data analysis and reviewed and revised the manuscript; Mr Koenig contributed to study design and protocol development, oversaw data collection efforts, and reviewed and revised the manuscript; and all authors approved the final manuscript as submitted.

The findings and conclusions in this manuscript are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

www.pediatrics.org/cgi/doi/10.1542/peds.2013-0401

doi:10.1542/peds.2013-0401

Accepted for publication Sep 24, 2013

Address correspondence to Melissa K. Holt, PhD, Counseling and Human Development, Boston University School of Education, 2 Silber Way, Boston, MA 02215. E-mail: holtm@bu.edu

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2013 by the American Academy of Pediatrics

FINANCIAL DISCLOSURE: The authors have indicated they have no financial relationships relevant to this article to disclose.

FUNDING: Funding for this project was supported by Dane County Youth Commission, the Dane County Department of Human Services, the United Way of Dane County, the Public Health Department of Madison and Dane County, and the participating Dane County School Districts. Dr Holt and Mr Reid received travel funding through the School of Education at Boston University to present findings from this study at the 2012 American Educational Research Association Meeting.

POTENTIAL CONFLICT OF INTEREST: The authors have indicated they have no potential conflicts of interest to disclose.

WHAT'S KNOWN ON THIS SUBJECT: Bullying involvement is associated with deleterious psychological, educational, and health effects. However, little is known about relations between bullying involvement and sexual risk-taking behaviors or whether similar patterns hold for heterosexual and gay, lesbian, bisexual, transgendered, or questioning adolescents.

WHAT THIS STUDY ADDS: Among adolescents, bullies and bully-victims engaged in more casual sex and sex under the influence than their peers. Controlling for demographic characteristics and other victimization exposures, bully and bully-victim status predicted sexual risk taking but primarily for heterosexual adolescents.

abstract

FREE

BACKGROUND: Psychological and educational correlates of bullying have been explored extensively. However, little information is available about the link between bullying and sexual risk-taking behaviors among adolescents, though for some youth it may be that sexual risk taking emerges in response to bullying involvement. Associations for both heterosexual youth and those who identify as gay, lesbian, bisexual, transgender, or questioning (GLBTQ) should be considered, as should the influence of victimization exposures in other domains. Accordingly, associations among bullying, other victimization forms, and sexual risk-taking behaviors were examined among adolescents with particular consideration to sexual orientation.

METHODS: A sample of 8687 high school students completed the Dane County Youth Survey, a countywide survey administered high school students from 24 schools. Participants were asked questions about their bullying involvement and sexual risk-taking behaviors (ie, engaging in casual sex and having sex while under the influence of alcohol or drugs).

RESULTS: Results indicated that bullies and bully-victims were more likely to engage in casual sex and sex under the influence. In multivariate analyses, these findings held even after controlling for demographic characteristics and victimization exposures in other domains, but primarily for heterosexual youth.

CONCLUSIONS: Bullies and bully-victims engaged in more sexual risk-taking behaviors, although patterns of association varied by sexual orientation. Bullying prevention programs and programs aimed at reducing unhealthy sexual practices should consider a broader stress and coping perspective and address the possible link between the stress of bullying involvement and maladaptive coping responses. *Pediatrics* 2013;132:e1481–e1487

Downloaded from www.aappublications.org/news by guest on December 4, 2020

The link between health risk behaviors and bullying (ie, as a bully, victim, or bully-victim) is an emergent area of research, coming out of work focused primarily on educational and psychological correlates of bullying.[1,2] To date, studies have found associations between bullying and alcohol/drug use,[3–5] smoking,[3,6] and psychosomatic problems,[7] with bullies and bully-victims often exhibiting the highest rates of risk-taking behaviors.[8,9] Furthermore, research suggests the association between bullying and somatic complaints might be causal.[10,11] Additional research suggests that bullying can be conceptualized as a stressor leading to stress-related psychosomatic problems and maladaptive coping strategies such as substance use.[12] Sexual risk taking might reflect another potential maladaptive coping strategy, yet to date this has not been examined. This study addresses this gap by considering how bullying is associated with 2 indicators of sexual risk taking: casual sex and sex while under the influence of alcohol or drugs.

This study also builds on research that finds that adolescents with non–bullying-specific victimization histories engage in more sexual risk taking than their nonvictimized peers,[13,14] which mirrors the more extensive research documenting associations between child maltreatment and subsequent maladaptive coping strategies among women.[15] Given that adolescents who report bullying in any capacity are more likely to be victims in other domains than their peers, it is important to assess these other victimization exposures.[16] Not doing so may overestimate the link between bullying and sexual risk taking. Those involved in bullying as bullies or bully-victims might also be at greater risk for sexual risk taking based on research indicating that childhood physical aggression is predictive of subsequent sexual risk behavior[17] and studies highlighting that the most at-risk adolescents engage in both higher levels of fighting and sexual activity than their lower-risk peers.[18]

Furthermore, research highlights that gay, lesbian, bisexual, transgender, and questioning (GLBTQ) youth experience unique stressors in the form of stigma, prejudice, and discrimination.[19] These stressors might translate into experiences with and coping reactions to bullying that are distinct from heterosexual youth. Therefore, the current study considers sexual risk taking separately for heterosexual and GLBTQ adolescents.

In sum, this study fills critical research gaps by assessing the relation between bullying involvement (ie, as a bully, victim, bully-victim, or uninvolved youth) and sexual risk taking. The investigation also explores the degree to which bullying involvement predicts sexual risk-taking behaviors after accounting for other victimization forms (ie, sexual abuse, exposure to domestic violence, childhood physical abuse, dating violence victimization) and considers these associations by sexual orientation status.

METHODS

Students completed self-report surveys in 2008 as part of the Dane County Youth Survey, administered in all middle and high schools in 1 Midwestern county in the United States. The county is geographically diverse, ranging from rural to urban communities. The response rate ranged from 90% to 95% across schools. A waiver of active consent was used, and children provided written assent. The study obtained approval through the participating school district's and the University of Illinois's institutional review boards.

Participants

The initial sample included 9921 students from 24 high schools; 1231 respondents were excluded from analyses because they did not entirely complete the bullying involvement measure and thus could not be classified into bullying subgroups. Three respondents were excluded because they reported not ever having sex but also reported risky sexual behavior. The final sample consisted of 8687 high school students (46.6% boys). High school grade levels were proportionately represented (25.9% 9th, 25.8% 10th, 23.8% 11th, 23.8% 12th), and the mean age was 15.81 (SD = 1.22). The sample was primarily white, non-Hispanic (81.7%, n = 7091), with the remaining participants self-identifying as African American (3.7%, n = 322), Asian (3.6%, n = 314), Hispanic (3.0%, n = 257), Native American (0.9%, n = 77), mixed race/ethnicity (5.5%, n = 478), and other (1.6%, n = 136). Twelve students did not report their race/ethnicity. With respect to sexual orientation, students were asked to indicate whether they identified as heterosexual (not transgendered), gay, lesbian, bisexual, transgendered, or questioning (GLBTQ). On the basis of this question, 94.7% (n = 7849) of the students who reported their sexual orientation indicated that they were heterosexual and not transgendered, and 5.3% (n = 443) of the students reported that they were GLBTQ. The final sample of students did not differ from those who did not complete the bullying involvement measure on gender, grade level, age, race/ethnicity, or sexual orientation.

Measures

Students completed the surveys electronically in school computer laboratories during proctored sessions. Details about the relevant survey components for this study are as follows.

Sexual Risk Behaviors

Students were provided with a definition of sex (ie, oral, anal, or vaginal) and

Downloaded from www.aappublications.org/news by guest on December 4, 2020

then were asked about their sexual activity, including 2 sexual risk-taking questions that were used in analyses for this article: "How many people have you had sex with that you just met or didn't know very well?" and "Have you ever had sex with someone under the influence of alcohol, marijuana, or other drugs?" Participants were considered to have engaged in casual sex if they indicated that they had ever had sex with ≥1 person they had just met or did not know well. Respondents were considered to have engaged in sex under the influence if they reported this occurred at least once during their lifetime.

Victimization Exposure

To assess exposure to domestic violence, respondents were asked the extent to which they agreed with the following: "My parents physically fight with one another." Responses options were strongly agree, agree, disagree, and strongly disagree. Adolescents who responded "strongly agree" or "agree" were considered to have witnessed domestic violence.

With respect to physical abuse, students were asked: "When was the last time a parent kicked you or hit you with their hand/fist or with an object, leaving bruises or bumps?" Response options were past 30 days, not past 30 days but past 12 months, more than 12 months ago, never. Adolescents who reported experiencing these behaviors at any time were considered to have been physically abused.

Sexual abuse was assessed through the item: "When was the last time any adult touched you in a sexual way or forced you to touch them in a sexual way that made you feel unsafe or hurt you in any way?" Response options mirrored those for physical abuse. Adolescents who reported experiencing these behaviors at any time were considered to have been sexually abused.

To measure physical victimization in dating relationships, students responded to the item: "Has a boyfriend or girlfriend ever hit, slapped, or physically hurt you on purpose?" Response options were yes, no, and don't know. Youth who responded "yes" to this item were considered to have experienced dating violence victimization.

The 4 dichotomous victimization exposure variables that were created were then used in subsequent bivariate and multivariate analyses.

Bullying Involvement

The Bullying and Victimization subscales from the University of Illinois Aggression Scales[20] were used to assess bullying perpetration and victimization. For all items, students were asked how often in the past 30 days they had engaged in a specified behavior. Response options included 0 (never), 1 (1 or 2 times), 2 (3 or 4 times), 3 (5 or 6 times), and 4 (≥7 times).

The bullying subscale contains 9 items assessing teasing, upsetting other students for the fun of it, harassing, excluding socially, name-calling, rumor spreading, and encouraging fights. The peer victimization subscale contains 4 items measuring similar dimensions. Cronbach α coefficients were 0.87 for the bullying subscale and 0.84 for the victimization subscale. The scale's validity has also been demonstrated through findings that self-reports of bullying involvement based on subscales are positively associated with peer nominations of bullying involvement.[21]

Students were classified into 1 of 4 groups based on their responses to the bullying and victimization subscales. Youth whose total scores on the bullying perpetration subscale were ≥1 SD above the mean for this subscale but who did not have elevated scores on the victimization subscale were classified as "bullies" (n = 486; 5.6%). Conversely, youth whose total scores on the victimization subscale were 1 SD above the mean but who did not have elevated scores on the bullying subscale were classified as "victims" (n = 745; 8.6%). Respondents whose scores were ≥1 SD above the mean on both the bullying and victimization subscales were considered "bully-victims" (n = 486, 5.6%). Finally, the "uninvolved" group consisted of individuals whose scores were not 1 SD above the mean on either the bullying or victimization subscales (n = 6970, 80.2%).

RESULTS

Preliminary Analysis

As indicated in Table 1, there were differences in bullying involvement by sex, with a higher percentage of girls than boys in the uninvolved group and fewer girls in the bully, victim, and bully-victim groups. Among GLBTQ youth, 60.4% were in the uninvolved group compared with 80.4% of heterosexual youth, and accordingly a higher percentage of GLBTQ youth were classified as bullies, victims, and bully-victims.

Next, χ^2 analyses were conducted to determine the relation between sexual risk taking and bullying involvement. Each of these analyses was computed 2 additional times as 3-way χ^2 so that the influence of sex and sexual orientation could be considered. With respect to casual sex, youth in the uninvolved group engaged in less than their peers in the bully and bully-victim groups but had somewhat comparable rates to adolescents in the victim group. Fewer female than male adolescents in the uninvolved and bully groups reported engaging in casual sex, whereas the converse was true for the victim and bully-victim groups. Regardless of bullying categorization, GLBTQ youth were more likely to report casual sex than

Downloaded from www.aappublications.org/news by guest on December 4, 2020

TABLE 1 Demographics, Sexual Risk Taking Behaviors, and Victimization Experiences for Overall Sample and by Bully or Victim Status

	Overall Sample, % (n = 8687)	Uninvolved, % (80.2%, n = 6970)	Bully, % (5.6%, n = 486)	Victim, % (8.6%, n = 745)	Bully-Victim, % (5.6%, n = 486)
Gender	Boys: 46.6	Boys: 75.9	Boys: 6.7	Boys: 9.5	Boys: 7.9
	Girls: 53.4	Girls: 84.1	Girls: 4.6	Girls: 7.8	Girls: 3.5
Sexual orientation	Heterosexual: 94.7	Heterosexual: 80.9	Heterosexual: 5.6	Heterosexual: 8.2	Heterosexual: 5.4
	GLBTQ: 5.3	GLBTQ: 66.4	GLBQT: 8.1	GLBTQ: 15.1	GLBTQ: 10.4
Casual sex	9.1	Total: 7.4	Total: 24.6	Total: 8.2	Total: 19.8
		Boys: 9.0	Boys: 27.1	Boys: 6.1	Boys: 17.8
		Girls: 6.2	Girls: 21.4	Girls: 10.4	Girls: 23.5
		Heterosexual: 6.8	Heterosexual: 23.3	Heterosexual: 6.3	Heterosexual: 17.6
		GLBTQ: 17.1	GLBTQ: 33.3	GLBTQ: 23.9	GLBTQ: 34.8
Sex under the influence of alcohol or drugs	14.0	Total: 12.3	Total: 33.8	Total: 11.2	Total: 23.0
		Boys: 11.8	Boys: 30.1	Boys: 8.4	Boys: 21.8
		Girls: 12.7	Girls: 38.6	Girls: 14.3	Girls: 25.2
		Heterosexual: 11.6	Heterosexual: 33.9	Heterosexual: 9.4	Heterosexual: 22.5
		GLBTQ: 26.5	GLBTQ: 36.1	GLBTQ: 27.3	GLBTQ: 28.3
Dating violence	7.5	Total: 5.7	Total: 14.4	Total: 12.5	Total: 20.0
		Boys: 4.8	Boys: 13.8	Boys: 9.8	Boys: 18.1
		Girls: 6.4	Girls: 15.2	Girls: 15.5	Girls: 23.9
		Heterosexual: 5.2	Heterosexual: 14.4	Heterosexual: 12.0	Heterosexual: 18.5
		GLBTQ: 13.7	GLBTQ: 17.1	GLBTQ: 23.1	GLBTQ: 36.4
Physical abuse	15.0	Total: 11.9	Total: 25.0	Total: 24.9	Total: 34.4
		Boys: 11.9	Boys: 24.1	Boys: 20.5	Boys: 32.1
		Girls: 11.9	Girls: 26.2	Girls: 29.7	Girls: 39.3
		Heterosexual: 11.3	Heterosexual: 24.3	Heterosexual: 23.5	Heterosexual: 32.5
		GLBTQ: 27.6	GLBTQ: 30.6	GLBTQ: 43.3	GLBTQ: 50.0
Sexual abuse	3.6	Total: 2.8	Total: 5.6	Total: 7.6	Total: 7.8
		Boys: 0.7	Boys: 1.9	Boys: 1.8	Boys: 3.5
		Girls: 4.4	Girls: 10.5	Girls: 13.8	Girls: 16.3
		Heterosexual: 2.1	Heterosexual: 5.3	Heterosexual: 6.1	Heterosexual: 5.6
		GLBTQ: 15.4	GLBTQ: 11.4	GLBTQ: 19.7	GLBTQ: 27.3
Domestic violence exposure	2.0	Total: 1.5	Total: 3.7	Total: 2.8	Total: 5.2
		Boys: 1.4	Boys: 3.3	Boys: 1.8	Boys: 4.4
		Girls: 1.6	Girls: 4.2	Girls: 3.9	Girls: 6.8
		Heterosexual: 1.4	Heterosexual: 3.9	Heterosexual: 2.5	Heterosexual: 4.8
		GLBTQ: 4.8	GLBTQ: 2.9	GLBTQ: 7.5	GLBTQ: 10.9

heterosexual youth, with particularly high rates for GLBTQ bullies and bully-victims.

Similar patterns emerged when assessing rates of sex while under the influence. Specifically, youth in the uninvolved group were less likely to report sex while under the influence than individuals from the bully and bully-victim groups. Rates of sex under the influence for the victim group were roughly comparable to the uninvolved group. Girls in all groups were more likely to report engaging in sex under the influence than boys. Similarly, compared with heterosexual youth, GLBTQ youth in all bullying involvement categories reported more sex under the influence.

Table 1 demonstrates differences across bullying involvement groups with respect to other forms of victimization. For the overall sample, involvement in bullying was associated with higher rates of dating violence victimization, physical abuse by an adult, sexual abuse by an adult, and domestic violence exposure. Within nearly all bullying involvement groups, female respondents reported more victimization experiences in other domains than male respondents, and GLBTQ youth reported more victimization in other domains than heterosexual youth.

Logistic Regression Findings

Logistic regression analyses were computed to determine whether membership in the bully, victim, or bully-victim group predicted casual sex and sex under the influence above and beyond other victimization forms. Models were run separately for heterosexual and GLBTQ youth to determine if different predictors of sexual risk taking emerged. In all models, demographic characteristics (age, gender, race/ethnicity) were included as controls.

Results indicated that for heterosexual youth, membership in the bully and bully-victim groups was associated with greater odds of participating in casual

Downloaded from www.aappublications.org/news by guest on December 4, 2020

sex after taking into account demographic characteristics and victimization in other domains (see Table 2). In contrast, for GLBTQ adolescents, only bully-victim status was predictive of engaging in casual sex once demographic characteristics and other victimization forms were considered. With respect to sex under the influence, bully and bully-victim group membership remained significant predictors even after controlling for demographic characteristics and other victimization forms (see Table 3) for heterosexual youth. Conversely, bullying was not significantly related to engaging in sex under the influence for GLBTQ youth.

Taken together, results highlighted that for both forms of sexual risk taking among heterosexual youth odds ratios were considerably higher for bully-victims than victims. Furthermore, in all analyses, victims were not at greater risk for sexual risk taking than uninvolved youth.

TABLE 2 Logistic Regression Predicting Casual Sex by Bully or Victim Status, Controlling for Age, Gender, Race/Ethnicity, and Other Victimization Exposures

	Heterosexual	GLBTQ
	Odds Ratio (95% CI)	Odds Ratio (95% CI)
Age	1.57 (1.45–1.69)	1.71 (1.26–2.32)
Female gender	0.70 (0.56–0.85)	1.10 (0.62–1.96)
Racial/ethnic minority	1.26 (0.98–1.60)	1.25 (0.68–2.30)
Physical dating violence victimization	2.29 (1.95–2.69)	2.45 (1.22–4.95)
Child maltreatment victimization	2.18 (1.66–2.86)	1.69 (0.92–3.12)
Exposure to domestic violence	1.29 (0.69–2.41)	0.62 (0.14–2.86)
Sexual abuse victimization	2.15 (1.53–3.00)	1.67 (0.87–3.20)
Bully group	3.44 (2.92–4.06)	2.04 (0.81–5.13)
Victim group	0.79 (0.56–1.10)	1.40 (0.86–2.28)
Bully-victim group	2.19 (1.58–3.04)	2.15 (1.22–3.78)

CI, confidence interval.

TABLE 3 Logistic Regression Predicting Sex Under the Influence of Alcohol or Drugs by Bully or Victim Status, Controlling for Age, Gender, Race/Ethnicity, and Other Victimization Exposures

	Heterosexual	GLBTQ
	Odds Ratio (95% CI)	Odds Ratio (95% CI)
Age	2.02 (1.83–2.22)	1.93 (1.35–2.74)
Female gender	1.18 (1.04–133)	1.54 (0.96–2.48)
Racial/ethnic minority	0.93 (0.77–1.13)	0.38 (0.17–0.83)
Physical dating violence victimization	3.77 (2.93–4.87)	7.57 (4.64–12.37)
Child maltreatment victimization	2.11 (1.63–2.75)	1.92 (1.11–3.33)
Exposure to domestic violence	1.23 (0.74–2.06)	0.23 (0.06–0.85)
Sexual abuse victimization	2.07 (1.45–2.97)	2.85 (1.34–6.05)
Bully group	3.72 (3.00–4.60)	1.43 (0.45–4.56)
Victim group	0.73 (0.54–1.00)	0.79 (0.43–1.48)
Bully-victim group	1.93 (1.40–2.67)	0.61 (0.27–1.40)

CI, confidence interval.

COMMENT

Results of this study showed an association between bullying and sexual risk-taking behaviors (maladaptive coping behaviors) among adolescents. Specifically, at the bivariate level, bullies and bully-victims reported more casual sex and sex under the influence than victims and students who were not involved in bullying. For victims, it might be that lower levels of sexual risk taking reflect a reduced likelihood of being in dating relationships,[22] which in turn allows for fewer opportunities to engage in sexual risk-taking behaviors. It also could be that this finding is suggestive of broader tendencies among victims to avoid risk-taking behaviors in general. Moreover, for heterosexual youth, associations with sexual risk taking held even after controlling for other victimization forms. This is consistent with previous research documenting effects of bullying involvement on psychological distress above and beyond other victimization exposures.[16] However, findings differed for GLBTQ youth in that bully-victim status predicted casual sex in multivariate models, but no other bullying variables emerged as significant predictors of sexual risk taking. To that end, it appears that stressors other than bullying may predict sexual risk taking among GLBTQ youth.

Given that the relation to sexual risk taking was found only for bullies and bully-victims in multivariate analyses, bullying perpetration may be conceptualized as a maladaptive coping response to stressors not captured in the current study (eg, harsh parenting). Given that both bullies and bully-victims engage in aggressive behavior, problem behavior theory might offer an alternative explanation for this association.[23] This theory asserts that problem behaviors tend to co-occur. It has been applied to understanding early sexual initiation[24] and problem behaviors at school,[25] although to date it has not been explored as a way in which to understand the link between sexual risk taking and bullying. It is possible that there are stressors that predict 2 potential maladaptive coping strategies (ie, bullying perpetration and sexual risk taking) creating an overlap between youth who perpetrate bullying and who engage in sexual risk taking behaviors. Accordingly, by addressing these underlying factors both behaviors may be reduced.

This study's findings also add to the literature on associations among bullying involvement, demographic variables,

Downloaded from www.aappublications.org/news by guest on December 4, 2020

and other victimization experiences. Consistent with previous research, girls were less likely to be involved with bullying than boys.[20,26] Although some research has found that relational aggression is more common among girls,[27,28] given that the bullying instrument used here includes 1 question directly related to relational aggression, it is not surprising that this result emerged. Similarly, in line with past research,[29,30] GLBTQ youth were more likely to be involved in all types of bullying than heterosexual youth, with striking discrepancies in the bully-victim and victim subgroups. This highlights the need to consider the unique experiences of GLBTQ youth in school-based prevention programs and to create school cultures that do not implicitly or explicitly foster harassment of sexual minority youth.

Finally, this study adds to existing literature on the link between bullying involvement and other victimization forms[16]; youth involved in bullying were more likely than uninvolved youth to report dating violence victimization, physical and sexual abuse by an adult, and exposure to domestic violence. This suggests that prevention efforts need to attend not only to bullying but also to the other stressors that are operating within the lives of youth that may lead to a host of maladaptive coping responses. Although not assessed in the current study, future research on this topic should also clarify the extent to which forced sex is a component of sexual risk-taking behaviors, given that this would be consistent with this study's findings on other victimizations.

From a broader prevention perspective, this study's findings have implications for both bullying prevention programs and programs aimed at reducing maladaptive coping behaviors such as sexual risk taking. In addressing appropriate coping strategies and interpersonal problem-solving skills, bullying prevention programs might offer youth proactive, healthy ways of dealing with bullying. Similarly, programs aimed at teaching adolescents healthy sexual practices (eg, communication between partners) could address bullying as 1 factor that might feed into making unhealthy choices. Furthermore, given that bullies and bully-victims might be at greater risk for unintended pregnancies and sexually transmitted infections, it would be important to include education around these topics in intervention programs. The notion of covering a range of issues affecting youth in a singular program is in line with calls from the field to create more comprehensive prevention programs that address multiple stressors and maladaptive coping strategies,[31] based on research that finds considerable overlap in risk factors for youth as well as evidence indicating that effective prevention programs tend to share common elements.

This study had a number of limitations that should be kept in mind when interpreting findings. First, students who did and did not complete the bullying measure might be qualitatively different from one another, which could have skewed findings. Second, the investigation was cross-sectional, and thus findings do not speak to the directionality of the association between bullying and sexual risk taking nor imply that the relation is casual in nature. Third, the survey did not assess additional stressors (eg, emotional dating violence, parental characteristics) that might be relevant to both bullying and sexual risk taking. Fifth, the respondents lived in 1 state, limiting generalizability to students residing elsewhere. Finally, all data relied on youth self-reports; collecting data from multiple sources would have bolstered support for findings.

CONCLUSIONS

Despite limitations, this study adds to the literature by extending our understanding of the relationship between bullying and sexual risk taking, a potential maladaptive coping response, and describing how associations differ between GLBTQ and heterosexual youth. In particular, findings highlight the complex nature of sexual risk taking among youth and suggest that bullying involvement might be a more salient predictor of sexual risk taking for heterosexual adolescents. Future studies could address mediators and moderators of the association between bullying and sexual risk taking and clarify how pathways might differ based on demographic characteristics and sexual orientation.

REFERENCES

1. Brunstein Klomek A, Marrocco F, Kleinman M, Schonfeld IS, Gould MS. Bullying, depression, and suicidality in adolescents. *J Am Acad Child Adolesc Psychiatry.* 2007;46(1):40–49
2. Schneider SK, O'Donnell L, Stueve A, Coulter RWS. Cyberbullying, school bullying, and psychological distress: a regional census of high school students. *Am J Public Health.* 2012;102(1):171–177
3. Russell ST, Sinclair KO, Poteat VP, Koenig BW. Adolescent health and harassment

Downloaded from www.aappublications.org/news by guest on December 4, 2020

based on discriminatory bias. *Am J Public Health*. 2012;102(3):493–495

4. Tharp-Taylor S, Haviland A, D'Amico EJ. Victimization from mental and physical bullying and substance use in early adolescence. *Addict Behav*. 2009;34(6-7):561–567
5. Radliff KM, Wheaton JE, Robinson K, Morris J. Illuminating the relationship between bullying and substance use among middle and high school youth. *Addict Behav*. 2012;37(4):569–572
6. Morris EB, Zhang B, Bondy SJ. Bullying and smoking: Examining the relationships in Ontario adolescents. *J Sch Health*. 2006;76(9):465–470
7. Gini G. Associations between bullying behaviour, psychosomatic complaints, emotional and behavioural problems. *J Paediatr Child Health*. 2008;44(9):492–497
8. Liang H, Flisher AJ, Lombard CJ. Bullying, violence, and risk behavior in South African school students. *Child Abuse Negl*. 2007;31(2):161–171
9. Peleg-Oren N, Cardenas GA, Comerford M, Galea S. An association between bullying behaviors and alcohol use among middle school students. *J Early Adolesc*. 2012;32(6):761–775
10. Fekkes M, Pijpers FIM, Fredriks AM, Vogels T, Verloove-Vanhorick SP. Do bullied children get ill, or do ill children get bullied? A prospective cohort study on the relationship between bullying and health-related symptoms. *Pediatrics*. 2006;117(5):1568–1574
11. Hansen TB, Steenberg LM, Palic SP, Elkit A. A review of psychological factors related to bullying victimization in schools. *Aggress Violent Behav*. 2012;17(4):383–387
12. Hager AD, Runtz MG. Physical and psychological maltreatment in childhood and later health problems in women: an exploratory investigation of the roles of perceived stress and coping strategies. *Child Abuse Negl*. 2012;36(5):393–403
13. Black MM, Oberlander SE, Lewis T, et al. Sexual intercourse among adolescents maltreated before age 12: a prospective investigation. *Pediatrics*. 2009;124(3):941–949
14. Putnam FW. Ten-year research update review: child sexual abuse. *J Am Acad Child Adolesc Psychiatry*. 2003;42(3):269–278
15. Senn TE, Carey MP. Child maltreatment and women's adult sexual risk behavior: childhood sexual abuse as a unique risk factor. *Child Maltreat*. 2010;15(4):324–335
16. Holt MK, Finkelhor D, Kantor GK. Hidden forms of victimization in elementary students involved in bullying. *School Psych Rev*. 2007;36(3):345–360
17. Timmermans M, van Lier PAC, Koot HM. Which forms of child/adolescent externalizing behaviors account for late adolescent risky sexual behavior and substance use? *J Child Psychol Psychiatry*. 2008;49(4):386–394
18. Zweig JM, Lindberg LD, McGinley KA. Adolescent health risk profiles: the co-occurrence of health risks among females and males. *J Youth Adolesc*. 2001;30(6):707–728
19. Meyer IH. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychol Bull*. 2003;129(5):674–697
20. Espelage DL, Holt MK. Bullying and victimization during early adolescence: Peer influences and psychosocial correlates. *J Emotional Abuse*. 2001;2(2–3):123–142
21. Espelage DL, Holt MK, Henkel RR. Examination of peer-group contextual effects on aggression during early adolescence. *Child Dev*. 2003;74(1):205–220
22. Arnocky S, Vaillancourt T. A multi-informant longitudinal study on the relationship between aggression, peer victimization, and dating status in adolescence. *Evol Psychol*. 2012;10(2):253–270
23. Jessor R, Jessor SL. *Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth*. New York, NY: Academic Press; 1977
24. Jessor R, Costa F, Jessor L, Donovan JE. Time of first intercourse: a prospective study. *J Pers Soc Psychol*. 1983;44(3):608–626
25. Hirschfield PJ, Gasper J. The relationship between school engagement and delinquency in late childhood and early adolescence. *J Youth Adolesc*. 2011;40(1):3–22
26. Eaton DK, Kann L, Kinchen S, et al; Centers for Disease Control and Prevention (CDC). Youth risk behavior surveillance—United States, 2011. *MMWR Surveill Summ*. 2012;61(4):1–162
27. Wang J, Iannotti RJ, Nansel TR. School bullying among adolescents in the United States: physical, verbal, relational, and cyber. *J Adolesc Health*. 2009;45(4):368–375
28. Zimmer-Gembeck MJ, Geiger TC, Crick NR. Relational and physical aggression, prosocial behavior, and peer relations: gender moderation and bidirectional associations. *J Early Adolesc*. 2005;25(4):421–452
29. Bontempo DE, D'Augelli AR. Effects of at-school victimization and sexual orientation on lesbian, gay, or bisexual youths' health risk behavior. *J Adolesc Health*. 2002;30(5):364–374
30. Espelage DL, Aragon SR, Birkett M, Koenig BW. Homophobic teasing, psychological outcomes, and sexual orientation among high school students: what influence do parents and schools have? *School Psych Rev*. 2008;37(2):202–216
31. Nation M, Crusto C, Wandersman A, et al. What works in prevention. Principles of effective prevention programs. *Am Psychol*. 2003;58(6–7):449–456

Downloaded from www.aappublications.org/news by guest on December 4, 2020

Sexual Risk Taking and Bullying Among Adolescents

Melissa K. Holt, Jennifer L. Matjasko, Dorothy Espelage, Gerald Reid and Brian Koenig

Pediatrics 2013;132;e1481
DOI: 10.1542/peds.2013-0401 originally published online November 11, 2013;

Updated Information & Services	including high resolution figures, can be found at: http://pediatrics.aappublications.org/content/132/6/e1481
References	This article cites 30 articles, 2 of which you can access for free at: http://pediatrics.aappublications.org/content/132/6/e1481#BIBL
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): **Injury, Violence & Poison Prevention** http://www.aappublications.org/cgi/collection/injury_violence_-_poison_prevention_sub **Bullying** http://www.aappublications.org/cgi/collection/bullying_sub **Psychiatry/Psychology** http://www.aappublications.org/cgi/collection/psychiatry_psychology_sub
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.aappublications.org/site/misc/Permissions.xhtml
Reprints	Information about ordering reprints can be found online: http://www.aappublications.org/site/misc/reprints.xhtml

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

Downloaded from www.aappublications.org/news by guest on December 4, 2020

PEDIATRICS®
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Sexual Risk Taking and Bullying Among Adolescents

Melissa K. Holt, Jennifer L. Matjasko, Dorothy Espelage, Gerald Reid and Brian Koenig

Pediatrics 2013;132;e1481
DOI: 10.1542/peds.2013-0401 originally published online November 11, 2013;

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://pediatrics.aappublications.org/content/132/6/e1481

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 345 Park Avenue, Itasca, Illinois, 60143. Copyright © 2013 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

Downloaded from www.aappublications.org/news by guest on December 4, 2020