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SEXUAL ORIENTATION AND BULLYING AMONG ADOLESCENTS IN THE GROWING UP TODAY STUDY

Elise D. Berlan, MD^{1,2,3}, Heather L. Corliss, PhD³, Alison E. Field, ScD^{3,4}, Elizabeth Goodman, MD⁵, and S. Bryn Austin, ScD^{3,4,6}

¹Nationwide Children's Hospital

²Department of Pediatrics, The Ohio State University College of Medicine

³Division of Adolescent and Young Adult Medicine, Children's Hospital Boston

⁴Channing Laboratory, Department of Medicine, Brigham and Women's Hospital, and Harvard Medical School

⁵The Floating Hospital for Children at Tufts - New England Medical Center, Tufts University School of Medicine

⁶Department of Society, Human Development, and Health, Harvard School of Public Health

Abstract

Purpose—To examine the relationship between sexual orientation and past-year reports of bullying victimization and perpetration in a large sample of American youth.

Methods—Survey data from 7,559 adolescents aged 14 to 22 who responded to the 2001 wave questionnaire of the Growing Up Today Study were examined cross-sectionally. Multivariable generalized estimating equations regression was performed using the modified Poisson method. We examined associations between sexual orientation and past-year bully victimization and perpetration with heterosexuals as the referent group, stratifying by gender and controlling for age, race/ethnicity, and weight status.

Results—Compared to heterosexual males, mostly heterosexual males (risk ratio (RR): 1.45; 95% confidence interval (CI): 1.13, 1.86) and gay males (RR 1.98; CI 1.39, 2.82) were more likely to report being bullied. Similarly, mostly heterosexual females (RR 1.72, 95% CI 1.45, 2.03), bisexual females (RR 1.63, 95% CI 1.14, 2.31), and lesbians (RR 3.36, 95% CI 1.76, 6.41) were more likely to report being bullied than were heterosexual females. Gay males (RR 0.34, 95% CI 0.14, 0.84) were much less likely to report bullying others than were heterosexual males. Mostly heterosexual females (RR 1.70, 95% CI 1.42, 2.04) and bisexual females (RR 2.41, 95% CI 1.80, 3.24) were more likely to report bullying others than heterosexual females. No lesbian participants reported bullying others.

Conclusions—There are significant differences in reports of bullying victimization and perpetration between heterosexual and sexual minority youth. Clinicians should inquire about sexual orientation and bullying, and coordinate care for youth who may need additional support.

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Corresponding Author: Elise DeVore Berlan, MD, MPH Section of Adolescent Medicine Nationwide Children's Hospital 700 Children's Drive Columbus, OH 43205 Elise.berlan@nationwidechildrens.org.

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Keywords

adolescent; bullying; sexual behavior; sexual orientation

INTRODUCTION

Sexual minority youth are young people with same-sex or both-sex sexual attraction and/or partners or youth who self identify as gay, lesbian, or bisexual. Sexual minority youth are particularly vulnerable to adverse health outcomes in a variety of physical and mental health domains [1–6]. For example, sexual minority youth are more likely than their heterosexual peers to experience suicidal thinking or attempt suicide [5]. They are more likely than their heterosexual peers to be threatened or injured at school [1,2,6], skip school because of feeling unsafe [6], be violently attacked requiring medical treatment and witness violence [7], and experience sexual and physical abuse [8,9]. Experiences with violence have been shown to be an important mediator of the relationship between sexual orientation and health risk behaviors including substance use, suicidality, and sexual-risk behaviors [2].

Bullying is a form of violence affecting the health of children and adolescents [10] that may disproportionately affect sexual minority youth. Bullying is characterized as a specific kind of aggressive behavior that is unprovoked and intended to harm or disturb. The behavior occurs repeatedly over time and there is an imbalance of power, with a more powerful person attacking a less powerful one [11]. In a national study, Nansel *et al.* found that almost one in three 6th through 10th grade students reported moderate or frequent involvement in bullying (being bullied and/or bullying others) [10]. Cross-sectional studies have found that involvement in bullying is associated with many negative health indicators, including: violent behavior [12], depression [13], suicidal ideation and behavior [13], physical health problems [10,14], reporting poorer quality of life [15], delinquency [16], and school and psychosocial maladjustment [10,14]. Longitudinal studies demonstrate that children who are involved in bullying, in addition to being at risk of future involvement in bullying [17], psychiatric problems and somatic complaints [18,19], as well as psychiatric disorders in early adulthood [20].

Studies based on samples of sexual minority youth drawn from gay, lesbian, and bisexual community settings demonstrate that lesbian, gay, and bisexual youths experience high levels of victimization, ranging from verbal insults to physical assault [21,22]. Despite increasing recognition of bullying as a public health problem and the accumulation of research related to sexual orientation and violence, there have been few studies that specifically investigate the relationship between bullying experiences and sexual orientation. In 2003, questions related to victimization by bullying were added to the Massachusetts Youth Risk Behavior Survey for the first time. This statewide survey of youth in Massachusetts schools found that 42% of sexual minority youth reported being bullied within the last year, compared to 21% of the heterosexual population [23]. In a Canadian school-based sample, Williams *et al.* found that lesbian, gay, bisexual, and youth who are questioning their sexual orientation reported more experiences of bullying over a two-month period than their heterosexual peers [9].

Few studies have disaggregated bisexual and mostly heterosexual adolescents from lesbian and gay adolescents. Previously published research in the Growing Up Today Study (GUTS) cohort has identified important differences between mostly heterosexual, bisexual, and lesbian/gay adolescents and heterosexual adolescents with respect to tobacco use [3], alcohol use [4], overweight [24], and disordered eating [25]. Additionally, in a school-based sample youth with partners of both sexes were more likely to report feeling unsafe at school and being threatened or injured with a weapon at school than opposite-sex partnered youth and same-sex partnered

youth [26]. Little is known about specific bullying victimization and perpetration differences between sexual minority subgroups and heterosexual youth. Consequently, we were interested in examining subgroup differences between sexual minority adolescents and heterosexual adolescents in reports of bullying victimization and perpetration in our sample. Previously published research in GUTS found that sexual minority girls and young women were more likely to be overweight than their heterosexual peers [24]. Moreover, both bully victimization and perpetration experiences appear to be more prevalent in overweight children and youth [27]. Our study was designed to examine and control for differences in weight status.

In this study, we aimed to examine the relationship between sexual orientation and bullying victimization and perpetration experiences in a large sample of American youth. We undertook the current study to estimate and compare the prevalence of bullying victimization and perpetration in youth who differ in their sexual orientation. We hypothesized that compared to heterosexual adolescents sexual minority youth would be more likely to be bullied and less likely to bully others.

METHODS

Study Participants and Design

The Growing Up Today Study is a national longitudinal cohort study of 16,882 adolescent boys and girls who are children of female registered nurses participating in the Nurses' Health Study II. Invitations to participate and baseline questionnaires were initially mailed in October 1996 to the 13,261 girls and 13,504 boys whose mothers had granted consent to invite them into the study. At baseline, 9,049 girls and 7,943 boys were enrolled in the cohort. The cohort is 93.3% white, 1.5% Asian, 0.9% African American, 1.5% Hispanic, 0.8% Native American, and 2.2% other ethnicity. Follow-up questionnaires assessing a wide range of health behaviors have been mailed biannually. Field *et al.* provide a detailed description of the GUTS methods [28]. This study was approved by the institutional review board at the Brigham and Women's Hospital.

We conducted cross-sectional analyses of data gathered from the 7,952 adolescents aged 14 to 22 years who responded to the GUTS 2001 wave questionnaire. We used data from 7,559 of the total responders (95%) who completed items on sexual orientation and bullying. Analyses did not include 31 respondents who were unsure of their sexual orientation and the 343 missing a response to the orientation question, and 19 who did not respond to both bullying questions.

Measures

The sexual orientation question was adapted from the Minnesota Adolescent Health Survey and asked about feelings of attraction using six mutually exclusive response options [29]. Participants were asked, "Which one of the following best describes your feelings?" Responses included: 1) Completely heterosexual (attracted to persons of the opposite sex); 2) Mostly heterosexual; 3) Bisexual (equally attracted to men and women); 4) Mostly homosexual; 5) Completely homosexual (lesbian/gay, attracted to persons of the same sex); or 6) Not sure. Because of small subgroup sizes, mostly homosexual and completely homosexual responses were combined into a single category (lesbian/gay). Study participants were then grouped into one of four categories of sexual orientation groupings: heterosexual; mostly heterosexual; bisexual; and lesbian/gay.

Experiences with bullying within the last year were assessed with the following two questions adopted from the World Health Organization Health Behavior of School-aged Children Survey [14]. The victim item read, "During the past year, how often have you been bullied?" Response options included: 1) I haven't been bullied; 2) Once or twice; 3) Sometimes; 4) About once a

week; and, 5) Several times a week. The perpetrator item read, “During the past year, how often have you taken part in bullying others?” Response options included: 1) I haven't bullied anyone; 2) Once or twice; 3) Sometimes; 4) About once a week; and, 5) Several times a week. Responses for both victimization and perpetration were classified as any involvement or no involvement to create binary outcome variables.

Self-reported height and weight were used to calculate body mass index (BMI) in kg/m². A SAS program provided by Centers for Disease Control and Prevention was used to identify weights and heights considered to be biologically implausible values (age-specific weight and height z-score below -6 or above 6 and BMI z-score below -4 or above 5) [30]. Participants' weight status was classified as overweight/obese, not overweight/obese, or missing/biologically implausible using International Obesity Task Force standards proposed by Cole *et al.*, which define overweight according to age and sex-specific BMI cut offs corresponding to a BMI greater than 25 kg/m² at age 18 and obese according to age and sex-specific BMI cut offs corresponding to a BMI greater than 30 kg/m² at age 18 [31].

The race/ethnicity question asks participants to identify themselves as White, Black, Hispanic, Asian or Pacific Islander, American Indian/Alaskan Native, and Other. Respondents were categorized as white, non-white, or missing race/ethnicity due to small sample size in the non-white group.

Statistical Analysis

Cross-sectional bivariate and multivariable regression analyses were performed using SAS Version 9.1 (1999, SAS Institute Inc., Cary, NC) to determine sexual orientation group differences in the prevalence of past-year bullying victimization and perpetration. Bivariate regression analyses were performed to evaluate the relationship between sexual orientation and covariates (gender, age, race/ethnicity, and weight status), which are known to be related to experiences with bullying [27,32]. All analyses were stratified by gender due to differences in patterns of involvement in bullying among males and females. We performed multivariable generalized estimating equations regression (GEE) to account for the non-independence of sibling clusters. In addition, we used the modified Poisson method described by Zou to estimate risk ratios (RR.) This strategy provides greater accuracy than the odds ratio for estimating the risk ratio for common outcomes (prevalence greater than 10%). We examined associations between sexual orientation and bully victimization and perpetration with heterosexuals as the referent group. Because we found that that age, race/ethnicity, and weight status were associated with both sexual orientation and bullying involvement, we included these covariates in all multivariable models to control for potential confounding.

RESULTS

Among the 2720 male participants in our analytic sample, 93.5% (n=2544) described themselves as heterosexual, 4.5% (n=123) as mostly heterosexual, 0.5% (n=14) as bisexual, and 1.4% (n=39) as mostly homosexual or completely homosexual (gay). Among the 4839 female participants who are included in analyses, 88.3% (n=4274) described themselves as heterosexual, 9.5% (n=460) as mostly heterosexual, 1.9% (n=90) as bisexual, and 0.3% (n=15) as mostly homosexual or completely homosexual (lesbian). Table 1 displays characteristics of the study population by sexual orientation and stratified by gender.

Table 2 displays sexual orientation group prevalence estimates, adjusted RRs, and 95% confidence intervals (CI) for adolescent bullying victimization and perpetration among male and female study participants. After adjusting for age, race/ethnicity, and weight status, female mostly heterosexual and bisexual youth were shown to be at increased risk for both victimization by bullying and perpetration of bullying compared to heterosexual females.

Lesbians were more likely to report victimization than heterosexuals, but we were unable to estimate the risk ratio for perpetration for lesbians because none reported the behavior. Among males, we found that mostly heterosexual and gay youth were at increased risk of victimization compared to heterosexual males. With regard to perpetration of bullying among males, we found that no group was at increased risk. In fact, gay males were less likely to perpetrate bullying than were heterosexual males.

DISCUSSION

Among youth responding to the 2001 wave of the Growing Up Today Study, the 1-year prevalence of reports of bullying victimization and perpetration differed by sexual orientation and gender. Bullying experiences, both victimization and perpetration, were more likely among sexual minority females than heterosexual females, although no lesbians reported bullying others in our study. The relationships between sexual orientation and bullying were different among males. Mostly heterosexual and gay males were more likely to report victimization by bullying compared to heterosexual males, and gay males were significantly less likely to report that they bullied others compared to heterosexual males.

Our study contributes to the current state of knowledge in several ways. Although the prevalence of child and adolescent bullying appears to decline after the middle school years [10], the experiences of the older adolescents in GUTS, along with several other studies [17, 33] support that bullying victimization and perpetration are nonetheless common in the adolescent population. Most studies to date that have examined the relationship between experiences with victimization and sexual orientation have combined sexual minority respondents into a single category, obscuring the potentially important differences that may exist between sexual orientation sub-populations and heterosexuals [1,2,9]. Our study was designed to compare the bullying experiences of mostly heterosexual, bisexual, and lesbian/gay adolescents to heterosexual adolescents. Additionally, our study uniquely contributes an examination of both bully victimization and perpetration experiences among these adolescents. So far, sexual orientation differences in experiences of bully perpetration have received little attention in the literature.

Our finding of increased reports of bullying perpetration among mostly heterosexual and bisexual girls is novel. The literature on this topic is scant, but in one school-based sample of Asian-Pacific Islanders in Guam, girls who identified as lesbian and bisexual were more likely to report participation in physical aggression on high school campuses than were heterosexual girls [34]. In that study, participation in physically aggressive acts was associated with being in threatening situations and feeling unsafe at school, leading the authors to speculate that for lesbian and bisexual girls, fighting may be more likely to be defensive, rather than aggressive. In our study, one plausible explanation for the higher prevalence of bullying perpetration among mostly heterosexual and bisexual girls may be a result of the elevated bully victimization they have experienced. However, gay males and lesbians also were more likely, in our study, to report more victimization by bullying than heterosexuals and were not more likely to report bullying perpetration. More research is needed to understand the sexual orientation group differences in bullying perpetration.

There are several plausible reasons why sexual minority youth of both genders may be disproportionately victimized by bullying. It is known that children who differ from their peers on the basis of physical appearance, disability, and gender non-conformity are often the targets of social isolation, harassment, bullying, and violence by their peers [35–37]. Moreover, the general content of verbal harassment that sexual minority and heterosexual youth experience is frequently disparaging of homosexuality [38,39]. Lesbian, gay, and bisexual adults who report being bullied as youths recall experiencing frequent name-calling, being ridiculed in

front of others, and physical violence [37]. The names and labels used by bullying perpetrators were derogatory and frequently referred to gender non-conformity and minority sexual orientation.

Bullying victimization may be part of a spectrum of violent experiences that contributes to adverse mental health outcomes in sexual minority youth. The detrimental effects of bullying victimization have been well documented in the general population [10,12,18]. Studies suggest that violence victimization experiences among sexual minority youth increase their odds of experiencing adverse mental health outcomes [2,35,40]. For example, Bontempo and D'Augelli demonstrated that victimization mediated an increased risk for suicidality among sexual minority youth in their study [2]. Similarly, in a community sample of sexual minority youth, Friedman *et al.* demonstrated that adolescent bullying victimization mediated an increased risk for suicidality among gay male young adults [35]. Controlling for other factors, Huebner *et al.* found increased levels of suicidal ideation among young gay and bisexual men who reported being victimized by physical violence within the last six months compared to those who did not report physical violence [40].

Limitations

Findings should be considered in the context of some limitations. The most germane to our research question is that our ability to examine the relationship between bullying perpetration and sexual orientation among gay and bisexual males and lesbians was limited due to small sample sizes. In addition, our cohort comprises children of nurses and includes largely non-Hispanic whites; it is not a random sample of U.S. adolescents. Experiences with bullying victimization and perpetration among racial/ethnic minority non-heterosexual youth are not well captured in our sample and care should be taken in generalizing our findings. Though not a representative sample, the GUTS cohort is not affected by selection bias common in studies of sexual minority youth recruited from lesbian/bisexual/gay organizations or venues. The experiences of youth who are recruited from lesbian/bisexual/gay organizations and venues may be different from those of sexual minority youth not involved in such organizations and venues. Consequently, those samples may not adequately represent the diversity of experiences of sexual minority youth in America. Because our data are cross-sectional, we cannot infer causality in the relationship between sexual orientation and experiences with bullying. Moreover, although we used a validated measure of bullying, our measures are based on self-report and bear potential for misrepresenting actual values and experiences. A recently published study comparing definition-based measures and behavior-based measures has identified significant discrepancies [32]. Our questions around bullying experiences allow for a broad interpretation by the respondent of his or her own experiences. We suspect that in this way our measure likely underestimates actual bullying experiences, as many young people may not identify behaviors such as relational aggression as indirect bullying. Also, the GUTS questionnaire did not include questions assessing intimate partner violence, and it is not known whether youth would consider this type of treatment to be bullying. Recall bias may be present because our bullying questions ask about past-year bullying experiences. As it may be difficult to remember a whole year's experiences, participants' responses may underestimate their actual experiences. Future research, using a more detailed bullying measure, will allow researchers to probe content, location, and type of bullying experienced (e.g. physical, verbal, indirect).

CONCLUSIONS

In this study, we found that significant differences in reports of bully victimization and perpetration between heterosexual youth and sexual minority youth and that these relationships between bullying and sexual orientation differed by gender. Clinicians providing care for adolescents should be aware that youth with a minority sexual orientation may be at higher

risk for victimization by bullying and perpetration of bullying. They should routinely inquire about sexual orientation and inquire about experiences with bullying, as well as other types of interpersonal violence and abuse. Clinicians should also be aware that sexual minority youth, in particular those who experience interpersonal violence, should be carefully screened for depression and suicidality and involvement in high risk behaviors. Referrals and appropriate care should be coordinated for those youth who may need additional support. Further research is needed to understand the mechanisms driving sexual orientation group differences in victimization and perpetration, as well as the possible role of bullying experiences in negative health outcomes adversely affecting sexual minority youth. Because adolescents spend a significant portion of their day in school, child and adolescent health professionals should support school policies that ensure access to a safe learning environment for all students.

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Sociodemographic characteristics of respondents in the 2001 Growing Up Today Study by sexual orientation and gender.

Table 1

Males	Heterosexual (n = 2544)	Mostly Heterosexual (n = 123)	Bisexual (n=14)	Gay (n=39)	Significance
Mean age in years (SD)	17.4 (1.6)	17.7 (1.6)	17.6 (1.4)	18.2 (1.5)	p = .004
Race % (n)					
White	93.4 (2376)	91.1 (112)	92.9 (13)	89.7 (35)	p = .58
Non-white	5.8 (148)	8.9 (11)	7.1 (1)	10.3 (4)	
Overweight/Obese % (n)	25.2 (641)	30.1 (37)	28.6 (4)	30.8 (12)	p = .51
Females	Heterosexual (n=4274)	Mostly Heterosexual (n=460)	Bisexual (n=90)	Lesbian (n=15)	Significance
Mean age in years (SD)	17.6 (1.6)	17.9 (1.6)	17.9 (1.6)	19.4 (1.1)	p < .0001
Race % (n)					
White	93.6 (4001)	89.1 (410)	85.6 (77)	86.7 (13)	p = .02
Non-white	6.1 (261)	10.4 (48)	11.1 (10)	6.7 (1)	
Overweight/Obese % (n)	18.3 (782)	24.4 (112)	32.2 (29)	26.7 (4)	p = .002

Note: P-values estimated by generalized estimating equation regression. Percentages in columns do not add to 100 because of missing data.

Table 2

Prevalence, multivariable risk ratio and 95% confidence intervals of adolescent bullying victimization and perpetration within the last year among respondents in the 2001 Growing up Today Study by sexual orientation and gender (N=7559).

		Male (N=2720)				Female (N=4839)			
		% (n)	Adjusted RR	95% CI	% (n)	Adjusted RR	95% CI		
Bullying Victim									
Sexual Orientation									
Heterosexual	26.0 (660)	Ref	Ref	Ref	15.9 (678)	Ref	Ref	Ref	
Mostly heterosexual	35.0 (80)	1.45	1.13–1.86		25.4 (117)	1.72	1.45–2.03		
Bisexual	35.7 (5)	1.46	0.72–2.99		25.6 (23)	1.63	1.14–2.31		
Lesbian/Gay	43.6 (17)	1.98	1.39–2.82		40.0 (6)	3.36	1.76–6.41		
Bullying Perpetrator									
Sexual Orientation									
Heterosexual	34.7 (883)	Ref	Ref	Ref	14.3 (609)	Ref	Ref	Ref	
Mostly heterosexual	35.8 (44)	1.07	0.84–1.36		23.3 (107)	1.70	1.42–2.04		
Bisexual	50.0 (7)	1.46	0.86–2.47		34.4 (31)	2.41	1.80–3.24		
Lesbian/Gay	10.5 (4)	0.34	0.14–0.84		0	*	*	*	

Note: Risk ratios (RR) and 95% confidence intervals (CI) are adjusted for age, race/ethnicity, and weight status.

* No lesbians reported bullying perpetration