

# Letters

## RESEARCH LETTER

### Physical and Sexual Violence Among Gay, Lesbian, Bisexual, and Questioning Adolescents

Physical and sexual violence are known public health hazards,<sup>1</sup> imposing substantial physical and emotional burdens on those who have experienced such violence.<sup>2</sup> Gay, lesbian, bisexual, and questioning adolescents are believed to be at higher risk than their heterosexual peers for violence.<sup>3</sup> However, no nationally representative study has examined the holistic risk of violence to sexual minority adolescents, and some forms of violence (eg, sexual assault by a stranger), to our knowledge, have not been assessed.<sup>4</sup> We used data from the National Youth Risk Behavior Survey (YRBS), conducted every 2 years by the Centers for Disease Control and Prevention, to quantify the risk of physical and sexual violence faced by sexual minority adolescents attending high schools in the United States.

**Methods** | For this cross-sectional study, we used pooled data from the 2015 and 2017 YRBS public use files to broaden the sample size and scope of our analysis. The survey in each of these years had a response rate of 60%.

The YRBS uses a 3-stage cluster sample of US counties within all states, schools within counties, and classrooms within schools to achieve a nationally representative sample of American adolescents. Students anonymously record responses on computer-scannable paper surveys administered during the school day. This study, which uses secondary, deidentified data, was exempted from institutional review board approval and informed consent as necessary for protection of public health under the common rule, at 45-CFR-46.102.

Participants in the YRBS in each year were asked to indicate their sex (female or male) and sexual orientation (heterosexual, gay or lesbian, bisexual, or not sure) and whether they had experienced any of 3 types of physical violence (past-year physical violence committed by a romantic partner, past-year physical fights anywhere, or past-year physical fights at school) and 2 types of sexual violence (lifetime forced intercourse, past-year sexual assault by a romantic partner). In 2017, participants were asked an additional question: whether they had experienced past-year sexual assault committed by anyone.

Outcome variables were dichotomized to indicate whether participants had experienced each form of violence 0 times or at least 1 time. The risks for each type of violence among sexual minority adolescents were quantified through descriptive statistics and logistic regression analysis after adjustment for the same confounders used in a previous analysis<sup>5</sup>: survey year, sex, age, race/ethnicity, English language proficiency, and grade level. Risk ratios were computed from the regression models using random draws from the variance-covariance matrix.<sup>5</sup> Survey sample weight-adjusted analyses were conducted with the

survey package in R, version 3.5.2 (R Foundation).<sup>6</sup> Significance tests for regression analyses used 2-sided  $\alpha = .05$ .

**Results** | Of the 28 811 participants in the 2015 and 2017 YRBS, 87.1% reported their sexual orientation as heterosexual, 2.2% as gay or lesbian, 7.0% as bisexual, and 3.7% as not sure.

Twelve percent of sexual minority adolescents reported physical violence committed by a romantic partner, 27.6% engaged in a physical fight, and 11.1% engaged in a physical fight on school property (**Table**). Furthermore, 20.6% of sexual minority adolescents reported experiencing sexual assault, 18.0% reported experiencing forced intercourse, and 12.5% reported experiencing sexual assault by a romantic partner.

After adjusting for confounders, sexual minority adolescents were consistently more likely than their heterosexual counterparts to report physical and sexual violence, including physical violence committed by a romantic partner (adjusted risk ratio [aRR], 1.97; 95% CI, 1.65-2.34) and sexual assault committed by anyone (aRR, 2.10; 95% CI, 1.68-2.58) in the preceding 12 months. Bisexual sexual minority adolescents were at a particularly elevated risk for violence, including physical violence committed by a romantic partner (aRR, 2.22; 95% CI, 1.82-2.67) and sexual assault committed by anyone (aRR, 2.36; 95% CI, 1.76-3.10).

Sexual minority female adolescents were at an elevated risk of physical violence relative to the risk to heterosexual female adolescents, including engaging in a physical fight anywhere (aRR, 1.74; 95% CI, 1.53-1.96) and engaging in a fight on school property (aRR, 1.91; 95% CI, 1.49-2.43). Sexual minority male adolescents had elevated risks of sexual violence relative to the risks to heterosexual male adolescents, including the risk of sexual assault (aRR, 4.64; 95% CI, 2.97-6.84) and the risk of forced intercourse (aRR, 4.70; 95% CI, 3.40-6.32).

**Discussion** | Sexual minority adolescents—particularly bisexual youth—are at an elevated risk for both physical and sexual violence. Given the substantial physical and emotional consequences of violence for those subjected to it and the large existing health disparities among sexual minority adolescents, addressing both physical and sexual violence against sexual minority adolescents should become a public health priority.

This study has some limitations. Self-reports are subject to misreporting and bias. Students who reported “not sure” may have been questioning their sexuality or unsure of the question. The YRBS does not collect information on transgender individuals; thus, we cannot assess their risk. This study was cross-sectional, and we cannot make causal claims about its findings. Although the YRBS is representative of US high school students, it may not be representative of US sexual minority high school students.

The results of our study suggest the existence of a crisis of violence against sexual minority adolescents. Researchers

Table. Physical Violence Among Sexual Minority Adolescents<sup>a</sup>

Type of Violence by Sexual Orientation	Unadjusted Participants, No. (Adjusted %)	Weighted Prevalence, % (95% CI)	Adjusted RR (95% CI)
Physical violence committed by a romantic partner in past 12 mo			
Heterosexual	17 402 (87.9)	5.2 (4.6-5.7)	1 [Reference]
Sexual minority	2520 (12.1)	11.8 (10.3-13.3)	1.97 (1.65-2.34)
Gay or lesbian	412 (1.9)	11.9 (7.9-15.8)	2.09 (1.45-2.92)
Bisexual	1429 (6.9)	12.6 (10.7-14.5)	2.22 (1.82-2.67)
Not sure	679 (3.3)	10.2 (7.7-12.6)	1.42 (1.02-1.94)
Engaged in a physical fight anywhere in past 12 mo			
Heterosexual	17 706 (88.0)	22.4 (21.2-23.6)	1 [Reference]
Sexual minority	2548 (12.0)	27.6 (25.1-30.1)	1.35 (1.23-1.48)
Gay or lesbian	415 (1.9)	25.3 (20.2-30.4)	1.01 (0.76-1.32)
Bisexual	1440 (6.8)	28.9 (25.5-32.3)	1.57 (1.37-1.78)
Not sure	693 (3.4)	26.3 (21.4-31.2)	1.16 (0.95-1.41)
Engaged in a physical fight at school in past 12 mo			
Heterosexual	17 720 (87.9)	7.7 (6.9-8.4)	1 [Reference]
Sexual minority	2560 (12.1)	11.1 (9.5-12.6)	1.55 (1.31-1.84)
Gay or lesbian	415 (1.9)	10.8 (7.9-13.7)	1.01 (0.64-1.50)
Bisexual	1446 (6.8)	10.1 (8.2-12.1)	1.72 (1.29-2.23)
Not sure	699 (3.4)	13.1 (9.9-16.2)	1.65 (1.21-2.18)
Sexual assault committed by anyone in past 12 mo (2017 data only) <sup>b</sup>			
Heterosexual	8526 (86.3)	7.9 (7.2-8.5)	1 [Reference]
Sexual minority	1377 (13.7)	20.6 (17.6-23.6)	2.10 (1.68-2.58)
Gay or lesbian	221 (2.2)	17.1 (10.8-23.4)	1.65 (0.92-2.69)
Bisexual	774 (7.7)	23.7 (19.9-27.4)	2.36 (1.76-3.10)
Not sure	382 (3.8)	16.7 (12.7-20.6)	1.80 (1.36-2.33)
Forced intercourse committed by anyone ever			
Heterosexual	17 809 (87.9)	5.4 (4.8-6.0)	1 [Reference]
Sexual minority	2572 (12.1)	18.0 (15.7-20.3)	2.76 (2.29-3.30)
Gay or lesbian	424 (1.9)	16.8 (12.0-21.6)	2.72 (1.82-3.87)
Bisexual	1442 (6.8)	21.1 (18.7-23.4)	3.16 (2.62-3.76)
Not sure	706 (3.4)	12.9 (9.4-16.4)	1.96 (1.35-2.71)
Sexual assault committed by a romantic partner in past 12 mo			
Heterosexual	17 238 (88.0)	5.1 (4.6-5.6)	1 [Reference]
Sexual minority	2478 (12.0)	12.5 (10.5-14.6)	1.93 (1.56-2.38)
Gay or lesbian	408 (1.9)	11.3 (7.1-15.5)	1.73 (1.12-2.57)
Bisexual	1400 (6.8)	14.2 (12.0-16.5)	2.27 (1.78-2.86)
Not sure	670 (3.3)	9.9 (7.5-12.3)	1.32 (0.90-1.89)

Abbreviation: RR, risk ratio.

<sup>a</sup> Data are based on 28 811 participants in the 2015 and 2017 National Youth Risk Behavior Survey. Physical violence by a romantic partner was assessed with the question "During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.); engaging in physical fights, with "During the past 12 months, how many times were you in a physical fight?"; and engaging in physical fights on school property, with the question "During the past 12 months, how many times were you in a physical fight on school property?" Sexual assault was assessed with the question "During the past 12 months, how many times did anyone force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.); forced intercourse, with "Have you ever been physically forced to have sexual intercourse when you did not want to?"; and sexual assault committed by a romantic partner, with "During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.)"

<sup>b</sup> Data are based on 11 280 participants in the 2017 National Youth Risk Behavior Survey only.

should work with policy makers and clinicians to design, implement, and assess interventions to reduce the risks and mitigate the harms of violence committed against sexual minority adolescents.

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