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Sexual Violence Among U.S. High School Students: Differences by Sexual Identity, 2023

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A B S T R A C T

Purpose: Sexual violence among youth remains a pressing public health issue in the United States, with lesbian, gay, bisexual, and other sexual minority (LGBQ+) youth disproportionately affected. This study utilizes nationally representative data from the 2023 Youth Risk Behavior Surveillance System to examine associations between sexual identity and three measures of sexual victimization among the US high school students.
Methods: We analyzed data from n = 16,730 US high school students via the 2023 Youth Risk Behavior Surveillance System. Multivariable logistic regressions compared three measures of sexual victimization (i.e., lifetime forced sexual intercourse [FSI]; past 12 month any sexual violence; and past 12 month dating sexual violence) by sexual identity; categories were heterosexual (referent), gay/lesbian, bisexual, questioning, and other. We also stratified these analyses by sex.
Results: Youth who identified as gay/lesbian (adjusted Odds Ratio [aOR]: 2.42), bisexual (aOR: 2.61), and other (aOR: 3.36) had significantly greater odds of reporting lifetime FSI relative to heterosexual youth. Similarly, youth who identified as bisexual (aOR: 2.00), questioning (sexuality) (aOR: 1.87), and other (aOR: 1.57) had significantly greater odds of reporting experiencing sexual violence in the past 12 months relative to heterosexual youth. In addition, youth who identified as bisexual (aOR: 1.94) and questioning (aOR: 1.95) had significantly greater odds of reporting dating sexual violence in the past 12 months relative to heterosexual youth. These relationships were significantly modified by sex; the disparities in lifetime FSI and past 12 month sexual violence by sexual identity were substantially greater among male students compared to female students.
Discussion: LGBQ + youth are at increased risk for sexual violence, compared to their non-LGBQ + counterparts.

IMPLICATIONS AND CONTRIBUTION

This manuscript highlights critical disparities in sexual victimization among lesbian, gay, bisexual, and other sexual minority youth using nationally representative data. Findings underscore the urgent need for inclusive, identity-informed prevention strategies and support services, as well as foundational causes for this higher rate of victimization. By revealing sex-based differences in victimization risk, this study contributes valuable insights for public health policy, education, and targeted intervention development.

Nearly one third of teenagers in the United States report experiencing dating violence, encompassing physical, sexual, emotional, or verbal abuse by a partner [1]. Collectively known as dating violence, sexual violence, or adolescent relationship

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abuse, enduring these forms of abuse has several detrimental effects on the developing youth, including increased risk for substance use, development of severe psychiatric disorders such as anxiety and depression, and increased thoughts of suicide [2]. Moreover, national health indicators (e.g., Healthy People 2030) demonstrate that teen dating violence is increasing, possibly due to greater recognition and increased reporting [3]; therefore, more research is warranted into the risk factors into multiple marginalized populations to inform prevention efforts.

Compared to heterosexual youth, lesbian, gay, bisexual, and other sexual minority (LGBQ+) youth report higher levels of increased dating violence and varying levels of perpetration [4]. Bisexual youth appear to be at exceptionally high risk. For example, a longitudinal study found that bisexual or questioning youth had *76% higher odds* of sexual IPV than gay or lesbian peers [5]. As a result, worse mental health symptomatology (e.g., anxiety, depression) is reported among these populations—specifically, youth who experienced victimization reported several health consequences, including greater drinking, suicidal ideation, and substance use [2]. Moreover, dating violence also manifests differently in LGBQ + youth: beyond physical, sexual, and emotional abuse, there are identity-related abuses [6]—threats to out someone, using stigmatization, leveraging marginalization or isolation, or cyberharassment targeting one's sexual orientation or gender identity. Although research has examined these relationships for LGBQ + youth, several gaps remain, including the limited knowledge of other sexual identities (e.g., questioning, other) or analyses by biological sex, limiting the ability to inform intervention development [7,8]. Furthermore, examining the most recently available national data will assist clinicians and policymakers in developing more comprehensive data-driven interventions.

Study aims and hypotheses

This study compares sexual violence victimization by sexual identity among a nationally representative sample of high school students in the United States in 2023. We also investigate possible differences in the association between sexual identity and sexual violence victimization by biological sex (i.e., male, female). For this study, sexual identity was categorized as heterosexual (referent), gay/lesbian, bisexual, questioning, and unsure/other.

We hypothesize that youth who identify as a sexual minority will have higher odds of sexual violence victimization, relative to their heterosexual counterparts. Based on previous research [4], we hypothesize that the association between sexual identity and sexual violence victimization will be stronger among male youth compared to female youth.

Methods

Data set and study sample

We analyzed data from the 2023 wave of the Youth Risk Behavior Surveillance System (YRBSS), representing the most recent publicly available national data on youth risk behaviors at the time of this study. The YRBSS is a cross-sectional survey that employs a three-stage, cluster probability-based sampling approach to produce nationally representative estimates for 9th-12th grade students (i.e., high school students) in public and private schools in the US in 2023. Data were collected by the Centers for Disease Control and Prevention (CDC); study methodologies and procedures are presented in detail elsewhere [7]. All data were deidentified and made publicly available by the CDC, and, as such, the study is not considered human subjects research.

We conducted a complete case analysis (CCA) [9] with the final analytic samples varying by missingness on each dependent variable. A total of n = 20,103 students completed the 2023 YRBSS; however, the final sample sizes for each analysis presented in the current study were as follows: (1) n = 14,700 for lifetime forced sexual intercourse (FSI); (2) n = 13,501 for past 12 month sexual violence; and (3) n = 13,399 for past 12 month sexual dating violence. To generate these samples, we removed n = 905 (~4.5% of the weighted sample) participants who had missing data on independent variables, n = 2,003 (~6.2% of the weighted sample) participants who had missing data on sexual identity, and n = 465 (~2.4% of the weighted sample) participants who had ineligible data on sexual identity. The remaining n = 16,730 participants were subsequently eligible for inclusion in each analysis.

We elected to conduct CCAs for each outcome for three reasons. First, we elected to conduct a CCA because this approach is most consistent with how the CDC analyses and presents YRBSS data [10]. The consistency of statistical methods is essential for comparing findings and replication studies. Second, simulation studies indicate that CCAs yield less biased estimates compared to multiple imputations when missingness is skewed toward a single variable [11]. Third, logistic regressions have been demonstrated to produce accurate, unbiased estimates for CCAs when high rates of missingness are observed on the exposure variable (e.g., sexual identity) and the outcome variable (e.g., sexual victimization) [12].

Measures

Sexual Violence Victimization. This study examined three (3) outcome variables to investigate sexual violence victimization. First, participants were asked: "Have you ever been physically forced to have sexual intercourse when you did not want to?" Those who responded "yes" were considered to have experienced FSI. Second, participants were asked: "During the past 12 months, how many times did anyone force you to do sexual things that you did not want to do? (Counting things such as kissing, touching, or being physically forced to have sexual intercourse.)" Those who reported one or more times were considered to have experienced any past 12 month sexual violence. Moreover, third, participants were asked: "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.)" Those who reported one or more times were considered to have experienced past 12 month sexual dating violence. For dating violence, those who responded as "I did not date or go out with anyone during the past 12 months" were categorized as not experiencing dating violence and retained for the analysis.

Sexual Identity. We examined self-reported gender identity. Participants were asked: "Which of the following best describes you?" Possible responses were as follows: (1) heterosexual (straight); (2) gay or lesbian; (3) bisexual; (4) I describe my sexual identity some other way ("other"); and (5) I am not sure

about my sexual identity (questioning). An additional response was "I do not know what this question is asking." For this question, participants who selected this response were excluded from our analyses, in accordance with CDC guidance [13].

Sex. We used a binary variable for biological sex (male served as the referent group), examined this as a possible effect modifier in the relationships between sexual identity and measures of sexual violence victimization.

Covariates. This study controlled for several demographic variables. Race was categorized as follows: (1) American Indian/Alaskan Native; (2) Asian; (3) Black; (4) Native Hawaiian/Other Pacific Islander; (5) White; (6) multiracial; and (7) none reported. For this study, White was the referent group to maximize statistical power, given the sample size. We controlled for a binary indicator of Hispanic ethnicity, which was coded as "not Hispanic" (referent) and "Hispanic." Grade was categorized as ninth grade (referent), 10th grade, 11th grade, and 12th grade. We controlled for a binary indicator of past 30-day alcohol consumption. Participants were asked: "During the past 30 days, on how many days did you have at least one drink of alcohol?" Those who reported one or more days were considered to have currently used alcohol.

Statistical analyses

To begin, we present descriptive statistics as weighted prevalence estimates, along with their corresponding 95% confidence intervals (CIs). Then, we conducted three (3) multivariable logistic regression analyses to estimate the associations between categories of self-reported sexual identity and: (1) lifetime FSI, (2) past 12 month any sexual violence victimization, and (3) past 12 month sexual dating violence victimization. Finally, we modeled an interaction term between sexual identity and biological sex to test for effect modification, for each outcome. Statistically significant interactions ($p < .05$) were used to inform sex-stratified analyses to assess for differences in the association between sexual identity and sexual violence victimization between male and female youth. All analyses controlled for race, ethnicity, grade, and current alcohol use; analyses of sexual identity also controlled for sex. Data were weighted to be nationally representative. Analyses were conducted in Stata (version 18.0; College Station, TX). A university institutional review board approved this study.

Results

Descriptive statistics

As seen in Table 1, 7.9% of our sample reported lifetime FSI, 10.8% reported past 12 month sexual violence, and 5.1% reported past 12 month sexual dating violence. The prevalence of these outcomes is presented stratified by sex in Supplemental Tables 1 and 2.

Analytic statistics and interaction

As seen in Table 2, odds of reporting lifetime FSI were significantly greater among youth who identified as gay/lesbian (adjusted Odds Ratio [aOR]: 2.42; 95% CI: 1.72–3.39), bisexual (aOR: 2.61; 05% CI: 2.03–3.36), and other (aOR: 3.36; 95% CI: 1.94–5.82), relative to those who identified as heterosexual; difference was observed among those who identified a questioning. In addition, odds of reporting experiencing any sexual violence in the past 12 months were significantly greater among youth who identified as bisexual (aOR: 2.00; 05% CI: 1.60–2.51), other (aOR: 1.57; 95% CI: 1.06–2.33), and questioning (aOR: 1.87; 95% CI: 1.32–2.67) relative to those who identified as heterosexual; difference was observed among those who identified a gay/lesbian. Finally, odds of reporting dating sexual violence in the past 12 months were significantly greater among youth who identified as bisexual (aOR: 1.94; 95% CI: 1.41–2.67) and questioning (aOR: 1.95; 95% CI: 1.16–3.28), relative to those

Table 1
Descriptive statistics of sexual violence victimization and sexual identity Among high school students in the United States; Youth Risk Behavior Surveillance System (YRBSS, 2023)

	Forced sexual intercourse (lifetime)[a] N = 14,700	Sexual violence (Past 12 months)[b] N = 13,501	Sexual dating violence (past 12 months)[c] N = 13,399
Total prevalence	7.9% (7.0–8.9)	10.8% (9.9–11.7)	5.1% (4.5–5.9)
Sexual identity[d]			
Heterosexual	7.2% (6.4–8.2)	10.2% (9.4–11.1)	3.9% (3.1–4.9)
Gay/lesbian	22.3% (16.5–29.5)	24.4% (17.7–32.5)	8.3% (5.1–12.7)
Bisexual	19.0% (12.5–27.8)	17.6% (12.0–25.0)	10.5% (7.4–14.8)
Other	8.9% (5.0–15.1)	8.5% (5.3–13.3)	7.3% (4.3–11.8)
Questioning	10.5% (6.1–17.5)	8.1% (7.4–8.9)	9.2% (6.1–13.5)
Sex			
Male	3.6% (2.8–4.6)	5.5% (4.6–6.6)	2.4% (1.7–3.3)
Female	12.5% (11.2–13.9)	16.6% (15.2–18.1)	8.1% (7.0–9.2)
Grade			
9th	6.5% (5.5–7.8)	9.6% (8.3–11.2)	3.9% (3.1–4.9)
10th	6.4% (5.4–7.5)	10.0% (8.6–11.6)	5.2% (4.0–6.6)
11th	9.3% (7.5–11.4)	12.3% (10.8–14.1)	6.2% (5.0–7.5)
12th	9.6% (7.5–12.2)	11.3% (9.7–13.2)	5.2% (4.0–7.0)
Race category[e]			
AI/AN	8.8% (4.4–17.0)	10.8% (7.0–16.3)	5.5% (2.8–9.8)
Asian	6.0% (3.5–10.1)	5.5% (3.3–8.9)	2.6% (1.2–5.3)
Black	6.5% (5.5–7.7)	8.3% (7.3–9.5)	3.1% (2.1–4.5)
Multiracial	11.6% (8.4–15.8)	12.7% (10.5–15.5)	5.9% (3.9–8.9)
NHOPI	5.0% (2.0–11.8)	15.2% (9.6–23.2)	5.1% (2.3–10.8)
No race	5.0% (3.9–6.5)	8.3% (6.8–10.2)	3.2% (2.1–4.7)
White	8.2% (7.1–9.6)	11.7% (10.5–13.1)	5.9% (5.0–6.8)
Hispanic ethnicity[f]			
No	7.8% (6.8–8.9)	10.4% (9.3–11.5)	5.0% (4.3–6.0)
Yes	8.1% (6.7–9.8)	11.8% (10.7–13.1)	5.1% (4.0–6.1)
Alcohol use[g]			
No	6.0% (5.3–6.7)	8.1% (7.2–9.1)	3.8% (3.2–4.6)
Yes	14.6% (11.9–17.8)	20.3% (18.2–22.6)	9.7% (8.3–11.2)

AI/AN = American Indian/Alaskan Native; NHOPI = Native Hawaiian or Other Pacific Islander.
***$p < .001$ **$p < .01$ *.05.

[a] "Have you ever been physically forced to have sexual intercourse when you did not want to?"

[b] 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).

[c] 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).

[d] Participants were asked: "Which of the following best describes you?"

[e] Participants were asked: "What is your race? (Select one or more responses.)" Participants who selected more than one response were categorized as "multiracial" and those who provided no response were categorized as "No Race".

[f] Participants were asked: "Are you Hispanic or Latino?"

[g] A binary indicator of any alcohol use in the past 30 days.

Table 2
Sexual identity and sexualvictimization Among high school students in the United States; Youth Risk Behavior Surveillance System (YRBSS, 2023)

	Forced sexual intercourse (lifetime)[a] N = 14,700	Sexual violence (Past 12 months)[b] N = 13,501	Sexual dating violence (past 12 months)[c] N = 13,399
	Adjusted odds ratio (95% confidence interval)		
Sexual identity[d]			
Heterosexual	1.00 (ref)	1.00 (ref)	1.00
Gay/lesbian	2.42*** (1.72–3.39)	1.52 (0.92–2.52)	1.87 (0.91–3.83)
Bisexual	2.61*** (2.03–3.36)	2.00*** (1.60–2.51)	1.94*** (1.41–2.67)
Other	3.36*** (1.94–5.82)	1.57* (1.06–2.33)	1.37 (0.72–2.61)
Questioning	1.29 (0.91–1.84)	1.87** (1.32–2.67)	1.95** (1.16–3.28)
Sex			
Male	1.00 (ref)	1.00 (ref)	1.00
Female	0.94 (0.71–1.24)	1.02 (0.78–1.33)	1.30 (0.88–1.90)
Grade	1.24 (0.87–1.78)	1.15 (0.89–1.78)	1.42* (1.02–1.97)
9th	1.20 (0.87–1.66)	0.96 (0.76–1.22)	1.09 (0.74–1.60)
10th			
11th	1.00 (ref)	1.00 (ref)	1.00
12th	0.91 (0.45–1.84)	0.81 (0.47–1.41)	0.90 (0.45–1.79)
Race category[e]	0.93 (0.52–1.68)	0.58* (0.34–1.00)	0.49 (0.21–1.13)
White	0.82 (0.63–1.05)	0.71** (0.55–0.90)	0.50** (0.33–0.77)
AI/AN	1.62* (1.14–2.31)	1.11 (0.86–1.44)	1.07 (0.66–1.74)
Asian	0.65 (0.25–1.67)	1.45 (0.89–2.36)	1.11 (0.53–2.33)
Black	0.66** (0.43–0.99)	0.72* (0.52–0.99)	0.68* (0.47–1.00)
Multiracial			
NHOPI	1.00 (ref)	1.00 (ref)	1.00
No race	1.15 (0.90–1.49)	1.21* (0.99–1.46)	1.01 (0.75–1.36)
Hispanic ethnicity[f]			
No	1.00 (ref)	1.00 (ref)	1.00
Yes	2.45*** (1.93–3.11)	2.68*** (2.20–3.27)	2.33*** (1.80–3.01)
Alcohol use[g]			
No	1.00 (ref)	1.00 (ref)	1.00
Yes	2.89*** (2.24–3.72)	2.78*** (2.20–3.51)	3.06*** (2.24–4.16)
	Interaction model		
Gender identity* sex			
Heterosexual	1.00 (ref)	1.00 (ref)	1.00 (ref)
Gay/lesbian	0.21*** (0.09–0.48)	0.23** (0.09–0.60)	0.13*** (0.05–0.40)
Bisexual	0.81 (0.37–1.78)	0.76 (0.39–1.48)	1.23 (0.40–3.86)
Other	0.17** (0.06–0.48)	0.49 (0.18–1.39)	0.55 (0.09–3.30)
Questioning	0.45 (0.20–1.03)	0.38** (0.19–0.80)	0.34* (0.13–0.91)

AI/AN = American Indian/Alaskan Native; NHOPI = Native Hawaiian or Other Pacific Islander.
***$p < .001$ **$p < .01$ *.05.
[a] "Have you ever been physically forced to have sexual intercourse when you did not want to?"
[b] 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).
[c] 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?
[d] Participants were asked: "Which of the following best describes you?"
[e] Participants were asked: "What is your race? (Select one or more responses.)" Participants who selected more than one response were categorized as "multiracial" and those who provided no response were categorized as "No Race".
[f] Participants were asked: "Are you Hispanic or Latino?"
[g] A binary indicator of any alcohol use in the past 30 days.

who identified as heterosexual; difference was observed among those who identified a gay/lesbian or other.

There was a statistically significant interaction for sex and gay/lesbian identity for lifetime FSI (aOR: 0.21; 95% CI: 0.09–0.48), past 12 month any sexual violence (aOR: 0.23; 95% CI: 0.09–0.60), but not past 12 month sexual dating violence (aOR: 0.13; 95% CI: 0.05–0.40). Similarly, there were significant interactions for sex and other for lifetime FSI (aOR: 0.17; 95% CI: 0.06–0.48), sex and questioning identity for past 12 month sexual violence (aOR: 0.38; 95% CI: 0.19–0.80), and past 12 month dating violence (aOR: 0.34; 95% CI: 0.13–0.91).

Sex-stratified analyses

As seen in Table 3, odds of reporting lifetime FSI were significantly greater among male youth who identified as gay (aOR: 6.87; 95% CI: 3.80–12.40), bisexual (aOR: 2.89; 95% CI: 1.42–5.88), other (aOR: 13.01; 95% CI: 4.53–37.40), and questioning (aOR: 2.29; 95% CI: 1.10–4.78), relative to those who identified as heterosexual. Similarly, odds of reporting past 12 -month any sexual violence were significantly greater among male youth who identified as gay (aOR: 3.98; 95% CI: 1.71–9.27), bisexual (aOR: 2.49; 95% CI: 1.35–4.61), other (aOR: 2.70; 95% CI: 1.02–7.15), and questioning (aOR: 3.88; 95% CI: 1.96–7.67), relative to those who identified as heterosexual. Finally, odds of reporting past 12 month dating violence were significantly higher among male youth who identified as gay (aOR: 7.11; 95% CI: 2.48–20.43) and questioning (aOR: 4.24; 95% CI: 1.47–12.25), relative to those who identified as heterosexual.

As seen in Table 4, odds of reporting lifetime FSI were significantly greater among female youth who identified as bisexual (aOR: 2.37; 95% CI: 1.81–3.11) and other (aOR: 2.21; 95% CI: 1.49–3.26), relative to those who identified as heterosexual. Odds of reporting past 12 month any sexual violence

Table 3
Sexual identity and sexual victimization Among high school students among males in the United States; Youth Risk Behavior Surveillance System (YRBSS, 2023)

	Forced sexual intercourse (lifetime)[a] N = 7,387	Sexual violence (Past 12 months)[b] N = 6,854	Sexual dating violence (past 12 months)[c] N = 6,804
	Adjusted odds ratio (95% confidence interval)		
Sexual identity[d]			
Heterosexual	1.00 (ref)	1.00 (ref)	1.00
Gay/lesbian	6.87*** (3.80–12.40)	3.98*** (1.71–9.27)	7.11*** (2.48–20.43)
Bisexual	2.89** (1.42–5.88)	2.49** (1.35–4.61)	1.53 (0.50–4.67)
Other	13.01*** (4.53–37.40)	2.70* (1.02–7.15)	2.10 (0.38–11.57)
Questioning	2.29* (1.10–4.78)	3.88*** (1.96–7.67)	4.24** (1.47–12.25)
Grade			
9th	1.00 (ref)	1.00 (ref)	1.00
10th	1.24 (0.65–2.37)	0.83 (0.51–1.37)	1.44 (0.63–3.29)
11th	1.78 (0.88–3.58)	1.36 (0.88–2.09)	2.03* (0.94–4.42)
12th	1.32 (0.64–2.71)	0.86 (0.59–1.28)	1.17 (0.43–3.23)
Race category[e]			
White	1.00 (ref)	1.00 (ref)	1.00
AI/AN	0.82 (0.46–1.49)	1.17 (0.46–2.96)	0.70 (0.29–1.69)
Asian	1.33 (0.46–3.83)	0.63 (0.25–1.57)	0.85 (0.13–5.44)
Black	1.39 (0.81–2.39)	1.24 (0.67–2.29)	0.80 (0.27–2.35)
Multiracial	1.76* (1.06–2.93)	1.46 (0.95–2.25)	1.49 (0.67–3.31)
NHOPI	1.41 (0.28–7.13)	1.87 (0.56–6.23)	2.28 (0.49–10.57)
No race	0.55 (0.16–1.84)	0.81 (0.42–1.55)	0.39* (0.18–0.81)
Hispanic ethnicity[f]			
No	1.00 (ref)	1.00 (ref)	1.00
Yes	1.28 (0.62–2.63)	1.12 (0.75–1.68)	1.54 (0.80–2.95)
Alcohol use[g]			
No	1.00 (ref)	1.00 (ref)	1.00
Yes	2.55*** (1.80–3.62)	3.15*** (2.17–4.55)	4.18*** (2.11–8.27)

AI/AN = American Indian/Alaskan Native; NHOPI = Native Hawaiian or Other Pacific Islander.
***$p < .001$ **$p < .01$ *.05.

[a] "Have you ever been physically forced to have sexual intercourse when you did not want to?"

[b] 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).

[c] 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).

[d] Participants were asked: "Which of the following best describes you?"

[e] Participants were asked: "What is your race? (Select one or more responses.)" Participants who selected more than one response were categorized as "multiracial" and those who provided no response were categorized as "No Race".

[f] Participants were asked: "Are you Hispanic or Latino?"

[g] A binary indicator of any alcohol use in the past 30 days.

were significantly greater among female youth who identified as bisexual (aOR: 1.87; 95% CI: 1.47–2.38) and questioning (aOR: 1.48; 95% CI: 1.04–2.11), relative to those who identified as heterosexual. Finally, odds of reporting past 12-month dating violence were significantly higher among female youth who identified as bisexual (aOR 1.89; 95% CI: 1.38–2.60), relative to those who identified as heterosexual.

Discussion

Principal findings

This study identified significant disparities in sexual violence experiences among youth that vary by both sexual orientation and sex. Overall, 7.9% of youth reported lifetime FSI, 10.8% reported experiencing any sexual violence in the past 12 months, and 5.1% reported past 12-month sexual dating violence. Sexual minority youth exhibited elevated risk; however, this effect was driven mainly by males. Male sexual minority youth—particularly those identifying as gay, bisexual, questioning, or "other"—had markedly higher odds of reporting sexual violence. For example, males identifying as "other" had the highest odds of lifetime FSI (aOR: 13.01).

In contrast, gay male youth had elevated odds of past-year sexual violence (aOR: 3.98) and dating violence (aOR: 7.11). Among females, the pattern differed: bisexual and "other/questioning" females had elevated risk, but females identifying as gay/lesbian did not show higher odds of sexual victimization. Interaction analyses revealed that the relationship between sexual orientation and violence exposure varies by sex, highlighting distinct risk profiles for male and female sexual minority youth. These findings underscore the importance of considering both sex and sexual orientation when assessing vulnerability to sexual violence.

Findings in context. These findings align with a growing body of literature indicating that LGBQ + individuals face disproportionate risks for sexual victimization. Nationally representative surveys have shown that LGBQ + youth are more likely than their heterosexual peers to experience forced sex and sexual violence, particularly those identifying as bisexual or questioning [13,14]. The elevated risk among bisexual youth is consistent with past research that points to unique vulnerabilities related to biphobia, social isolation, and dual marginalization from both heterosexual and gay/lesbian communities [15].

Table 4
Sexual identity and sexual victimization among high school students among females in the United States; Youth Risk Behavior Surveillance System (YRBSS, 2023)

	Forced sexual intercourse (lifetime)[a] N = 7,313	Sexual violence (Past 12 months)[b] N = 6,647	Sexual dating violence (past 12 months)[c] N = 6,595
	Adjusted odds ratio (95% confidence interval)		
Sexual identity[d]			
Heterosexual	1.00 (ref)	1.00 (ref)	1.00
Gay/lesbian	1.41 (0.91–2.19)	0.92 (0.57–1.48)	0.90 (0.44–1.85)
Bisexual	2.37** (1.81–3.11)	1.87** (1.47–2.38)	1.89** (1.38–2.60)
Other	2.21** (1.49–3.26)	1.36 (0.91–2.05)	1.18 (0.59–2.36)
Questioning	1.07 (0.73–1.57)	1.48* (1.04–2.11)	1.52 (0.94–2.47)
Grade			
9th	1.00 (ref)	1.00 (ref)	1.00
10th	0.85 (0.62–1.17)	1.10 (0.80–1.51)	1.25 (0.83–1.88)
11th	1.12 (0.77–1.64)	1.07 (0.79–1.47)	1.28 (0.87–1.87)
12th	1.18 (0.80–1.75)	1.00 (0.78–1.28)	1.07 (0.73–1.56)
Race category[e]			
White	1.00 (ref)	1.00 (ref)	1.00
AI/AN	0.97 (0.39–2.46)	0.69 (0.31–1.56)	0.95 (0.40–2.27)
Asian	0.80 (0.44–1.43)	0.54 (0.28–1.05)	0.39* (0.15–0.97)
Black	0.67* (0.52–0.88)	0.57** (0.44–0.72)	0.44** (0.27–0.74)
Multiracial	1.64* (1.03–2.62)	1.02 (0.73–1.41)	0.98 (0.61–1.59)
NHOPI	0.45 (0.13–1.58)	1.32 (0.74–2.36)	0.72 (0.26–1.97)
No race	0.66 (0.40–1.08)	0.68 (0.48–0.96)	0.78 (0.48–1.26)
Hispanic ethnicity[f]			
No	1.00 (ref)	1.00 (ref)	1.00
Yes	1.10 (0.89–1.37)	1.21 (0.96–1.54)	0.87 (0.61–1.25)
Alcohol use[g]			
No	1.00 (ref)	1.00 (ref)	1.00
Yes	2.38*** (1.89–2.99)	2.55*** (2.08–3.13)	1.94*** (1.47–2.57)

AI/AN = American Indian/Alaskan Native; NHOPI = Native Hawaiian or Other Pacific Islander.
***$p < .001$ **$p < .01$ *.05.

[a] "Have you ever been physically forced to have sexual intercourse when you did not want to?"

[b] 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).

[c] 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).

[d] Participants were asked: "Which of the following best describes you?"

[e] Participants were asked: "What is your race? (Select one or more responses.)" Participants who selected more than one response were categorized as "multiracial" and those who provided no response were categorized as "No Race".

[f] Participants were asked: "Are you Hispanic or Latino?"

[g] A binary indicator of any alcohol use in the past 30 days.

These sex- and identity-specific patterns suggest that risk pathways differ between males and females. Male LGBQ + youth may experience heightened vulnerability due to intersecting stigma related to gender nonconformity, homophobia, and under-recognition of male sexual victimization. At the same time, bisexual and questioning females may face distinct social and relational stressors linked to identity uncertainty or fluidity [16,17]. Including less-categorically defined identities, such as "other" and questioning, is critical, as youth in these groups may face elevated risk due to limited social support, identity-related uncertainty, and challenges in accessing affirming resources.

Moreover, this study also contributes to understanding how youth identifying as "other" or "questioning" face elevated odds of sexual violence, which may reflect their increased vulnerability due to identity-related uncertainty, lack of social support, or fluidity in attraction and relationship contexts [18]. Interventions must be inclusive of these less-categorically defined groups and sensitive to the diverse lived experiences within the LGBQ + youth community.

Our study corroborates previous literature emphasizing that alcohol use is a significant factor in adolescent sexual violence. Studies have shown that alcohol is involved in a substantial proportion of sexual assault cases among youth. For instance, a study found that alcohol was involved in approximately 12%–20% of assault cases, depending on the age and gender of the respondent [19]. For LGBQ + youth, previous research has found that increased victimization has led to increased alcohol use but only for females [20]. These findings suggest that alcohol use not only increases the risk of sexual violence but also contributes to risky sexual behaviors that can lead to victimization. Therefore, prevention strategies for youth should emphasize the role of alcohol in teen dating violence. Alcohol can impair judgment, reduce risk perception, and increase vulnerability to victimization, while also facilitating aggressive behaviors in perpetrators. Educational interventions should highlight that intoxicated individuals cannot provide informed consent and address how alcohol may be exploited in assault situations. Furthermore, these interventions, especially for males, should integrate social expectations and respect for bodily autonomy. Integrating bystander intervention training [21] and alcohol-specific consent scenarios can further equip youth to recognize risky situations, intervene safely, and make informed decisions, thereby reducing the incidence of alcohol-facilitated sexual violence.

Nevertheless, while both internal and external conditions may have influenced our results, the broader political climate and restrictive legislation require new approaches and

strategies for potential resolutions. Current policy proposals, such as those advanced by President Donald Trump and Project 2025, seek not only to limit but in many cases to outright prohibit the implementation of comprehensive, LGBQ + -inclusive sexual education in public schools [22]. These initiatives directly challenge evidence-based practices shown to improve youth health outcomes and undermine the capacity of educators and health professionals to address disparities faced by LGBQ + youth. As a result, solutions that would otherwise be considered necessary and logical—such as inclusive curricula, affirming teacher training, or school-based prevention programs—are rendered nearly impossible to implement in many states [23]. In fact, attempts to introduce such interventions may place schools at risk of losing critical funding or facing political and legal backlash. This restrictive environment underscores the urgency of developing alternative, community-based, and policy-informed strategies that can operate outside of hostile legislative frameworks, while also highlighting the broader social and structural barriers that constrain the translation of public health research into practice.

Therefore, reducing sexual violence against LGBQ + youth requires a multifaceted, unique, and out-of-the-box approach that addresses societal stigma, structural inequalities, and the current policy limitations. Research shows that LGBQ + youth are at significantly higher risk for sexual victimization due to factors such as discrimination, lack of inclusive sex education, and familial rejection [24,25]. One effective strategy involves implementing comprehensive, LGBQ + -inclusive sexual education that fosters respect and consent while affirming diverse identities [25]. However, this strategy also involves fitting within the limitations proposed by the Trump Administration's Project 2025. A potential strategy could include creating supportive school environments through antibullying policies while providing access to affirming mental health resources. School-based strategies could consist of implementing inclusive anti-bullying policies, creating supportive environments that affirm diverse sexual identities, and ensuring access to mental health resources tailored to sexual minority youth. Given the heightened vulnerability of males, specific attention should be paid to addressing homophobia, gender nonconformity stigma, and under-recognition of male victimization. For females, interventions should focus on supporting bisexual and questioning youth, addressing social isolation, and promoting inclusive relationship education that validates diverse identities. This solution has been linked to decreased vulnerability to sexual violence, no matter what sexuality participants identify as [26]. Community-level interventions, whether inside or outside schools, that increase social support and reduce isolation among LGBQ + youth may further protect against victimization. A holistic prevention strategy must prioritize inclusion, education, and systemic change to address the unique risks faced by LGBQ + individuals.

Limitations

This study has several limitations that should be taken into account when interpreting the findings. First, the data are cross-sectional, which precludes any determination of causality between sexual orientation and experiences of sexual violence. While associations are robust, it is not possible to assess temporality or the directionality of these relationships. Second, all variables were self-reported, which introduces the potential for response bias due to social desirability or recall error. Given the sensitive nature of questions related to sexual identity and victimization, underreporting or misreporting may have occurred, particularly among youth who may not feel safe disclosing such information—even in an anonymous survey context, which may lead to low population counts. Third, while the YRBSS is designed to be representative of the US high school students, it does not capture youth who are not enrolled in school or who have dropped out—populations that may experience even higher rates of sexual violence and may include a disproportionate number of LGBQ + youth. This may result in an underestimation of both victimization and disparities. Furthermore, since the data were collected during the COVID-19 pandemic, the results may be skewed or over-represented due to the US high school students being unable to attend school in person. With this variable, it is essential to consider that the results may be underestimating the actual issue, potentially pointing toward a more significant problem.

Fourth, the measure of sexual orientation is limited to a single-item identity label and does not capture dimensions of attraction or behavior. This constraint may obscure variability within groups and among youth who are questioning, fluid in their identities, or who do not use common labels. Similarly, the "other" category lacks specificity, making interpretation of findings for this group more challenging. Fifth, the COVID-19 pandemic, including stay-at-home orders and widespread school closures, may have influenced both data collection and youth experiences. Remote learning environments likely altered opportunities for disclosure, access to supportive adults, and school-based reporting of violence, while also increasing social isolation and family stress that could exacerbate risk factors. At the same time, overwhelmed schools may have experienced reduced capacity for administering surveys and implementing prevention programs, which may contribute to differences in prevalence estimates across years. Finally, although the YRBSS provides robust data on many health behaviors, it offers limited contextual information about the nature, perpetrator, or setting of sexual violence experiences. Without these details, it is challenging to understand the mechanisms underlying the observed disparities fully. Despite these limitations, this study offers critical insight into sexual orientation-related disparities in sexual violence among youth using a large, nationally representative dataset.

Conclusions

This study highlights significant disparities in experiences of sexual violence among the US high school students, with LGBQ + youth—particularly those identifying as bisexual, gay, questioning, or other—facing disproportionately higher rates of victimization compared to their heterosexual peers. These disparities were especially pronounced among male LGBQ + youth, who reported the highest odds of both lifetime and past-year victimization. The observed interaction effects between sex and sexual orientation emphasize the importance of considering intersectional identities when addressing sexual violence among youth.

These findings underscore the urgent need for targeted, inclusive prevention and intervention strategies that address the current political climate and the unique vulnerabilities faced by LGBQ + youth. Schools, public health agencies, and community organizations should prioritize culturally competent education, support services, and trauma-informed care that affirm diverse

sexual identities. Moreover, future research should explore the contextual and structural factors that contribute to these disparities, as well as protective mechanisms that may buffer against victimization.

Supplementary Data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.jadohealth.2025.10.027.

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