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Bullying and Cyberbullying among LGBQ and Heterosexual Youth from an Intersectional Perspective: Findings from the 2017 National Youth Risk Behavior Survey

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ABSTRACT

While LGBTQ youth may be victims of bullying at greater rates than heterosexual youth, research examining in-school bullying and cyberbullying victimization disparities through an intersectional framework is limited. Using the 2017 Youth Risk Behavior Survey, the present study examined the prevalence of in-school bullying and cyberbullying victimization across sexual orientation, gender, race, and grade (*N* = 13,567). Results position sexual minority youth at higher odds of experiencing in-school bullying and cyberbullying than heterosexual youth and show that bisexual youth were more likely than gay/lesbian youth to be cyberbullied. Findings from intersectional analyses show within-group variation in bullying victimization across sexual orientation based on gender, grade, and race. Specific intersectional results and implications for in-school bullying and cyberbullying prevention and intervention efforts are discussed.

Introduction

Bullying is a global public health concern marked by deleterious, long-term social, emotional, and behavioral consequences (David-Ferdon & Simon, 2014). Traditionally, bullying is defined as any unwanted negative behavior directed to cause harm by another individual or group of individuals for which there is an observed or perceived power imbalance against the victim (Gladden et al., 2014; Olweus, 2013). However, with the ubiquitous use of social media and electronics among youth (Lenhart, 2015), rates of cyberbullying have been increasing (Kennedy, 2019). Cyberbullying is defined as actions performed using digital media or electronic technology with the goal of communicating aggression or inflicting harm or discomfort to an individual (see Abreu & Kenny, 2018), and has been shown to confer similar negative effects on well-being as in-school bullying (Kowalski & Limber, 2013). The 2017 Youth Risk Behavior Survey estimated the prevalence of bullying and cyberbullying victimization across the United States (U.S.) at 19.0% and 14.9%, respectively. To develop targeted bullying prevention and intervention efforts, and to track more nuanced changes over time, identifying populations that are disproportionately victimized by in-school bullying and cyberbullying is needed (Gower et al., 2018).

Bullying and cyberbullying victimization by sexual orientation

Sexual orientation is linked to different rates of bullying and cyberbullying victimization. A wealth of research has positioned lesbian, gay, bisexual, transgender, and questioning (LGBTQ) youth as experiencing increased rates of bullying victimization compared to their heterosexual counterparts

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(Reisner et al., 2015; Russell et al., 2014; Schuster et al., 2015). For example, recent prevalence statistics from the Youth Risk Behavior Survey data cite that nearly 35% of LGB youth reported in-school bullying compared to 19% of heterosexual youth (Kann et al., 2016). Higher rates of bullying victimization among LGBTQ youth have been consistently linked to increased rates of depression, suicidal ideation and attempts, and poorer overall mental health (Bontempo & D'Augelli, 2002; D'Augelli et al., 2002; Duong & Bradshaw, 2014; Mueller et al., 2015), substance use and abuse (Bontempo & D'Augelli, 2002; Rosario et al., 2014), sexual risk-taking (Bontempo & D'Augelli, 2002; Rosario et al., 2014), and poor educational outcomes (Aragon et al., 2014). Thus, disparate rates of bullying victimization faced by LGBTQ youth are linked with serious psychological, physical, and educational costs during their time in school and beyond (Toomey et al., 2010).

Disparate rates of cyberbullying victimization are also experienced by LGBTQ youth compared to their heterosexual counterparts (Bouris et al., 2016; Cénat et al., 2015), and such victimization is also linked to a range of poor health outcomes (Cénat et al., 2015). Indeed, despite the fact that LGBTQ youth continue to face bullying disparities inside and outside of the classroom, translating research findings into practice still lags behind (Earnshaw et al., 2017). One possible explanation for this lack of action may rest in the lack of specificity about LGBTQ youth experiences in the context of bullying and cyberbullying victimization. Because LGBTQ youth are unique in their lived experiences, more research investigating prevalence disparities among specific LGBTQ youth populations is needed to gain targeted information relevant to bullying and cyberbullying prevention and intervention efforts. Still, research needs to examine other integral factors that make up one's identity like gender, race, and grade in school – especially within the context of school hierarchies where bullying victimization often occurs – to provide a more complete picture of LGBTQ youth experiences. One approach to understanding the contribution of multiple identities on bullying victimization is intersectionality theory.

Intersectionality theory

In their meta-analysis of LGBTQ school victimization, Myers et al. (2020) conclude by discussing the importance for future research to broaden its theories to build on the risks LGBTQ students face in bullying victimization. Given the influence identity plays in shaping our interactions with and behaviors toward others (Stets & Serpe, 2013), intersectionality theory, coined by Crenshaw (1989), may be a suitable framework to investigate bullying and cyberbullying victimization prevalence disparities. While intersectionality theory remains primarily applied in theoretical or conceptual work, empirical research uses intersectionality to view health inequalities among those belonging to multiple historically oppressed groups (Bowleg, 2012, as cited in Fehrenbacher & Patel, 2020). Indeed, the increase in popularity of intersectionality research has been driven, in part, by a failure of public health research to consider and recognize that individuals hold multiple, interlocking social identities that meaningfully impact their vulnerability to a range of factors, including bullying victimization (Bowleg, 2012). Instead, most public health research examines social identities independently, precluding a full understanding of the lived experience of individuals whose identities cut across multiple indices of privilege and oppression (Bauer, 2014).

Intersectionality is a conceptual framework that considers how multiple aspects of identity (e.g., race/ethnicity, gender, sexual orientation), that are shaped by socio-cultural forms of privilege and oppression (e.g., racism, homophobia), interact to impact one's health and life experiences (Hankivsky & Grace, 2015). The dynamic interactions across various categories of social identity contributes to disparities in power across contexts. As such, an intersectionality framework views individuals on a continuum of advantage and disadvantage where privilege and penalty can be simultaneously experienced and observed depending on the context and groups of comparison (in Hankivsky & Grace, 2015; Shields, 2008). Certain groups of individuals holding dual minority statuses (e.g., Black and Gay; Balsam et al., 2011) may be at greater risk of bullying victimization. For example, while Latinx and African American youth tend to experience higher levels of bullying victimization than their White peers (DeVoe et al., 2005), sexual minority Latinx and African American youth may be

victimized on the basis of their race (Peguero, 2012), sexual orientation, or both, with the latter conferring greater cumulative risk of bullying victimization than their counterparts.

Across sexual orientation, gender and racial disparities in bullying victimization may be due, in part, to deviating from traditional cultural norms or stereotypes held by peers (Peguero, 2012). Indeed, some racial or ethnic communities (e.g., African American) may hold more rigid and negative attitudes toward non-heterosexual identities (e.g., Glick & Golden, 2010), which may be related to bullying victimization. Sexual minorities belonging to such communities may therefore experience higher levels of intra-race bullying victimization due to their sexual orientation. Furthermore, in comparison to White-sexual minority youth, nonwhite sexual minorities may experience higher levels of bullying victimization because they deviate from the typical "White" characterization of an LGBTQ individual. Indeed, nonwhite LGBTQ youth experience stigma and oppression from other sexual minorities (in Chulani, 2019), potentially leading to higher levels of bullying victimization compared to White LGBTQ youth. Gender differences may also emerge as sexual minority males are commonly viewed as deviating from socialized masculine ideals which may be related to more negative judgments than same-sex attracted females (Bettinsoli et al., 2020).

Central to intersectionality is the notion that multiple identities at the micro-level (e.g., intersections of race, gender, sexual orientation) intersect with experiences at the macro-level (e.g., racism, sexism) to perpetuate health disparities. Examining bullying victimization prevalence disparities (i.e., social inequities) through an intersectionality framework may be a valuable first step in explaining well-documented negative mental health consequences as a result of bullying victimization (Gower et al., 2018; Moore et al., 2017). Yet, research seldom uses an intersectionality framework to examine the prevalence of different types of bullying victimization (e.g., in-school bullying and cyberbullying) across multiple social and personal identities that sexual minority youth hold (e.g., gender, race, and age; Gower et al., 2018), relative to heterosexual youth.

This may be due to methodological constraints that are imposed when conducting quantitative intersectionality research. Commonly, quantitative studies informed by an intersectionality framework examine interactions between various social markers of identity to confer risk or compare effects across subgroups of participants (e.g., Coulter et al., 2017; Ferlatte et al., 2018). With these methods, researchers are able to explore diversity within groups, therefore providing information relevant to the development and prevention of bullying (Cole, 2009). However, such analyses require large sample sizes, for which not enough data may exist for certain outcome measures or social categories of interest to examine meaningful differences across subgroups (Hankivsky & Grace, 2015). Furthermore, to obtain adequate power for such analyses, researchers commonly collapse certain social groups into one aggregate group (e.g., gay/lesbian, bisexual, and questioning into one "sexual minority" group), therefore reducing the specificity of findings.

The present study

Given these concerns, the present study examined the prevalence of in-school bullying and cyberbullying victimization across sexual orientation, gender, race, and grade using data from the 2017 Youth Risk Behavior Survey. In keeping with an intersectionality framework method of investigation, which utilizes research processes to uncover the nuanced relations between an individual's multiple social identities and life experiences (Hankivsky & Grace, 2015), the present study did not test any a-priori hypotheses and is therefore exploratory in nature.

Methods

Data source

The 2017 Youth Risk Behavior Survey (YRBS), conducted by the Centers for Disease Control and Prevention (CDC), is a biennial, nationwide survey on various health behaviors of youth ages

9–12 (Centers for Disease Control and Prevention (CDC), 2013). Public and private school students spanning the 50 states and the District of Columbia were sampled. Schools across these regions were systematically selected to be proportional to the enrollment of students at each school. In total, 192 schools were sampled and 144 of these schools participated (approximately 75% response rate). All students at these schools were sampled over fixed timeframes and systematic equal probability sampling was used to generate random start times for student participation. The CDC received Institutional Review Board approval prior to data collection for the 2017 YRBS.

Measures

Social group membership
Sexual orientation. Participants indicated their sexual orientation by responding to the question, "Which of the following best describes you?" Responses included heterosexual, gay or lesbian, bisexual, and unsure.

Sex. Participants responded to the question, "What is your sex?" to which responses could be "female" or "male."

Race/ethnicity. Information on race/ethnicity was collected with two questions. First, participants were asked, "Are you Hispanic or Latino?" Participants were then instructed to select their race from the following options: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, or White. Participants could select more than one option. If participants responded to the initial question that they were Hispanic or Latino and left the next question with the other race options blank, they were categorized as Hispanic/Latino-Non-mixed. If participants responded to the first question that they were Hispanic/Latino but selected an additional race option in the following question, they were coded as Multiple-Hispanic/Latino, and if participants selected multiple race categories but indicated that they were not Hispanic/Latino, they were coded as Multiple-Non Hispanic/Latino. Due to sample size restraints, race was collapsed into the following groups: White, Hispanic/Latino, African American/Black, "Other," and Mixed race.

Grade. Participants' grades were obtained with the question "In what grade are you?" Responses included 9th grade, 10th grade, 11th grade, 12th grade, or "ungraded or other grade."

Bullying victimization
Bullying victimization was assessed with two questions: one examining in-school bullying victimization and one examining cyberbullying victimization. The definition of bullying included in the YRBS questionnaire encompasses verbal (e.g., teasing), relational (e.g., spreading rumors), and physical (e.g., shoving) domains, and does not address frequency of bullying victimization (CDC, 2017). Therefore, when indicating bullying victimization experience, participants could not specify type or frequency/severity of victimization.

In-school bullying victimization. Participants indicated that they had experienced in-school bullying in the past year: "During the past 12 months, have you ever been bullied on school property?" Responses could be "Yes" or "No."

Cyberbullying victimization. Participants indicated that they had experienced cyberbullying in the past year: "During the past 12 months, have you ever been electronically bullied? (Count being bullied through texting, Instagram, Facebook, or other social media)." Responses could be "Yes" or "No."

Analytic strategy

Data cleaning and analyses were conducted in stata v.16 statistical software (StataCorp, 2019) and analyses were significant at $p < .05$. To account for the complex survey design of the YRBS, weighting estimates based on student sex, race/ethnicity, and grade level were applied which reconcile student non-responsiveness and the oversampling of African American and Latino youth. STATA's "svyset" prefix was utilized to account for the assigned stratum and primary sampling unit (PSU) assigned for each participant.

Among the 14,765 participants who completed surveys, 208 (1.4%) were excluded due to missing data on cyberbullying or in-school bullying. Of the remaining participants, 112 (0.77%) were missing data on sex, 625 (4.31%) on sexual orientation, 303 (2.08%) on race, and 106 (0.73%) on grade. An additional 26 (0.18%) participants were excluded because they indicated that they were "ungraded." As total missingness was low (6.67%), analyses were conducted with listwise deletion, which resulted in a final analytic sample of 13,567 participants.

Analyses were conducted in two stages. First, descriptive statistics on in-school bullying and cyberbullying victimization, broken down by sex, race, and grade, and stratified by sexual orientation were examined. Next, bivariate logistic regressions were conducted to investigate associations between sexual orientation, race, sex, and grade level on in-school bullying and cyberbullying victimization. Odds ratios greater than 1 indicate a greater odds of endorsing bullying victimization relative to the reference group, and odds ratios less than 1 indicate a lower odds of endorsing bullying victimization relative to the reference group. The historically non-oppressed group was selected as the reference group for each variable, such that males, heterosexuals, and White participants were the reference group for sex, sexual orientation, and race, respectively. Grade was analyzed as a continuous variable to examine trends of bullying victimization as grade level increased, as opposed to comparing odds of victimization in one grade relative to another grade (which would occur if grade was analyzed as a factor variable).

The second stage of analyses applied the intersectionality approach to studying bullying victimization. Accordingly, multivariable logistic regression models were used for all analyses. To show variations across the subgroups of sexual orientation for the effects of gender, race, and grade on in-school bullying and cyberbullying victimization, we stratified our models by sexual orientation identity. Stata's "subpop" command was utilized to stratify models.

Results

Table 1 presents descriptive statistics for in-school bullying and cyberbullying for the different sexual orientation groups in the total sample and within race/ethnicity, gender, and grade. For the total sample, proportion of in-school and cyberbullying victimization was higher among LGBQ than heterosexual participants, with bisexual youth having the highest rate of victimization for both types of bullying (34.03% for in-school bullying and 29.35% for cyberbullying). Within each sexual orientation group, rates of victimization were lower for cyberbullying than in-school bullying. Across heterosexual, gay/lesbian, and bisexual participants, rates of in-school bullying and cyberbullying were highest among White youth, while for unsure participants, mixed race had the highest rate of in-school and cyberbullying victimization. Within each sexual orientation group, females had higher rates of cyberbullying victimization than males, but rates were mixed for in-school bullying. The proportion of participants victimized by in-school bullying and cyberbullying decreased at higher grade levels for heterosexual participants, but no observable patterns emerged for sexual minorities.

In bivariate analyses (Table 2), LGBQ youth had significantly higher odds of experiencing in-school bullying and cyberbullying relative to their heterosexual peers. Bisexual participants also had significantly higher odds of experiencing cyberbullying than gay/lesbian youth (as indicated by non-overlapping 95% CIs). Hispanic, Black, and other participants had significantly lower odds of being bullied in school than their White peers, and Hispanic, Black, other, and mixed-race participants had

Table 1. Descriptive statistics for bullying and cyberbullying by sexual orientation identity.

	Sexual Orientation Identity			
Variable	Heterosexual (N = 11,611)	Gay/Lesbian (N = 323)	Bisexual (N = 1,073)	Unsure (N = 560)
Bullying at School				
Total no.	1,910	98	318	124
Total, % (SE)	17.10 (0.53)	28.22 (3.54)	34.03 (3.26)	23.37 (2.50)
Race/Ethnicity, % (SE)				
White	19.48 (0.78)	38.46 (6.41)	41.51 (4.17)	24.71 (3.42)
Hispanic	11.88 (1.05)	9.90 (2.91)	19.46 (4.92)	19.73 (5.79)
Black	10.42 (0.96)	13.58 (8.27)	19.51 (6.65)	21.63 (8.75)
Other (not mixed)	13.65 (1.31)	32.59 (16.17)	7.64 (3.81)	11.01 (4.29)
Mixed race	18.62 (0.89)	30.48 (5.92)	38.11 (4.54)	28.01 (5.01)
Gender, % (SE)				
Male	14.17 (0.57)	28.29 (6.44)	39.95 (4.52)	20.37 (3.41)
Female	20.47 (0.99)	28.14 (4.72)	32.78 (3.30)	25.32 (3.12)
Grade, % (SE)				
Freshman	21.54 (1.09)	30.84 (7.55)	35.79 (4.09)	27.79 (4.18)
Sophomore	17.85 (0.94)	36.88 (5.92)	38.13 (6.40)	23.57 (5.22)
Junior	15.80 (0.99)	24.21 (5.75)	38.06 (5.22)	24.09 (5.35)
Senior	12.53 (0.89)	18.72 (5.99)	22.38 (4.30)	15.61 (4.99)
Cyberbullying				
Total no.	1,483	65	283	116
Total, % (SE)	13.34 (0.49)	18.18 (2.25)	29.35 (2.69)	21.32 (2.63)
Race/Ethnicity, % (SE)				
White	15.69 (0.77)	25.13 (4.35)	39.07 (3.02)	21.10 (3.61)
Hispanic	9.29 (1.07)	17.70 (7.34)	15.22 (3.31)	16.47 (4.97)
Black	7.73 (0.79)	0.78 (0.85)	14.75 (6.17)	21.46 (7.58)
Other (not mixed)	10.13 (1.62)	17.58 (11.07)	9.74 (4.23)	21.27 (8.39)
Mixed race	13.48 (0.77)	10.06 (3.77)	26.09 (4.71)	26.03 (6.28)
Gender, % (SE)				
Male	8.78 (0.47)	13.65 (2.94)	30.08 (4.65)	17.34 (2.94)
Female	18.56 (0.89)	22.73 (4.52)	29.20 (2.61)	23.90 (3.63)
Grade, % (SE)				
Freshman	14.78 (0.75)	18.09 (5.36)	34.88 (4.51)	29.08 (4.46)
Sophomore	12.94 (0.90)	30.21 (5.79)	30.17 (3.90)	15.62 (4.89)
Junior	12.74 (1.05)	10.00 (3.82)	29.29 (4.49)	21.33 (3.99)
Senior	12.71 (1.12)	10.78 (4.49)	22.22 (3.49)	16.72 (4.07)

Percentages are weighted according to survey designed weight variables.

lower odds of experiencing cyberbullying than White youth. For both in-school bullying and cyberbullying, females had significantly higher odds relative to males. Additionally, for each increase in grade level, odds of in-school bullying and cyberbullying both decreased.

In-school bullying victimization

In-school bullying victimization among total sample

Table 3 presents results from the multivariable logistic regression models examining in-school bullying victimization. When examining the entire sample, we found that LGBQ youth had higher odds of being bullied than heterosexual youth. Results also show that Hispanic, Black, and other participants had lower odds of experiencing in-school bullying than White participants, that females had higher odds of being bullied in school than males, and that for each increase in grade level, odds of being bullied decreased.

In-school bullying victimization among sexual orientation subgroups

Table 3 also displays the multivariable logistic regression models examining in-school bullying, stratified by sexual orientation. Sexual orientation modified some of the effects of race/ethnicity on in-school bullying.

Table 2. Results of bivariate logistic regressions predicting bullying and cyberbullying.

	In-school Bullying Victimization		Cyberbullying Victimization	
Variable	OR	95% CI	OR	95% CI
Sexual Orientation				
Heterosexual	1.00 (–)		1.00 (–)	
Gay/Lesbian	**1.91**	**(1.35, 2.69)**	**1.44**	**(1.04, 2.01)**
Bisexual	**2.50**	**(1.90, 3.29)**	**2.70**	**(2.06, 3.53)**
Unsure	**1.48**	**(1.11, 1.96)**	**1.76**	**(1.24, 2.50)**
Race/Ethnicity				
White	1.00 (–)		1.00 (–)	
Hispanic	**0.53**	**(0.42, 0.68)**	**0.54**	**(0.42, 0.69)**
Black	**0.47**	**(0.38, 0.57)**	**0.43**	**(0.34, 0.54)**
Other (not mixed)	**0.56**	**(0.47, 0.68)**	**0.56**	**(0.41, 0.76)**
Mixed race	0.94	(0.80, 1.11)	**0.80**	**(0.69, 0.93)**
Gender				
Male	1.00 (–)		1.00 (–)	
Female	**1.59**	**(1.38, 1.83)**	**2.36**	**(2.02, 2.75)**
Grade	**0.82**	**(0.78, 0.86)**	**0.92**	**(0.86, 0.97)**

OR = odds ratio; CI = confidence interval; bolded ORs significant at *p* < .05
Odds ratios greater than 1 indicate a greater likelihood of endorsing in-school or cyberbullying victimization relative to the reference group, and odds ratios less than 1 indicate a lower likelihood of endorsing in-school bullying or cyberbullying victimization relative to the reference group.

Table 3. Odds ratios from multivariable logistic regression models predicting in-school bullying victimization, stratified by sexual orientation.

	Full Sample	Heterosexual	Gay/Lesbian	Bisexual	Unsure
Variable	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Sexual Orientation					
Heterosexual	1.00 (–)				
Gay/Lesbian	**2.04 (1.44, 2.90)**				
Bisexual	**2.28 (1.76, 2.94)**				
Unsure	**1.38 (1.04, 1.83)**				
Race/Ethnicity					
White	1.00 (–)	1.00 (–)	1.00 (–)	1.00 (–)	1.00 (–)
Hispanic	**0.49 (0.38, 0.63)**	**0.54 (0.43, 0.68)**	**0.17 (0.08, 0.49)**	**0.34 (0.19, 0.62)**	0.81 (0.33, 2.00)
Black	**0.46 (0.37, 0.57)**	**0.47 (0.37, 0.60)**	0.23 (0.05, 1.12)	**0.33 (0.13, 0.83)**	0.82 (0.26, 2.62)
Other	**0.57 (0.47, 0.70)**	**0.65 (0.53, 0.79)**	0.75 (0.17, 3.24)	**0.11 (0.03, 0.37)**	0.42 (0.17, 1.04)
Mixed race	0.93 (0.79, 1.09)	0.93 (0.78, 1.12)	0.66 (0.33, 1.32)	0.89 (0.57, 1.38)	1.21 (0.66, 2.23)
Gender					
Male	1.00 (–)	1.00 (–)	1.00 (–)	1.00 (–)	1.00 (–)
Female	**1.46 (1.28, 1.67)**	**1.57 (1.34, 1.83)**	1.07 (0.44, 2.59)	0.77 (0.55, 1.08)	1.34 (0.80, 2.25)
Grade	**0.80 (0.77, 0.84)**	**0.80 (0.76, 0.84)**	**0.75 (0.56, 1.00)**	**0.82 (0.68, 0.98)**	0.83 (0.65, 1.07)

OR = Odds Ratio; bolded ORs significant at *p* < .05; rounded to the nearest hundredths place.
Odds ratios greater than 1 indicate a greater likelihood of endorsing in-school bullying victimization relative to the reference group, and odds ratios less than 1 indicate a lower likelihood of endorsing in-school bullying victimization relative to the reference group

For heterosexual and bisexual participants, Hispanic, Black, and other race participants all had lower odds of in-school bullying compared to White heterosexual participants, though the odds that Black and other race gay/lesbian or unsure participants were bullied in-school were not significantly different from that of White gay/lesbian or White unsure participants, respectively. Gender also modified some of the effects of sexual orientation such that among heterosexual participants, females had statistically significantly higher odds of experiencing in-school victimization compared to males; however, no differences in the odds of bullying victimization were found between males and females among any other sexual minority groups. Lastly, among heterosexual, gay/lesbian, and bisexual participants, for each increase in grade level, odds of in-school bullying decreased.

Table 4. Odds ratios from multivariable logistic regression models predicting cyberbullying victimization, stratified by sexual orientation.

	Full Sample	Heterosexual	Gay/Lesbian	Bisexual	Unsure
Variable	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Sexual Orientation					
Heterosexual	1.00 (–)				
Gay/Lesbian	**1.50 (1.07, 2.10)**				
Bisexual	**2.18 (1.71, 2.77)**				
Unsure	**1.59 (1.12, 2.26)**				
Race/Ethnicity					
White	1.00 (–)	1.00 (–)	1.00 (–)	1.00 (–)	1.00 (–)
Hispanic	**0.50 (0.39, 0.65)**	**0.55 (0.40, 0.75)**	0.62 (0.18, 2.08)	**0.27 (0.17, 0.43)**	0.81 (0.34, 1.95)
Black	**0.42 (0.34, 0.54)**	**0.45 (0.34, 0.59)**	**0.02 (0.00, 0.21)**	**0.26 (0.10, 0.70)**	0.99 (0.35, 2.80)
Other	**0.56 (0.40, 0.78)**	**0.59 (0.40, 0.87)**	0.67 (0.13, 3.44)	**0.16 (0.06, 0.47)**	1.15 (0.38, 3.53)
Mixed race	**0.78 (0.68, 0.91)**	**0.83 (0.71, 0.98)**	**0.32 (0.14, 0.75)**	**0.54 (0.31, 0.95)**	1.34 (0.62, 2.91)
Gender					
Male	1.00 (–)	1.00 (–)	1.00 (–)	1.00 (–)	1.00 (–)
Female	**2.16 (1.88, 2.49)**	**2.38 (2.02, 2.80)**	1.78 (0.78, 4.09)	1.08 (0.73, 1.59)	1.51 (0.88, 2.59)
Grade	**0.90 (0.84, 0.97)**	0.93 (0.87, 1.00)	**0.66 (0.44, 0.98)**	**0.80 (0.66, 0.98)**	0.81 (0.65, 1.00)

OR = Odds Ratio; bolded ORs significant at $p < .05$; ORs rounded to the nearest hundredths place.
Odds ratios greater than 1 indicate a greater likelihood of endorsing cyberbullying victimization relative to the reference group, and odds ratios less than 1 indicate a lower likelihood of endorsing cyberbullying victimization relative to the reference group.

Cyberbullying victimization

Cyberbullying victimization among total sample
Results from the multivariable logistic regression model examining cyberbullying among the total sample can be found in Table 4. All sexual minority groups had significantly higher odds of cyberbullying victimization compared to heterosexual participants; each racial group had lower odds of cyberbullying victimization relative to White participants; females had higher odds of being cyberbullied than males; and for each increase in grade level, odds of cyberbullying decreased.

Cyberbullying victimization among sexual orientation subgroups
Table 4 also displays the multivariable logistic regression models examining cyberbullying victimization by sexual orientation group. In these models, race/ethnicity modified some of the effects of sexual orientation on cyberbullying victimization such that among heterosexual and bisexual participants, each racial minority group had significantly lower odds of cyberbullying victimization relative to White participants; however, for participants unsure of their sexual orientation, no effects were found for race. Gender also modified the effect of sexual orientation on cyberbullying victimization. Among heterosexual youth, females had statistically significantly higher odds of cyberbullying victimization than males, but no gender effects were observed for any of the sexual minority groups. Grade also modified some of the effects of sexual orientation on cyberbullying victimization such that for each increase in grade level, odds of cyberbullying victimization decreased among gay/lesbian and bisexual participants, but not among heterosexual or unsure participants.

Discussion

Despite research indicating that LGBTQ youth experience higher rates of in-school bullying and cyberbullying victimization relative to their heterosexual peers (Cénat et al., 2015; Kann et al., 2016; Toomey & Russell, 2016, for review), scant research has investigated within-group variability in bullying prevalence among sexual minorities and the differential risk that other personal identities (e.g., gender, grade in school, and race) may confer to this already vulnerable population. Accordingly, the present study adopted an intersectional approach to examine the prevalence of bullying and cyberbullying victimization based on sexual orientation, gender, race, and grade among a nationally representative sample of high school students in the U.S.

Results support findings that show gay/lesbian, bisexual, and unsure (i.e., questioning) youth to be disproportionately bullied in school and online relative to their heterosexual peers. Building on this existing evidence, differences in LGBQ in-school and cyberbullying victimization emerged when sexual orientation was examined independently. Specifically, there were no significant differences in the odds of in-school bullying victimization across sexual minority groups; however, for cyberbullying, bisexual participants had higher odds of being victimized than gay/lesbian participants. This finding adds to the growing body of evidence suggesting that bisexual youth may be susceptible to higher levels of mental health problems than other sexual minority groups (Marshal et al., 2011; Saewyc et al., 2006). The present results also add to the bullying literature by highlighting that bullying type may be an important attribute to consider in recognizing more at-risk populations. Further research should explore what specific factors may contribute to the high levels of cyberbullying bisexual youth face. For instance, bisexual youth may face higher levels of stigma because of their divergence from both heterosexual and monosexual norms (Feinstein et al., 2019), and it could indeed be this lack of community that contributes to bisexual youth as the target of higher cyberbullying.

Results from the intersectional analyses show nuanced patterns of victimization. Like in previous studies (e.g., Hertz et al., 2015; Pontes et al., 2018; Spriggs et al., 2007), Hispanic, Black, and other participants were less likely to experience bullying than White youth; females were more likely to experience bullying than males; and as grade increased, odds of bullying decreased. However, when stratified by sexual orientation, this pattern of victimization only reflected heterosexual youth's experiences. For example, among each sexual orientation subgroup, females were not more likely to experience in-school bullying than males. This finding diverges from research identifying a sex effect within sexual minority populations such that gay males were more likely to be victimized in school than lesbian females (Dunn et al., 2015). Additionally, while heterosexual and bisexual Black and other race participants were less likely to experience in-school bullying than heterosexual and bisexual White participants, respectively, this protective effect did not emerge for Black and other race gay/lesbian or unsure participants. This finding may reflect literature showing that LGB African American youth are more likely to mask their sexual orientation than their Euro-American peers (Mustanski et al., 2011; Parks, 2001), which may be more pronounced for Bisexual than Gay African American youth due to unique bisexual stereotypes (e.g., binegativity) that result from divergence from both heterosexual and monosexual norms (McLean, 2007). Bisexual African American youth may therefore have had a lower likelihood of being bullied than White bisexual youth, a finding that did not emerge among those identifying as gay – because less may have disclosed their sexual orientation – which may reduce the likelihood they are targeted due to this oppressed identity.

Examining cyberbullying prevalence through an intersectional lense also revealed nuanced patterns of victimization. As with in-school bullying, when examining the entire sample, White youth were more likely to experience cyberbullying than other racial groups; females were more likely to be cyberbullied than males; and as grade level increased, odds of cyberbullying victimization decreased. However, when stratified by sexual orientation, significant gender and grade variations emerged. Namely, sexual orientation modified the effects of gender such that among the heterosexual participants, females had higher odds of cyberbullying victimization than males, a risk that was not present among sexual minorities. Additionally, for each sexual minority group, odds of cyberbullying decreased as grade level increased, a protective effect that did not emerge for heterosexual participants.

These findings support the idea that one's experience as a victim of in-school bullying and cyberbullying is shaped by multiple intersecting identities that confer different levels of risk. Intersectionality may therefore be a valuable framework for identifying individuals who may be disproportionately bullied by their peers. At its tenet, intersectionality theory recognizes that holding different personal identities can be a protective or risk factor relative to who is being compared and the group against which they are being compared (Shields, 2008). For example, among heterosexual participants, being female was related to higher levels of in-school and cyberbullying victimization (i.e., emerged as a risk factor); however, gender did not confer a greater risk of bullying victimization among sexual minority youth, who experienced in-school bullying and cyberbullying more than their

heterosexual peers. Therefore, identifying bullying prevalence disparities may be more complex than just examining individual social group memberships or assuming that more marginalized identities equate to greater risk of marginalization (i.e., additive effect; Bostwick et al., 2014).

Despite calls to action to develop and implement LGBTQ-specific bullying intervention programs (Earnshaw et al., 2017), sexual minority youth still face bullying disparities, reinforcing the need for such programs. This is especially true in regard to cyberbullying prevention, in which there is an absence of empirically evaluated programs (Abreu & Kenny, 2018). Indeed, if unaddressed, cyberbullying has significant negative consequences for LGBQ youth. The present results build on this research, suggesting that bisexual youth may experience disproportionate rates of cyberbullying compared to lesbian/gay youth. These data illustrate the need for bullying prevention and intervention programs to address specific LGBTQ populations. That said, findings from the present study should be discussed in light of limitations and future directions.

Limitations and future directions

First, it is important for future research to consider dynamic factors such as school environment on the development and maintenance of bullying and cyberbullying victimization among LGBTQ youth. For example, risk of in-school and cyberbullying victimization for male and female LGBTQ youth of diverse racial and ethnic backgrounds may be impacted by school and community contexts such as culture of the school system, racial/ethnic school composition, dominant political and religious beliefs of the school system and geographic region, and more, all of which represent valuable avenues for future research to test the constraints on generality of these findings. Second, the 2017 YRBS did not include questions allowing for the inclusion of transgender youth. Future research should be inclusive of transgender youth to better understand the impact of intersectionality on bullying and cyberbullying victimization faced by this especially vulnerable population. This future research direction is reinforced by recent research pointing to heightened levels of bullying victimization faced by transgender youth relative to their LGBQ and heterosexual counterparts (see Myers et al., 2020). Third, the questions used to capture bullying and cyberbullying victimization may have limited conclusions, and future research should employ more thorough assessment (e.g., corroborating data from family and peers) of bullying to best understand how intersectionality impacts outcomes. Moreover, the survey items used in the 2017 YRBS to assess bullying and cyberbullying victimization fail to capture important details of the bullying experience including, but not limited to, frequency and severity of bullying and specific types of bullying such as relational aggression, psychological manipulation (e.g., spreading rumors), and serious physical violence. It may be the case that LGBTQ youth of specific gender and racial/ethnic identities may disproportionately experience some of these specific types of bullying, an important area for future research. It may also be the case that intersecting identities may afford protective effects against the experience of some of these specific types of bullying, another important area for future research. These limitations aside, the present study used a nationally representative sample of U.S. youth which increases generalizability of findings. Finally, due to the sensitive nature of bullying, social desirability could have impacted youth responding. Future research employing novel methods (e.g., experience sampling methods) may add rich data about the impact of intersectionality on bullying and cyberbullying victimization as it unfolds in the real world.

Conclusions

LGBQ youth experienced higher rates of bullying and cyberbullying victimization relative to their heterosexual counterparts and within LGBQ youth, bisexual youth were evidenced to show higher rates of cyberbullying victimization. When examined through an intersectionality lens, nuanced differences in bullying and cyberbullying victimization emerged across sexual

orientation, gender, race, and grade. Accordingly, findings have important implications for bullying prevention and intervention, suggesting the need to take into consideration each unique identity of LGBQ youth in relation to bullying and cyberbullying victimization.

Disclosure statement

No competing financial interests exist for the authors.

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Data Availability Statement

The data that support the findings of this study are openly available in Centers for Disease Control and Prevention, Adolescent and School Health, National YRBS Datasets and Documentation, at https://www.cdc.gov/healthyyouth/data/yrbs/data.htm.

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