Suicide Ideation and Bullying Among US Adolescents: Examining the Intersections of Sexual Orientation, Gender, and Race/Ethnicity

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Recently, stories linking suicide to bullying, particularly among lesbian, gay, and bisexual (LGB) youths, also known as sexual minorities, have been prominent in the media. In response to these tragic losses, media campaigns such as the It Gets Better Project¹ have emerged to promote the message that suicide is not the answer. The focus of suicide prevention programs on LGB youths is warranted because research suggests that these youths are at higher risk for suicide and suicidal behaviors than are their heterosexual peers.²⁻⁵ Regardless of whether youths self-identify as LGB or report same-sex attraction or sexual contact, LGB youths have higher odds of reporting suicidal thoughts, plans, and attempts. 2,4,5 The strain of coping with the stigma of being a sexual minority in a society in which heterosexuality is normative is often referenced for explaining why LGB youths are at higher risk for suicide. 4,6 In fact, studies show that when youths attend schools with cultures that are more likely to stigmatize LGB youths, their mental health outcomes are even worse.⁶

The strain LGB youths may experience is apparent when one examines the percentage of LGB youths who experience harassment and bullying.⁷ Of the gay, lesbian, bisexual, or transgender (LGBT) 6th- to 12th-grade students from the 2011 National School Climate Survey of the Gay, Lesbian and Straight Education Network,8 55% reported some form of electronic harassment.⁷ Additionally, estimates indicate that between 80%⁷ and 91%⁹ of LGBT students reported being the victim of name calling and verbal harassment in the school setting, and at least 40% have been physically harassed.⁷ Because adolescence is characterized by a heightened sensitivity to peers, 10-12 this harassment can be devastating. Interestingly, whether the harassment is online or in person does not change the negative

Objectives. We examined how race/ethnicity, gender, and sexual orientation shape adolescents' likelihood of being bullied and vulnerability to suicide ideation.

Methods. We analyzed pooled data from the 2009 and 2011 Youth Risk Behavior Surveys (n=75344) to assess race/ethnicity, gender, and sexual orientation variation in being bullied and suicide ideation.

Results. White and Hispanic gay and bisexual males, White lesbian and bisexual females, and Hispanic bisexual females were more likely to be bullied than were White heterosexual adolescents. Black lesbian, gay, and bisexual youths' vulnerability to being bullied was not significantly different from that of White heterosexual youths. Black and Hispanic heterosexual youths were less likely to be bullied than were White heterosexual youths. Despite differences in the likelihood of being bullied, sexual minority youths were more likely to report suicide ideation, regardless of their race/ethnicity, their gender, or whether they have been bullied.

Conclusions. Future research should examine how adolescents' intersecting identities shape their experience of victimization and suicidality. School personnel should develop antibullying and antihomophobia policies in response to the disproportionate risk of being bullied and reporting suicidality among sexual minority youths. (*Am J Public Health*. 2015;105: 980–985. doi:10.2105/AJPH.2014.302391)

effects victimization can have on adolescents' mental health and well-being. ¹³ Youths who are bullied or harassed are more likely to report delinquent behaviors, depression, low selfesteem, poor school performance, and higher levels of alcohol and drug use. ^{9,11,14–18} Finally, most germane to this study, youths who reported being victimized or bullied had higher odds of attempting suicide and planning to complete suicide. ¹⁹

Despite the prevalence of bullying among LGBT youths, there may be important race/ethnicity and gender variations to consider. Previous research suggests that males are more likely than females to report being bullied^{20,21} and that White adolescents are more likely than Black adolescents²² to report being bullied—however, admittedly, these findings are far from conclusive because other research has found no evidence of racial differences in

bullying.¹⁵ The evidence is sparser, but growing, when considering the intersections of gender, race/ethnicity, and sexuality and victimization. For instance, the Gay, Lesbian and Straight Education Network 2011 National School Climate Survey found that Black LGBT students were less likely to feel unsafe at school or report physical or verbal harassment because of their sexuality than their White, Hispanic, or multiracial LGBT peers. Kosciw et al.²³ also found that Black LGBT students were less likely to experience victimization related to sexual orientation compared with White LGBT youths. However, note that a substantial proportion of Black LGBT youths did report these experiences (e.g., 54% of Black LGBT youths felt unsafe at school because of their sexual orientation).7 Hispanic LGBT youths appear to experience harassment on par with their White peers: 62% of Hispanic LGBT

vouths felt unsafe at school because of their sexual orientation compared with 65% of White LGBT youths. Finally, a recent study by Russell et al.24 found some race/ethnicity and gender differences in victimization in the Youth Risk Behavior Survey (YRBS) data. For example, White and Hispanic sexual minorities skipped school because they felt unsafe more often than their heterosexual peers. Interestingly, being a sexual minority did not significantly change the degree of victimization that Black or Asian American youths reported. In terms of gender differences, Russell et al.²⁴ found that bisexual boys reported more experiences of victimization than did other groups of sexual minority and majority youths.

In addition to race and gender differences in the prevalence of harassment, victimization, and bullying, important race and gender differences were found in the prevalence of suicidal behaviors. 17,25,26 The Centers for Disease Control and Prevention's (CDC) recent report found that female adolescents report suicide ideation, plans, and attempts more frequently than male adolesacents do. The prevalence of seriously considering suicide is higher among White, Black, and Hispanic female adolescents than among White, Black, and Hispanic male adolescents.¹⁷ Female adolescents also have a higher prevalence of suicide attempts than male adolescents do, with Hispanic females having the highest prevalence (17.6%) followed by Black females (13.9%) and White females (13.7%).¹⁷ Despite the higher prevalence of suicide attempts among females across racial/ethnic categories, researchers have found that the rate of suicide attempts among Black males has increased significantly in recent decades. 27,28 These gender and race disparities in suicidality suggest that comparing the experiences of LGB youths with those of heterosexual youths, while considering race and gender differences, is needed to assess the magnitude of the problem.

With this study, we add to the growing literature on bullying and suicide among sexual minorities by examining gender, race/ethnicity, and sexual minority status differences in (1) the victims of bullying, (2) those who report suicide ideation, and (3) the association between being bullied and suicide ideation. To do this, we use pooled data from the 2009 and 2011 regional YRBS from 19 US states and cities. As recent

public health researchers have noted,²⁹ programs to address public health issues, such as adolescent suicide, will be effective only if we understand how various aspects of adolescent identity, such as race/ethnicity, gender, and sexuality, intersect to condition the development of health and risk behaviors.

METHODS

This study used state and local data from the 2009 and 2011 YRBS conducted under the auspices of the CDC's Youth Risk Behavior Surveillance System. 30,31 The purpose of the YRBS is to assess the prevalence and correlates of key health and risk behaviors in adolescence that are related to leading causes of morbidity and mortality in the United States. As such, the YRBS includes questions on unintentional injuries and violence, sexual behaviors, alcohol and drug use, tobacco use, and exercise and dieting.³² On a voluntary basis, certain state and local governmental agencies supplement the national YRBS sample with a slightly different sampling frame. The data collected by these state and local governmental agencies are representative of public high school students in each jurisdiction. The advantage of the state and local data for our purposes is that, unlike the national data, many state and local surveys included questions about sexual orientation, and by pooling them, we could achieve a sufficient sample size of LGB youths of various races/ethnicities to examine our research questions.³³ The limitation to this approach is that our findings are not truly generalizable to the United States as a whole.

In 2009, a sexual orientation question was asked in 8 state surveys and 6 local surveys. In 2011, the question was asked in 9 state surveys and 10 local surveys, and all the states and local surveys that asked the question in 2009 also asked it in 2011. Data from the state and local surveys can be acquired from the CDC in some instances or from the agency responsible for conducting the survey in others (usually a state department of education or health or a municipal school district). We secured permission for all the 2009 state and local surveys and all but 1 of the 2011 surveys. Our analysis was based on 32 of these 34 data sets. Specifically, we used data from the following school districts: Boston, Massachusetts;

Chicago, Illinois; Washington, DC; Houston, Texas; Los Angeles, California; Milwaukee, Wisconsin; New York, New York; San Diego, California; San Francisco, California; and Seattle, Washington; and the following states: Connecticut, Delaware, Hawaii, Illinois, Maine, Massachusetts, North Dakota, Rhode Island, and Wisconsin. One state survey was eliminated for both 2009 and 2011 because it did not include a measure of suicide ideation. For a more complete description of the state and local agency survey designs, see Brener et al.³⁴

Our analytic sample was restricted via a sub-population procedure to White, Black, and Hispanic adolescents because those were the racial/ethnic groups large enough to allow for analysis of multiple aspects of adolescents' identities (namely, gender and sexual orientation). Our analytic sample was further restricted to adolescents who answered all survey items relating to suicide ideation, gender, age, race/ethnicity, sexual orientation, and bullying, leaving us with a final analytic sample size of 75 344, of whom 5541 self-reported as LGB.

Measures

Our study focused on 5 key variables: suicide ideation, being bullied, sexual orientation, race/ethnicity, and gender; and 4 control variables: year of administration, jurisdiction, region, and age of respondent. Descriptive statistics for all variables are provided in Table 1. To assess suicide ideation, adolescents were asked, "During the past 12 months, did you ever seriously consider attempting suicide?" Adolescents who responded "yes" were coded as 1 on a binary indicator of suicide ideation. Of the respondents, 12.99% reported suicide ideation (Table 1).

The YRBS collected information about being bullied in 2 contexts, bullied on school property and bullied electronically, but not all survey sites asked about both. Our measure "bullied" was based on adolescents' responses to the yes-or-no questions "During the past 12 months, have you been bullied on school property?" and "During the past 12 months, have you ever been electronically bullied (include being bullied through e-mail, chat rooms, instant messaging, Web sites, or texting)?" In 2009, the latter question was included in 6 of the state and local surveys, but it was phrased and punctuated slightly differently: "During the

TABLE 1—Weighted Descriptive Statistics for the Analytic Sample of US Adolescents: Pooled 2009 and 2011 Youth Risk Behavior Surveys, United States

	% or Median
Reported suicide ideation, %	12.99
Reported being bullied, %	21.81
Heterosexual, %	93.49
Gay or lesbian, %	1.76
Bisexual, %	4.76
Median age, y	16.00
White, %	49.40
Black, %	19.80
Hispanic, %	30.80
2009, %	42.52
2011, %	57.48
Jurisdiction (state), %	71.74
Jurisdiction (city), %	28.26
Northeast, %	41.45
Midwest, %	47.06
South, %	1.48
West, %	10.01

past 12 months, have you ever been electronically bullied, such as through e-mail, chat rooms, instant messaging, Web sites, or text

messaging?" Because this question was essen-

tially identical in content to the 2011 question,

Note. The sample size was n = 75344.

we also included the 2009 responses from those states and local surveys in the analyses. Adolescents' responses were coded as 1 on the bullied measure if they responded "yes" to any of these questions and 0 if they indicated that they experienced no form of bullying. Overall, 21.81% of our sample reported being bullied (Table 1).

Sexual orientation was assessed in the state and local surveys with the following question: "Which of the following best describes you?" Responses included "heterosexual," "gay or lesbian," "bisexual," and "not sure." Our study focused on heterosexual, bisexual, gay, and lesbian adolescents, excluding adolescents who reported "not sure." In our sample, 93.49% were heterosexual, 1.76% were gay or lesbian, and 4.76% were bisexual (Table 1).

We also examined 3 demographic variables. The first was based on adolescents' responses to the question "What is your sex?" Responses included "female" and "male." Females were coded as 1 and males as 0. Our second demographic variable was race/ethnicity. First, adolescents were asked whether they were Hispanic or Latino, and second, they were asked to identify their race. We constructed 3 mutually exclusive categories: non-Hispanic White, non-Hispanic Black, and Hispanic/Latino/Latina. In our sample, 49.40% were White, 19.80% were Black, and 30.80% were Hispanic (Table 1). Finally, we included controls for adolescents' ages (an ordinal variable),

region of the country, jurisdiction (city vs state), and survey year (2009 vs 2011) to account for any potential variation resulting from these factors.

Analytic Plan

We used binary logistic regression for all analyses. Because we found (in analyses available from the authors by request) significant gender differences (via 2- and 3-way interaction terms) in the associations between race, sexual orientation, and bullying and because significant gender differences in suicidality exist in adolescence, ^{25,26} we stratified our models by gender with the subpopulation command in SPSS version 22 (SPSS, Inc, Chicago, IL).

The YRBS is based on complex sampling designs, and it is imperative that these designs be taken into consideration when analyzing health survey data, in general, and YRBS data, in particular. Following the recommendations of CDC and recent research on use of pooled YRBS data, we used the complex survey procedures in SPSS to take into account the complex sampling design and included sample weights in all of our analyses. In particular, in computing standard errors, we used Taylor series linearization.

RESULTS

Table 2 presents results from our logistic regression models predicting being bullied by race/ethnicity and sexual orientation after we controlled for age, jurisdiction, year, and region. We found significant differences in the likelihood of being bullied by race/ethnicity and sexual orientation. Black and Hispanic heterosexual males were less likely than White heterosexual males to report being bullied. Black gay and bisexual males did not differ significantly from White heterosexual males in their likelihood of being bullied; however, White and Hispanic gay and bisexual males were significantly more likely than White heterosexual males to report being bullied. Specifically, White gay males were 3.918 times more likely, White bisexual males were 2.423 times more likely, Hispanic gay males were 2.356 times more likely, and Hispanic bisexual males were 2.631 times more likely to report being bullied than were their White heterosexual

TABLE 2—Odds Ratios (ORs) From Logistic Regression Models Predicting Being Bullied Among US Adolescents, by Race/Ethnicity and Sexual Orientation: Pooled 2009 and 2011 Youth Risk Behavior Surveys, United States

	Males, OR (95% CI)	Females, OR (95% CI)
White heterosexual (Ref)	1.000	1.000
White gay or lesbian	3.918 (2.519, 6.092)	2.976 (1.693, 5.231)
White bisexual	2.423 (1.621, 3.622)	2.620 (1.963, 3.497)
Black heterosexual	0.456 (0.372, 0.559)	0.525 (0.449, 0.614)
Black gay or lesbian	1.265 (0.712, 2.248)	0.590 (0.309, 1.127)
Black bisexual	1.554 (0.869, 2.779)	0.852 (0.575, 1.264)
Hispanic heterosexual	0.675 (0.578, 0.787)	0.715 (0.632, 0.809)
Hispanic gay or lesbian	2.356 (1.684, 3.296)	0.908 (0.509, 1.621)
Hispanic bisexual	2.631 (1.722, 4.020)	1.320 (1.025, 1.699)
Unweighted no.	36 173	39 171

Note. CI = confidence interval. Jurisdiction, year, region, and age were controlled. The sample size was n = 75344.

counterparts. These differences were all statistically significant. A similar pattern emerged for females. Black and Hispanic heterosexual females were less likely than White heterosexual females to report being bullied. Black lesbian and bisexual females and Hispanic lesbians were not significantly different from White heterosexual females in terms of their likelihood of being bullied; however, White lesbian and bisexual females and Hispanic bisexual females were more likely than their White heterosexual peers to report being bullied.

In Table 3, we examine the associations among suicide ideation and sexual orientation and race/ethnicity (model 1) and being bullied (model 2). Again, all models controlled for jurisdiction, year, region, and age and were stratified by gender. Model 1, for both males and females, showed that the probability of reporting suicide ideation for Black and Hispanic heterosexual youths was not statistically different from their White same-gender heterosexual peers; however, sexual minority males and females (regardless of their race/ ethnicity) were significantly more likely than their same-gender White heterosexual peers to report suicide ideation. This pattern held for White, Black, and Hispanic participants. Model 2 introduced a control for whether respondents

had been bullied. For both males and females, being bullied significantly increased the likelihood that respondents would report suicide ideation (odds ratio [OR] = 3.330 for males; OR = 3.151 for females). Interestingly, once being bullied was controlled, Black heterosexual females were significantly more likely to report suicide ideation than their White heterosexual peers. Also, note that all sexual minorities were significantly more likely to report suicide ideation (compared with their same-gender White heterosexual peers) even after being bullied was held constant in model 2.

As a final step (in models available from the authors by request), we explored whether the association between being bullied and suicide ideation varies for adolescents depending on their race and sexual orientation. The only significant interaction we found was for bisexual Hispanic females; the association between being bullied and suicide ideation was slightly weaker among Hispanic bisexual adolescents than among the White heterosexual female reference group (although the association was still positive). We did not find any other significant interactions. Thus, our overall findings suggest that being bullied is a negative and harmful event for all youths, regardless of their sexual orientation or race.

TABLE 3—Odds Ratios (ORs) From Logistic Regression Models Predicting Suicide Ideation Among US Adolescents, by Race/Ethnicity and Sexual Orientation: Pooled 2009 and 2011 Youth Risk Behavior Surveys

	Males		Females	
	Model 1, OR (95% CI)	Model 2, OR (95% CI)	Model 1, OR (95% CI)	Model 2, OR (95% CI)
White heterosexual (Ref)	1.000	1.000	1.000	1.000
White gay or lesbian	2.922 (1.801, 4.741)	2.085 (1.177, 3.694)	4.542 (2.891, 7.135)	3.623 (2.287, 5.740)
White bisexual	4.566 (3.178, 6.561)	3.872 (2.705, 5.542)	5.878 (4.360, 7.924)	5.009 (3.789, 6.621)
Black heterosexual	0.895 (0.728, 1.101)	1.056 (0.853, 1.309)	1.090 (0.895, 1.327)	1.271 (1.025, 1.575)
Black gay or lesbian	2.041 (1.115, 3.737)	1.976 (1.069, 3.650)	3.342 (1.914, 5.835)	4.004 (2.288, 7.007)
Black bisexual	4.738 (2.525, 8.890)	4.593 (2.422, 8.709)	3.146 (2.296, 4.311)	3.473 (2.549, 4.732)
Hispanic heterosexual	1.073 (0.874, 1.319)	1.182 (0.959, 1.457)	1.212 (1.024, 1.434)	1.327 (1.117, 1.577)
Hispanic gay or lesbian	3.263 (2.294, 4.640)	2.748 (1.944, 3.884)	2.075 (1.278, 3.370)	2.206 (1.307, 3.724)
Hispanic bisexual	5.235 (3.354, 8.171)	4.415 (2.875, 6.781)	4.216 (3.457, 5.141)	4.257 (3.360, 5.394)
Bullied, yes or no		3.330 (2.846, 3.897)		3.151 (2.792, 3.556)
Unweighted no.	36 173		39 171	

Note. CI = confidence interval. Jurisdiction, year, region, and age were controlled. The sample size was n = 75 344. Source. Youth Risk Behavior Survey.

DISCUSSION

In recent years, the higher risk for suicide among LGB youths has received substantial attention from researchers, policymakers, and the media. Some posit that this vulnerability may be driven at least in part by LGB youths' disproportionate exposure to peer harassment. At the same time, research has found that not all sexual minority youths report harassment at equal rates⁷ and that suicidality varies by gender and race/ethnicity.^{25,37} With this study, which used an intersectional framework, we contribute to the growing literature on the mental health of sexual minorities by examining how race/ethnicity, gender, and sexual orientation shape adolescents' experiences with bullying and suicide ideation.

Taken as a whole, our findings suggest that being bullied is associated with higher odds of suicide ideation, regardless of an adolescent's gender, race/ethnicity, or sexual orientation. Additionally, even after we controlled for being bullied, LGB youths of all genders and races were more likely than their same-gender White heterosexual peers to report suicide ideation. Our findings differed from those of a recent study by LeVasseur et al.,38 which found that the association between bullying and suicide attempts appears to be strongest for non-Hispanic sexual minority males. We did not find any significant interactions in the relation between bullying and suicide attempts by race/ethnicity or gender.

Our study of the intersection between race and sexual orientation also resulted in important new insights. Although previous research found that Black males were less likely than White males and Black females were no more likely than White females to report suicide ideation, 17 when we analyzed this by race and sexual orientation, we found that Black LGB youths were more likely than their White heterosexual same-gender peers to report suicide ideation and that Black heterosexual males and females were not statistically significantly different from their White heterosexual counterparts in terms of their likelihood of reporting suicide ideation. Other research, which compared sexual minorities of different races/ ethnicities and genders with one another, found very few differences in terms of their risk

for suicidality.³⁷ Taken together, these findings suggest that regardless of race/ethnicity or gender, sexual minorities are more vulnerable to poor mental health outcomes than are sexual majorities. It is also interesting to note that when we compared Black and Hispanic heterosexual youths with their same-gender White heterosexual peers, the racial differences in reporting suicide ideation were not statistically significant. Thus, sexual orientation is clearly an important demographic factor for understanding suicidality among US youths.

Although we did not find significant race/ ethnicity or gender differences in the link between sexual minority status and suicide ideation, we did find important differences in adolescents' likelihood of being bullied because of their sexual orientation, gender, and race/ ethnicity. Bullying is a known risk factor for suicide, and our study indicated that White LGB youths were more likely to be bullied than their White same-gender heterosexual peers. Black LGB youths, on the other hand, were no more vulnerable to bullying than their samegender White heterosexual peers. Hispanic lesbians also were no more likely to be bullied, and, finally, Black and Hispanic heterosexual youths were significantly less likely to be bullied than their same-gender White heterosexual peers.

Even though sexual minorities often are more likely to be bullied and bullying is strongly associated with suicide ideation, sexual minorities from all race/ethnicity and gender categories were more likely to report suicide ideation even with bullying held constant. This suggests that additional factors, perhaps relating to the experience of being gay or lesbian, such as social stigma³⁹⁻⁴¹ or a lack of social support, ^{42,43} may be responsible for the increased risk for suicidal thoughts among LGB youths. Although it was beyond the scope of this study to investigate LGB youths' experiences with stigma and social support, this is an important direction for future research.

In summary, our study represents an important step forward in research on LGB youths' experiences with being bullied and suicidality; however, our study was not without limitations. First, our data were not strictly representative of the nation, and youths in locations where the YRBS does not ask about sexual orientation may have different

experiences with bullying and sexual minority status than the youths analyzed in this study. When nationally representative data become available, this will be a crucial area for future research. Second, the YRBS is an in-school, in-person survey, which may affect adolescents' willingness to disclose their sexual orientation accurately. Third, because the data were crosssectional, we could not determine whether the bullying preceded suicide ideation (or if possibly the reverse occurred). In addition, because states and localities used different versions of the YRBS, each emphasizing different potential protective or risk factors, we were unable to account for potentially important risk or protective factors for suicidality in our models. Similarly, some jurisdictions that we analyzed did not ask about electronic bullying, suggesting that we may have underestimated the effects of bullying because some youths may have been misclassified as "not bullied" if their bullying occurred online in a jurisdiction that asked only about in-person bullying. Despite these limitations, this research provides compelling evidence for the importance of considering sexual orientation in research on mental health and well-being in adolescence.

In the United States, LGB youths report frequent experiences with peer victimization, with potentially serious consequences for their well-being.¹⁴ Currently, policymakers, school personnel, and researchers are critically limited in their ability to understand the implications of victimization for sexual minority youths because of the limited availability of nationally representative data. National surveys of adolescent health, such as the YRBS, should recognize the importance of including sexual orientation and attraction in survey instruments to improve the ability to develop effective suicide and bullying prevention programs for sexual minority youths. Furthermore, our research, along with other recent research, 37,38 showed the advantage of using an intersectional perspective to understand mental health disparities. Finally, school personnel should develop antibullying and antihomophobia policies in response to the disproportionate risk of being bullied and reporting suicidality among sexual minority youths. Several helpful resources specifically designed for educators can be found on the Gay, Lesbian, and Straight Education Network Web site,8 including how

to create safe environments for LGBT adolescents at school, how to include LGBT history and issues in curriculum, and how to discuss respect for all individuals among youths of all ages.

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Contributors

A. S. Mueller conceptualized the study, interpreted the data, and wrote the article. W. James managed, analyzed, and interpreted the data and edited the article. S. Abrutyn reviewed the literature and edited the article. M. L. Levin conceptualized the study; acquired, analyzed, and interpreted the data; and edited the article.

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Human Participant Protection

The institutional review board of The University of Memphis approved this study. We complied with the principles of the ethical practices of public health of the American Public Health Association.

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