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Sexual identity, adverse childhood experiences, and suicidal behaviors

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Abstract

Purpose—To examine the influence of sexual identity and adverse childhood experiences (ACEs) on suicidal behaviors in a population-based sample of high school students.

Methods—A two-stage cluster random sampling design was used to recruit 5,108 students from 97 high schools. 4,955 students (97%) provided information that allowed for classification of sexual identity into three groups: 1) lesbian, gay or bisexual (LGB) (10%); 2) not sure (4.6%); and 3) heterosexual (85.4%). Five measures of childhood abuse and household dysfunction were summed and categorized as: 0, 1, 2, 3–5 ACEs. Weighted logistic regression was used to assess the influence of sexual identity, ACEs, and their interaction on suicide ideation and attempts in the past 12 months.

Results—Compared to heterosexual students, those who were LGB and not sure had higher odds of suicide ideation and attempts. There was also a graded relationship between cumulative ACE exposure and suicidal behaviors. While sexual identity/ACEs interaction was not observed, LGB/not sure students who experienced a high number of ACEs were disproportionately affected. Compared to heterosexual students with 0 ACEs, LGB/not sure students with 0 ACEs (AOR=3.32, 95% CI=1.96, 5.61), 1 ACE (AOR=6.58, 95% CI=4.05, 10.71), 2 ACEs (AOR 13.50, 95% CI=8.45, 21.58), and 3–5 ACEs (AOR=14.04, 95% CI=8.72, 22.62) had higher odds of suicide ideation. A similar pattern was observed for suicide attempts.

Conclusions—LGB and students not sure of their sexual identity with greater exposure to ACEs experience disproportionately high levels of suicide ideation and attempts. Trauma informed interventions for these populations are warranted.

Keywords

Sexual identity; adverse childhood experiences; suicidal behaviors; high school students

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Suicide is the second-leading cause of death among adolescents and young adults (10–24 years) in the United States¹ and there is evidence that suicide rates are increasing in this age group.² Population-based studies demonstrate that adolescents who self-identify as lesbian, gay, or bisexual (LGB) report significantly higher rates of suicidal behaviors than their heterosexual peers.^{3,4} In 2015, sexual identity was added as a core variable to the national Youth Risk Behavior Survey (YRBS) resulting in the largest number of states and school districts that have assessed sexual identity among high school students to date (25 states and 19 large urban school districts). The 2015 YRBS found that the prevalence of suicide ideation was nearly three times higher and the prevalence of suicide attempts was more than four times higher among LGB students compared to heterosexual students. Suicidal behaviors were also consistently higher among students who were not sure of their sexual orientation compared to those who self-identified as heterosexual.³

Sexual identity remains significantly associated with suicidal behaviors after controlling for known risk factors such as depression and substance use^{4–6} suggesting that other risk factors may explain the disproportionate rates of suicidal behaviors among sexual minority youth. The minority stress model hypothesizes that stigma, prejudice, and discrimination experienced by LGB individuals contribute to chronic stress and poor mental health outcomes, including suicidal behaviors.⁷ Most studies with LGB youth have focused on exposure to sexual minority-related victimization^{8–10} and being bullied or victimized at school^{11–13} and have generally found support for the minority stress model. However, exposure to victimization and other stressors within the family are common for LGB youth¹⁴ and may also contribute to suicidal risk behaviors.^{15–18}

Adverse childhood experiences (ACEs) can be defined as childhood abuse, neglect, and a range of household dysfunction.¹⁹ Population-based cross-sectional research has documented a higher prevalence of ACEs among sexual minority adults^{20,21} and there is a demonstrated dose-response relationship between ACEs and attempted suicide throughout the lifespan.^{22,23} Studies with adult populations have also explored the role of a limited number of ACEs in the relationship between sexual identity and suicidal risk behaviors. One study used cross sectional data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) and found that the association between LGB identity and attempted suicide among adults was significantly mediated by childhood sexual abuse and physical abuse for females and sexual abuse for males.¹⁷ Another longitudinal study with a nationally representative sample of young adults (18–27 years) showed that exposure to childhood adversity (defined as any exposure to childhood physical abuse, childhood sexual abuse, housing instability, or intimate partner violence) partially explained the relationship between LGB identity and suicidality.¹⁸

While mediation analyses are important for understanding the possible mechanism by which LGB identity influences suicide risk, an equally important and unexplored question is whether ACEs interact with sexual identity to influence suicidal behaviors. Understanding whether sexual minority adolescents who have elevated exposure to ACEs are disproportionately at risk for suicidal behaviors is essential for developing effective suicide prevention strategies for sexual minority populations. Furthermore, previous research exploring the role of ACEs in the relationship between sexual identity and suicidal behaviors

has relied on samples of adult and young adult populations and only focused on childhood abuse¹⁷ or broad measures of any childhood adversity.¹⁸ Children are often exposed to multiple forms of abuse and household dysfunction and there is evidence that cumulative exposure to adversities may have a greater impact on health outcomes than individual stressors.²⁴ In the present study, we examined the independent and interacting influence of sexual identity and cumulative exposure to ACEs on recent suicide ideation and attempts in a population-based sample of 4,955 high school students.

METHODS

Participants and Procedures

The YRBS is a national survey designed by the Centers for Disease Control and Prevention (CDC) to monitor priority health-related behaviors among high school students. Data for our analyses were obtained from the 2015 Nevada YRBS. A two-stage cluster random sampling design was used to ensure a representative sample of students in grades 9 to 12 from regular, charter, and alternative public schools throughout the state. The first sampling stage grouped 16 school districts into 7 regions which align with the statewide prevention coalition structure. In the second sampling stage, second period or required English classes were randomly selected from all schools for survey administration. Half of the school districts required active parental permission and half required passive parental permission. After parental permission was obtained, the questionnaire was administered to students in all selected classes. Students could choose not to participate and could skip any questions they did not feel comfortable answering. Overall, 5,108 youth from 97 schools completed the questionnaire. The overall response rate (a combination of school and student participation) was 65%. The study was approved by the University Institutional Review Board (IRB) and local school district IRB approval was obtained when required.

Measures

Sexual Identity—In 2015, the CDC added sexual identity as a core YRBS variable.³ Students were asked “Which of the following best describes you?” Responses included: heterosexual (straight); gay or lesbian; bisexual; and not sure. Three comparison groups were used for the analyses: 1) lesbian, gay or bisexual (LGB); 2) not sure, and 3) heterosexual.

Adverse Childhood Experiences—The CDC YRBS survey includes a core measure of lifetime sexual abuse: “Have you ever been physically forced to have sexual intercourse when you did not want to?” Additionally, four state-added variables were adapted from the Behavioral Risk Factor Surveillance System ACE module^{20,21} to assess lifetime prevalence of: 1) physical abuse by an adult - “Have you ever been hit, beaten, kicked, or physically hurt in any way by an adult? (Do not include being spanked for bad behavior)”; 2) household domestic violence - “Have you ever seen or heard adults in your home slap, hit, kick, punch, or beat each other up?”; 3) household mental illness - “Have you ever lived with someone who was depressed, mentally ill, or suicidal?”; and 4) household substance abuse - “Have you ever lived with someone who was a problem drinker or alcoholic or abused street or prescription drugs?” Responses to all ACE questions were dichotomized as

yes vs. no. Two household dysfunction questions (household mental illness and household substance use) included a response of don't know. Consistent with previous research with adults using the BRFSS ACE module^{19,20} don't know responses were coded as missing for these questions. The five ACE questions were summed to create a total ACE score (range 0–5). The ACE score was further categorized as 0, 1, 2, and 3–5 ACEs.

Suicide Risk Behaviors—A standardized YRBS question was used to assess suicide ideation, “During the past 12 months, did you ever seriously consider attempting suicide?” Responses were dichotomized as yes vs. no. Suicide attempts were assessed by asking students, “During the past 12 months, how many times did you actually attempt suicide?” Responses were dichotomized as 0 times vs. 1 or more times.

Covariates—Demographic characteristics included sex, age, and race/ethnicity. County of residence was coded as urban (50,000 or more people) or rural (<50,000 people) using the Census Bureau's classification of urban and rural counties.²⁵ Additionally, a state-added question assessed whether students were qualified for free or reduced lunch (yes vs. no) as a proxy for income level. School district parental permission (active vs. passive) and use of alcohol and marijuana in the past 30 days (yes vs. no) were also included as covariates.

Analyses

The weighted chi-square test was used to compare the prevalence of sociodemographic characteristics, substance use, ACEs, and suicide risk behaviors between LGB, not sure, and heterosexual students. Because three sexual identity groups were compared for each variable, the Bonferroni method was used to adjust for multiple comparisons.

To account for the complex survey design, weighted logistic regression was used to assess whether sexual orientation (LGB, not sure, and heterosexual) and ACE scores (0, 1, 2, 3–5 ACEs) were independently associated with suicide ideation and suicide attempts after controlling for sex, age, race/ethnicity, county of residence, qualification for free or reduced lunch, parental permission type, recent alcohol use, and recent marijuana use. The Adjusted Odds Ratio (AOR) and 95% Confidence Interval (CI) were calculated.

We repeated the weighted logistic regression models for each outcome including sexual identity x ACE score interaction terms. Because the models without interaction terms showed similar effects for students who self-identified as LGB and those who were not sure of their sexual orientation, these two groups were combined for interaction analyses. Overall, 8 groups were compared: 1) heterosexual/0 ACEs (referent); 2) heterosexual/1 ACE; 3) heterosexual/2 ACEs; 4) Heterosexual/3–5 ACEs; 5) LGB & not sure/0 ACEs; 6) LGB & not sure/1 ACE; 7) LGB & not sure/2 ACEs; and 8) LGB & not sure/3–5 ACEs. All percentages shown are weighted percentages and all p-values are two-tailed. SAS version 9.4 (SAS Institute, Cary, NC) was used for all analyses.

RESULTS

Of the 5,108 participants who completed surveys, 4,955 (97.0%) answered the sexual identity question. Of this group, 498 (10.0%) self-identified as LGB, 227 (4.6%) were not

sure of their sexual identity, and 4,230 (85.4%) self-identified as heterosexual. Descriptive characteristics LGB, not sure, and heterosexual students are presented in Table 1. Almost three quarters of participants were 16 years of age or younger and most were Hispanic (39.4%) and non-Hispanic White (36.3%). One in five students lived in a rural county and 40.5% qualified for free or reduced lunch. Almost one third of the sampled students (30.5%) drank alcohol and 19.6% used marijuana in the past 30 days. A higher proportion of LGB and not sure students were female and a higher proportion of LGB students qualified for free or reduced lunch compared to heterosexual students. Recent use of alcohol was also higher among LGB and not sure students and recent use of marijuana was higher among LGB students compared to heterosexual students.

Table 2 shows the unadjusted associations between sexual identity and ACEs and sexual identity and suicidal behaviors. Individual ACEs were consistently higher among LGB and not sure students compared to heterosexual students ($p<.001$): sexual abuse (LGB, 24.4%; not sure, 13.9%; and heterosexual, 6.8%), physical abuse (LGB, 34.1%; not sure, 21.2%; and heterosexual, 13.1%), witnessing domestic violence in the home (LGB, 26.7%; not sure, 25.0%; and heterosexual, 14.7%), household mental illness (LGB, 50.3%; not sure, 44.6%; and heterosexual, 27.4%), and household substance abuse (LGB, 47.1%; not sure, 37.7%; and heterosexual, 28.2%). Additionally, LGB and not sure students had higher cumulative ACE scores than heterosexual students ($p<.001$). For example 56.2% of LGB and 40.3% of not sure students experienced 2–5 ACEs, compared to 25.3% of heterosexual students. LGB and not sure students also had higher prevalence of suicide ideation (LGB, 41.5%; not sure, 36.8%; heterosexual, 13.9%; $p<.001$) and suicide attempts in the past 12 months (LGB 28.5%; not sure, 21.1%; heterosexual, 6.8%; $p<.001$).

After controlling for all covariates, higher odds of suicide ideation and attempts were observed among students who self-identified as LGB (ideation AOR=2.48, 95% CI=1.83, 3.35; attempts AOR=3.03, 95% CI=2.17, 4.23) or were not sure of their sexual identity (ideation AOR=2.87, 95% CI=1.88, 4.37; attempts AOR=3.20, 95% CI=1.84, 5.57) compared to students who self-identified as heterosexual (Table 3).

As ACE scores increased, there was an increase in the odds of: 1) suicide ideation - 1 ACE (AOR=2.31, 95% CI=1.74, 3.07), 2 ACEs (AOR=3.82, 95% CI=2.77, 5.27), 3–5 ACEs (AOR=5.73; 95% CI=4.11, 8.00); and 2) attempts - 1 ACE (AOR=1.21, 95% CI=0.76, 1.93), 2 ACEs (AOR=3.09, 95% CI=1.91, 5.02), 3–5 ACEs (AOR=5.43, 95% CI=3.41, 8.65) (Table 3).

In the models that included interaction terms (sexual identity x ACE scores), no statistically significant interactions were observed. A similar pattern of increasing odds of suicide ideation and attempts corresponding to increases in ACE scores was observed regardless of sexual identity (Figures 1 and 2). However, students who reported that they were LGB or not sure of their sexual identity and had higher ACE scores were disproportionately affected. Compared to heterosexual students with 0 ACEs, LGB/not sure students with 0 ACEs (AOR=3.32, 95% CI=1.96, 5.61), 1 ACE (AOR=6.58, 95% CI=4.05, 10.71), 2 ACEs (AOR=13.50, 95% CI=8.45, 21.58), and 3–5 ACEs (AOR=14.04, 95% CI=8.72, 22.62) had higher odds of suicide ideation (Figure 1). Elevated odds of suicide attempts were also found

among LGB/not sure students with 0 ACEs (AOR=3.76, 95% CI=1.81, 7.79), 1 ACE (AOR=4.23, 95% CI=2.26, 7.93), 2 ACEs (AOR=12.81, 95% CI=6.28, 26.14), and 3–5 ACEs (AOR=13.15, 95% CI=7.27, 23.79) compared to heterosexual students with no ACEs (Figure 2).

DISCUSSION

This study examined the independent and interacting influence of sexual identity and cumulative exposure to ACEs on suicidal behaviors in a population-based sample of high school students. Consistent with previous research, students who self-identified as LGB^{2,3} or were not sure of the sexual orientation³ were at greater risk for suicide ideation and attempts. Furthermore, there was a strong and graded relationship between ACEs and suicidal behaviors, which is consistent with adult literature.^{22,23} While we did not observe significant interaction between sexual identity and ACEs, students who self-identified as LGB or were not sure of their sexual identity and experienced a high number of ACEs were disproportionately affected. For example, compared to heterosexual students with no ACEs, LGB/not sure students with 2 or more ACEs had approximately 13 times higher odds suicide ideation and attempts.

We were not able to identify mechanisms underlying the influence of LGB identity and ACEs on suicidal behaviors, but past research has shown that sexual minority victimization and peer/school victimization^{8–13} increases suicide risk behaviors among LGB adolescents. It may be that exposure to ACEs adds to other stressors that are common among sexual minority populations such as social discrimination, stigma, and victimization.²¹ Future research using representative longitudinal designs should explore whether exposure to societal minority stressors as well as ongoing family adversities have a cumulative and interacting impact on suicide ideation and attempts across the lifespan. There is also a need for studies that explore protective factors or youth assets that may moderate the impact of childhood trauma on suicidal behaviors.

Our study supports a growing body of evidence showing higher levels of childhood abuse among LGB youth compared to heterosexual youth¹⁴ and adds to this literature by demonstrating that adolescents who are not sure about their sexual identity are also at increased risk for abuse. Even within the same family, research has shown that LGB individuals are at greater risk for psychological abuse and physical abuse than their heterosexual siblings.²⁶ There is a paucity of data exploring household dysfunction in sexual minority populations,¹⁶ but our results suggest that LGB and not sure adolescents are more likely to witness household domestic violence and live with an adult with a substance abuse or mental health problem which is consistent with recent population-based adult research.^{20,21}

The reasons for higher prevalence of ACEs among sexual minority youth are not evident in our study or others. However, research has demonstrated an association between childhood gender non-conformity (which is more common among LGB adolescents) and childhood abuse and neglect by family members.^{27,28} Furthermore, verbal abuse and other forms of victimization are potential consequences when sexual minority youth disclose their sexual

orientation to parents²⁹ and research with lesbian and bisexual women has shown that earlier age of awareness and disclosure of sexual identity is associated with an increased risk of harassment and abuse by family members.³⁰

Strengths and Limitations

The strengths of our study include use of a large representative sample of LGB, not sure, and heterosexual high school students and a focus on cumulative exposure to childhood abuse and household dysfunction. There are also some limitations that should be noted.

First, information bias may partially account for the higher prevalence of childhood abuse and household dysfunction we observed among LGB and not sure participants. It is possible that students who are willing to self-identify as LGB are also more likely to report potentially stigmatizing information such as childhood abuse and household dysfunction³¹ and if LGB youth and those who are not sure of their sexual identity have more exposure to therapy and counseling services this may increase their recognition of different types of family dysfunction.²⁰ However, researchers generally conclude that elevated rates of suicidal behaviors among LGB individuals are not due to self-report³² and over-reporting of ACEs among students who are LGB or not sure of their sexual identity would not influence the main associations we observed.

Second, we combined lesbian, gay, and bisexual students into one group to ensure enough power to assess interaction. Such grouping of sexual identity prohibited our ability to investigate differences in ACEs and suicide risk behaviors as well as potential interacting effects between different sexual minority populations.

Third, while a strength of our study was the inclusion of several measures of childhood abuse and household dysfunction, we did not have some ACE measures that are typically included in adult surveillance studies such as emotional abuse, incarceration of family member, and parental separation/divorce.^{20,21}

Fourth, the YRBS is a cross-sectional surveillance study and as such, we cannot determine the temporal relationship between the development of sexual identity, the timing of ACEs, and potential influence on suicidal behaviors. Finally, while our survey results are generalizable to high school students in one state, we are cautious about generalizing to other areas.

Conclusion

Our research demonstrates that high school students who self-identify as LGB or are not sure of their sexual identity and have higher cumulative exposure to ACEs are important sub-populations for suicide prevention efforts. Screening for ACEs in schools, pediatric primary care settings, and other child-serving agencies has been recommended as an efficient strategy for identifying youth who may be at risk for a range of poor physical and mental health outcomes.³³ Our research provides evidence for assessing sexual identity during such screenings and demonstrates the importance of ensuring that providers who work with sexual minority adolescents are aware of their elevated risk for experiencing ACEs²⁶ and the potential influence this can have on suicidal behaviors. Finally, the higher

prevalence of ACEs among adolescents who are LGB or not sure of their sexual identity and the demonstrated influence on suicide risk behaviors highlight the need to ensure that suicide prevention efforts for sexual minority youth are trauma-informed.

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Implications and Contributions

Adolescent research exploring the independent and interacting influence of sexual identity and adverse childhood experiences (ACEs) on suicidal behaviors is limited. This study found that LGB and students who are not sure of their sexual identity with greater ACE exposure have disproportionately high odds of suicide ideation and attempts.

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Figure 1. Interacting Influence of Sexual Identity and Adverse Childhood Experiences (ACEs) on Suicide Ideation – 2015^{a,b,c}

^aHeterosexual/0 ACEs is the referent group. AORs and 95% CI's plotted.

^bModel adjusted for sex, age, race/ethnicity, county of residence, free or reduced lunch qualification, parent permission type, recent alcohol use, and recent marijuana use.

^cNo significant interaction effects between sexual identity and ACEs observed.

Figure 2. Interacting Influence of Sexual Identity and Adverse Childhood Experience (ACEs) on Suicide Attempts – 2015^{a,b,c}

^aHeterosexual/0 ACEs is the referent group. AORs and 95% CI's plotted.

^bModel adjusted for sex, age, race/ethnicity, county of residence, free or reduced lunch qualification, parent permission type, recent alcohol use, and recent marijuana use.

^cNo significant interaction effects between sexual identity and ACEs observed.

Table 1

Characteristics of 4,955 High School Students, by Sexual Identity – 2015

	Total N (%) ^a	LGB N (%)	Not sure n (%)	Heterosexual n (%)	P-Value
Sex					
Female	2538 (48.7)	360 (71.7)	146 (65.2)	2032 (45.1)	<i>b, c</i>
Male	2398 (51.3)	134 (28.3)	80 (34.8)	2184 (54.9)	
Age					
14 years	590 (10.5)	65 (10.7)	27 (10.0)	498 (10.5)	
15 years	1359 (25.5)	142 (28.9)	70 (27.8)	1147 (24.9)	
16 years	1311 (25.8)	127 (21.4)	57 (23.3)	1127 (26.5)	
17 years	1140 (25.0)	113 (26.7)	47 (25.0)	980 (24.8)	
18 years	543 (13.2)	50 (12.2)	25 (13.9)	468 (13.3)	
Race/ethnicity					
Hispanic	1951 (39.4)	177 (37.4)	90 (39.8)	1684 (39.6)	
Non-Hispanic White	1919 (36.3)	199 (35.3)	83 (38.5)	1637 (36.3)	
Non-Hispanic Black	263 (9.9)	35 (12.1)	11 (8.3)	217 (9.7)	
Non-Hispanic Other	721 (14.5)	72 (15.2)	30 (13.3)	619 (14.4)	
County of residence					
Urban	3612 (90.4)	378 (90.8)	173 (93.5)	3061 (90.2)	
Rural	1343 (9.6)	120 (9.2)	54 (6.5)	1169 (9.8)	
Parent permission					
Active	2918 (79.3)	299 (78.9)	127 (76.6)	2492 (79.5)	
Passive	2037 (20.7)	199 (21.1)	100 (23.4)	1738 (20.5)	
Qualify for free or reduced lunch					
Yes	1920 (40.5)	235 (49.1)	90 (39.8)	1595 (39.6)	<i>b</i>
No	3013 (59.5)	260 (50.9)	134 (60.2)	2619 (60.4)	
Alcohol use (past 30 days)					
Yes	1391 (30.5)	205 (46.8)	78 (42.7)	1108 (28.1)	<i>b, c</i>
No	3071 (69.5)	232 (53.2)	117 (57.3)	2722 (71.9)	
Marijuana use (past 30 days)					
Yes	958 (19.6)	170 (34.7)	55 (26.8)	733 (17.5)	<i>b</i>

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	Total N (%) ^a	LGB N (%)	Not sure n (%)	Heterosexual n (%)	P- Value
No	3928 (80.4)	310 (65.3)	166 (73.2)	3452 (82.5)	

^aLGB vs. Not sure (p<.001)

^bLGB vs. Heterosexual (p<.001)

^cNot sure vs. Heterosexual (p<.001)

Table 2

Adverse Childhood Experiences (ACEs), Suicide Ideation, and Suicide Attempts by Sexual Identity - 4,955 High School Students – 2015

	LGB n (%)	Not sure n (%)	Heterosexual n (%)	P-Value
ACEs				
Sexual abuse				
Yes	122 (24.4)	42 (13.9)	329 (6.8)	<i>b, c</i>
No	369 (75.6)	181 (86.1)	3882 (93.2)	
Physical abuse				
Yes	171 (34.1)	52 (21.2)	598 (13.1)	<i>b, c</i>
No	315 (65.9)	171 (78.8)	3617 (86.9)	
Household domestic violence				
Yes	133 (26.7)	63 (25.0)	617 (14.7)	<i>b, c</i>
No	346 (73.3)	160 (75.0)	3581 (85.3)	
Household mental illness				
Yes	255 (50.3)	102 (44.6)	1159 (27.4)	<i>b, c</i>
No	222 (49.7)	112 (55.4)	2955 (72.6)	
Household substance use/abuse				
Yes	234 (47.1)	86 (37.7)	1229 (28.2)	<i>b, c</i>
No	235 (52.9)	125 (62.3)	2882 (71.8)	
ACE score				
0	95 (21.9)	65 (37.8)	1967 (50.0)	<i>b, c</i>
1	97 (21.9)	50 (21.9)	999 (24.8)	
2	109 (23.4)	43 (21.7)	638 (15.2)	
3–5	151 (32.8)	47 (18.6)	450 (10.1)	
Suicide ideation (past 12 months)				
Yes	214 (41.5)	87 (36.8)	617 (13.9)	<i>b, c</i>
No	270 (58.5)	133 (63.2)	3602 (86.1)	
Suicide attempts (past 12 months)				
Yes	135 (28.5)	44 (21.1)	288 (6.8)	<i>b, c</i>
No	306 (71.5)	149 (78.9)	3396 (93.2)	

^aLGB vs. Not sure (p<.001)

^bLGB vs. Heterosexual (p<.001)

^cNot sure vs. Heterosexual (p<.001)

Table 3

Influence of Sexual Identity and Adverse Childhood Experiences (ACEs) on Suicide Ideation and Suicide Attempts – 2015

Variable	Suicide Ideation ^a		Suicide Attempts ^a	
	AOR	(95% CI)	AOR	(95% CI)
Sexual Identity				
Heterosexual (ref)	1.00		1.00	
LGB	2.48	(1.83, 3.35)	3.03	(2.17, 4.23)
Not sure	2.87	(1.88, 4.37)	3.20	(1.84, 5.57)
ACE Score				
0 (ref)	1.00		1.00	
1	2.31	(1.74, 3.07)	1.21	(0.76, 1.93)
2	3.82	(2.77, 5.27)	3.09	(1.91, 5.02)
3–5	5.73	(4.11, 8.00)	5.43	(3.41, 8.65)

^aAdjusted for sex, age, race/ethnicity, county of residence, free or reduced lunch qualification, parent permission status, recent alcohol use, and recent marijuana use.

‘AOR’ = adjusted odds ratio; ‘CI’ = confidence interval.