

Suicidal Ideation and Attempt Among Adolescents Reporting “Unsure” Sexual Identity or Heterosexual Identity Plus Same-Sex Attraction or Behavior: Forgotten Groups?

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Word Count: 5,980

Objective: To compare risk of suicide ideation and attempts in adolescents with (1) GLB identity, (2) “unsure,” identity, or (3) heterosexual identity with same-sex attraction/fantasy or behavior, to heterosexual identity without same-sex attraction/fantasy or behavior.

Method: 1,856 students aged 14 and older from 14 public and private high schools in Montréal, Québec, were surveyed anonymously. The survey included items assessing sexual orientation, health risk behaviors, and suicidal ideation and attempts. Multiple logistic regression models were used to assess risk factors for suicidal ideation and attempts.

Results: 58 (3.1%) adolescents identified as GLB, 59 (3.2%) as “unsure”, and 115 (6.2%) as heterosexual with same-sex attraction/fantasy or behavior. Compared to heterosexually-identified youth without same-sex attraction/fantasy or behavior (N=1,624; 87.5%), in multivariable analyses, 12-month suicidal ideation was significantly higher for both GLB (odds ratio [OR]=2.31, 95% confidence interval [CI] 1.22 to 4.37) and “unsure” youth (OR=2.64, 95% CI 1.38 to 5.08). 12-month suicidal attempts were significantly elevated for GLB youth (OR=2.23, 95% CI 1.15 to 4.35), and high, although not statistically significant, for “unsure” youth (OR=1.61, 95% CI 0.77 to 3.36). Heterosexual identity with same-sex attraction/fantasy or behavior was not significantly associated with increased suicidal ideation (OR=1.26, 95% CI 0.76 to 2.08) or attempts (OR=1.03, 95% CI 0.55 to 1.91) in multivariable analyses.

Conclusion: Compared to heterosexual youth without same-sex attraction/fantasy or behavior, adolescents with GLB and “unsure” identities were at greater risk of suicidality. However, youth who reported same-sex attraction or behavior, but a heterosexual identity, were not at elevated risk.

Keywords: Sexual identity, suicidality, adolescence

INTRODUCTION

Gay, lesbian and bisexual (GLB) adolescents are at higher risk of mental health problems than their heterosexual peers. For GLB adolescents the lifetime rate of suicide attempt is between 20% and 40%,¹⁻³ approximately 2 to 6 times that of non-GLB adolescents.^{2,4,5} GLB adolescents report higher rates of risk factors for suicidal behavior, including depression, anxiety, alcohol and substance abuse,^{6,7} eating disorders,^{2,8} early sexual activity and more sexual partners,⁵ being victims of violence,⁹ family history of criminal offending,⁶ and family disruption.⁶ Even after controlling for traditional risk factors, GLB sexual status is independently associated with suicidal ideation and attempt.^{1,3,6,10}

Sexual orientation includes 3 components: attraction/fantasy, behavior, and identity.¹¹ Some studies of suicidal ideation and attempt have compared youth with same-sex attraction or behavior to youth with opposite sex attraction and behavior,^{6,12-14} but most are based on self-report of sexual identity and compare adolescents with GLB identity to those with heterosexual identity.¹⁵ Sexual orientation, however, is a complex construct, and there is great variability within heterosexual-identified or homosexual-identified groups in terms of sexual attraction and behavior. Many adolescents with same-sex attraction or behavior, for instance, identify themselves as heterosexual.^{16,17} It has been argued that adolescents with same-sex attraction/fantasy or behavior, but heterosexual identity, differ in important ways from both heterosexual-identified youth without same-sex attraction/fantasy or behavior and GLB-identified youth and that they may not be at risk for poor mental health outcomes.¹⁷ Existing studies, however, have not differentially assessed the risk of poor mental health outcomes among heterosexually-identified adolescents with same-sex attraction or behavior.¹⁷

Beyond this, existing studies of sexual identity and mental health outcomes have inconsistently addressed adolescents who reported being “unsure” about their sexual identity, even though as many or more adolescents report being “unsure” about their sexual identity as those reporting a GLB identity.^{2,5,10,11,16} Many studies have not included an “unsure” response option.^{3,6,18-20} When studies have included “unsure” identity as a response option, adolescents with “unsure” identity have been inconsistently categorized as GLB^{10,13} or heterosexual/non-GLB.^{2,5} One large study⁵ reported results with adolescents unsure of their identity alternatively counted as non-GLB and excluded from analyses. These youth with “unsure” identity were classified as GLB in a subsequent study using the same data.¹⁰ Adolescents who report “unsure” sexual identity may experience substantial turbulence in what is an important formative period in a young person’s life. Youth who report “unsure” sexual identity may be exploring GLB identity. The formation of a GLB sexual identity is a different and possibly more complex process than heterosexual identity formation.²¹ Sexual relationships and identity develop in a social context that establishes what the relationships mean and how they are socially supported or not supported. Adolescents exploring GLB sexual identity or who are otherwise unsure about their sexual identity are often without role models and accurate information. They may experience substantial confusion or fear of discrimination.²² Little is known, however, about whether youth who are “unsure” of their sexual identity are at risk for poor mental health outcomes.

Assertions that GLB youth are at risk for suicidal behavior oversimplify sexual identity diversity, and no studies have specifically examined risk for suicide behavior among youth with heterosexual identity, but same-sex attraction/fantasy or behavior, or among youth with “unsure” sexual identity. The objective of this study was to compare risk of suicide ideation and attempts separately in four groups of adolescents, controlling for traditional risk factors: (1) adolescents

who reported heterosexual identity without same-sex attraction/fantasy or behavior, (2) adolescents with GLB sexual identity, (3) adolescents with “unsure” sexual identity, and (4) adolescents with heterosexual identity and same-sex attraction/fantasy or behavior.

METHODS

Sample Design and Population

Participants in the study were students aged 14 and older, enrolled in grades 9-11 in either public or private schools in Montreal, Quebec, Canada. In 2004, principals from all public high schools in the French Montreal School Board (N=39), and English Montreal school board (N=20), as well as 2 private high schools were notified about the study by mail and then contacted by phone and invited to participate. The study purpose was stated as investigating suicide and its risk factors, including sexuality. The survey was approved and administered in 14 high schools (8 French school board, 4 English school board, 2 private). Within each school, principals selected 1-6 classrooms for survey administration based on logistical considerations and ensuring that no student would complete the survey more than once.

Prior to survey administration, parents were notified and given the opportunity to refuse their child’s participation. Students were informed that the survey was anonymous, confidential, and voluntary. Classroom teachers were not permitted to circulate among students in order to ensure the confidentiality of responses. Questions about sexual orientation were scattered throughout the survey to make it less likely that classmates could identify which questions others were answering. In addition, students were provided with a cover sheet to conceal the answers they recorded on a scannable answer sheet. The study was approved by the Montreal General Hospital research ethics committee.

Demographic data and rates of sexual identity, attraction/fantasy, and behavior from this study have been published previously.¹⁶

Measures

The 2004 Quebec Youth Risk Behavior Survey (QYRBS) questionnaire was based on the 2001 Center for Disease Control Youth Risk Behavior Survey,²³ with additional items related to sexual orientation.

Sexual Identity, Attraction/Fantasy, and Behavior

Sexual identity was measured by the question, “Which of the following best describes you?” Responses were *heterosexual (straight)*, *gay or lesbian*, *bisexual*, and *not sure*. Sexual attraction/fantasy was measured by the question, “During your life, to whom have you been attracted to or had fantasies about, either romantically or sexually?” (*no romantic or sexual interest, female(s)*, *male(s)*, *female(s) and male(s)*). Sexual behavior was measured by the question, “During your life, who have you had sex with?” (*no sexual contact, female(s)*, *male(s)*, *female(s) and male(s)*). The instructions indicated, “In this questionnaire, when we ask about sex, we are asking about any oral sex, vaginal sex, and/or anal sex that was consensual, which means that it was agreed upon by both people.” Students were classified as (1) heterosexual without same-sex attraction/fantasy or behavior, (2) heterosexual with same-sex attraction/fantasy or behavior, (3) GLB, if they reported gay, lesbian, or bisexual identity, (4) and “unsure,” if they reported “not sure” for sexual identity.

Depressed mood

Depressed mood was measured by asking, “During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?” Responses were dichotomous.

Substance Use

Four substance use variables were examined, including current use (past 30 days) of cigarettes, alcohol, and marijuana and lifetime use of hard drugs (cocaine, heroin, illegal drug injection). Responses were measured with ordinal response options then dichotomized into positive and negative responses.

Fighting

Fighting behavior was assessed by the question, “During the past 12 months, how many times were you in a physical fight?” This variable was measured on an ordinal 5-point scale ranging from “0” to “8 times or more.” Responses were recoded as dichotomous, no fighting vs. fighting 1 or more times.

Physical and Sexual Abuse

Physical abuse was measured by the item, “During the past 12 months, did any adult family member ever hit, slap, or physically hurt you on purpose?” Responses were dichotomous.

Sexual abuse was measured by the item, “During your life, has anyone ever had sexual contact with you against your will, including unwanted touching?” Response options were no or yes.

Sexual Risk Behaviors

Two sexual risk behavior variables were examined. Early initiation of sexual contact, which was the primary sexual risk behavior variable, was measured by the question, “How old were you when you had sex for the first time?” Responses were on a 5-point ordinal scale ranging from “never had sex” to “13 years old or younger”. This variable was recoded into a 3-point ordinal scale: “never had sex,” “14 years old and older,” and “13 years old or younger,” due to the relative small number of response in some categories. In addition, number of sexual

partners was assessed by the question, “During the past 3 months, with how many people did you have sex?” Responses were on a 5-point ordinal scale, ranging from “never had sex” to “4 or more people.” This variable was also recoded into a 4-point variable: “never had sex,” “had, but not in the past 3 months,” “1 person,” and “more than 1 person,” due to the very small number of students with “4 or more people.”

Suicidal Ideation and Attempts

Suicidal ideation was assessed dichotomously with the item, “During the past 12 months, did you ever seriously consider attempting suicide?” Suicidal attempt was assessed with the item, “During the past 12 months, how many times did you actually attempt suicide?” Original response options were ordinal, ranging from “0” to “6 or more times.” Responses were dichotomized into “no suicide attempts” vs. “1 or more suicide attempts” due to the small number of respondents who reported multiple attempts.

Data Analyses

Heterosexual students without same-sex attraction/fantasy or behavior, GLB-identified students, “unsure” students, and heterosexual students with same-sex attraction/fantasy or behavior were compared on health risk factors and suicidal ideation and attempts using chi-square tests of significance for the overall comparison and Bonferroni-corrected comparisons between subgroup pairs. To maintain the family-wise error rate $<.05$, the Bonferroni-corrected α for each of the 6 subgroup comparisons for each variable was 0.0083.

The associations of demographic, risk factor, and sexual orientation variables with suicide ideation and attempts were assessed with multiple logistic regression models. Each model included the variables age, gender, race, depressed mood, drug use, fighting, physical and sexual abuse, sexual risk behaviors, and sexual orientation. Discrimination and calibration of the

logistic regression models were assessed with the c-index and Hosmer-Lemeshow goodness-of-fit test statistic (HL), respectively.²⁴ The c-index for each model reflects the percentage of comparisons where adolescents with suicidal ideation or attempts had a higher predicted probability of ideation or attempts than adolescents without ideation or attempts for all possible pairs of adolescents in the sample, one of whom reported ideation/attempts and the other of whom did not report ideation/attempts. The HL is a measure of the accuracy of the predicted number of cases of suicide ideation or attempts compared to the number of students who actually reported ideation/attempts across the spectrum of probabilities. A relatively large p value indicates that the model fits reasonably well. All of these analyses were conducted using SPSS version 16.0 (Chicago, IL), and all statistical tests were 2-sided with a $p < .05$ significance level.

In addition, post-hoc analyses for suicidal ideation and attempts that incorporated student clustering by schools were conducted using R version 2.7.0, and the mixed logistic models with random effects for school were compared to the originally specified logistic regression models.

RESULTS

Sample Characteristics

No parents refused permission, and all eligible students consented to participate. A total of 1,951 adolescents completed the QYRBS (mean of 5.4 classrooms and 139.4 students per school). Of these, 16 surveys were discarded due to mostly empty or defaced answer sheets. Of the 1,935 students whose data were recorded, 1,856 (95.9%) had complete data for all relevant items and were included in the present analyses. As shown in Table 1, 912 (49.1%) students were older than 16 years, 915 (49.3%) were females and 1197 (65.9%) were white. Based on data from the 2001 Canadian Census,²⁵ the sample closely replicated the percentage of females aged 15-19 living in Montreal (50.2%). A total of 1,624 students reported heterosexual identity

without same-sex attraction/fantasy and behavior (87.5%); 58 students (3.1%) identified as GLB, 59 (3.2%) students identified as “unsure,” and 115 (6.2%) students reported heterosexual identity but same-sex attraction/fantasy or behavior, including 33 (1.8%) who reported same-sex behavior.

Health Risk Behaviors

As shown in Table 1, of the 10 health risk factors (depressed mood, smoking, drinking, marijuana, hard drugs, fighting, physical abuse, sexual abuse, early sexual behavior, multiple sexual partners), compared to students with a heterosexual identity without same-sex attraction/fantasy or behavior, students with a GLB identity were significantly more likely to report depressed mood ($p<.001$), smoking ($p<.001$), drinking ($p<.001$), marijuana use ($p<.001$), use of hard drugs ($p<.001$), physical abuse, sexual abuse ($p<.001$), earlier sexual behavior ($p<.001$), and more sexual partners ($p<.001$). Students with an “unsure” identity were more likely than students with a heterosexual identity without same-sex attraction/fantasy or behavior to report smoking ($p<.001$), use of hard drugs ($p<.001$), sexual abuse ($p<.001$), and more sexual partners ($p=.006$). Students with a heterosexual identity and same-sex attraction/fantasy or behavior were more likely to report smoking ($p<.001$), use of hard drugs ($p=.004$), physical abuse ($p<.001$), sexual abuse ($p<.001$), earlier sexual behavior ($p<.001$), and more sexual partners ($p<.001$) compared to students with a heterosexual identity without same-sex attraction/fantasy or behavior.

Suicidal Ideation and Attempts

A total of 313 (16.9%) respondents reported having seriously considered attempting suicide and 177 (9.5%) respondents reported 1 or more suicide attempts within the past 12 months. As shown in Table 2, on an unadjusted basis, students with a GLB identity were almost

5 times more likely than students with heterosexual identity without same-sex attraction/fantasy or behavior to report suicidal ideation (OR=4.80, 95% CI=2.81 to 8.21, $p<.001$); students with an “unsure” identity were more than 3 times as likely to report suicide ideation (OR=3.51, 95% CI=2.04 to 6.06, $p<.001$); and students with a heterosexual identity with same-sex attraction/fantasy or behavior, were more than twice as likely to report suicide ideation (OR=2.09, 95% CI=1.35 to 3.24, $p=.001$). In multivariable analysis, after adjusting for age, gender, depressed mood, drug use, fighting, physical and sexual abuse, and sexual risk behaviors, students with a GLB identity were more than twice as likely to report suicide ideation (OR=2.31, 95% CI=1.22 to 4.37, $p=.010$); youth with an “unsure” identity were almost 3 times more likely (OR=2.64, 95% CI=1.38 to 5.08, $p=.004$); and students with a heterosexual identity and same-sex attraction/fantasy or behavior, did not report a significantly higher rate of suicide ideation (OR=1.26, 95% CI=0.76 to 2.08, $p=.373$). Based on the number of students with a heterosexual identity and same-sex attraction/fantasy or behavior, there was 80% power to detect an OR of approximately 2.0 or greater. Female gender, depressed mood, physical and sexual abuse were also significantly associated with 12-month suicide ideation ($p<.05$). The final model had good discriminative power (c-index=.81) and calibration ($p=.881$ for the HL statistic). There were no significant differences in suicidal ideation between students with GLB and “unsure” identities in bivariable or multivariable analyses.

As shown in Table 3, compared to youth with heterosexual identity without same-sex attraction/fantasy or behavior, in unadjusted analyses, both students with a GLB (OR=4.65, 95% CI=2.57 to 8.41, $p<.001$) and an “unsure” identity (OR=2.86, 95% CI=1.48 to 5.53, $p<.05$) were significantly more likely to report at least one suicide attempt. Students with a heterosexual identity and same-sex attraction/fantasy or behavior did not report a significantly higher rate of

suicide attempts (OR=1.68, 95% CI=0.95 to 2.98, $p=.074$). In multivariable analysis, both GLB (OR=2.23, 95% CI=1.15 to 4.35, $p=.018$) and “unsure” identities (OR=1.61, 95% CI=0.77 to 3.36, $p=.203$) were associated with elevated risk of suicide attempt, although this was not significant for students with an “unsure” identity. Based on the number of students with “unsure” identity, there was 80% power to detect an OR of approximately 2.1 or greater. Students with a heterosexual identity and same-sex attraction/fantasy or behavior were not at greater risk of suicide attempts (OR=1.03, 95% CI=0.55 to 1.91, $p=.926$). Female gender, depressed mood, fighting, and physical abuse were also significant independent predictors of 12-month suicide attempts ($p<.05$). The model had good discriminative power (c-index=.77) and calibration ($p=.121$ for the HL statistic). Students with a GLB or an “unsure” identity were not significantly different from each other in suicidal attempts in unadjusted or adjusted analyses.

For both suicidal ideation and attempts, models with an interaction term between age and sexual identity category were tested post-hoc. The interaction term was not statistically significant nor did it improve model fit in either case. There were no substantive changes in model parameters for either the suicidal ideation or suicidal attempts models when student clustering by schools was incorporated. The fit of the models did not improve with nesting by schools and the estimated standard deviation for the random effect of school was essentially equal to zero in both models.

DISCUSSION

This was the first study to assess risk of suicide ideation and attempt between adolescents with an “unsure” sexual identity, those with a GLB identity, those with a heterosexual identity and same-sex attraction/fantasy or behavior, and those with a heterosexual identity without same-sex attraction/fantasy or behavior. In multivariable analyses, youth with a GLB identity

and youth with an “unsure” identity were at 2-3 times higher risk for suicidal ideation than youth with a heterosexual identity without same-sex attraction/fantasy or behavior, whereas youth with a heterosexual identity with same-sex attraction or behavior were not at significantly increased risk. Adolescents with a GLB identity also had significantly higher odds of suicide attempt (OR=2.2), and youth with an “unsure” identity had elevated, although not statistically significant risk (OR=1.6). The odds of suicide attempt were not elevated for youth with a heterosexual identity and same-sex attraction or behavior compared to youth with a heterosexual identity without same-sex attraction/fantasy or behavior. There were no statistically significant differences in risk estimates for GLB versus “unsure” adolescents for suicide ideation or attempts.

This is also the first study addressing the issue that same-sex attraction or behavior is not associated with increased suicidal ideation or attempts. Many studies have shown that youth with GLB status are at substantially greater risk of suicide ideation and attempt than non-GLB youth. Sexual minority youths, however, do not comprise a homogeneous population, but rather are a diverse collection of individuals with great variability on important characteristics, including the nature of their sexual orientation.¹⁷ The results of this study demonstrate that simply dichotomizing sexual orientation into GLB versus heterosexual and concluding that GLB youth are at risk of mental health problems may not accurately capture the nature of risk related to GLB status. Indeed, whereas both students with GLB and “unsure” sexual identities had increased risk of suicidality, risk was not elevated among students with heterosexual identity and same-sex attraction or behavior in multivariable analyses. These findings suggest that same-sex attraction or behavior per se is not likely the driving force behind the increased risk seen in youth with GLB and unsure identities.

As identity defines the individual in a social context, it is likely that anti-homosexual bias (homophobia) is an important mediating factor for increased suicidal risk among youth with non-heterosexual identity, especially in adolescent settings.^{26,27} GLB adolescents who have come out are visible in a gay-negative environment and can be subject to discrimination and violence. Adolescents with a GLB or “unsure” identity who have not shared this with others, nonetheless view society’s anti-gay behaviors and may conclude that this is what awaits them. Internalized homophobia, which refers to negative feeling towards oneself because of homosexuality, may be another factor making youth more vulnerable to suicidality.²⁸ Measuring distress among non-heterosexual adolescents may also be catching these youth at their most vulnerable, when their own internalized homophobia is high and their opportunities for socialization with peers is low, relative to adulthood.

Identity development among sexual minority youth is not a homogeneous process. Many youth consolidate their GLB identity only at the end of adolescence or early adulthood, when their access to autonomy allows them more choice in their environment. For example, Igartua and colleagues’ study using the same data has found that older students were somewhat more likely to identify as GLB or unsure than younger students.¹⁶ Given the average age of our sample (15.9 years), it is possible that these young GLB and unsure youth are different than those that develop non-heterosexual identities later in life. Identification of the characteristics that lead a youth to express a non-heterosexual identity in a dangerous social climate, rather than delay it to a safer time, may help clarify the interplay between environmental and individual factors.

The implications of this study are multiple. The first is the need to recognize that research that divides sexuality into binary groups (e.g., GLB versus heterosexual identity; same-sex attraction or behavior versus opposite-sex attraction or behavior) may not accurately represent

key risk factors. There are important differences between youth with “unsure,” GLB, heterosexual identity without same-sex attraction/fantasy or behavior, and heterosexual identity with same-sex attraction/fantasy or behavior. The second is for the clinician. In an adverse environment, an adolescent’s hesitation to express a non-heterosexual identity may be protective; evaluation of both the adolescent and the environment may more accurately guide discussions and the understanding of how an adolescent’s sexual identity development may impact mental health outcomes. The final implication relates to the need to understand the ways our schools, institutions and families support anti-gay sentiment, as this is likely a powerful source of increased suicidal ideation and attempt in vulnerable youth.¹ The mediating effects of social support need further investigation to better understand the mechanisms underlying the link between homosexual orientation and suicidality.

There are limitations that should be considered in interpreting the results of this study. Sampling was not done randomly, and it is possible that bias could have been introduced and that schools with more open attitudes towards non-heterosexual students were oversampled. On the other hand, the sample was representative of the Montreal population in terms of language, race/ethnicity and gender. Another strength was the high rate of participation response. This was likely due to the study passive consent method, in which parents were asked to notify the school if their children did not have their permission to complete the anonymous survey.

The sample sizes of both self-identified GLB and “unsure” youth were small in the study. Some associations of GLB and “unsure” identities with health risk factors might not have been statistically significant due to limited statistical power. Furthermore, because of relatively small numbers, it was not possible to analyze gender differences, to separately analyze data from students who identified as bisexual versus gay and lesbian or to conduct mediator/moderator

analyses. Students who identified as GLB were more likely to be at least 16 years old, but the relatively small number of students in subgroups did not permit exploration of interactions between sexual orientation categories and age. In addition, transgendered identity, gender non-conforming behavior, bullying, and parental rejection were not addressed in this study. Moreover, the study was cross-sectional and not prospective, and thus could not address questions related to the stability of sexual patterns over time or the eventual identity outcome of students who were “unsure” at the time of survey. Indeed, other studies have reported that, among adolescents, there is substantial variability across time in sexual identity, attraction/fantasy, and behavior.¹⁷ Finally, although we distinguished between GLB and “unsure” youth, outcomes for these groups were similar, and 21.1% of the GLB group reported exclusively opposite-sex attraction/fantasy. This raises questions about the degree of differentiation between these groups during adolescence, but alternatively may reflect limitations in single-item assessments of dimensions of sexual orientation.

CONCLUSION

This is the first study to examine risk of suicide ideation and attempt among adolescents who reported heterosexual identity and same-sex attraction/fantasy or behavior and among adolescents with “unsure” sexual identity. Sexual minority youth are not a homogeneous group, but vary among themselves in important ways. Adolescents with a GLB sexual identity or an “unsure” sexual identity were at elevated risk of suicidal ideation and attempt. However, youth who identified themselves as heterosexual, whether or not they had same-sex attraction/fantasy or behavior were not at risk. These findings suggest that same-sex attraction/fantasy or behavior per se do not increase suicidality. Studies examining the link between anti-gay sentiment and

suicidality, as well as individual factors that lead to non-heterosexual identity expression in an adverse environment are needed.

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Table 1. Demographics, Health Risk Factors, and Suicide Ideation and Attempt

Variable	Total N=1856 n (%)	Heterosexual	Gay, Lesbian, or Bisexual (GLB)	Unsure Identity N=59 n (%)	Heterosexual	p value
		Identity Without Same-Sex Attraction or Behavior N=1624 n (%)	Identity N=58 n (%)		Identity With Same-Sex Attraction or Behavior N=115 n (%)	
Age ≥16 years	912 (49.1)	786 (48.4) ^a	39 (67.2) ^a	26 (44.1)	61 (53.0)	.026
Female	915 (49.3)	757 (46.6) ^{a,c}	38 (65.5) ^a	35 (59.3) ^c	85 (73.9)	<.001
White ^h	1197 (65.9)	1041 (65.4)	41 (73.2)	29 (51.8) ^f	86 (76.1) ^f	.009
Depressed Mood	641 (34.5)	528 (32.5) ^a	36 (62.1) ^a	26 (44.1)	51 (44.3)	<.001
Smoking	441 (23.8)	338 (20.8) ^{a,b,c}	27 (46.6) ^a	24 (40.7) ^b	52 (45.2) ^c	<.001
Drinking	1020 (55.0)	873 (53.8) ^a	45 (77.6) ^{a,d}	30 (50.8) ^d	72 (62.6)	.001
Marijuana	523 (28.2)	431 (26.5) ^a	29 (50.0) ^a	22 (37.3)	41 (35.7)	<.001
Hard Drugs	139 (7.5)	100 (6.2) ^{a,b,c}	10 (17.2) ^a	14 (23.7) ^b	15 (13.0) ^c	<.001
Fighting	604 (32.5)	520 (32.0)	24 (41.4)	26 (44.1)	34 (29.6)	.098
Physical Abuse	359 (19.3)	287 (17.7) ^{a,c}	21 (36.2) ^a	16 (27.1)	35 (30.4) ^c	<.001
Sexual Abuse	299 (16.1)	221 (13.6) ^{a,b,c}	21 (36.2) ^a	19 (31.7) ^b	38 (33.0) ^c	<.001
First Sexual Behavior ^g		a,c	a,d	d	c	
Never	1063 (57.3)	972 (59.9)	12 (20.7)	31 (52.5)	48 (41.7)	<.001
≥14 years	538 (29.0)	457 (28.1)	29 (50.0)	13 (22.0)	39 (33.9)	
≤13 years	255 (13.7)	195 (12.0)	17 (29.3)	15 (25.4)	28 (24.3)	
Sexual Partners ^{g,h}		a,b,c	a,d,e	b,d	c,e	
Never had	1060 (57.2)	967 (59.6)	12 (20.7)	32 (54.2)	49 (42.6)	<.001

Sexual Identity and Suicidality

0 last 3 months	233 (12.6)	197 (12.1)	7 (12.1)	8 (13.6)	21 (18.3)	
1 in last 3 months	428 (23.1)	361 (22.3)	28 (48.3)	10 (15.3)	30 (26.1)	
>1 in last 3 months	133 (7.2)	97 (6.0)	11 (19.0)	10 (16.9)	15 (13.0)	
Sexual Attraction ^{g,h}		a,b,c	a,e	b,f	c,e,f	
No interest	124 (6.7)	109 (6.7)	3 (5.3)	11 (18.6)	1 (0.9)	<.001
Opposite sex only	1560 (84.4)	1509 (93.3)	12 (21.1)	20 (33.9)	19 (16.5)	
Same sex only	46 (2.5)	0 (0.0)	5 (8.8)	3 (5.1)	38 (33.0)	
Bisexual	119 (6.4)	0 (0.0)	37 (64.9)	25 (42.4)	57 (49.6)	
Sexual Behavior ^{g,h}		a,b,c	a,d	b,d	c	
No contact	1022 (55.3)	936 (57.8)	12 (21.1)	28 (47.5)	46 (40.0)	<.001
Same sex only	19 (1.0)	0 (0.0)	5 (8.8)	4 (6.8)	10 (8.7)	
Opposite sex only	756 (40.9)	682 (42.2)	19 (33.3)	19 (32.2)	36 (31.3)	
Bisexual	52 (2.8)	0 (0.0)	21 (36.8)	8 (13.6)	23 (20.0)	
Suicide Ideation	313 (16.9)	235 (14.5) ^{a,b,c}	26 (44.8) ^a	22 (37.3) ^b	30 (26.1) ^c	<.001
Suicide Attempt	177 (9.5)	133 (8.2) ^{a,b}	17 (29.3) ^a	12 (20.3) ^b	15 (13.0)	<.001

^a Heterosexual without same-sex attraction/fantasy or behavior significantly different from GLB, $p < .0083$ based on Bonferroni correction.

^b Heterosexual without same-sex attraction/fantasy or behavior significantly different from unsure, $p < .0083$ based on Bonferroni correction.

^c Heterosexual without same-sex attraction/fantasy or behavior different from heterosexual with same-sex attraction/fantasy or behavior, $p < .0083$ based on Bonferroni correction.

^d GLB different from unsure, $p < .0083$ based on Bonferroni correction.

^e GLB different from heterosexual with same-sex attraction/fantasy or behavior, $p < .0083$ based on Bonferroni correction.

^f Unsure different from heterosexual with same-sex attraction/fantasy or behavior, $p < .0083$ based on Bonferroni correction.

^g For variables with >2 levels, footnote references a-f are presented on the first line of the variable only.

^h For race/ethnicity, $N=1,816$; for number of sexual partners, $N=1,854$; for sexual attraction, $N=1,849$; for sexual behavior, $N=1,849$.

Table 2. Risk Factors for Suicide Ideation

Variable	Unadjusted Odds Ratio (95% CI)	<i>p</i>	Adjusted Odds Ratio^a (95% CI)	<i>p</i>
Age ≥16 years	1.10 (0.86-1.40)	.442	0.91 (0.68-1.21)	.506
Male	0.44 (0.34-0.57)	<.001	0.60 (0.44-0.82)	.001
Depressed Mood	8.79 (6.63-11.66)	<.001	6.32 (4.67-8.51)	<.001
Smoking	2.67 (2.07-3.46)	<.001	1.41 (0.98-2.02)	.062
Drinking	1.61 (1.25-2.08)	<.001	0.95 (0.69-1.30)	.729
Marijuana	1.95 (1.51-2.51)	<.001	1.12 (0.79-1.60)	.522
Hard Drugs	2.31 (1.57-3.39)	<.001	0.99 (0.61-1.62)	.982
Fighting	1.71 (1.33-2.19)	<.001	1.24 (0.91-1.69)	.174
Physical Abuse	3.09 (2.37-4.04)	<.001	1.85 (1.36-2.50)	<.001
Sexual Abuse	3.60 (2.73-4.76)	<.001	1.68 (1.21-2.34)	.002
Early Sexual Behavior				
Never	Reference			
≥14 years	1.80 (1.37-2.37)	<.001	1.26 (0.90-1.77)	.173
≤13 years	2.11 (1.50-2.96)	<.001	1.18 (0.77-1.81)	.448
Sexual Identity				
Heterosexual Without Same-Sex Attraction or Behavior	Reference			
Gay, Lesbian, Bisexual (GLB)	4.80 (2.81-8.21)	<.001	2.31 (1.22-4.37)	.010
Unsure	3.51 (2.04-6.06)	<.001	2.64 (1.38-5.08)	.004
Heterosexual With Same-Sex Attraction or Behavior	2.09 (1.35-3.24)	.001	1.26 (0.76-2.08)	.373

^a Adjusted for age, gender, depressed mood, drug use, fighting, physical and sexual abuse, and sexual risk behavior.

Table 3. Risk Factors for Suicide Attempt

Variable	Unadjusted Odds Ratio (95% CI)	<i>p</i>	Adjusted Odds Ratio^a (95% CI)	<i>p</i>
Age ≥16 years	1.00 (0.73-1.36)	.997	0.84 (0.59-1.18)	.314
Male	0.56 (0.41-0.77)	<.001	0.62 (0.42-0.90)	.012
Depressed Mood	4.68 (3.36-6.52)	<.001	3.02 (2.11-4.33)	<.001
Smoking	2.64 (1.92-3.63)	<.001	1.20 (0.78-1.85)	.398
Drinking	1.50 (1.09-2.07)	.013	0.81 (0.55-1.18)	.274
Marijuana	2.30 (1.68-3.15)	<.001	1.29 (0.85-1.97)	.235
Hard Drugs	3.40 (2.22-5.21)	<.001	1.66 (0.99-2.78)	.053
Fighting	2.47 (1.81-3.37)	<.001	1.85 (1.29-2.67)	.001
Physical Abuse	2.98 (2.14-4.13)	<.001	1.76 (1.23-2.53)	.002
Sexual Abuse	3.01 (2.14-4.24)	<.001	1.41 (0.96-2.09)	.084
Early Sexual Behavior				
Never	Reference			
≥14 years	1.85 (1.30-2.65)	.001	1.27 (0.84-1.92)	.250
≤13 years	2.83 (1.89-4.26)	<.001	1.51 (0.93-2.46)	.094
Sexual Identity				
Heterosexual Without Same-Sex Attraction or Behavior	Reference			
Gay, Lesbian, Bisexual (GLB)	4.65 (2.57-8.41)	<.001	2.23 (1.15-4.35)	.018
Unsure	2.86 (1.48-5.53)	.002	1.61 (0.77-3.36)	.203
Heterosexual With Same-Sex Attraction or Behavior	1.68 (0.95-2.98)	.074	1.03 (0.55-1.91)	.926

^a Adjusted for age, gender, depressed mood, drug use, fighting, physical and sexual abuse, and sexual risk behavior.