

ABSTRACT

In 2016, suicide was the second leading cause of death amongst adolescents in the United States. Research has identified various social, biological, and psychological risk factors to suicide, with bullying identified as a major risk factor for suicidality amongst adolescents. The Centers for Disease Control has identified bullying as a major risk factor for suicidality amongst youth. Youth with nonheteronormative sexual identities have been found to be at elevated risk for suicide and bullying. The influence of peer victimization on varying degrees of suicidality was explored in the current study, with a focus on students who identified as a sexual minority. Secondary data analysis was conducted on the 2017 National Youth Risk Behavior Surveillance System (YRBSS) ($n = 14,684$). The YRBSS is a self-report written survey that measures health-risk behaviors amongst students from grades nine through 12 in public and private schools, such as bullying and suicidality. Results revealed that students who were bullied at school and online were more likely to report suicidality than those who were not bullied. In addition, sexual minority youth were more likely to be bullied than heterosexual students, and were more likely than heterosexual students to endorse suicidality. Through the Interpersonal Theory of Suicide and General Strain Theory, it is imperative that school administrators, staff, parents, and peers actively prevent and intervene at bullying and suicide.

INTRODUCTION

- Suicide was the second leading cause of death for 10 to 34 year-olds in 2016, with a 33% increase in suicide rates from 1999 to 2017
- Mental illness, depressed mood, family dynamics, abuse, intimate partner issues, and history of suicidal ideation put adolescents from 10 to 17 years old at risk for suicide
- Bullying has been identified by the Centers for Disease Control as a significant risk factor of mental illness and suicidal ideation amongst youth
- Sexual minorities are at more risk for both bullying and declining mental health due to negative perceptions of their identity by their peers, family, and other adults

LITERATURE REVIEW

Bullying and Cyberbullying Amongst High School Students

- 28% of students 12-18 years old reported they were bullied at school and 6% reported they were bullied electronically (DeVoe & Murphy, 2011)
- 21% of bullying was physical, 53.6% of bullying was verbal, 51% was social, and 13.6% was electronic (Wang, Iannotti, & Nansl, 2009)
- 43% of children who were victims of bullying were still victims four years later (Scholte, Engels, Overbeek, De Kemp, & Haselager, 2007)
- Victims of bullying reported higher rates of depression, suicidal ideation, and suicide attempts than those who were not victimized

Interpersonal Theory of Suicide

- Thwarted belongingness and perceived burdensomeness, in conjunction with acquired capability, increases a person's risk of suicide, either attempted or fatal (Van Orden et al., 2010)

General Strain Theory

- Strainful relationships pressures individuals to externalize negative feelings, such as self-injurious behavior (Agnew, 1992; Hay, Meldrum, & Mann, 2010)

Research Gaps

- Research is ambiguous on how peer victimization increases risk for suicidality
- Limited research on effects of cyberbullying on suicidality as compared to other forms of bullying, especially amongst sexual minority youth

Purpose

The current study aims to explore the effect of adverse peer interactions (bullying) on mental health of adolescents (suicidality).

Research Questions

1. What is the relationship between bullying and suicidality amongst adolescents in the high school setting?
2. What is the relationship between bullying and suicidality amongst adolescents who identify as a sexual minority (lesbian, gay, bisexual, transgender, and/or queer)?

Hypotheses

1. Adolescents who have experienced bullying are more likely to have thought about suicide in comparison to adolescents who have not experienced bullying, and that adolescents who have experienced electronic bullying are more likely to have increased suicidality than adolescents who have been bullied at school
2. Adolescents belonging to a sexual minority have increased bullying and suicidality, and that suicidality for those who have been bullied electronically is increased for those who have been bullied at school

METHODOLOGY

Research Design

- Secondary data analysis of the 2017 National Youth Risk Behavior Surveillance System (YRBSS) ($n = 14,684$), a biannual survey conducted by the CDC

Data Collection

- With parental consent, students filled out the questionnaire and marked their answers with a pencil on a paper booklet

Sample

- YRBS surveyed adolescents and young adults from grades nine through 12 in all private and public schools in 50 states and the District of Columbia, utilizing a three-stage cluster sample design

Measures

- Bullying was measured with two variables that asked about being bullied at school, and about being bullied electronically
- Suicidality was measured with four variables that asked about feeling sad or hopeless, considering suicide, making a suicide plan, and suicidal attempts

Statistical Analysis

- Chi-square tests were utilized to examine the associations between sexual identity, being bullied at school, being bullied electronically, and suicidality
- Logistic regression was conducted to examine the influence of sexual identity, gender, grade, and being bullied on suicidality

RESULTS

Bullied at school and Suicidality

- Significant associations of moderate strength were found between being bullied at school and feeling sad or hopeless ($\chi^2(1) = 935.98, p < 0.01, \Phi = .254$), being bullied at school and having considered suicide ($\chi^2(1) = 944.64, p < 0.01, \Phi = .255$), and between being bullied and having made a suicide plan ($\chi^2(1) = 732.68, p < 0.01, \Phi = .225$)
- Significant association of weak strength was found between being bullied and having attempted suicide ($\chi^2(4) = 416.78, p < 0.01, \text{Cramer's } V = .198$)

Bullied electronically and Suicidality

- Significant associations of moderate strength were found between being electronically bullied and feeling sad or hopeless ($\chi^2(1) = 992.98, p < 0.01, \Phi = .262$), between being electronically bullied and having considered suicide ($\chi^2(1) = 954.78, p < 0.01, \Phi = .257$), being electronically bullied and having made a suicide plan ($\chi^2(1) = 737.64, p < 0.01, \Phi = .226$), and being electronically bullied and having attempted suicide ($\chi^2(4) = 448.38, p < 0.01, \text{Cramer's } V = .206$)

Sexual identity and Bullying

- Significant associations of weak strength were found between identifying as a sexual minority youth and being bullied at school ($\chi^2(3) = 184.04, p < 0.01$ with Cramer's $V = .115$) and being electronically bullied ($\chi^2(3) = 191.11, p < 0.01$ with Cramer's $V = .117$)

Sexual identity and Suicidality (Figure 1)

- Significant associations of moderate strength were found between identifying as a sexual minority and feeling sad or hopeless ($\chi^2(3) = 790.88, p < 0.01, \text{Cramer's } V = .238$), having considered suicide ($\chi^2(3) = 1004.62, p < 0.01, \text{Cramer's } V = .269$), having made a suicide plan ($\chi^2(3) = 901.14, p < 0.01, \text{Cramer's } V = .255$)
- Significant relationship of weak strength was found between identifying as a sexual minority and having attempted suicide ($\chi^2(3) = 457.02, p < 0.01$ with Cramer's $V = .122$)

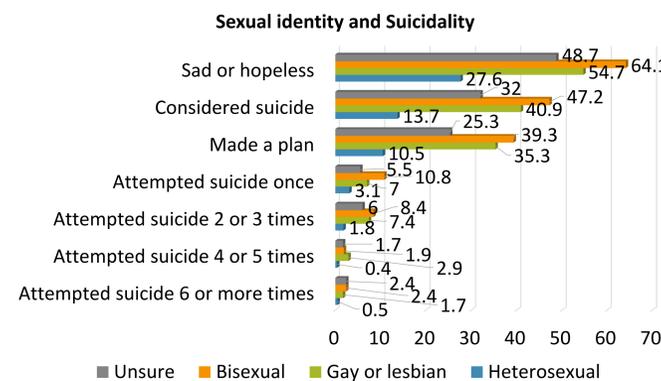


Figure 1. Percentage of sexual minority youth endorsing suicidality.

Logistic Regression (Table 1)

- Logistic regressions models identifying the effects of sexual identity, gender, grade, bullying at school, and electronic bullying on suicide variables (feeling sad or hopeless, having considered suicide, made a suicide plan, having attempted suicide) were statistically significant

Table 1

Sexual identity, being bullied, and having Attempted suicide four or five times

	B	S.E.	df	Sig.	Exp(B)	95% CI	
						Lower	Upper
Sexual Identity							
Gay or lesbian	1.83	.459	1	.000	6.249	2.541	15.34
Bisexual	1.22	.343	1	.000	3.380	1.727	6.616
Not sure	1.32	.456	1	.004	3.734	1.527	9.135
Female							
	.083	.293	1	.776	1.087	.612	1.931
Grade level							
10 th grade	.157	.384	1	.683	1.169	.551	2.481
11 th grade	.172	.390	1	.658	1.188	.553	2.551
12 th grade	.333	.400	1	.406	1.395	.637	3.057
Ungraded	2.09	1.14	1	.066	8.073	.869	75.04
Bullied at school							
Bullied	1.01	.329	1	.002	2.751	1.443	5.245
Bullied online							
Bullied	.835	.329	1	.011	2.305	1.209	4.395

DISCUSSION

- Students who identified as a sexual minority youth and those who reported being bullied either at school or electronically were more likely to have endorsed suicidality.
- Notably, bisexual identity was the strongest predictor of feeling sad or hopeless, having considered suicide, having made a suicide plan, and having attempted suicide at least once
- Students identifying as gay or lesbian were most likely to have attempted suicide four or five times.

Implications

- Results of the study emphasize the importance of bullying prevention programs in schools across the nation to reduce its impact on mental health and suicidality.
- Efforts to prevent bullying should target all forms of bullying, including electronic bullying.
- Findings also highlight the development and implementation of suicide protocols that intervene at every aspect of suicidality in schools across the nation, with increased focus on those who have been victimized by their peers because of their sexual identity

Strengths and limitations

- The YRBSS data was collected for public use, was easily accessible online at no time or financial cost to the researcher, and was a large set of data that was generalizable to the nation
- The dataset was valuable in that it was able to be re-analyzed and re-interpreted through a specified research question and a different theoretical lens.
- While the survey included pertinent questions regarding student demographics, bullying prevalence, and suicidality, it was not feasible to include other questions related to the current study.
- The current study was unable to identify students who reported being bullied or endorsing suicide, ask follow-up questions, and assess students at a later time point

Future direction

- It is recommended that all school administrators establish suicide protocols to effectively identify and intervene with students who express suicidality.
- Creating inclusive environments for sexual minority youth and positive conversations among staff, peers, and guardians is one recommended approach to preventing bullying and suicide.
- Future research should explore the direction between peer victimization, mental illness, and suicidality, and aim to clarify the role of mental illness on bullying and its relationship with suicidality.
- Research should also continue to explore the role of sexual identities beyond lesbian and gay individuals on bullying and its relationship with suicidality to determine the direction of the relationship

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