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Suicide and Life-Threatening BEHAVIOR

ORIGINAL ARTICLE

A longitudinal study examining the associations of bullying victimization and suicidal ideation among sexual minority adolescents

Susan M. De Luca PhD[1,2] | **Christina Caramanis PhD**[2] | **Anao Zhang**[2,3]

[1]The Steve Hicks School of Social Work, The University of Texas at Austin, Austin, TX, USA

[2]The Population Research Center, The University of Texas at Austin, Austin, TX, USA

[3]School of Social Work, The University of Michigan, Ann Arbor, MI, USA

Correspondence
Susan M. De Luca, The Steve Hicks School of Social Work, The University of Texas at Austin, 1925 San Jacinto Blvd. STOP D3500, Austin, TX 78712.
Email: sdeluca@austin.utexas.edu

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Abstract

Introduction: Roughly one-third of sexual minority adolescents (SMA) report at least one lifetime suicide attempt. Supportive connections are protective for ideation, yet little is known about this association with SMA—especially longitudinally.

Methods: Five-step logistic regressions examined the associations of bullying, SMA, and ideation, and also how connectedness mediates this from age 9 and 15 (Fragile Families and Child Wellbeing Study; N = 3,023 adolescents).

Results: At age 9, SMA reported higher levels of daily bullying compared with heterosexual peers (26% versus 14%), and at age 15, SMA reported daily (7%) and weekly (20%) bullying. SMA (32%) reported ideation compared with their heterosexual peers (13%) at age 15. Parental and school connectedness protected adolescents regardless of sexual orientation for SI, but parental attachment buffered the effect of SMA ideation more than school connectedness.

Conclusion: Impressing upon schools to be mindful of bullying on their campuses, especially of SMA, is crucial for suicide prevention as we found heterosexual students connected to their school were protected from ideation, yet this was not found for SMA. Strong parent–child bonds can mediate the effects of bullying while at school, speaking to the importance of having at least one trusted adult in an adolescent's life.

KEYWORDS

bullying, longitudinal, sexual minority adolescents, suicidal ideation

INTRODUCTION

As sexual minority (SM) adolescent suicide rates continue to rise, focusing on social determinants of health, including bullying, offers a contextual perspective to suicide risk. Suicide is the third leading cause of death among 10- to 24-year-olds (Centers for Disease Control & Prevention, 2019). The Centers for Disease Control's biennial surveillance reports that the prevalence of suicidal ideation has increased among individuals aged 12–18 over the last two decades by 70% (Centers for Disease Control & Prevention, 2018, 2019). More than 40% of SM youth report ideation yearly, which is far higher than the U.S. general adolescent population rate of 17% (Centers for Disease Control & Prevention, 2018). While the *2012 National Strategy for Suicide Prevention* now includes SM individuals as a targeted, higher risk group (U.S Department of Health and Human Services, Office of the Surgeon General, & National Action Alliance for Suicide Prevention, 2012), the presentation of ideation among SM adolescents is still uncertain. The lack of clarity on why SM individuals are at an increased risk is potentially due to the lack of

probability-based, longitudinal data that include the measures of SM status, ideation, and other social determinants (Haas et al., 2010; Institute of Medicine, 2011).

There are also likely distinct presentations of ideation among SM adolescents transitioning into adulthood population-based samples. This time is a unique and dynamic developmental period in which ideation disparities often emerge (Arnett, 2000). Despite their heightened risk (Centers for Disease Control & Prevention, 2018), there is a dearth of understanding the processes by which adolescents present ideation and interpersonal risk factors detailed at the national level (Cha et al., 2018).

Upstream factors are key to suicide prevention. The 2017 National Survey of Drug Use and Health estimated that over 10.5 million people had disclosed ideation in the past year, 3.2 million reported creating a suicide plan, and 1.4 million attempted suicide (Substance Abuse & Mental Health Services Administration, 2018). Ideation is one of the most prevalent of the suicide-related behaviors and is a predominant reason for adolescent hospitalizations over the last decade (Plemmons et al., 2018).

Sexual minority adolescents are nearly 3 times more likely to report recent ideation than heterosexuals (Zaza et al., 2016). Social factors, often due to minority stress, can intensify SM disparities related to poor mental health and suicide risk (Plöderl et al., 2014). Alongside minority stress, the interpersonal theory of suicide posits that social strains can also increase one's interpretation of thwarted belongingness and/or perceived burdensomeness among SM youth (Silva et al., 2015). During adolescence, aside from parental relationships, peer acceptance and inclusion are critical to individuals' mental and physical health outcomes. Earlier work has postulated that peer acceptance/inclusion might play an even more crucial role in health outcomes, including suicide, than previously thought (O'donnell et al., 2004). Minority stress compliments the interpersonal theory of suicide because stigma experienced by SM adolescents can provoke a thwarted sense of belonging and feeling like a burden to their families (Baams et al., 2015; Silva et al., 2015; Van Orden et al., 2010). Sexual minority adolescents who experience bullying can express minority stress, burdensomeness, and/or thwarted belongingness via depression, anger, or denial (Savin-Williams & Dube, 1998; Schope, 2002).

Mutual feelings of care, trust, and support between individuals, often categorized as "connectedness," is a protective factor for a wide range of mental health outcomes (Whitlock et al., 2014). There is a scarcity of empirical information, however, regarding the influence of bullying and SM adolescents' ideation risk, and whether those conditions are chronic or sporadic in nature. Connectedness is a protective mechanism for children, and peer dynamics are linked to mental and physical health problems including suicidal ideation and behaviors, but these mechanisms are underexplored in quantitative studies of SM youth. Connections to others might be even more important to SM youth if they are not feeling supported in other areas of their lives.

While bullying can be potentially destructive to any adolescent, the social and psychological stressors inherited as identifying as a sexual minority can increase emotional distress based on a variety of social determinants of health. The stigmatization SM adolescents experience can influence such decisions to use substances, and engaging in other maladaptive behaviors (Hughes & Eliason, 2002). Achieving developmental milestones during adolescence includes a variety of mechanisms including impulse control, forward thinking, and navigating costs and benefits to decisions. Sexual minority adolescents who are trying to achieve these milestones in the maelstrom of rejection from peers, anti-gay sentiments from religious leaders, and policies that include promoting conversion therapy, only intensify the adolescent experience. The minority-related stressors sexual minorities often engage in (e.g., prejudice and discrimination) are believed to increase risky behaviors (Rosario et al., 2002, 1996) more so than heterosexual and cisgender peers. The theoretical basis for the minority stress model has been examined in both sexual minority adults (Meyer, 2003) and adolescents (Holloway et al., 2012; Traube et al., 2012), indicating the utility of the theory in a variety of contexts.

While bullying is destructive to any adolescent, sexual minority adolescents are expected to be more vulnerable to bullying than their heterosexual peers. This is because, first, sexual minorities are more likely to experience bullying when compared with their heterosexual peers, and second, they are more likely to suffer from severe consequences, for example, suicide, than their heterosexual counterparts due to already amplified emotional distress that are inherited as identifying as a sexual minority (Cénat et al., 2015; Mueller et al., 2015). Therefore, we believe that examining an increasing stressor among adolescents (i.e., bullying) among a higher risk group associated with suicidality can shed light onto SM risk for ideation.

This is the first study, to our knowledge, to examine longitudinal patterns of how peer bullying impacts SM adolescents' ideation in the context of parent and school connectedness. We not only examine SM adolescents' self-reports of bullying longitudinally over multiple waves of Fragile Families and Child Wellbeing Study (FFCWS) data, but we also explore the extent to which connectedness at school and youths' feelings toward their parents mediate this relationship. Previous research—including work by our team (blinded)—suggests that social connections and suicidal ideation and behaviors among SM individuals are a complex phenomenon (Barnes & Meyer, 2012; Gibbs & Goldbach, 2015; Meyer et al., 2015). This calls for a closer examination of these trends with specific

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social determinants to understand the unique mechanisms of protections and risks.

METHODS

Data

Our study used two waves of the FFCWS dataset (Reichman et al., 2001). The FFCWS follows a cohort of 4,898 children born in families at greater risk of divorcing/breaking up from their child's birth to age 15 (Reichman et al., 2001). The FFCWS is a national dataset with its baseline sampling parents of newborns (1998–2000) from a stratified sample of 20 major U.S. cities with populations of 200,000 or more. We selected a subset of the FFCWS sample (N=3,023) that contains adolescent SM status as well as both adolescent and primary caregiver interviews. This study was approved by the University of Texas at Austin's Institutional Review Board.

Measures

SM status

SM was measured by child's self-report of romantic attraction at the age 15 interview where adolescents were asked to report: (1) "if ever liked a girl or boy as more than just a friend"; (2) "sex of current partner"; (3) "sex of first sexual partner"; and (4) "sex of non-dating sexual partner." Adolescents were coded as SM if, based on their gender assigned at birth, any same-sex attraction was indicated in their responses to any of the above questions. Adolescents who reported having never felt an attraction to someone from either sex were excluded from the analysis.

Child's suicidal ideation

Ideation is measured by child's self-reported feeling of the degree to which she/he feels life is not worth living at age 15 (Paykel et al., 1974). It is rated on a four-point Likert scale with a lower score indicating lower risk of feeling life is not worth living. Given small cell sizes, we generated a binary variable indicating any suicidal thoughts (1 if yes; 0 if otherwise).

Bullying

At the age 9 and 15 interviews, children were asked how often in the last month children in their school/neighborhood: (a) "picked on them or said mean things to them," (b) "hit them," (c) "took their things," or (d) "purposely left them out of activities." In the year 15 interview, adolescents were asked to report bullying in the past week. The score for each item ranged from 0 to 4, ranked as "not once," "once but less than weekly," "weekly but not daily," and "daily." These items were modeled after the peer bullying assessment from the PSID-CDS-III.[1,2]. Age 9 bullying victimization retained an alpha of 0.67 and age 15 bullying an alpha of 0.62. To consolidate these scales into a cumulative scale for a more efficient analysis, we constructed an index of bullying at each age capturing the extent to which each student reported any bullying. Student bullying was thus categorized at each age as "bullying at least once but less than weekly" (1), "bullying at least weekly but not daily" (2), and "daily bullying" (3).

Parental connectedness

Parental connectedness is measured with two items from which we composed a parent–child connectedness index (alpha =0.71). These items include, "how close they felt toward mother/father (as the primary caregiver)" and "how well the child and primary caregiver shared ideas and talked about issues that really matter." These are two items found in the total six items originally developed by the middle childhood and adolescent (FFMCA) section of the National Survey of Child Health (NSCH) (Bendheim-Thoman Center for Research on Child Wellbeing & Columbia Population Research Center, 2013; Blumberg et al., 2012). Both items are rated on a four-point Likert scale, ranging from 1 (not very close/not very well) to 4 (extremely close/extremely well).

Control variables

We included adolescents' age, race/ethnicity, and sex, as well as BMI status at age 9 and 15 (healthy weight, underweight, overweight, or obese), physical health status at age 9 and 15 (no health problems, 1 health problem, 2 health problems, or 3+ health problems) as these have all been linked to increased risk of bullying. A measure of child age 9 connectedness at school—a mean score of the degree of self-reported inclusiveness, closeness,

[1]Child Development Supplement: Panel Study of Income Dynamics. (2007). Retrieved February 17, 2021, from http://psidonline.isr.umich.edu/CDS/questionnaires/cds-iii/child.pdf

[2]The Panel Study of Income Dynamics Child Development Supplement: User Guide for CDS-III. (2010). Retrieved February 17, 2021, from http://psidonline.isr.umich.edu/CDS/questionnaires/cds-iii/child.pdf

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happiness, and safety of the child's experiences at school, ranging from 0 to 4 was also included. We also included parental educational attainment as a proxy for economic status (less than high school, high school or equivalent, some college, or college or higher), and marital status (1 if married; 0 if otherwise).

Analytic strategy

We investigated the correlates of ideation in order to identify disparities in their origins between SM and heterosexual adolescents. We hypothesized that bullying would have a stronger negative effect on ideation for SM adolescents than their heterosexual peers due to perceived stigmatization and prejudice, and that connectedness at school and attachment to parents would be more protective. For our empirical approach, we ran a set of logistic regression models to analyze the direct effect of SM status and ideation, and the extent to which bullying, attachment to parents, and connectedness at school mediate the effect of SM (indirect effect). Comparing the magnitude of change across nested models (with and without each of the mediating variables) can, however, be problematic because the variance of the dependent variable changes with the inclusion of each additional mediating variable as a predictor, thereby affecting the size of the estimates (Long, 1997). To test for this, we use the KHB method in Stata 15 using the *khb* package as a sensitivity analysis. Conceptualized by Karlson, Breen, and Holm (2012), the KHB method allows for changes in the coefficients due to rescaling to be separated from changes that are due to the introduction of additional variables. As a result, we are able to decompose the total effect of sexual minority status into direct effects and indirect effects via bullying, attachment to parents, and connectedness at school simultaneously. In other words, we test the total indirect effects by entering all three variables into the model and testing for mediation simultaneously.

RESULTS

Table 1 presents a descriptive picture of our analytic sample by identified sexual orientation. Among the 3,023 adolescents in our sample, just over 10% reported sexual attraction to the same sex. On average, 32% of adolescents who were identified as SM reported having suicidal thoughts compared to only 13% of heterosexual youth, which mirrors other studies in terms of ideation risk among SM adolescents. SM youth also reported significantly higher rates of bullying victimization at both ages 9 and 15 than their heterosexual counterparts. At age 9, the proportion of SM

TABLE 1 Descriptive Characteristics: SM & Non-SM Adolescents (N = 3,023)

	Total %	Non-SM minority=0	SM minority=1	
Total	100	89.75	10.25	
Suicidal Ideation (age 15)				
Yes	15.35	13.45	31.94	***
No	84.65	86.55	68.06	***
Bullying Index (age 9)				
Never bullied	36.78	38.08	25.48	***
Bullied once but not weekly	25.87	26.06	24.19	
Bullied weekly but not daily	23.06	22.56	27.42	+
Bullied daily	14.29	13.31	22.90	***
Bullying Index (age 15)				
Never bullied	74.79	76.37	60.97	***
Bullied once but not weekly	9.89	9.62	12.26	
Bullied weekly but not daily	12.57	11.76	19.68	***
Bullied daily	2.75	2.25	7.10	**
Connectedness at school (yr9 mean)	3.1856	3.1939	3.1129	
Attachment to Parents (yr9mean)	24.355	24.5124	22.9807	***
Gender				
Male	52.1	56.25	15.81	***
Female	47.9	43.75	84.19	***
Race/Ethnicity				
White	17.90	17.58	20.65	
Black	49.35	49.28	50.00	
Hispanic	25.07	25.43	21.94	
Multi-racial/ Other	7.67	7.70	7.42	
Physical Health (age 15)				
0	62.02	62.48	58.06	
1	26.53	26.39	27.74	
2	8.63	83.7	10.97	
3+	2.81	2.76	3.23	
BMI (age 9)				
Healthy weight	53.52	54.37	46.13	**
Underweight	5.06	4.98	5.81	

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TABLE 1 (Continued)

	Total %	Non-SM minority=0	SM minority=1	
Overweight	17.07	17.03	17.42	
Obese	24.35	23.63	30.65	*
BMI (age 15)				
Healthy weight	57.43	58.83	45.16	***
Underweight	3.8	3.65	5.16	
Overweight	19.22	18.47	25.81	**
Obese	19.55	19.06	23.87	+
Age in months (yr 15 mean)	187.57	187.50	188.17	
Married at Baseline				
Yes	23.32	24.14	16.13	***
No	76.68	75.86	83.87	***
Maternal end at baseline				
Less than high school	31.96	31.66	34.52	
High school or equivalent	31.79	31.40	35.16	
Some college	25.50	25.88	22.26	
College or higher	10.75	11.06	8.06	+

Note: Chi-square tests indicated significant differences in variables between Non-SM and SM adolescents at the time of the age 15 interview. t tests were used for testing significance in mean scores.*** $p<0.001$, ** $p<0.01$, * $p<0.05$, + $p<0.10$.

youth reporting daily bullying was nearly twice that of heterosexual youth (26% vs. 14%, respectively), and while about 40% of children in the heterosexual group reported no bullying in the past month, this was the case for only about a quarter of SM youth.

Of SM adolescents, 7% reported daily bullying and 20% reported weekly bullying compared to 2% and 12% of heterosexual adolescents, where 76% of heterosexual adolescents reported no experiences of bullying victimization compared to 61% of SM adolescents.

Table 2 displays the results of logistic regression models predicting suicidal ideation. Model 1 in Table 2 analyzed the effect of SM status on ideation, net of all mediating variables and controls. From this baseline model, we then add age 15 bullying (Model 2), attachment to parents (Model 3), and connectedness at school (Model 4). Finally, in Model 5, we include all mediating variables and controls. Across all models, SM youth were more than two times as likely to have ideation than their heterosexual counterparts; however, the magnitude of this effect was progressively diminished with the addition of each mediating variable. Model 2 shows that, compared with no bullying, each instance of bullying was predictive of increasing risk of ideation, while the effect of SM on ideation was attenuated from 2.79 to 2.43. Models 3 and 4 indicate that attachment to parents and connectedness at school each have a diminishing effect on ideation, but, compared with the baseline model (Model 1), attachment to parents attenuates the effect of SM on ideation to a greater extent than connectedness at school.

As a sensitivity analysis, we also unpack the magnitude of the diminishing effect of each mediating variable on the relationship between sexual minority and ideation, using the KHB method in Stata 15. Results (available upon request) indicate that, compared with heterosexual youth, the probability of ideation for SM adolescents is 12.87 percentage points higher. After controlling for age 15 bullying, parental attachment, and connectedness at school, this average increase is reduced to 10.19 percentage points. An increase in SM (i.e., going from sexual minority = 0 to sexual minority = 1) leads to higher bullying, attachment, and connectedness at school scores, which is then translated into a higher probability of SI of 2.68 percentage points.

To further interpret the results of the KHB method, we look at the confounding ratio, confounding percentage, and the rescaling factor (results available upon request). The confounding ratio indicated that the total effect (i.e., the sum of the direct and indirect effects) for SM adolescents is 1.26 times larger than the direct effect (i.e., identifying as a SM that remains after controlling for the additional variables). The confounding percentage indicated that 20.86% of the total effect of being sexual minority on ideation is due to the additional explanatory variables (i.e., bullying, parental attachment, and connectedness at school) that are added to the model. Looking further at the components of difference, we found that, of this 20.86% (i.e., the proportion of the total effect of identifying as SM on ideation due to bullying, parental attachment, and connectedness at school), weekly and daily bullying, along with parental attachment accounted for over 80% of the effect.

DISCUSSION

Our study, the first of its kind to our knowledge, examined the association between self-reported bullying and ideation among 9- and 15-year-old SM and heterosexual adolescents and how parent and school connections are related to these outcomes. We found that SM children reported higher rates of daily, weekly, and monthly bullying at ages 9 and 15 compared with their heterosexual peers. Ideation was also higher at age 15 among SM adolescents than heterosexual adolescents. Overall, based on the logistic regression analyses, our findings supported

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TABLE 2 Logistic regression models predicting suicidal thoughts, Odds Ratios. (N=3,023).

	Model 1	Model 2	Model 3	Model 4	Model 5
SM	2.79*** (0.40)	2.43*** (0.36)	2.62*** (0.38)	2.75*** (0.39)	2.33*** (0.34)
Bullying index (age 15)					
Bullied once but not weekly		2.14*** (0.34)			2.09*** (0.33)
Bullied weekly but not daily		2.32*** (0.32)			2.20*** (0.31)
Bullied daily		4.05*** (0.99)			3.44*** (0.85)
Attachment to parents			0.95*** (0.01)		0.97*** (0.01)
Connectedness at school				0.82*** (0.04)	0.86** (0.04)
Female	0.91 (0.10)	0.89 (0.10)	0.88 (0.10)	0.88 (0.10)	0.85 (0.09)
Race/Ethnicity					
Black	0.88 (0.14)	0.94 (0.15)	0.88 (0.14)	0.88 (0.14)	0.94 (0.15)
Hispanic	1.27 (0.22)	1.38+ (0.24)	1.27 (0.22)	1.29 (0.22)	1.39+ (0.24)
Multi-racial/Other	1.16 (0.26)	1.21 (0.27)	1.15 (0.26)	1.16 (0.26)	1.19 (0.27)
Age in months (yr 15)	1.00 (0.01)	1.00 (0.01)	1.00 (0.01)	1.00 (0.01)	1.00 (0.01)
Physical health					
1	0.97 (0.12)	0.94 (0.12)	0.95 (0.12)	0.96 (0.12)	0.93 (0.11)
2	0.96 (0.18)	0.91 (0.17)	0.98 (0.18)	0.95 (0.18)	0.92 (0.18)
3+	1.09 (0.33)	1.09 (0.34)	1.12 (0.35)	1.08 (0.33)	1.11 (0.35)
BMI age 9					
Underweight	0.85 (0.22)	0.86 (0.22)	0.84 (0.21)	0.85 (0.22)	0.84 (0.22)
Overweight	0.86 (0.14)	0.92 (0.15)	0.88 (0.14)	0.86 (0.14)	0.92 (0.15)
Obese	1.07 (0.17)	1.11 (0.18)	1.09 (0.17)	1.06 (0.17)	1.12 (0.18)
BMI age 15					
Underweight	1.73* (0.42)	1.65* (0.41)	1.79* (0.44)	1.69* (0.41)	1.66* (0.42)
Overweight	1.25 (0.18)	1.27+ (0.19)	1.25 (0.18)	1.22 (0.18)	1.25 (0.18)
Obese	1.11 (0.19)	1.03 (0.18)	1.09 (0.19)	1.09 (0.19)	1.02 (0.18)
Maternal end at baseline					
High school or equivalent	0.91 (0.12)	0.94 (0.12)	0.92 (0.12)	0.92 (0.12)	0.95 (0.12)
Some college	0.84 (0.12)	0.84 (0.12)	0.85 (0.12)	0.84 (0.12)	0.85 (0.12)
College or higher	0.77 (0.18)	0.80 (0.19)	0.80 (0.18)	0.80 (0.19)	0.84 (0.20)

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TABLE 2 (Continued)

	Model 1	Model 2	Model 3	Model 4	Model 5
Married at Baseline	0.69*	0.69*	0.73*	0.69*	0.71*
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Constant	0.35	0.13+	0.74	0.68	0.38
	(0.41)	(0.15)	(0.88)	(0.80)	(0.46)

Note: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, +$p < 0.10$.

Abbreviation: BMI, body mass index.

our hypotheses that parent and school connections were an important buffer for ideation, with parents a stronger buffer than a school for adolescents who identified as SM.

Our analyses revealed that rates of ideation among SM (32%) adolescents were higher compared with their peers (13%). This shows the strength of our analyses as most empirical studies have found over time that roughly 40% of SM adolescents report ideation in the past year. These rates are also often biased as they include the higher risk group of SM individuals. It is distressing that these proportions have not decreased despite our knowledge regarding SM suicide risk.

Our study, and studies that focus on suicidal ideation, are important to upstream prevention. By understanding the presentation, especially related to key social determinants, of ideation we can help prevent suicidality from occurring. If any individual experiences suicidal ideation or an attempt, or they have a friend or family member who engages in these behaviors, they have a higher lifetime relative risk of engaging in ideation themselves. Therefore, upstream prevention is critical to a public health outcome for all, and more relevant than ever as the U.S. life expectancy has decreased for three consecutive years recently (Woolf & Schoomaker, 2019). Furthermore, adolescents represent the largest portion of potential years lost and greatest cost to society from suicide of over $9 billion in 2013 (Shepard et al.,l., 2016).

Our study indicated that daily bullying among SM adolescents (26%) was higher at age 9 than heterosexual adolescents (14%), and 40% of heterosexuals reported they had not experienced any bullying. Moreover, these disparities continued 6 years later when participants were surveyed again. With that said, bullying is not a new experience for school-age children, and even though the United States is more welcoming to SM students than past generations, the differences in reported bullying are apparent. Engaging in more upstream prevention programs, especially in schools, is an important avenue to suicide prevention.

Discussions about bullying with parents, teachers, and students are often limited to just these important stakeholder groups. Conversations also need to be encouraged by other members of the school community including all staff, volunteers, and allied professionals that serve a school. For example, cafeteria workers are often left out of the discussion about mental health promotion, yet they can quickly see any changes in a student from one day to the next. Custodial workers often see events in the hallways or other areas of the school building that teachers do not observe. In addition, training all members of the school community not only about bullying, but also signs of emotional distress, and the importance of trusted adults in children's lives should be considered. And these discussions need to occur as early, and as often, as possible. Students at age 9 are often considering suicide based on CDC reports (DeVille et al., 2020); therefore, suicide prevention needs to happen once students start school. These discussions would need to be developmentally appropriate of course, but prevention programs, including the lauded good behavior game, have shown impressive outcomes not only when introduced in Kindergarten, but also decades later.

While participants were asked about their sexual orientation at age 15, identifying one's sexual orientation can occur before or after age 15. Therefore, the elevated reports of bullying at age 9 could be a product of that process of learning more about one's identity. In other words, a child's bullying at age 9 and 15 could be due to the same or different reasons. We also did not have data on these more specific experiences of coming out, when and how they came out, etc., and future studies should examine peer, family, and school acceptance. Future work will enable research to shed light on what the bullying experience resulted from in their own eyes, why individuals bullied those same individuals six years later, and why bullying might have been more acute when students were younger compared with older. In that same vein, parents' attitudes about SM individuals would be helpful in order to understand what children are taught at home, as that often mirrors their thoughts and behaviors at school. Our study is intended as a first step in understanding this process.

Bullying is more insidious than in past generations including in-person or online bullying. A noted difference is that online bullying does not end when the last school bell rings for the day and into the night. While our study did not have the capacity to understand the type of

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bullying our participants experienced, what is apparent is that school connectedness did not protect SM students from suicidal ideation in the same way as parent connectedness. This is interesting as the process of individuation often includes peers taking a more predominate role in adolescents' lives than their parents. Therefore, more work and potentially more novel approaches need to be developed for school systems. Bullying is often a topic that continues to be a concern for not only children, but also parents and other trusted adults. What would be helpful is to engage a variety of demographics to create and plan a healthy school climate campaign. Hearing their voices will not only provide a deeper picture of what needs to be done differently in current programs, but also what is working. Unfortunately, we often do not hear the voice of the students who have a history of bullying behavior. We often depend upon students who are from underrepresented groups to "teach" others how to reduce the oppression and discrimination they experience, but that only tells us half of the story.

There are a number of campaigns to educate the public not only on bullying prevention but also on creating safer school environments for SM individuals. Clearly, we need to increase these programs in terms of their breadth by providing more universal messaging but, importantly, also targeted messaging to assist higher risk groups including SM individuals. And while this was a nationwide study, the cities included in the FFCWS were in large urban areas. Therefore, future studies can examine bullying and suicidal ideation in nationally representative samples longitudinally, and also stratifying by urban/rural and different geographic regions, to more fully understand the scope of these healthy outcomes in relation to parent and school connections as potential protective factors. These mechanisms could be protective for sexual minorities due to changes regarding sexual minority messaging and how that might change over time.

Attachment to parents attenuated the effect of SM's reported ideation more so than connectedness at school. This does make sense, as students who identified as SM individuals reported feeling less physically and emotionally safe at their school. This finding speaks to the importance of having trusted adults in adolescents' lives, but that is clearly not enough for prevention efforts. Further research is needed to understand what makes a school more welcoming to a variety of students from various lived experiences. Innovative programs including sources of strength posit that creating a culture of acceptance is integral to decreasing emotional distress and ultimately suicide. Some school-based suicide prevention programs utilize trained peer mentors/leaders from a variety of social networks in each school. Students can pick from an array of peers to find support and caring while in school. Some students will not address concerns with an adult for the fear of retribution or making their situation worse, but research has found that a peer leader can bridge that gap between feeling isolated and not seeking help to accessing professional services, and this also increases connections to those in their schools during difficult times.

CONCLUSION

While our study contributes to the literature, there are some notable limitations. Social desirability, especially among adolescents, can bias any survey instrument dealing with mental health, suicide, and bullying measures. The FFCWS dataset, although rich with longitudinal data, has limited measures on mental health and the types of bullying sustained at ages 9 and 15. For example, since adolescents were only asked about suicidal ideation at age 15, one cannot surmise if the ideation is chronic, unlike the bullying questions asked at ages 9 and 15. While there are limitations to any study, these do not reign over our study's significant strengths. We examined increasingly salient topics for any adolescent: sexual orientation, bullying, and suicidal thoughts and how these identities and experiences coexist over 6 years. It is our intention that our study will engage other researchers to continue this work to exemplify developmentally appropriate prevention and intervention programs for mental health promotion. Also, the FFCWS will continue to collect data on these families, and it will be interesting to see how bullying in earlier years has longer-term effects in later adolescence/emerging adulthood.

Longitudinal and birth cohort studies such as the FFCWS encourage upstream approaches to prevention by identifying antecedents to more acute health outcomes years later in adolescents' lives. For example, our study found that mechanisms related to suicidal ideation 6 years prior could be identified years before more pressing health outcomes emerge. Cross-sectional studies definitely have a place in our field and can offer critical snapshots into adolescents' lives; however, multiple data points offer opportunities for process-oriented change that is so badly needed in our field. Additionally, schools are acknowledging that they are becoming mental healthcare centers as much as academic institutions, yet they do not have the resources and training to be able to serve their students efficiently and effectively.

Teachers are often the first to discern even slight changes in behavior and can be the change agent and advocate a student desperately needs. And with that awareness and ability to address such issues, many maladaptive health outcomes could be prevented. These interventions

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not only lead to a healthier population, but also can reduce health costs to families and communities—especially those with underserved and underrepresented groups. Approaches to intervention that deal with inclusion and equity are lacking in many health promotion programs and can be a key piece in the complex mosaic of treatment alternatives. Our study endorses the literature designating the importance of trusted adults (i.e., parents and family members) in prevention by emphasizing that mental health care should focus on the family systems informing mental health and suicide prevention in schools and communities at large.

DISCLAIMER

The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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CONFLICT OF INTEREST

No competing financial interests exist.

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