



Research paper

Non-Suicidal self-injury and suicide in depressed Adolescents: Impact of peer victimization and bullying

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ABSTRACT

Background: While prior research has demonstrated that peer victimization and bully perpetration contribute to non-suicidal self-injury (NSSI) and suicidal thoughts and behaviors (STBs), it remains unclear whether these interpersonal processes differentiate self-injuring adolescent suicide ideators and attempters.

Methods: The study included adolescents aged 13–18 years ($n = 223$; $M = 15.31$, $SD = 1.34$) recruited from an acute inpatient program. Participants were divided into two groups: (1) NSSI_{SI} ($n = 106$): endorsed past year NSSI, current suicide ideation, and no lifetime suicide attempts and (2) NSSI_{SI+SA} ($n = 117$): endorsed past year NSSI, current suicide ideation, and lifetime suicide attempts. Adolescents completed clinical interviews (i.e., mental disorders, NSSI, and STBs) and self-report measures assessing peer victimization, bully perpetration, and depression severity.

Results: NSSI_{SI+SA} youth reported higher levels of peer victimization and bully perpetration than NSSI_{SI} youth ($ps < 0.01$, $ds = 0.36$ – 0.37). Among the NSSI_{SI+SA} youth, bully perpetration was associated with a greater number of past month suicide attempts ($p = 0.02$, $RR = 1.07$). Only peer victimization was associated with greater NSSI behaviors in the past month ($p = 0.04$, $RR = 1.01$).

Limitations: The study is cross-sectional, and reports of peer victimization and bully perpetration rely on self-report assessment.

Conclusions: Peer victimization and bully perpetration differentiated adolescent suicide ideators and attempters, highlighting the need to address bully perpetration in addition to peer victimization in suicide interventions and research.

1. Introduction

Suicide is the second leading cause of death for adolescents (Cha et al., 2017). Non-suicidal self-injury (NSSI)—the deliberate harm to one's own bodily tissue without the intent to die—often co-occurs with suicidal thoughts and behaviors (STBs) among youth (Ribeiro et al., 2016; Stewart et al., 2017a). However, not all adolescents who self-injure attempt suicide (Joiner et al., 2012). Clarifying specific psychiatric and socio-emotional processes that potentiate risk for suicide attempts among youth reporting NSSI is essential, as this may afford greater insight into those at risk for suicide and critically, may identify promising targets for preventative intervention.

Several theories have highlighted interpersonal stress as playing a

key role in the ideation-to-action framework (Klonsky and May, 2014)—the transition from suicide ideation to suicidal behaviors. For example, the interpersonal theory of suicide (ITS) (Joiner, 2005) suggests that perceived burdensomeness and thwarted belongingness—core interpersonal processes—may increase the desire to die while acquired capability may result in attempts. Additionally, research testing the Integrated Motivational-Volitional Theory (IMV) (O'Connor, 2011) has shown that negative life events, particularly those of an interpersonal nature internalized as humiliating or defeating, lead to feelings of entrapment and subsequent suicide ideation and attempts. Within the IMV framework, increased capability for suicide (e.g., increased pain threshold; heightened fearlessness) also confers increased risk for suicide attempts (O'Connor, 2011). Taken together,

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interpersonal processes seem to be a catalyst that may escalate suicide risk in vulnerable individuals.

Two interpersonal processes that may confer increased STB risk among adolescent self-injurers are peer victimization and bully perpetration (Arango et al., 2016; Geoffroy et al., 2016; Stewart et al., 2017b). Peer victimization reflects the experience of overt (e.g., hitting, pushing), reputational (e.g., spreading rumors), or relational (e.g., being excluded, gossiped about) aggression from peers, and bully perpetration is aggression directed towards a peer (Olweus, 2013; Prinstein et al., 2001). Within the community, approximately 35% of youth are involved in bullying (Modecki et al., 2014)—as a perpetrator, victim, or both—and bullying involvement is associated with a range of detrimental effects (Olweus, 2013). Specifically, peer victimization is cross-sectionally (Heilbron and Prinstein, 2010; O'Connor et al., 2009) and prospectively (Giletta et al., 2012, 2015) associated with NSSI. Further, while peer victimization is associated with suicide ideation, (Giletta et al., 2015; Holt et al., 2015) specific forms of victimization—namely, overt and reputational victimization—are associated with a greater likelihood of making a suicide attempt (Stewart et al., 2017b). Less research has examined bully perpetration and NSSI, but prior research has shown that bully perpetration is cross-sectionally related to NSSI (Claes et al., 2015) and STBs (Klomek et al., 2007) among youth in the community. There is, however, a critical need to examine these relationships in clinical samples of adolescents in an effort to parse the differential effects of mental disorders and interpersonal factors on STBs (Stewart et al., 2017a).

The ideation-to-action framework can serve to clarify the relationship between peer victimization, bully perpetration, and STBs in youth who engage in NSSI. For example, peer victimization may increase thwarted belongingness (ITS) or increase feelings of entrapment (IMV); consequently, youth may feel alienated and isolated from key social support, subsequently increasing suicide ideation (Juvonen et al., 2003). That said, it also may be that for some youth who experience peer victimization, these painful experiences could increase acquired capability and subsequent risk for suicide attempts. On the other hand, aggressive behaviors related to bully perpetration may lead to suicide attempts by repeatedly exposing the individual to painful and provocative experiences (e.g., physical fights, threats of violence). Through these experiences, ideation-to-action frameworks contend that, bullies develop higher pain tolerance and greater fearlessness, characteristics thought to increase suicide capability. Indeed, adults reporting more painful and provocative events have greater pain tolerance, lower fear of death, and score higher on measures of acquired suicide capability (Bender et al., 2011; Van Orden et al., 2008). Taken together, peer victimization and bully perpetration may be central factors within the ideation-to-action framework, and further research is needed to clarify the differential relationship with suicidal ideation versus suicide attempts. Moreover, in order to guide the development of preventative intervention programs, it is critical to disambiguate the role of peer victimization and/or bully perpetration with respect to the severity of suicidal and non-suicidal thoughts and behaviors.

1.1. Goals of the current study

The goal of the study is to identify differences in peer victimization and bully perpetration among a clinical sample of self-injuring adolescent suicide ideators and attempters. First, we hypothesized that relative to adolescent suicide ideators, suicide attempters would report greater peer victimization and bully perpetration. Second, we hypothesized that increased peer victimization and/or bully perpetration would be related to the frequency of past month suicide attempts within the suicide attempter group. Last, given the limited research in this area, we tested whether peer victimization and bully perpetration are associated with individual differences on the following key dimensions of NSSI above and beyond group status (suicide ideator versus attempter): NSSI thoughts (i.e., past month frequency, duration, and

intensity) and behaviors (i.e., past month frequency, number of methods).

2. Method

2.1. Participants

The sample included 223 adolescents (78.9% female), aged 13–18 years ($M = 15.31$, $SD = 1.34$) and predominantly White ($n = 177$, 79.4%). Between November 2013 and September 2016, participants were recruited from an acute inpatient program designed to address clinical and safety concerns, including non-suicidal self-injury (NSSI) and suicidal thoughts and behaviors and poor treatment responses. Adolescents were grouped based on their history of NSSI and suicide attempts, assessed through the Self-Injurious Thoughts and Behaviors Interview (SITBI) (Nock et al., 2007) as well as recent suicide ideation severity, measured by Beck's Scale for Suicide Ideation (BSS) (Beck et al., 1979). Two groups of self-injurers were compared: (1) those who reported one or more NSSI behaviors in the past year, current suicide ideation ($BSS \geq 4$) (Holi et al., 2005), and no lifetime suicide attempts ($NSSI_{SI} = 106$) and (2) adolescents who reported one or more NSSI behaviors, current suicide ideation ($BSS \geq 4$), and one or more lifetime suicide attempts ($NSSI_{SI+SA} = 117$). Prior research has used a subset of this sample (70.4%) to test different pathways in which peer victimization contributed to self-injurious and suicide outcomes (Stewart et al., 2017b).

2.2. Procedure

The study was part of a quality assurance project approved by the Partners Institutional Review Board. Adolescents aged 13–17 years assented, while legal guardians and adolescents older than 17 provided written consent. Within 48 hours of admission to acute clinical services, graduate students and BA-level research assistants administered interviews assessing psychiatric diagnoses as well as suicidal thoughts and behaviors. Participants also completed self-report instruments measuring peer victimization and bully perpetration as well as depression and anxiety symptom severity.

2.3. Clinical interviews

Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-KID) (Sheehan et al., 2010). The MINI-KID is a structured diagnostic interview that assesses current and lifetime psychopathology using the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*. The MINI-KID has reliable psychometric properties for diagnosing youth in various settings (Sheehan et al., 2010).

Self-Injurious Thoughts and Behaviors Interview (SITBI) (Nock et al., 2007). The SITBI is a structured clinical interview assessing current and lifetime self-injurious thoughts and behaviors and has been validated for use in different settings (Nock et al., 2007). Questions on the SITBI probe the presence, onset, frequency, and severity of self-injurious thoughts and behaviors. Group characterization was determined by assessing past year NSSI, “How many times in the past year have you engaged in NSSI?” The presence of lifetime suicide attempts was assessed by asking, “Have you ever made an actual attempt to kill yourself in which you had at least some intent to die?” Suicide ideation in the past month was assessed through, “How many times in the past month have you had thoughts of killing yourself?” Outcome variables for self-injurious ideation were assessed with questions on the frequency of past month NSSI thoughts, average lifetime NSSI thoughts’ intensity on a scale ranging from 0 (not at all) to 4 (extremely), and duration of NSSI thoughts prior to engaging in NSSI on a scale of 0 (0 seconds) to 6 (more than 2 days). For participants who endorsed more than one length of time (for different episodes), there is an additional option (*spans* > 2

responses). Outcome variables for self-injurious behaviors focused on the frequency of past month NSSI behaviors, the number of NSSI methods used in one's lifetime, and the frequency of past month suicide attempts.

2.4. Self-Report instruments

Revised Peer Experiences Questionnaire (RPEQ) (Prinstein et al., 2001). The RPEQ assesses peer victimization and bully perpetration in the previous year. The victimization and bullying items assess identical experiences, differing only with respect to the perpetrator/victim (e.g., “A teen chased me like he really wanted to hurt me” vs. “I chased a teen like I really wanted to hurt him/her”). Both the victimization and the bullying subscales consist of 9-items, with each item ranging from 1 (*never*) to 5 (*always*), and total scores range from 9 to 45, with higher scores indicating greater severity of victimization and bullying. The internal consistency was excellent for the victimization ($\alpha = 0.90$) and acceptable for bullying ($\alpha = 0.73$) subscales.

Beck's Scale for Suicide Ideation (BSS) (Beck et al., 1979). The BSS is a 19-item questionnaire assessing the severity of suicide ideation in the past week. Each item is rated on a scale from 0 (*least severe*) to 2 (*most severe*), and higher total scores indicate more severe ideation. The internal consistency of the BSS items was excellent in our sample ($\alpha = 0.94$).

Center for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977). The CES-D is a 20-item measure assessing depression symptom severity in the past week. Item scores range from 0 (*rarely or none of the time*) to 3 (*almost or all of the time*), and higher total scores reflect greater depression severity. In the current study, the internal consistency was excellent ($\alpha = 0.97$).

Multidimensional Anxiety Scale for Children (MASC) (March et al., 1997). The MASC is a 39-item self-report measure assessing current anxiety symptoms. Each item ranged from 0 (*Never true about me*) to 3 (*Often true about me*), and higher total scores (range: 0–117) indicate more severe anxiety. The internal consistency for our sample was excellent ($\alpha = 0.93$).

2.5. Data analytic overview

We first conducted a series of univariate analyses testing differences between the NSSI_{SI} and NSSI_{SI+SA} groups. We used chi-square analyses for categorical variables and independent samples *t*-test analyses for continuous variables. No sociodemographic or diagnostic variable

differentiated the groups (see Table 1), and thus, subsequent models testing group differences in victimization and bully perpetration did not include covariates. Similarly, given non-significant univariate analyses, the initial multivariate models testing non-suicidal and suicide outcomes did not include covariates. However, to determine whether victimization and bully perpetration was associated above and beyond group status (i.e., NSSI_{SI} vs. NSSI_{SI+SA}), these variables were included in all significant multivariate models. When testing multivariate models, negative binomial regression models were used for count data (NSSI thoughts, NSSI behaviors, NSSI methods, suicide attempts), ordinal logistic regression models were utilized for ordinal data (duration of NSSI thoughts), and linear regression was used for continuous variables (intensity of NSSI thoughts).

3. Results

3.1. Univariate analyses

Univariate analyses are summarized in Table 1. When comparing the NSSI_{SI} and NSSI_{SI+SA} groups, there were no significant differences in demographic characteristics. Similarly, the NSSI_{SI} and NSSI_{SI+SA} groups did not differ in current mental disorders, total number of disorders, and symptom severity. In line with our hypothesis, compared to the NSSI_{SI} adolescents, the NSSI_{SI+SA} youth reported more severe past year victimization and bully perpetration.

3.2. Multivariate analyses

We first conducted a negative binomial model to test whether victimization and bully perpetration was significantly related to the number of suicide attempts in the past month within the NSSI_{SI+SA} group. The overall model was significant, $\chi^2(N = 117, df = 2) = 10.15, p = 0.006$, and bully perpetration was significantly associated with the number of past month suicide attempts, $b = 0.07, RR = 1.07, p = 0.02$. However, the relationship between victimization and past month suicide attempts was non-significant, $b = 0.03, RR = 1.03, p = 0.07$.

Next, we conducted several models to examine associations between peer victimization and bully perpetration and key NSSI features (see Table 2). For the frequency and intensity of NSSI thoughts, models including group, victimization, and bullying perpetration were significant, $\chi^2(N = 222, df = 3) = 7.95, p = 0.047$ and $R^2 = 0.04, F(3, 217) = 2.73, p = 0.045$, respectively. In both models, more severe peer victimization ($ps < 0.02$), but not bullying perpetration ($ps > 0.06$), was

Table 1
Demographic and clinical characteristics of the sample.

M (SD) or n (%)	Total (n = 223)	NSSI _{SI} (n = 106)	NSSI _{SI+SA} (n = 117)	Test	p	d/φ
Demographics						
Age	15.31 (1.34)	15.48 (1.36)	15.16 (1.30)	$t(221) = -1.79$	0.08	0.24
Sex (% female)	176 (78.90)	85 (81.70)	91 (82.70)	$\chi^2(1) = 0.04$	0.85	0.01
Race/Ethnicity				$\chi^2(4) = 4.75$	0.31	0.15
White	177 (79.40)	84 (80.80)	93 (81.60)			
Black	2 (0.90)	0 (0.00)	2 (1.80)			
Asian	10 (4.50)	7 (6.70)	3 (2.60)			
Native American	1 (0.40)	0 (0)	1 (0.90)			
2 or more races	28 (12.60)	13 (6.00)	15 (13.20)			
Clinical Measures						
Mood disorder	214 (96.00)	101 (95.30)	113 (96.60)	$\chi^2(1) = 0.24$	0.62	0.03
Anxiety disorder	135 (60.50)	59 (55.70)	76 (65.00)	$\chi^2(1) = 2.01$	0.16	0.1
Externalizing disorder	50 (22.40)	24 (22.60)	26 (22.20)	$\chi^2(1) = 0.01$	0.94	0.01
Total disorders	1.79 (0.71)	1.74 (0.74)	1.84 (0.68)	$t(221) = 1.07$	0.28	0.14
Depression symptoms	39.58 (11.57)	39.53 (10.58)	39.62 (12.44)	$t(221) = 0.06$	0.95	0.01
Anxiety symptoms	66.86 (16.55)	66.70 (16.30)	67.00 (16.84)	$t(221) = 0.13$	0.89	0.02
Victimization	20.41 (8.03)	18.88 (7.32)	21.78 (8.41)	$t(220) = 2.73$	0.007	0.37
Bullying	11.70 (3.09)	11.13 (2.53)	12.21 (3.46)	$t(212) = 2.69^*$	0.008	0.36

Note. ^{*}Levene's test of equal variance not met in this analysis, df adjusted from 221 to 212.

Table 2
Negative binomial regression analyses testing the relationship between peer victimization and bully perpetration and NSSI characteristics.

NSSI thoughts									
Variable	Past month frequency <i>b</i> (SE)	χ^2	RR	CI ₉₅	Average intensity <i>b</i> (SE)	<i>t</i>	<i>r</i> _{sp}	<i>R</i> ²	
Model 1									
Group Status	0.002 (0.09)	0.001	1.00	0.84–1.20	<0.001 (0.01)	<0.001	<0.001	<0.001	
Model 2									
Group Status	0.03 (0.09)	0.08	1.03	0.86–1.23	−0.02 (0.10)	−0.20	−0.01	0.04	
Victimization	0.02 (0.01)	7.14**	1.02	1.004–1.03	0.02 (0.01)	2.48*	0.17		
Bullying	−0.02 (0.02)	2.03	0.98	0.95–1.01	−0.03 (0.02)	−1.87	−0.12		
NSSI behaviors									
Variable	Past month frequency <i>b</i> (SE)	χ^2	RR	CI ₉₅	Number of methods <i>b</i> (SE)	χ^2	RR	CI ₉₅	
Model 1									
Group Status	0.48 (0.17)	7.91**	1.61	1.16–2.25	0.35 (0.08)	19.32***	1.41	1.21–1.65	
Model 2									
Group Status	0.43 (0.17)	6.39*	1.53	1.10–2.14	0.31 (0.08)	14.38***	1.36	1.16–1.59	
Victimization	0.02 (0.01)	4.10*	1.02	1.00–1.05	0.01 (0)	3.04	1.01	1.00–1.02	
Bullying	−0.02 (0.03)	0.35	0.98	0.93–1.04	0.01 (0.01)	0.42	1.01	0.98–1.03	

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

associated with more severe NSSI thoughts. For the frequency of NSSI behaviors and number of NSSI methods, the overall models were significantly associated with each outcome, $\chi^2(N = 222, df = 3) = 11.64, p = 0.009$ and $\chi^2(N = 222, df = 3) = 23.00, p < 0.001$. More severe victimization was associated with frequent past month NSSI behavior ($p = 0.04$) but the effect of bullying perpetration was non-significant ($p = 0.56$). In contrast, only being in the NSSI_{SI+SA} group (versus the NSSI_{SI} group) was associated with using a greater number of NSSI methods ($p < 0.001$). Finally, the model for the duration of NSSI thoughts was non-significant, $\chi^2(N = 221, df = 1) = 0.63, p = 0.43$.

4. Discussion

Given that suicide is the second leading cause of death for adolescents and NSSI often co-occurs with suicide (Cha et al., 2017; Stewart et al., 2017a), it is essential to identify factors that can differentiate self-injuring adolescents who think about suicide from those who attempt suicide. In the current study, peer victimization and bully perpetration significantly distinguished adolescent self-injuring suicide ideators from attempters. Additionally, bully perpetration, but not peer victimization, was associated with the frequency of past month attempts among the attempter group and only peer victimization was related to the frequency of past month NSSI thoughts and their average intensity, as well as past month NSSI behaviors.

Both NSSI and suicide ideation are prospectively associated with suicide attempts (Ribeiro et al., 2016). However, only one-third of adolescent ideators escalate to suicidal actions, (Nock et al., 2013) and most well-established risk factors for STBs are not associated with attempts among self-injurers reporting current suicide ideation (Stewart et al., 2017a). Consequently, identifying novel markers of suicide risk in this population is critical for improving clinical care. We found that suicide attempters reported significantly greater peer victimization and bully perpetration than ideators while no clinical or demographic variables differentiated the groups. Thus, greater bullying involvement may distinctly characterize self-injurers who have made suicide attempts, a group at high-risk of dying by suicide (Finkelstein et al., 2015). Our findings underscore the importance of augmenting conventional assessment approaches (e.g., psychiatric symptoms) with rigorous evaluations of interpersonal processes to more accurately identify youth likely to transition from ideation to attempts.

However, only bully perpetration, and not victimization, was associated with the number of recent suicide attempts among adolescent

attempters. As many adolescents who report bullying are also victims, (Craig et al., 2009) it is critical to parse the unique contributions of perpetration and victimization, as we did in our models. Through the lens of ideation-to-action frameworks, (Joiner, 2005; Klonsky and May, 2014; O'Connor, 2011) our results suggest that bullying may contribute to acquiring the capability, and this could occur both directly and indirectly. Physical bullying perpetration, in particular, may put adolescents in situations where they are actually injured (i.e., victim defends themselves) or where there is a threat of injury. Thus, bullies may repeatedly experience physical pain and threatening situations. Applying opponent process theory, the ITS proposes that, through habituation and conditioning, exposure to these types of painful and provocative events makes people more capable of making potentially lethal suicide attempts (Bender et al., 2011; Van Orden et al., 2008).

Physical bullying perpetration may also build suicide capability indirectly. Being a bully is associated with a range of delinquent behaviors (e.g., physical fights, carrying a weapon, burglary, drug use; see Alvarez-García et al., 2015) that may habituate youth to fear and pain. Further, bullies have higher trait impulsivity and callous unemotional traits (e.g., Fanti and Kimonis, 2012; Viding et al., 2009). Greater impulsivity is associated with risk-taking (e.g., Crone et al., 2016) and bullies high in impulsivity may be more likely to engage in the types of behaviors (e.g., physical fights) that build suicide capability. Callous-unemotional traits may be associated with high levels of fearlessness thought to be partially genetically determined (Fanti et al., 2016); thus, bullies with these traits may have greater capability for suicide due to constitutionally lower fearlessness of death.

Critically, we did not test mechanisms underlying the association between bullying perpetration and suicide attempts directly; thus, future longitudinal research incorporating these processes is needed to confirm this possibility. Notably, NSSI is also strongly associated with indices of suicide capability; (Muehlenkamp and Gutierrez, 2007; Stanley et al., 2001) thus, bullying perpetration may be a marker of suicide attempts among individuals who already possess potent suicide risk factors. As bullies tend to be overlooked in school-based anti-bullying programs, (Tofi and Farrington, 2011) our results indicate that addressing the needs and behaviors of both victims and perpetrators (particularly those with risk factors like NSSI) is essential for more effectively preventing suicide in youth.

Being a suicide attempter (versus ideator) was associated with more frequent past month NSSI behaviors (but not NSSI thoughts) and employing more distinct methods of self-injury, controlling for bullying

perpetration and victimization. This extends research with lifetime self-injurers showing these features differentiate attempters from non-attempters (Victor and Klonsky, 2014) and suggests that they are directly related to attempts, versus ideation more generally. Further, peer victimization, but not perpetration, was uniquely associated with the frequency of recent NSSI thought and behaviors. Compared to perpetration, bully victimization tends to be more strongly related to internalizing symptoms than perpetration; (Olweus, 2013) thus, victimized youth may have used NSSI to escape from aversive emotions or negative thoughts, the most commonly reported function of NSSI behavior (Nock et al., 2009). Critically, victimization was associated with the frequency of NSSI thoughts and behaviors above and beyond the effect of suicide attempt history, suggesting its relations with suicide attempt and NSSI may be driven by dissociable underlying mechanisms. Fine-grained analyses of the features of bullying victimization (e.g., chronicity, injuries sustained) and their relations to suicide attempts and NSSI will further clarify the role bullying plays in these behaviors.

Our findings should be considered in light of several limitations. First, our study is cross-sectional, and thus, we cannot ascertain whether the peer victimization or bully perpetration in the past year occurred prior to the attempts and suicide risk factors in the past month. It is essential to conduct multi-wave longitudinal studies to disentangle the temporal relationship among bully perpetration, peer victimization, and suicidal thoughts and behaviors. Second, we utilized self-report measures to assess peer victimization and bully perpetration, which may be subject to recall biases. Multi-informant and sociometric methods such as peer nominations may serve to address limitations of self-report instruments (Olweus, 2013; Prinstein et al., 2010). Third, the generalizability of the findings may be limited to a high-risk clinical sample of self-injuring adolescents with current ideation that may not capture the experiences of adolescent suicide ideators and attempters in the broader community. Last, the majority of our sample reported both peer victimization and bully perpetration, which precludes our ability to adequately test differences among victims, bullies, and victim/bullies. Future research would benefit from exploring how these this differentially impacts the trajectory of non-suicidal and suicidal thoughts and behaviors.

In summary, prior research has shown that interpersonal processes are associated with suicidal thoughts and behaviors. The current study built on these findings by identifying that peer victimization and bully perpetration differentiated self-injuring adolescent ideators from attempters. It further highlighted the need to address bully perpetration in addition to peer victimization in suicide interventions and research. Ultimately, an improved understanding of interpersonal stressors that differentially contributes to attempts versus ideation may lead to insight on preventing the loss of lives through suicide.

Conflicts of interest

Declaration of interest: None.

Contributors

Genesis Vergara: data collection, data analysis, and writing the initial drafts of the manuscript.

Jeremy G. Stewart: data analysis and final revision of the manuscript.

Elizabeth Cosby: data collection and database management.

Sarah Hope Lincoln: final revision of the manuscript.

Randy P. Auerbach: study design and final revision of the manuscript.

All authors have approved the final version of the article.

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