Suicide Risk Factors and Mediators between Childhood Sexual Abuse and Suicide Ideation Among Male and Female Suicide Attempters

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Abstract

The current study examined the manner in which childhood sexual abuse (CSA) history relates to risk factors for suicidal behavior among recent suicide attempters ($n = 166$). Men who recently attempted suicide and endorsed a CSA history had higher scores on measures of hopelessness and suicide ideation than men without a CSA history. Men with a CSA history were also more likely to have made multiple suicide attempts and meet diagnostic criteria for posttraumatic stress disorder and borderline personality disorder. In contrast, there were fewer group differences as a function of CSA history among the female suicide attempters. Hopelessness was a significant mediator between CSA history and suicide ideation in both men and women.

Childhood sexual abuse (CSA) correlates with suicide ideation and a history of making a suicide attempt (e.g., Martin, Bergen, Richardson, Roeger, & Allison, 2004). Therefore, it is important to study the manner in which CSA history relates to risk factors for suicidal behavior. Sex differences are an important consideration in this area because women are more likely to experience CSA (see Tolin & Foa, 2006) and to make a suicide attempt (e.g., Roy & Janal, 2006). Although some researchers conclude that the impact of CSA is equally detrimental to women and men (e.g., Dube et al., 2005), others have found sex differences in predicting symptomatology based on CSA history (e.g. Martin et al., 2004). Whether CSA relates to suicide risk factors in the same way for both female and male suicide attempters remains an empirical question.

The association between CSA and suicidality is well-documented, yet few studies have investigated mechanisms for this association. CSA history is associated with psychiatric disturbance (Polusny & Follette, 1995) which increases one's risk for suicide (Bertolote, Fleischmann, De Leo, & Wasserman, 2003). Therefore, psychiatric disturbance may be one plausible mechanism. CSA may also increase the likelihood of developing negative beliefs associated with suicide. Hopelessness is a robust predictor of suicide (Beck, Brown, Berchick, Stewart, & Steer, 1990) and correlates with a history of CSA (Meadows & Kaslow, 2002). Furthermore, Meadows and Kaslow (2002) found that hopelessness mediated the relation between CSA history and history of suicide attempt in a cross-sectional sample. They did not examine the role of psychiatric symptomatology, along with hopelessness, so it is unclear how much each factor independently influences the relation. Furthermore, their sample only included African American women.

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The aims of the study were: (a) to compare recent suicide attempters with a CSA history to those without a CSA history on measures of psychological risk factors, analyzing data from men and women separately, and (b) to examine several possible mediators of the relation between CSA and suicide ideation among male and female suicide attempters, including depression, posttraumatic stress disorder (PTSD), borderline personality disorder (BPD), substance abuse/dependence, and hopelessness.

Method

Participants

Analyses included baseline data gathered from participants in a preliminary and full clinical trial (Brown et al. 2005) investigating the use of cognitive therapy in reducing suicide re-attempts. Patients were recruited from psychiatric or medical emergency departments after a suicide attempt (see Brown et al., 2005). The mean age was 34.4 years (SD = 9.9, 18 to 66 years), and 57.8% were female. Self-reported ethnicity was 62.2% Black, 28.9% White, and 8.9% identified as another race. Most were single (64.5%), 17.4% were divorced or separated, 10.5% were married, and 7.6% were widowed. All participants completed interviews with postdoctoral or master's level clinicians and were paid $50.

Measures

Self-reports—CSA history was assessed with the self-report item: "*Did you ever experience sexual abuse as a child?*" Responses to this question correlated strongly with responses to another self-report item assessing the experience of any type of child abuse (φ = .67). The Beck Hopelessness Scale (BHS; Beck & Steer, 1993) is a self-report consisting of 20 true-false statements assessing the extent of positive and negative beliefs about the future (KR-20 = .92).

Clinician-administered measures—The Scale for Suicide Ideation (SSI; Beck, Kovacs, & Weissman, 1979) is a 19-item clinician-administered scale used to evaluate the intensity of current attitudes, behaviors, and plans to commit suicide (α = .76). The Number and Dates of Suicide Attempts (NDSA) is a measure assessing number of previous suicide attempts. The Structured Clinical Interview for DSM-IV-Axis I (SCID-IV; First, Spitzer, Gibbon, & Williams, 1995) was administered to assess Axis I disorders. Analyses included the diagnoses of major depressive disorders, dysthymia, PTSD, and alcohol and drug use disorders, which have demonstrated satisfactory reliability across previous studies (κs > .76; Skre, Onstad, Torgersen, & Kringlen, 1991). The Structured Clinical Interview for DSM-IV-Axis II (SCID-II; First, Spitzer, Gibbon, & Williams, 1997) was administered to assess BPD. Previous studies have illustrated satisfactory reliability (κs > .71; Dreessen & Arntz, 1998).

Results

Fifty-nine participants (32.8%) endorsed the experience of CSA, 108 (60.0%) denied CSA, and 13 (7.2%) did not respond. There were no differences in demographics or any of the measures between those who reported their CSA status and those who did not (ps > .15). The 166 participants who reported both their CSA history and sex are included. Those reporting CSA were significantly more likely to be female (67.8% versus 32.2%), χ^2 (1, N = 166) = 4.65, p < .05.

Group differences are reported in Table 1. Among women, those with a CSA history reported significantly greater suicide ideation (d = .74), yet were less likely to have a depressive disorder diagnosis than those without a CSA history. Among men, compared to

those without a CSA history, those with a CSA history reported significantly higher hopelessness ($d = .58$) and suicide ideation ($d = .83$), and were significantly more likely to endorse multiple suicide attempts and be diagnosed with PTSD and BPD, although they were less likely to be diagnosed with a depressive disorder.

Depressive disorder, PTSD, BPD, substance abuse/dependence, and hopelessness were examined as potential mediators using the SPSS boot-strapping macro for multiple mediators (Preacher & Hayes, 2008). The output provides the 95% confidence interval of the indirect effect; if zero is not included, the effect is assumed to be significant. The bootstrapping procedure was chosen because it provides a non-parametric approach to hypothesis testing, which was preferred given the skewed distribution of the SSI.

Among women, CSA history was a predictor of suicide ideation, $R^2 = .13$, $F(1, 91) = 13.41$, $p < .001$. The overall indirect effect of CSA history on suicide ideation through depressive disorder, PTSD, BPD, substance disorders, and hopelessness was significant, $R^2 = .33$, $F(6, 84) = 6.97$, $p < .001$. Only hopelessness was a significant mediator after controlling for the other variables (95% CI = 0.02 – 2.92). After controlling for the variables, the direct effect of CSA on suicide ideation remained significant ($p < .01$).

Among men, CSA history was a predictor of suicide ideation, $R^2 = .14$, $F(1, 69) = 11.52$, $p < .01$, and the overall indirect effect on suicide ideation was significant, $R^2 = .38$, $F(6, 64) = 6.60$, $p < .001$. Hopelessness was a significant mediator (95% bias-corrected CI = 0.33 – 4.35). After controlling for the variables, the direct effect of CSA remained significant ($p < .01$).

Discussion

Although women were more likely to endorse a history of CSA, men reporting CSA experienced more hopelessness and suicide ideation, and were more likely to have attempted suicide multiple times and be diagnosed with PTSD and BPD, in comparison to men without a CSA history. The higher rates of risk factors among men suggest that they may be at higher risk for poor outcomes, and possibly suicide; yet the possible confounding effects of age and ethnicity must be examined before we can draw strong conclusions. Unexpectedly, both male and female CSA survivors were less likely to be diagnosed with a depressive disorder, compared to those without a CSA history. However the rates of depressive disorders in both CSA and non-CSA groups were quite high in this sample, and the rates among the CSA survivors are consistent, or even higher, than rates of depression among CSA survivors reported in previous research (e.g., Polusny & Follette, 1995).

The reasons underlying the different patterns of results among men and women are unclear. Perhaps the characteristics of the CSA experienced by men differed from those experienced by women and exerted different influences on suicide ideation. Compared to female CSA survivors, male CSA survivors are more likely to report more force and physical abuse during CSA (Watkins & Bentovim, 1992). Unfortunately, such information was not gathered in the present study, but a finer-grained analysis of CSA characteristics represents an area for future research.

For both men and women, hopelessness was a significant mediator between CSA and suicide ideation. Only hopelessness emerged as a significant mediator, providing less support for other plausible mechanisms. It is possible that children who experience CSA are more likely to attribute the negative life event to internal causes than external ones, which may lead to a higher likelihood of hopelessness (Alloy, Abramson, Smith, Gibb, & Neeren, 2006). Future research exploring the attributions suicidal individuals make about their experiences of CSA may support this hypothesis.

The relation between CSA and suicide ideation remained significant even when accounting for the mediators, suggesting that CSA may have a direct effect on suicide ideation. Alternatively, other factors such as emotion regulation or problem-solving deficits, impulsivity, other negative beliefs, and/or habituation to pain (Joiner, 2005) may also explain the relation. A more comprehensive investigation of potential mediators is necessary.

The assessment of CSA was also limited, as it was based on self report to one question. Reviews in the area of retrospective recall of childhood events suggest that reports can be accurate, but there is a tendency to under-report abuse (Hardt & Rutter, 2004). Furthermore, the language used in this item may be stigmatizing and could have contributed to under-reporting or differential reporting for men, who are less likely to report their abuse history (Black & DeBlassie, 1993). In addition, diagnostic reliability was not assessed in this study; however structured diagnostic assessments with good psychometric properties were utilized. Finally, because only CSA was assessed, the effects of other traumas or negative events could not be examined and represent possible confounds.

The sample of ethnically diverse suicide attempters represents an understudied group; yet the nature of the sample also limits the generalizability of the findings. The division of the sample based on sex allowed for the examination of the understudied group of male CSA survivors, but it also yielded a small subsample size ($n = 19$). This may have contributed to sampling bias, so replication is necessary. Finally, cross-sectional data were used, so future research is needed to draw conclusions about how processes unfold over time.

Acknowledgments

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Table 1

Group Differences Between Suicide Attempters With and Without a CSA History

	Female suicide attempters				Male suicide attempters			
	CSA history $n = 40$		No CSA history $n = 54$		CSA history $n = 19$		No CSA history $n = 53$	
	M	SD	M	SD	M	SD	M	SD
BHS total	13.23	5.71	11.00	6.26	13.55*	4.71	10.51	5.78
SSI	11.07*	9.78	4.92	6.39	11.71*	10.35	4.38	6.94

	n	%	n	%	n	%	n	%
Multiple attempter	30	75.0	38	70.4	19*	100.0	35	66.0
Depressive disorder	30	75.0	49*	90.7	9	47.4	43*	81.1
PTSD	12	30.0	10	18.5	10*	52.6	5	9.4
BPD	21	52.5	20	37.0	9*	47.4	8	15.1
Substance dependence/ abuse	24	60.0	31	57.4	13	68.4	43	81.1

Note. BHS = Beck Hopelessness Scale; SSI = Scale for Suicide Ideation; PTSD = Posttraumatic Stress Disorder; BPD = Borderline Personality Disorder.

*
Indicates significantly higher score or prevalence ($p < .05$).