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PTSD and reasons for living: Associations with depressive symptoms and alcohol use

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ABSTRACT

Posttraumatic stress disorder (PTSD) is associated with suicidal ideation and behavior, and is found to frequently co-occur with other conditions that exacerbate the risk for suicidal behavior. Despite these findings, few individuals with PTSD engage in suicidal acts, and there has been little research to examine those factors that protect against such behaviors. The current study used path analysis to examine the association among PTSD, depression, hazardous alcohol consumption, and beliefs about suicide (i.e., reasons for living) in a community sample with motor vehicle accident related-PTSD ($N=50$). Reasons for living were inversely associated with PTSD, depression, and alcohol use. Further, depression symptom severity accounted for the association between PTSD symptom severity and reasons for living. In contrast, hazardous alcohol consumption only demonstrated a trend for accounting for the association between PTSD and reasons for living. Our findings highlight the importance of clinicians assessing co-occurring depression symptoms and suggest the potential use of interventions that promote adaptive cognitions about suicide among people with PTSD.

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1. Introduction

Posttraumatic stress disorder (PTSD) is a debilitating condition that is associated with suicidal ideation (Jakupcak et al., 2009), self-harming behaviors (Dyer et al., 2009), and suicide attempts (Sareen et al., 2005; Panagioti et al., 2012). The prevalence of suicidal ideation has been estimated to be as high as 40% among those with PTSD and the prevalence of suicide attempts is approximately 20% in this population (Cougle et al., 2009). In addition, PTSD is highly comorbid with other psychological disorders, such as depression and alcohol use disorders (AUDs), which are independently associated with increased risk for suicidal ideation and behaviors (Bolton et al., 2010; Blanco et al., 2013). Despite the increased risk for suicidal ideation and behavior among those with PTSD and comorbid conditions, a significant proportion of these individuals never engage in suicidal behavior. Previous research has primarily focused on those factors that further exacerbate risk for suicide. However, it also is important to examine factors that may protect against suicide among this group to fully inform intervention and prevention efforts.

Identified protective factors against suicide encompass a variety of domains including, but not limited to, access to clinical care, social factors, positive coping skills, and religious beliefs (U.S. Public Health Service, 1999). In particular, cognitions about the nature and consequences of suicide have been highlighted as a protective factor against suicidal ideation and behavior in community and inpatient samples (Linehan et al., 1983). Linehan et al. (1983) developed the Reasons for Living Inventory (RFL), which assesses life-sustaining beliefs that may deter one from engaging in suicidal acts. The measure indexes six types of beliefs/reasons for living including: survival and coping beliefs, responsibility to family, child related concerns, fear of suicide, fear of social disapproval, and moral objections. Several cross sectional investigations have replicated Linehan et al. (1983) original findings of negative associations between these reasons for living and suicidal

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ideation and behavior (Mann et al., 1999; Osman et al., 1999; Lizardi et al., 2007; Malone et al., 2000). In addition, prospective research has shown that greater reasons for living are inversely associated with later suicidal behavior (Lizardi et al., 2007). Taken together, these findings suggest that these identified beliefs about suicide/reasons for living may be a significant set of cognitions that mitigate against the experience of suicidal ideation and engagement in suicidal behavior. Thus, it may be particularly important to increase our understanding of factors that contribute to alterations in these beliefs, which may be a key treatment target and mechanism for enhancing resilience to suicide.

Few studies have examined the role of these protective cognitions among individuals who have posttraumatic symptoms. One study examined the relationship between trauma exposure and reasons for living among women. Degree of sexual victimization was found to be inversely related to overall reasons for living, such that those who were subjected to sexual coercion or attempted rape reported fewer reasons for living compared to those who experienced no victimization (Segal, 2009). Furthermore, among individuals with comorbid PTSD and substance dependence, reasons for living including: concerns about children, a wish to survive, and one's belief in their ability to cope differentiated those individuals who had engaged in self-harming behaviors or attempted suicide from those who had not (Harned et al., 2006). These findings suggest that the presence of PTSD symptoms may be associated with alterations in cognitions that protect against engaging in suicidal behaviors. However, the aforementioned studies failed to address the role of comorbid psychiatric conditions (e.g., depression) that may better account for the observed relationships.

As previously stated, depression and alcohol use disorders (AUDs) are highly comorbid with PTSD, with comorbidity estimates ranging from 30% to 50% for depression (Breslau et al., 1991; Kessler et al., 1995; Blanchard et al., 1998; Blanco et al., 2013) and as high as 24% for AUDs (Keane et al., 1998). Furthermore, depression and AUDs are both independently associated with increased suicidal ideation and behavior (Bolton et al., 2010; Panagioti et al., 2012; Stevens et al., 2013). The presence of co-occurring depressive and AUDs among individuals with PTSD may interfere with their ability to generate adaptive coping beliefs that prevent them from engaging in suicidal behavior. For instance, cognitive models of depression suggest that depression is characterized by a pervasive systematic negativity of cognitive processes, including hopelessness (Beck, 2002). The presence of such a cognitive style may limit one's ability to generate adaptive beliefs about suicide. Moreover, previous research has suggested that alcohol use can impair cognitive processing by limiting attention and restricting thought processes, whereby, the most immediate parts of one's experience influence behavior and emotions (Steele and Josephs, 1990). Alcohol use may, therefore, create a state of cognitive constriction (e.g. intense thoughts of suicide that cannot be dismissed) that inhibits the ability to generate and implement effective coping strategies that may prevent one from engaging in suicidal behaviors. Taken together, PTSD, depression and AUDs each may negatively influence adaptive coping beliefs. Given the high proportions of co-occurrence for these disorders, depression and AUDs should also be examined to better elucidate the unique association between PTSD and adaptive beliefs about suicide behaviors.

The aim of the current study is to examine the association among PTSD, depression, hazardous alcohol consumption, and adaptive coping beliefs about suicide. Based on prior findings (Harned et al., 2006), we predicted that reasons for living would be inversely associated with PTSD symptom severity, depression symptom severity, and hazardous alcohol consumption. In addition, we expected that the association between PTSD symptom severity and reasons for living would be accounted for depressive symptom severity and hazardous alcohol consumption.

2. Methods

2.1. Procedure

Participants were recruited from the larger community for a treatment study, the results of which are described elsewhere (Sloan et al., 2012). Inclusion criteria for the treatment study included a primary diagnosis for motor vehicle accident (MVA)-related PTSD, being at least 18 years of age, and having an MVA that occurred at least 3 months prior. Participants were excluded if they had a current psychotic disorder, current substance dependence diagnosis, or unstable bipolar disorder. Individuals who were deemed to be potentially eligible for the study based upon a brief telephone screen presented in person for an initial assessment.

Upon arrival to the baseline assessment session, participants provided informed consent and then completed semi-structured diagnostic interviews and self-report measures. Although a variety of measures were completed, only measures relevant to this study are presented here. The diagnostic clinical interviews were conducted by doctoral-level psychologists. All interviews were recorded for interrater reliability ratings, with 15% of the interviews randomly selected for independent review. The study was approved by local Institutional Review Boards.

2.2. Measures

PTSD symptoms were assessed using the Clinician Administered PTSD Scale (CAPS; Blake et al., 1995), a measure widely regarded as the gold-standard for assessing PTSD. The CAPS has been shown to have strong reliability and validity (Weathers et al., 2001). The CAPS is a structured clinical interview that assesses 17 core symptoms of PTSD, as defined by DSM-IV (American Psychiatric Association, 1994) and allows the interviewer to rate the frequency (e.g., 4=daily or almost daily) and intensity (e.g., 3=severe, considerable distress) of each symptom along five-point ordinal scales. The CAPS was used in this study to index both the presence of PTSD and overall symptom severity. The presence of PTSD was established using the original scoring method (Blake et al., 1995), which requires the presence of one or more re-experiencing symptoms, three or more avoidance symptoms, and two or more hyperarousal symptoms. This scoring method is consistent with the *DSM-IV* diagnostic criteria for PTSD (American Psychiatric Association, 1994). Each symptom must receive a frequency score of one or more and an intensity score of two or more in order to count towards diagnostic status. This scoring method has demonstrated excellent validity (Weathers et al., 1999). Total symptom severity was calculated by summing the frequency and intensity scores for all 17 symptoms. The interrater reliability for PTSD diagnosis was high (0.93) and total CAPS score ranged from 42 to 110.

The Structured Clinical Interview for DSM IV Disorders (SCID-IV) was used in the current study to assess for the exclusion criteria of psychotic or organic mental disorder, as well as to assess for current and past substance use disorders and mood and anxiety disorders (First et al., 2002). The SCID is a semi-structured, clinician-administered measure of Axis-I disorders per the *DSM-IV* (American Psychiatric Association, 1994). The interrater reliability of the SCID diagnoses was high (0.82–0.98).

The Reasons for Living Inventory (RFL; Linehan et al., 1983) is a 48-item self-report measure of beliefs posited to buffer against suicidal ideation; survival and coping beliefs (e.g., I believe I can find other solutions to my problems), responsibility to family (e.g., It would hurt my family too much and I would not want them to suffer), child-related concerns (e.g., The effect on my children could be harmful), fear of suicide (e.g., I am afraid that my method of killing myself would fail), fear of social disapproval (e.g., Other people would think I am weak and selfish), and moral objections (e.g., I consider it morally wrong). Each item is dichotomously scored (i.e. no/yes) with higher total scores indicating the presence of protective beliefs against suicidal ideation. The total score scale reflects a sum of all items and has demonstrated strong internal consistency in both clinical and non-clinical samples (Linehan et al., 1983; Osman et al., 1993, 1999; Malone et al., 2000).

The original measure is composed of the six sub-scales described above, each examining a unique factor of resilience to suicidal ideation. Psychometric data support a six-factor solution and the calculation of individual subscale scores (Range and Antonelli, 1990; Osman et al., 1999). However, findings also suggest utility for a one-factor solution and calculation of a total scale score (Malone et al., 2000; Lizardi et al., 2007). Given existing findings, only the total score was examined in the current study. Total scores for the current sample ranged from 9 to 36. Alpha for RFL total was high for the current sample (α=0.95).

The Beck Depression Inventory (BDI-II; Beck et al., 1996) was administered to assess depressive symptoms in the current study. The BDI is a widely used 21-item, self-report measure that has demonstrated reliability as a measure of depressive symptom severity (Quilty et al., 2010). Internal reliability for the current sample was high (α=0.90) and scores ranged from 0 to 31.

The Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993) is a 10-item self-report measure of hazardous alcohol consumption. The AUDIT uses a five-point Likert-type scale that is summed to create a total scale value ranging from 0 to 40, with higher scores representing greater hazardous alcohol