Symptoms of Post-Traumatic Stress, but Not Global Disease Burden, Are Associated With Suicidal Behavior in Multi-Diagnostic Individuals With PTSD

Isabelle A. Tully[1,2,3], Sara C. Schmidt[1,2], & Melanie S. Harned[2,3]

[1]*Seattle Institute of Biomedical and Clinical Research;* [2]*VA Puget Sound Health Care System;* [3]*University of Washington*

Introduction:

Post-traumatic stress disorder (PTSD) is associated with a high rate of suicide attempts (SA) and suicidal ideation (Krysinksa & Lester, 2010).

Other comorbid problems are also highly prevalent in those with PTSD.

- PTSD is associated with difficulties in emotion regulation (Radomski & Read, 2016).
- Global distress and additional psychiatric diagnoses also co-occur frequently with PTSD (Galatzer-Levy, Nickerson, Litz, & Marmar, 2012; Marshall, Schell, & Miles, 2010).

Due to limited empirical data, it is unclear to what degree heightened risk of SA in individuals with PTSD is accounted for by PTSD-specific symptoms (e.g., re-experiencing and hyperarousal symptoms, dissociation) versus associated comorbid problems (e.g., global psychopathology, emotion dysregulation).

- Characterizing symptoms related to increased risk of engaging in life-threatening behavior is critical to reducing mental health-related morbidity and mortality.

The Current Study:

Using baseline data from a larger study of multi-diagnostic patients with PTSD receiving Dialectical Behavior Therapy (DBT) in public mental health settings, **the present study** aimed to identify characteristics that differentiate between patients who had attempted suicide in the past year from those who had not.

Method:

Participants

- Participants were adults and adolescents (N = 35) who were receiving DBT in public mental health agencies in Philadelphia. Per clinician report, they met criteria for an average of 3.90 diagnoses including PTSD (SD = 1.50).

Procedures

- Participants completed baseline measures of SA, post-traumatic cognitions, PTSD symptoms, emotion regulation, and global psychopathology.

Table 1. Demographics

	M (*SD*) or %
Age (years)	29.91 (*13.20*)
Gender (% female, male, transgender)	80.0, 17.10, 2.90
Racial/Ethnic Minority (%)	64.70
Income (% < $5,000 per year)	84.80
Sexual Orientation (% LGBT)	44.10
Past Year Suicide Attempt (%)	45.71

Measures

- **Suicide Attempt Self-Injury Interview** (SASII; Linehan et al., 2006): 12-item interview in which past SA are assessed.
- **PTSD Symptom Scale - Interview for DSM-IV** (PSS-I; Foa, Riggs, Dancu, & Rothbaum, 1993): 17-item interview measure assessing re-experiencing, avoidance, and arousal.
- **Posttraumatic Cognitions Inventory** (PTCI; Foa, Ehlers, Clark, Tolin, & Orsillo, 1999): 33-item self-report assessing negative cognitions about the self, the world, and self-blame.
- **Dissociative Experiences Scale Taxon** (DES-T; Bernstein et al., 1986): 8-item self-report measure of dissociative tendencies.
- **Brief Symptom Inventory – Global Severity Index** (BSI; Derogatis et al., 1983): 53-item self-report measure assessing global severity of psychiatric symptoms.
- **Difficulties in Emotion Regulation Scale** (DERS-16; Bjureberg et al., 2016): 16-item self-report assessing emotion dysregulation.

Analyses

- T-tests of baseline measures were utilized to assess differences between individuals with and without one or more SA in the past year.

Figure 1. Negative cognitions about the self and self-blame and recent SA.

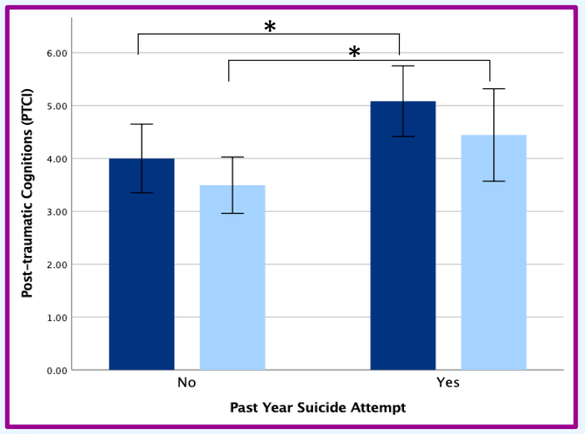


Figure 2. Overall negative post-traumatic cognitions and recent SA.

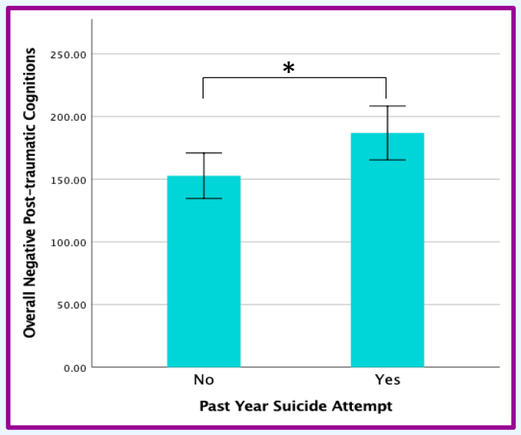


Figure 3. Dissociative symptoms and recent SA.

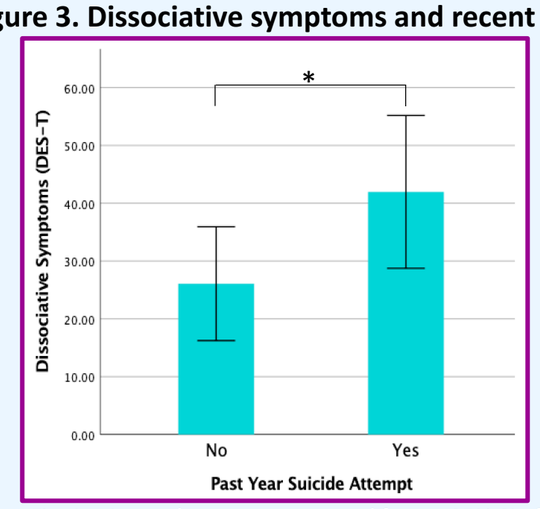
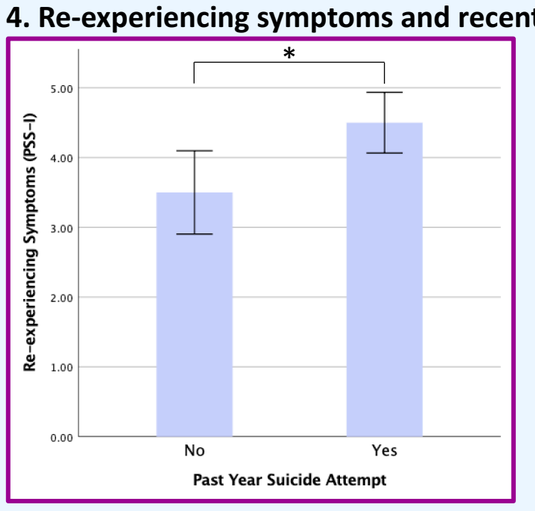


Figure 4. Re-experiencing symptoms and recent SA.



Note: Fig. 1 – 4 error bars are constructed from a 95% CI of the mean, *p < .05

Discussion:

This study sought to examine features of psychopathology differentiating multi-diagnostic individuals with PTSD and an SA in the past year from those with no past year SA.

Higher re-experiencing symptoms related to recent SA.

- More frequent, intense PTSD re-experiencing symptoms were uniquely related to SA.
  - No relationship between PTSD avoidance and hyperarousal symptom clusters and SA.
- Intrusive thoughts and images of traumatic events may facilitate habituation to aversive, physically painful events and fear of death (Bryan & Anestis, 2011), potentially increasing capacity to attempt suicide.

More negative post-traumatic cognitions about the self and self-blame in those with recent SA.

- Maladaptive, negative self-appraisal may maintain or increase feelings of burdensomeness and suicidal beliefs (e.g., hopelessness, unlovability; Van Orden et al., 2010; Wiblin, Holder, Holliday, & Surís, 2018).

Dissociative symptoms greater in those with a past year SA.

- Dissociative symptoms consistently associated with PTSD (Briere, Scott, & Weathers, 2005).
- Co-occurrence with high re-experiencing symptoms potentially inflates the intensity of intrusive symptoms while decreasing perceived ability to manage them, increasing hopelessness and distress.

Preliminary evidence for the role of PTSD-specific symptoms rather than global psychological distress and emotion dysregulation in precipitating suicidal behavior observed in multi-diagnostic individuals.

- Demonstrates importance of regularly screening psychiatric patients for trauma and PTSD even if not the primary reason for being referred to and/or seeking treatment.
- Provides insight into structuring effective treatments for those with PTSD and co-occurring diagnoses.
- Key to identifying those with a heightened risk of engaging in life-threatening, suicidal behavior.

Results:

Table 2. Descriptive statistics for baseline psychopathology

	Past Year SA (*SD*) (*n* = 16)	No Past Year SA (*SD*) (*n* = 19)	Between-Group Comparison
Overall PTSD Symptoms (PSS-I, Sum)	34.06 (*8.19*)	30.67 (*7.97*)	$t(32) = -1.22$, $p = .23$, $g = 0.41$
Re-experiencing Symptoms (PSS-I, Sum)	4.50 (*0.82*)	3.50 (*1.20*)	$t(32) = -2.80$, $p = .01$, $g = 0.94$
Post-traumatic Cognitions (PTCI, Sum)	186.88 (*40.33*)	152.79 (*37.64*)	$t(33) = -2.58$, $p = .01$, $g = 0.86$
Dissociative Experiences (DES-T, M)	41.96 (*22.89*)	26.09 (*19.16*)	$t(29) = -2.10$, $p = .04$, $g = 0.74$
Global Severity Index (BSI, M)	2.28 (*0.91*)	1.88 (*0.90*)	$t(33) = -1.31$, $p = .20$, $g = 0.43$
Emotion Dysregulation (DERS-16, Sum)	57.38 (*17.43*)	52.72 (*17.78*)	$t(32) = -0.77$, $p = .45$, $g = 0.26$

Limitations and Future Directions:

- Small sample size and cross-sectional analysis of psychiatric symptoms.
- Difficulties with emotion regulation common in patients with multiple diagnoses; likely contributes to suicidality despite lack of between-group effect.
- Examine association of post-traumatic cognitions with suicide-related beliefs.
- Assess self-reported motivation for engaging in suicidal behavior.
- Analyze longitudinal data to examine how intra-individual fluctuations in post-traumatic stress symptoms predict changes in suicidal behavior and attempts.

Please contact Isabelle Tully with any questions regarding this material at itully@uw.edu