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Substance use disorders and PTSD: An exploratory study of treatment preferences among military veterans

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HIGHLIGHTS

- Almost all Veterans perceived a relationship between PTSD and substance use disorder symptoms.
- PTSD symptom exacerbation was typically (85.3%) associated with increased substance use.
- PTSD symptom improvement was typically (61.8%) associated with decreased substance use.
- Over half of Veterans indicated a preference for integrated psychotherapy.

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ABSTRACT

Background: Substance use disorders (SUDs) and Post Traumatic Stress Disorder (PTSD) frequently co-occur among Veterans and are associated with poor treatment outcomes. Historically, treatments for SUDs and PTSD have been delivered sequentially and independently. More recently, however, integrated treatments have shown promise. This study investigated Veterans' perceptions of the interrelationship between SUDs and PTSD, as well as treatment preferences.
Methods: Participants were 35 Veterans of recent military conflicts in Iraq and Afghanistan, and prior operations, who completed the Treatment Preferences Questionnaire as well as an in-depth interview.
Results: The majority (94.3%) perceived a relationship between their SUD and PTSD symptoms. Veterans reported that PTSD symptom exacerbation was typically (85.3%) associated with an increase in substance use, and PTSD symptom improvement was typically (61.8%) followed by a decrease in substance use ($p < .01$). Approximately 66% preferred an integrated treatment approach.
Conclusions: Although preliminary, the findings provide clinically-relevant information that can be used to enhance the development and provision of care for Veterans with SUDs and PTSD.

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1. Introduction

Substance use disorders (SUDs) and Post Traumatic Stress Disorder (PTSD) are frequently co-occurring conditions that affect a substantial proportion of military Veterans (Carlson et al., 2010; Erbes, Westermeyer, Engdahl, & Johnsen, 2007; Hoge, Auchterlonie, & Milliken, 2006; Hoge et al., 2004). The prevalence rate of current SUDs in Veterans age 18–53 (18.2%) is nearly five times that of the general population (SAMHSA, 2007). In Veterans of 18–25 years old, the rate of heavy alcohol use (i.e., consuming >5 drinks per occasion at least once a week) is 32.2%, almost twice as high as that of their civilian counterparts (Ames & Cunradi, 2004). Similarly, PTSD rates are more than twice as high in Veterans than civilians. Recent large-scale investigations demonstrate that approximately 15–17% of Veterans returning from Iraq and Afghanistan have PTSD (Hoge, Terhakopian, Castro, Messer, & Engel, 2007; Milliken, Auchterlonie, & Hoge, 2007; Smith et al., 2008; Tanielian et al., 2008), versus 6–8% in the civilian population (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Kessler et al., 2005). Seal, Bertenthal, Miner, Sen, and Marmar (2007) found that 25% of returning OEF/OIF Veterans ($N = 103,788$) received at least one mental health diagnoses, and the most common mental health diagnosis was PTSD, which represented 52% of cases. In both Veteran and non-Veteran samples, research demonstrates poorer treatment outcomes in SUD/PTSD patients as compared with patients with either disorder alone, including more social issues,

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legal problems, suicide attempts, and severity of substance use (Back et al., 2000, 2008; Dass-Brailsford & Myrick, 2010; Jacobsen, Southwick, & Kosten, 2001; Norman, Tate, Anderson, & Brown, 2007; Ouimette, Goodwin, & Brown, 2006; Young, Rosen, & Finney, 2005).

To date, the *sequential treatment* model has been the standard of care for comorbid SUDs and PTSD (Killeen, Back, & Brady, 2011; van Dam, Vedel, Ehring, & Emmelkamp, 2012). The first sequence of this model addresses the SUD alone. Once the patient obtains a minimum length of abstinence (e.g., 3 to 6 months), the second sequence, which is generally delivered by another clinician, targets the PTSD. It is difficult, however, for SUD/PTSD patients to maintain abstinence from alcohol or drugs in the face of untreated PTSD symptoms. One possible reason for this difficultly is because many SUD/PTSD patients report using substances to "self-medicate" PTSD symptoms (e.g., sleep disturbances, intrusive memories) (Tomlinson, Tate, Anderson, McCarthy, & Brown, 2006). Untreated PTSD symptoms serve as salient triggers for cravings to use or relapse. More recently, *integrated treatments*, which address SUDs and PTSD concurrently, have been developed and the findings demonstrate significant improvements in both PTSD and SUD symptomatology (Back et al., 2012; Brady, Dansky, Back, Foa, & Carroll, 2001; Foa et al., 2013; Hien et al., 2009; McGovern et al., 2009; Mills et al., 2012; Najavits, 2002; Torchalla, Nosen, Rostam, & Allen, 2012).

The most extensively studied integrated treatment to date is Seeking Safety (SS), a 25-session, cognitive-behavioral intervention delivered in group format. SS is a non-trauma-focused intervention (van Dam et al., 2012), meaning the patient does not revisit the trauma memory (no exposure-based techniques utilized), and it focuses on present or past aspects of a patient's life other than the trauma. SS focuses on psychoeducation, cognitive restructuring, and developing interpersonal and self-control skills. Data from randomized controlled trials demonstrate that SS leads to significant improvement in PTSD and SUD symptoms; however, little evidence shows that SS is superior to treatments targeting SUDs only (van Dam et al., 2012).

Several trauma-focused, integrated treatments which involve exposure-based techniques to address PTSD have been developed and the findings are promising (Back et al., 2012; Brady et al., 2001; Mills et al., 2012). Prolonged Exposure (PE) is an evidence-based treatment for PTSD that involves two key components: (1) in-vivo exposure in which patients approach safe, but anxiogenic, situations in real life, and (2) imaginal exposure in which patients revisit the trauma memory repeatedly in session (Foa, Rothbaum, Riggs, & Murdock, 1991). Studies employing PE among individuals with SUDs demonstrate significant reductions in PTSD and SUD severity (Back et al., 2012; Brady et al., 2001; Mills et al., 2012; Najavits, Schmitz, Gotthardt, & Weiss, 2005; Triffleman, Carroll, & Kellogg, 1999). The most recent study conducted by Mills et al. (2012) was a randomized controlled trial ($N = 103$) comparing an exposure-based integrated SUD/PTSD treatment called "COPE" (Back et al., in press) with treatment as usual (TAU), which was generally substance abuse treatment. The findings indicate that the integrated therapy resulted in significantly greater reductions in PTSD symptoms as compared to TAU. Both groups evidenced significant reductions in SUD severity. Thus, while most integrated studies show promising outcomes the existing evidence base is still emerging and methodological limitations exist including, for example, small sample sizes and lack of control or comparison groups. Larger, randomized controlled trials of integrated treatments are needed to help inform treatment practice guidelines.

Given the ongoing conflicts in Iraq and Afghanistan and the anticipated influx of returning service members in the upcoming years, continued attention to development and refinement of evidenced-based interventions that effectively address co-occurring SUDs and PTSD is vitally needed. One important gap in the literature involves knowledge of Veterans' perceptions and preferences regarding treatment for SUDs and PTSD. Thus, the current study sought to expand on previous civilian-based research by exploring perceptions of SUD/PTSD symptom interplay, as well as treatment knowledge and preferences among Veterans. Given that previous research has documented differences in response to psychotherapy for PTSD among Veterans from different war eras (Chard, Schumm, Owens, & Cottingham, 2010), we explored differences by military cohort. Such information can be used to help inform patient care and the design of controlled trials of integrated treatments.

2. Material and methods

Participants ($N = 35$) were 21 Operation Enduring Freedom (OEF) and/or Operation Iraqi Freedom (OIF) Veterans and 14 non-OEF/OIF Veterans (e.g., Persian Gulf War, Vietnam). Participants were primarily recruited through newspaper advertisements and referrals from community treatment clinics from February 2010 to April of 2011. Interested individuals contacted the study team by telephone. Potential participants were screened over the telephone for current DSM-IV diagnostic criteria for substance abuse or dependence and PTSD using a measure created for this study. The telephone screen also included questions regarding inclusion criteria (e.g., 18 or older, a military veteran, able to refrain from alcohol or drug use on the day of the scheduled appointment, literate). Eligible participants were then scheduled to come into the clinic, and read and sign an informed consent form approved by the Institutional Review Board at the Medical University of South Carolina. Participants were then interviewed in individual or group format for 60–90 min. A trained doctoral-level clinician facilitated the interviews. Participants received $25 for their time.

During the interview, clinicians used several open-ended and close-ended questions to engage Veterans in a discussion regarding their thoughts and opinions regarding treatment for PTSD and SUDs. Examples of questions include, "What do you think of integrated treatments where both the alcohol/drugs and the PTSD are targeted together in treatment by the same provider?", "Have you heard of prolonged exposure therapy?" and "How much, if any, clean time do you think is needed before working on the PTSD/trauma?" In addition to the interview, Veterans completed the Treatment Preference Questionnaire (TPQ), adapted from questionnaires developed by Brown, Stout, and Gannon-Rowley (1998), Brown and Wolfe (1994) and Najavits (2000). The utilized TPQ is a 32-item, self-report questionnaire that assesses (a) the perceived relationship between SUDs and PTSD symptoms,

Table 1
Demographic and military background characteristics ($N = 35$).

Demographics	
Age, mean (SD)	39.4 (11.6)
Gender, male	94.3%
Race	
Caucasian	48.6%
African American	51.4%
Relationship status	
Married	34.3%
Single, never married	40.0%
Separated/divorced	22.8%
Engaged	2.9%
Employment status	
Unemployed	62.9%
Employed full-time	22.9%
Employed part-time	2.9%
Full-time student	8.6%
Retired	1.9%
Years of education, mean (SD)	13.6 (1.6)
Military background	
Years served, mean (SD)	6.2 (4.0)
Military branch	
Army	61.8%
Marines	14.7%
Navy	11.8%
National Guard	5.9%
Coast Guard	2.9%
Air Force	4.8%