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The impact of social support on psychological distress for U.S. Afghanistan/Iraq era veterans with PTSD and other psychiatric diagnoses

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ABSTRACT

This study aimed to examine the degree to which posttraumatic stress disorder (PTSD) affects the relationship between social support and psychological distress for U.S. Afghanistan/Iraq era veterans with and without co-occurring psychiatric disorders. Veterans ($N=1825$) were administered self-report questionnaires and a structured diagnostic interview as part of a multi-site study of post-deployment mental health through the Department of Veterans Affairs (VA) Mid-Atlantic Mental Illness Research, Education and Clinical Center (MIRECC). Main and interaction effects models assessed the association between *psychological distress* and *social support* for three comparisons conditions (Controls vs. PTSD-only, non-PTSD, and PTSD plus co-morbid diagnoses). Having PTSD was a critical factor in attenuating the strength of this association, more so than other diagnoses. Furthermore, those with PTSD plus co-morbid diagnoses did not demonstrate significantly larger attenuation in that association compared to the PTSD-only group, indicating that psychiatric comorbidity may be less important in considering the role of social support in PTSD. By understanding this relationship, new avenues for engaging and enhancing treatment outcomes related to social support for veterans of this cohort may be identified. Additional longitudinal research could help evaluate the effect of PTSD symptom clusters, social support type, and trauma exposure type on these relationships.

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1. Introduction

Posttraumatic stress disorder (PTSD) is one of the most frequently diagnosed mental health conditions among Afghanistan and Iraq era veterans (Hoge et al., 2007), with prevalence rates significantly higher than those in the U.S. civilian population (10–25% military vs. 3–12% civilians; Kessler et al., 1995; Breslau et al., 1998a, 1998b). PTSD is associated with high rates of comorbidity in the veteran population (Fairbank et al., 1983; Kessler et al., 1995; Keane and Kaloupek, 2006; Erbes et al., 2007). Up to 88% of those with chronic PTSD report at least one other comorbid psychological disorder, most commonly secondary major depression, and up to 59% report at least two comorbid conditions (Kessler et al., 1995; Ikin et al., 2010). Considering comorbidity in veterans is associated with lower social support (Campbell et al., 2007) and increased distress and impairment (Ikin et al., 2010), it is

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paramount that the influence of social support on PTSD functioning is evaluated in the context of comorbidity (Guay et al., 2006). PTSD and concurrent comorbid conditions can lead to a variety of research and treatment implications related to distress, impairment, and healthcare costs (Kulka et al., 1990; Jordan et al., 1992; Kessler, 2000; Calhoun et al., 2002; Beckham et al., 2003; Schnurr and Green, 2004; Boscarino, 2006; Flood et al., 2010; Adler et al., 2011; Elbogen et al., 2012). Despite high rates of comorbidity that could substantially impact research results, many studies on veterans with PTSD do not evaluate comorbid psychiatric conditions (Keane and Kaloupek, 2006). Thus, research evaluating the impact of PTSD on various outcomes in the context of comorbidity is critical (Keane and Kaloupek, 2006). Furthermore, including comparison groups in research is equally critical in determining whether comorbidity makes a difference in PTSD outcomes such as social support and psychological distress (Guay et al., 2006; Keane and Kaloupek, 2006).

Research on Vietnam, Gulf War, and Afghanistan era veteran cohorts suggests that social support may be one of the most significant factors in the prediction (Brewin et al., 2000; Ozer et al., 2008) and development of PTSD (Brewin et al., 2000; Pietrzak et al., 2010b; Wright et al., 2013), though the directionality and cause of the relationship is unknown (Kadushin, 1983; Barrett and Mizes, 1988; Laffaye et al., 2008; Pietrzak et al., 2010a, 2010b). In general, research has indicated that there is an inverse relationship between social support and a variety of mental health conditions and risk factors (Pietrzak et al., 2010b; Bambara et al., 2011) including PTSD (Pietrzak et al., 2009; Polusny et al., 2011). Research on the most recent cohort of Iraq and Afghanistan era veterans indicates that those who screen positive for PTSD report lower levels of unit and post-deployment social support compared to those without PTSD even after controlling for demographic factors and combat exposure and that those with higher levels of these types of social support reported fewer traumatic stress symptoms (Pietrzak et al., 2009). Veterans with PTSD are more likely to seek out social support than veterans without PTSD, yet less likely to have the problem solving skills that would allow them to benefit positively from the buffering effects of social support (Jakupcak et al., 2010). Because of this, veterans with PTSD may report less social support and poorer social functioning and life satisfaction compared to veterans without PTSD, and to those with other anxiety and depressive disorders (Tsai et al., 2012).

There are several possible reasons as to why the relationship between social support and psychological functioning may be particularly tenuous for those with PTSD. Social support is influenced by the individual's acceptance of resources when made available (Benight and Bandura, 2004). Evidence supports both the *erosion* (King et al., 2006; Laffaye et al., 2008) and *cognitive* (Ehlers and Clark, 2000) theories of social support in those with PTSD. These models posit that PTSD symptoms either erode interpersonal resources or increase perceived threat (i.e., hypervigilance) which leads to reduced social support and thus impaired functional outcomes. For individuals with PTSD, the acceptance of social support may be particularly difficult because of core symptoms such as avoidance, alienation, detachment (Friedman, 2006) and emotional numbing (Wilson and Kurtz, 1997).

The generalizability of research focusing on the relationship between social support, PTSD, and various outcomes in OEF/OIF veterans would be improved if analyses were conducted in the context of comorbidity (Keane and Kaloupek, 2006) and if analyses were based on full diagnostic evaluations rather than self-report screenings. One important potential outcome of such studies would be that they could provide a more accurate representation of the potential needs specific to treatment-seeking veterans with and without PTSD and associated comorbid conditions. An alternative outcome is that if results were similar to studies that did not include comorbidity and full diagnostic evaluations, we could be more secure in the generalizability of those research studies, which would reduce study costs. However, without studies that evaluate these issues, we are left without important methodological checks on the important work being conducted on the needs of our veterans.

Thus, the purpose of the current study is to evaluate social support, one of the most widely identified resiliency factors of PTSD in its association with PTSD, psychiatric comorbidity, and psychological distress in a large U.S. Afghanistan/Iraq era veteran sample. As noted, in a methodological advance, compared to the majority of studies examining PTSD and social support that have used brief screening measures to assess PTSD as a solitary diagnosis, the current study employed structured clinical interviews to diagnose PTSD and other psychiatric conditions, in order to evaluate comorbidity and comparison groups. Specifically, the following hypotheses were formulated: (1) higher levels of social support will be associated with lower levels of global psychological distress; (2) the presence of any mental health diagnosis will attenuate the inverse association between social support and psychiatric distress; (3) PTSD in particular would further attenuate that association; and (4) the presence of PTSD with additional co-occurring mental health conditions (hereafter termed PTSD plus comorbidity) would have the largest effect attenuating this association.

2. Method

2.1. Participants and procedures

Secondary analyses were conducted using data originally collected between June 2005 and December 2011 from the Mid-Atlantic Mental Illness Research, Education, and Clinical Center (VISN 6 MIRECC) Post-Deployment Mental Health Registry of Iraq/Afghanistan era veterans and military service members who served in the U.S. Armed Forces subsequent to September 11, 2001. Inclusion/exclusion criteria of the original data collection were as follows: must have served in the military after 9/11/2001, must speak English and read at the 8th grade reading level. The institutional review board at each of the four collaborating VA medical center sites approved the protocol prior to initiating the study. Participants were recruited and referred from fliers, advertisements, VA clinic referrals, and invitational letters initially using the Dillman system of participant recruitment (Dillman, 2000; the Dillman method was determined to not be necessary after the first few years as sufficient enrollment was obtained after only single mailings). All participants were given a verbal description of the protocol prior to signing a written informed consent. Participants in this study consisted of $N=1825$. Study demographics are presented in Table 1.

2.2. Measures

Structured Clinical Interview for DSM-IV-TR Axis-I Disorders (SCID-I (First et al., 1994)). The SCID-I is a semi-structured interview for determining DSM-IV Axis I diagnoses, including PTSD. It has been found to be both clinically sensitive and reliable (Keane and Barlow, 2002), with good to excellent interrater reliability for current disorders and moderate test–retest reliability for lifetime disorders (Rogers, 2001). SCID interviewers received initial and ongoing training and supervision by psychologists and other experienced interviewers. For the current study, 22 interviewers completed an extensive SCID training program consisting of (1) watching the standard SCID training tapes, (2) observing at least one live full SCID interview by an experienced SCID study interviewer, (3) being observed and rated conducting at least one live SCID interview on the participant population (additional observations were based on feedback), (4) rating 7 video recorded SCID training interviews to establish inter-rater reliability (5) regular consultation with experienced interviewers, and (6) participating in bi-weekly reliability meetings. Additionally, interviewers were supervised by or were licensed doctoral-level clinical psychologists. The interviewers demonstrated an excellent mean interrater reliability for any Axis I diagnoses (Fleiss's $\kappa=0.94$), and specifically for current PTSD (Fleiss' $\kappa=1.0$).

Medical Outcomes Study: Social Support Survey (MOS (Sherbourne and Stewart, 1991)): the MOS Social Support Survey is a 19-item self-administered scale which assesses perceived availability of general functional social support in four domains (emotional/informational, tangible, affectionate, and positive social interaction). It also yields an overall social support score. Items were developed based on the most critical empirically- and theoretically-based dimensions of support, especially for