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Ethnic and racial differences in clinically relevant symptoms in active duty military personnel with posttraumatic stress disorder

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ABSTRACT

Previous research has shown racial/ethnic differences in Vietnam veterans on symptoms related to posttraumatic stress disorder (PTSD). The current study explored racial/ethnic differences in PTSD symptoms and clinically relevant symptoms. Resilience and social support were tested as potential moderators of racial/ethnic differences in symptoms. The sample included 303 active duty male service members seeking treatment for PTSD. After controlling for age, education, military grade, and combat exposure, Hispanic/Latino and African American service members reported greater PTSD symptoms compared to non-Hispanic White service members. Higher alcohol consumption was endorsed by Hispanic/Latino service members compared to non-Hispanic White or African American service members, even after controlling for PTSD symptom severity. No racial/ethnic differences were found with regard to other variables. These results suggest that care should be made to thoroughly assess PTSD patients, especially those belonging to minority groups, for concurrent substance use problems that may impede treatment utilization or adherence.

1. Introduction

Given the ongoing military conflicts in the Middle East, there has been increasing focus on ensuring adequate mental health-care for post-9/11 service members. Specifically, a great deal of attention has been placed on the detection and effects of posttraumatic stress disorder (PTSD) following the high stress associated with serving in and around Iraq (Operation Iraqi Freedom; OIF) and Afghanistan (Operation Enduring Freedom; OEF; Shea, Reddy, Tyrka, & Sevin, 2013; Shea, Vujanovic, Mansfield, Sevin, & Liu, 2010). Lifetime prevalence estimates for PTSD in military samples (both OEF/OIF and Vietnam veterans) have ranged from 5 to 20% in

Abbreviations: AUDIT, Alcohol Use Disorders Identification Test; BAI, Beck Anxiety Inventory; BDI-II, Beck Depression Inventory-II; CAPS, Clinician-Administered PTSD Scale; CTS, Conflict Tactics Scale; DRRI, Deployment Risk and Resilience Inventory; *DSM-IV-TR*, *Diagnostic and Statistical Manual of Mental Disorders Fourth Edition Text Revision*; ISEL, Interpersonal Support Evaluation List; OIF/OEF/OND, Operation Iraqi Freedom/Operation Enduring Freedom/Operation New Dawn; PCL-S, PTSD Checklist-Stressor Specific Version; PE, Prolonged Exposure; PSS-I, PTSD Symptom Scale-Interview Version; PTSD, posttraumatic stress disorder; RCTS, Revised Conflict Tactics Scale; RSES, Response to Stressful Experiences Scale; STAXI, State-Trait Anger Expression Inventory; VA, Department of Veterans Affairs; WRAIR, Walter Reed Army Institute of Research Horizontal and Vertical Cohesion Scales.

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non-treatment seeking populations and up to 50% in veterans seeking treatment (Dohrenwend et al., 2006; Ramchand et al., 2010). Healthcare burden from PTSD in military service members includes a higher number of missed days from work, a higher public health cost, poorer health functioning, and higher healthcare utilization across the medical system (Asnaani, Reddy, & Shea, 2014; Hoge, Terhakopian, Castro, Messner, & Engel, 2007; Tuerk et al., 2013).

Identifying racial/ethnic differences in PTSD and clinically relevant symptoms in military service members is important for understanding how these symptoms may present in different cultural groups. Such research can inform our understanding of disparities in mental health care utilization and can suggest factors to consider in diagnosis, prevention, and treatment. Thus far, research on racial/ethnic differences in PTSD symptoms has shown mixed results (Hall-Clark, Sawyer, Golik, & Asnaani, 2016). The National Vietnam Veterans Readjustment Study reported that Hispanic veterans are at higher risk of developing PTSD than non-Hispanic White veterans or African American veterans (Kulka et al., 1990). In addition, Rosenheck and Fontana (1996) found more severe PTSD symptoms in Puerto Rican Vietnam veterans compared to non-Hispanic White veterans or African American veterans in a sample of treatment-seeking veterans with PTSD.

Ortega and Rosenheck (2000) found that Hispanic Vietnam veterans showed more severe PTSD symptoms and were more likely to have PTSD than non-Hispanic White veterans. However, the Hispanic group in this study was primarily Puerto Rican, consistent with the findings of Rosenheck and Fontana (1996). In addition, the Hispanic group did not show greater functional impairment than non-Hispanic White veterans, which the authors suggest may be due to differences in cultural expressiveness rather than illness severity (Ortega & Rosenheck, 2000). Others have also suggested that the previous finding of greater PTSD in Hispanic Vietnam veterans may be influenced by cultural differences in the style of responding (Ruef, Litz, & Schlenger, 2000). Conversely, others do not find racial/ethnic differences in PTSD symptoms. Studies comparing African American and non-Hispanic White treatment-seeking combat veterans with PTSD did not find significant group differences in terms of PTSD symptoms (Frueh, Gold, de Arellano, & Brady, 1997; Monnier, Elhai, Frueh, Sauvageot, & Magruder, 2002; Trent, Rushlau, Munley, Bloem, & Driesenga, 2000).

Most previous research on racial/ethnic differences in PTSD has been limited to veterans. Since veterans have served, but are not currently serving, they experience variable amounts of time since the traumatic event occurred. During that time, cultural influences (differences in re-assimilation, cultural barriers to treatment, etc.) could impact the presentation of PTSD symptoms in different racial/ethnic groups. Active duty military service members, on the other hand, may be more homogeneous in terms of their current military experiences, which could provide a clearer picture of racial/ethnic differences in PTSD symptoms, if any, prior to re-assimilation into the community. Therefore, the first aim of the current study was to examine racial/ethnic differences in PTSD symptoms in a sample of active duty military service members with PTSD.

In addition, racial/ethnic differences may be found in other symptoms that are clinically relevant to PTSD. Veterans with PTSD often experience comorbid depression, general anxiety, alcohol problems, and anger (Yarvis & Schiess, 2008) highlighting the need to better understand which populations might be at risk for such symptoms. Research on racial/ethnic differences in military samples shows that African American veterans with PTSD report equivalent rates of depression and general anxiety symptoms compared to non-Hispanic White veterans (Frueh et al., 1997; Monnier et al., 2002; Trent et al., 2000). However, these previous studies did not examine differences in depression and general anxiety in Hispanic/Latino individuals. Furthermore, these prior studies were conducted with veterans with PTSD, not with active duty service members. Therefore, it would be informative to examine racial/ethnic differences in depression and general anxiety in a sample of active duty service members with PTSD.

In terms of substance use, the most recently published Health Related Behaviors Survey of Active Duty Military Personnel (Department of Defense, 2013) found non-Hispanic White service members endorsed the greatest amount of moderate alcohol use, followed by Hispanic service members, and then African American service members. Non-Hispanic White, Hispanic, and African American service members did not differ significantly in terms of heavy alcohol use. Another study found that African American active duty service members were more likely to endorse alcohol problems compared to non-Hispanic White and Hispanic service members (Bell, Harford, Fuchs, McCarroll, & Schwartz, 2006). However, the same study also found that non-Hispanic White service members were more likely to endorse heavier alcohol use than African American or Hispanic service members (Bell et al., 2006). Although both Bell et al. (2006) and the Department of Defense survey (2013) used active duty service members, these studies did not take into account whether service members had PTSD or not, making it difficult to generalize these results to PTSD samples.

Regarding alcohol use and aggression, Bell et al. (2006) found that heavy alcohol use was a significant risk factor for engaging in spousal abuse among non-Hispanic White and Hispanic service members but not African American service members. Additionally, C'de Baca, Castillo, and Qualls (2012) found non-Hispanic White female veterans had higher scores on a scale of antisocial behaviors than Hispanic female veterans. In contrast, African American female veterans endorsed greater levels of assault than non-Hispanic White female veterans (C'de Baca et al., 2012). Taken together, the literature reveals a mixed picture regarding the degree to which race and ethnicity impact other symptoms associated with PTSD. Therefore, the second aim of the current study was to explore racial/ethnic differences in clinically relevant symptoms related to PTSD (depression, general anxiety, substance use/abuse, and anger/aggression) in a large sample of active duty military service members with PTSD.

While identifying racial/ethnic differences is of interest, it is also important to understand what factors may be influencing these differences. For example, it is possible that any observed racial/ethnic differences in PTSD and other clinically relevant symptoms may depend on other factors such as the individual's level of social support or resilience. Protective factors such as support and resilience are thought to ameliorate the development and exacerbation of PTSD and its related dysfunction (Green, Calhoun, Dennis, & Beckham, 2010). Resilience is conceptualized as a trait-like ability to effectively cope with stress and thrive despite hardship (Connor & Davidson, 2003). Research shows that those with higher resilience experience lower levels of PTSD symptoms. For example, in a sample of veterans, Green et al. (2010) found that resilience was a particularly strong buffer against PTSD symptoms for those with the highest levels of combat exposure. Furthermore, several studies have found that lower levels of unit support and postdeployment social support were associated with higher PTSD symptoms (Pietrzak et al., 2010; Wright, Kelsall, Sim, Clarke, & Creamer, 2013). Thus, the third aim of the current study was to test whether resilience and social support moderated racial/ethnic differences found in PTSD and clinically relevant symptoms.

To help bridge the current gaps in knowledge about differences among demographic groups in terms of PTSD and clinically relevant symptoms, the current study examined racial/ethnic differences in a number of symptom domains in a sample of active duty U.S. service members seeking treatment for PTSD. Racial/ethnic differences among those identifying as non-Hispanic White, African American, and Hispanic/Latino were explored for PTSD, depression,