



HHS Public Access

Author manuscript

Mil Psychol. Author manuscript; available in PMC 2015 April 15.

Published in final edited form as:

Mil Psychol. 2014 January 1; 26(1): 15–22. doi:10.1037/mil0000027.

The Relationship Between Post-Deployment Factors and PTSD Severity in Recent Combat Veterans

Kyle Possemato,

Center for Integrated Healthcare, VA Healthcare Network Upstate New York

Shannon McKenzie,

Center for Integrated Healthcare, VA Healthcare Network Upstate New York

Meghan E. McDevitt-Murphy,

University of Memphis, Memphis VA Medical Center

Joah Williams, and

University of Memphis, Memphis VA Medical Center

Paige Ouimette

Center for Integrated Healthcare, VA Healthcare Network Upstate New York

Abstract

Combat traumas precipitate PTSD, however non-traumatic deployment and post-deployment factors may also contribute to PTSD severity. The Deployment Risk and Resilience Inventory was used to investigate pre, peri and post-deployment factors associated with current PTSD severity in 150 recent combat veterans with PTSD and hazardous alcohol use. Hierarchical linear regression analyzed what factors independently predicted PTSD severity when controlling for socio-demographic characteristics and combat specific variables. Four post-deployment factors independently predicted PTSD severity: unemployment, alcohol use, social support, stressful (non-traumatic) life events. The centrality of trauma in the maintenance of PTSD and clinical implications for treatment providers are discussed.

Keywords

Combat; post-deployment; PTSD; risk; resilience

Introduction

Negative mental health outcomes following warzone exposure, particularly Posttraumatic stress disorder (PTSD), can serve as a barrier for veterans reintegrating back into civilian life. PTSD is common among Operation Enduring Freedom (OEF)/ Operation Iraqi Freedom (OIF) veterans: with estimates ranging from as low as 4% among combat veterans to as high as 23% among OEF/OIF veterans seen at Veterans Affairs facilities (Gates et al.

Correspondence concerning this article should be addressed to Shannon M. McKenzie, Center for Integrated Healthcare, 800 Irving Ave, Syracuse, NY 13210, Shannon.McKenzie@va.gov.

2012; Richardson, Frueh, & Acierno, 2010; VHA, 2008). Combat exposure during deployments has been consistently correlated with PTSD diagnoses (Ramchand et al. 2010) and the maintenance of PTSD symptoms overtime (Vasterling et al. 2010). In addition a variety of other factors have been implicated in the development and maintenance of PTSD (King, King, Bolton, Knight, & Vogt, 2008; King, King, Vogt, Knight, & Samper, 2006; Polusny et al. 2011; Seal et al. 2009). For instance, lack of social support and subsequent life stressors may independently pose an increased risk for a range of psychiatric symptoms (Ozer et al., 2003). Deployments are accompanied by prolonged separations from family members and loved ones which can hamper social support that service members had prior to their deployment. Non-traumatic stressors accompanied by living in a warzone include long, exhausting work days and constant exposure to uncomfortable climates which can erode military service member's ability to cope with stressors. Vogt et al. (2011) developed a model of how pre-, peri- and post-deployment risk factors relate to the development of PTSD: perceived threat, post deployment stressors, and post deployment social support all demonstrated direct effects on PTSD symptomatology. Investigation of these risk factors as independent predictors of PTSD severity overtime is needed.

The Conservation of Resource (COR) theory (Hobfoll, 1989) is often used to interpret findings regarding the impact of pre, peri, and post-deployment risk factors among OEF/OIF veterans (e.g., Vogt et al., 2011). According to COR theory, traumatic stress is characterized by a rapid loss of resources and can lead to increased vulnerability to subsequent stressors. During deployment, resources are used at a high rate: personnel are losing individual resources while being required to supply physical and mental strength to their unit. Individuals required to give support during times when they themselves need support, can experience increased psychological distress (Riley & Eckenrode, 1986). COR theory explains how non-traumatic stressors can also contribute to the development, as well as the severity and course of PTSD, through the depletion of resources making individuals more prone to traumatic stress reactions.

In times of depleted resources and increased demands, individuals may use maladaptive coping strategies, such as alcohol use, to cope with stress and PTSD symptoms. Individuals often attempt to "self-medicate" their PTSD symptoms with substance use (Khantzian, 1997) or substance use may place individuals at higher risk for exposure to trauma, inhibit natural processing and resolution of trauma-related distress, and heighten physiologic arousal and exacerbate PTSD symptoms (Jacobsen, Southwick, & Kosten, 2001). Hazardous drinking and alcohol-related problems are known to be positively associated with combat exposure, PTSD and post-deployment stressors (e.g. McDevitt-Murphy et al. 2010, Kehle et al., 2012). Among samples of National Guard and Reserve service members, combat exposure was associated with onset of heavy drinking, and alcohol-related problems (Jacobson et al. 2008) and those with depression, PTSD, and anxiety were more likely to be misusing alcohol (Burnett-Zeigler et al. 2011). Development of a new alcohol use disorder following deployment has also been found to be associated with PTSD severity and post-deployment stressors (Kehle et al., 2012). PTSD and substance use problems are clearly closely related for many OEF/OIF veterans.

To further understand what factors beyond combat trauma exposure influence the severity of PTSD post-deployment, we investigated which pre, peri- and post-deployment factors predict PTSD severity independent of combat trauma in a sample of OEF/OIF veterans. Consistent with the COR theory, we predicted that deployment work environment, post-deployment support, alcohol use, and stressors would directly contribute to the severity of PTSD when controlling for combat trauma and socio-demographic (i.e., age, income) and military (e.g., length of deployment) variables that are known to be correlated with PTSD severity (Vasterling et al., 2010, Yehuda, 1999). This study seeks to make a unique contribution to the field by investigating what post-combat and post-deployment factors are associated with current PTSD symptoms in recent combat veterans receiving care at Veterans Affairs (VA) facilities.

Method

Data were collected from 150 OEF/OIF veterans as part of two separate longitudinal studies conducted among VA primary care patients. Participants (n=91) from VA facilities in New York were recruited for a longitudinal study examining daily fluctuations in PTSD and alcohol use. Participants (n=59) from a VA facility in Tennessee were recruited for a longitudinal study examining the efficacy of brief interventions for alcohol misuse. Data for this investigation were collected prior to intervention. The principal aims of both larger studies differ however, baseline data collections were conducted analogously for both studies. Variables for this secondary analysis were selected based on the aims described earlier and the similarities of the samples and assessment batteries. The combining of de-identified data for the current investigation received approval from Institutional Review Boards affiliated with both facilities.

Participants

For the New York site, potential participants were identified based on their annual PTSD and hazardous alcohol use screens conducted in primary care and then received a recruitment letter, followed by a brief telephone screen. At the Tennessee site, veterans were approached in primary care and were invited to complete a screening packet which included the Alcohol Use Disorders Identification Test (AUDIT). After providing informed consent, participants completed in-person clinical interviews and self-report questionnaires to determine their eligibility into the longitudinal protocols. Inclusion criteria included exposure to combat during an OEF/ OIF deployment within the past 5 years; hazardous alcohol use (AUDIT score ≥ 8 for all men and woman in Tennessee; AUDIT score ≥ 7 for women in New York; Saunders, Aasland, Babor, & de la Fuente, 1993); and at least subthreshold symptoms of combat-related PTSD, defined as functional impairment associated with one re-experiencing symptom, plus three avoidance or two arousal symptoms (Blanchard, Hickling, Taylor, & Loos, 1994) measured by the Clinician Administered PTSD Scale (CAPS; Blake, Weathers, Nagy, & Kaloupek, 1995).

Measures

The Clinician Administered PTSD Scale—(CAPS; Blake et al. 1995) is a clinical interview that assesses the 17 core symptoms of PTSD as defined in the DSM-IV-TR (APA,

2000). The CAPS has sound psychometric properties and is considered the gold standard in PTSD assessment (Weathers, Keane, & Davidson, 2001).

The Alcohol Use Disorders Identification Test—(AUDIT; Saunders, et al., 1993) consists of 10 questions inquiring about alcohol consumption and drinking related behaviors over the previous 12 months. The AUDIT is psychometrically sound (Reinert & Allen, 2007) and is a standard instrument used in the VA system. In the current sample the AUDIT demonstrated acceptable internal consistency ($\alpha = .78$).

The Deployment Risk and Resilience Inventory—(DRRI; King et al., 2006) measures risk and resilience associated with military deployment. The DRRI includes measures to assess two pre-deployment, 10 peri-deployment, and two post-deployment factors. Research has found initial psychometric support for the DRRI (Vogt et al. 2008). Pre-deployment factors include the Prior Life Stressors scale, items identified exposure to traumatic events before deployment, and the Childhood Family Environment scale assessed cohesion and closeness among family members.

Three peri-deployment scales assessed traumatic combat stressors: Perceived Threat, Combat Experiences and Aftermath of Battle (consequences of combat, e.g., handling bodily remains). Non-traumatic peri-deployment factors assessed include the Training and Preparedness for deployment scale, the Difficult Living and Working Environment scale (gauging uncomfortable climate, inadequate equipment, etc), the Life and Family Concerns scale, the Unit Support scale, the Relationships Within Unit scale (including general and sexual harassment), and the Nuclear, Biological and Chemical Exposures scale.

Post-deployment factors assessed include the Social Support scale that inquires about the extent to which family, friends, coworkers, and community provide emotional and instrumental assistance and the Post-deployment Stressors scale that inquires about post-deployment stressful life events, including efforts at reintegration.

Data Analysis

Bivariate correlations were conducted to examine associations between socio-demographic/military characteristics, individual DRRI subscales, PTSD severity, and AUDIT score. Variables correlated with PTSD severity at $p < .10$ were included in a hierarchical linear regression investigating factors that predict PTSD severity. Relevant socio-demographic variables were entered in step one, combat traumas in step two, and any correlated pre, peri and post-deployment factors, including alcohol use in step three. All assumptions of hierarchical regression were met.

Results

Participants ($n=150$) were predominately male 87% ($n=130$) and white 77% ($n=116$), with a mean age of 31 ($SD=8.1$). Over half (55%, $n=82$) were employed (income= \$33,604, $SD=$ \$22,646), married or partnered (55%, $n=83$), and 51% ($n=76$) had children. Thirty-seven percent ($n=56$) reported more than one OEF/OIF deployment. Most participants (79%,

n=118) met criteria for diagnostic-level PTSD, and 21% (n=32) met criteria for subthreshold PTSD.

Bi-variate correlations among study variables are shown in Table 1. Table 2 presents the results of the hierarchical linear regression predicting which pre, peri and post-deployment risk factors independently predicted PTSD severity, while controlling for relevant socio-demographic and combat trauma variables. Employment status, alcohol use severity, post-deployment support, and post-deployment life events emerged as the only independent predictors of PTSD severity. The final model accounted for 46% of the total variance in PTSD severity, with the third step being a 30% improvement over step two ($F(5, 138)=15.59, p .00$).

Discussion

Our investigation revealed that four post-deployment factors: employment, alcohol use, social support, and stressful life events independently predicted PTSD severity, after controlling for combat traumas, in a sample of OEF/OIF combat veterans recruited from VA primary care clinics. These post-deployment factors are important to consider when providing intervention for OEF/OIF veterans with PTSD. In addition to traditional therapies that target the core symptoms of PTSD, adjunctive interventions such as vocation rehabilitation, addictions treatment, and family therapy may be important to improve combat veterans' functioning and well-being. To the extent that these interventions can be delivered simultaneously by single treatment providers or treatment teams, may improve outcomes for veterans. For instance, there is increasing support for the efficacy of integrated treatments for PTSD and substance use (see McCauley et al., 2012 for review). Also, when multiple treatment services can be provided within one healthcare system, with service coordination for these services, veterans are most likely to receive the highest quality of care.

Due to the cross-sectional nature of this study, we are not able to know if post-deployment factors exacerbate and/or serve to maintain PTSD severity overtime for veterans or if alternatively, as COR theory predicts, the loss of resources associated with PTSD increases a Veteran's vulnerability to additional stressors. Regarding the temporal relationship between alcohol use and PTSD, much of the currently available research supports that alcohol use disorders often develop following combat-related PTSD symptoms (Ouimette et al., 2010; Kehle et al., 2012), but alternative etiologies have also garnered empirical support. Nonetheless, our results show that increased PTSD severity and increased post-deployment stressors co-occur and therefore warrant clinical intervention.

Stressors that occurred before and during deployment, including combat trauma and work environment, did not emerge as independent predictors of PTSD severity. Current stressors are most closely related to current PTSD severity; however, the lack of a relationship between earlier risk factors and current PTSD severity does not preclude that pre and peri-deployment factors contributed to the etiology of PTSD. In our sample of veterans, combat traumas were less associated with PTSD than current non-traumatic stressors. This is somewhat inconsistent with the traditional conceptualization of PTSD (i.e., that symptoms result from the experience of trauma). Research regarding the role of genetic-based

differences (Koenen, Amsstade, Nugent, 2009), peri-traumatic negative emotions, and social support (Ozer, Best, Lippy, Weise, 2003) in the development and maintenance of PTSD have led some to reconsider the centrality of trauma in the conceptualization of PTSD. However, the research conducted as part of the DSM-V field trials supports the centrality of trauma and traumatic exposure continues to be necessary to make a PTSD diagnosis (Friedman, Resick, Bryant, Brewin, 2010). Nonetheless, the current findings indicate that non-traumatic post-deployment stressors are closely related to the severity of PTSD symptoms in OEF/OIF veterans.

The major limitations of this study are that it is cross-sectional and no causal implications can be drawn. Future research investigating how traumatic and non-traumatic peri-deployment risk factors contribute to the development of PTSD in theatre for combat personnel may shed additional light on the role of trauma in the etiology of PTSD. Research on how post-deployment factors contribute to the maintenance of PTSD symptoms overtime could provide information to guide clinical intervention. Strengths of the study include our sample of OEF/OIF veterans drawn from two geographically diverse areas that were assessed with the gold standard of clinical interviews for PTSD. Also, our statistical model allowed us to control for a number of variables, all of which were measured with psychometrically sound instruments. Our results encourage clinicians providing treatment for veterans with PTSD to incorporate interventions that support employment, healthy drinking limits, increased social support, and general stress management skills.

Acknowledgments

This research was supported by a grant VA Clinical Sciences Research and Development Merit awarded to Paige Ouimette (VHA CSR&D 1I01CX000175-01A1) and a National Institute of Health grant awarded to Meghan McDevitt-Murphy (K23 AA016120).

References

- Blake DD, Weathers FW, Nagy LM, Kaloupek DG. The development of a clinician-administered PTSD scale. *Journal of Traumatic Stress*. 1995; 8(1):75–90. [PubMed: 7712061]
- Blanchard EB, Hickling EJ, Taylor AE, Loos WR. The psychophysiology of motor vehicle accident related posttraumatic stress disorder. *Behavior Therapy*. 1994; 25(3):453–467.10.1016/s0005-7894(05)80157-1
- Friedman MJ, Resick PA, Bryant RA, Brewin CR. Considering PTSD for DSM-V. *Depression and Anxiety*. 2010; 28:750–769.10.1002/da.20767 [PubMed: 21910184]
- Gates MA, Holowka DW, Vasterling JJ, Keane TM, Marx BP, Rosen RC. Posttraumatic stress disorder and military personnel: Epidemiology, screening, and case recognition. *Psychological Services*. 2012; 9(4):361–382.10.1037/a0027649 [PubMed: 23148803]
- Hobfoll SE. Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*. 1989; 44:513–524.10.1037/0003-066X.44.3.513 [PubMed: 2648906]
- Jacobsen LK, Southwick SM, Kosten TR. Substance use disorders in patients with PTSD: A review of the literature. *American Journal of Psychiatry*. 2001; 158(8):1184–1190.10.1176/appi.ajp.158.8.1184 [PubMed: 11481147]
- Kehle SM, Ferrier-Auerbach AG, Meis LA, Arbisi PA, Erbes CR, Polusny MA. Predictors of post deployment alcohol use disorders in national guard soldiers deployed to Operation Iraqi Freedom. *Psychology of Addictive Behaviors*. 2012; 26(1):42–50.10.1037/a0024663 [PubMed: 21823766]

- Khantzian EJ. The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harvard review of psychiatry*. 1997; 4(5):231–244.10.3109/10673229709030550 [PubMed: 9385000]
- King LA, King DW, Bolton EE, Knight JA, Vogt DS. Risk factors for mental, physical, and functional health in Gulf War veterans. *Journal of rehabilitation research and development*. 2008; 45(3):395–407.10.1682/JRRD.2007.06.0081 [PubMed: 18629748]
- King LA, King DW, Vogt DS, Knight J, Samper RE. Deployment risk and resilience inventory: A collection of measures for studying deployment-related experiences of military personnel and veterans. *Military Psychology*. 2006; 18(2):89–120.10.1207/s15327876mp1802_1
- Koenen KC, Amssstade AB, Nugent NR. Gene-environment interaction in PTSD: An update. *Journal of Traumatic Stress*. 2009; 22(5):416–426.10.1002/jts.20435 [PubMed: 19743189]
- McCauley JL, Killeen T, Gros DF, Brady KT, Back SE. Posttraumatic stress disorder and co-occurring substance use disorders: Advances in assessment and treatment. *Clinical Psychology: Science And Practice*. 2012; 19(3):283–304.10.1111/cpsp.12006
- McDevitt-Murphy ME, Williams JL, Bracken KL, Fields JA, Monahan CJ, Murphy JG. PTSD symptoms, hazardous drinking, and health functioning among U.S. OEF and OIF veterans presenting in primary care. *Journal of Traumatic Stress*. 2010; 00(0):1–4.10.1002/jts.20482
- Ouimette P, Coolhart D, Sugarman D, Funderburk JS, Zelman RH, Dornau C. A pilot study of PTSD and associated functioning of army national guard. *Traumatology*. 2008; 143(3):51–56.10.1177/1534765608320330
- Ozer EJ, Best SR, Lipsey TL, Weiss DS. Predictors of PTSD and symptoms in adults: a meta-analysis. *Psychological bulletin*. 2003; 129(1):52–73.10.1037/0033-2909.129.1.52 [PubMed: 12555794]
- Polusny MA, Erbes CR, Murdoch M, Arbisi PA, Thuras P, Rath MB. Prospective risk factors for new-onset post-traumatic stress disorder in national guard soldiers deployed to Iraq. *Psychological Medicine*. 2011; 41(4):687–98.10.1017/S0033291710002047 [PubMed: 21144108]
- Ramchand R, Schell TL, Karney BR, Osilla KC, Burns RM, Caldarone LB. Disparate prevalence estimates of PTSD among service members who served in Iraq and Afghanistan: Possible explanations. *Journal of traumatic stress*. 2010; 23(1):59–68.10.1002/jts.20486 [PubMed: 20135699]
- Reinert DF, Allen JP. The alcohol use disorders identification test: An update of research findings. *Alcoholism: Clinical and Experimental Research*. 2007; 31(2):185–199.10.1111/j.1530-0277.2006.00295.x
- Richardson LK, Frueh BC, Acierno R. Prevalence estimates of combat-related post-traumatic stress disorder: Critical review. *Australian and New Zealand Journal of Psychiatry*. 2010; 44:4–19.10.3109/00048670903393597 [PubMed: 20073563]
- Riley D, Eckenrode J. Social ties: Subgroup differences in costs and benefits. *Journal of Personality and Social Psychology*. 1986; 51(4):770–778. [PubMed: 3783424]
- Seal KH, Metzler TJ, Gima KS, Bertenthal D, Maguen S, Marmar CR. Trends and risk factors for mental health diagnoses among Iraq and Afghanistan veterans using Department of Veterans Affairs health care, 2002-2008. *American Journal of Public Health*. 2009; 99(9):1651–1658.10.2105/AJPH.2008.150284 [PubMed: 19608954]
- Saunders JB, Aasland OG, Babor TF, de la Fuente JR. Development of the alcohol use disorders identification test (AUDIT). *Addiction*. 1993; 88(6):791–804.10.1111/j.1360-0443.1993.tb02093.x [PubMed: 8329970]
- U.S. Department of Veterans Affairs Health Administration Office of Public Health and Environmental Hazards. Analysis of VA healthcare utilization among US Global War on Terrorism (GWOT) Veterans. Washington, DC: Author; 2008. Unpublished quarterly report (cumulative through 3rd quarter FY2008)
- Vasterling JJ, Proctor SP, Friedman MJ, Hoge CW, Heeren T, King LA, King DW. PTSD symptom increases in Iraq-deployed soldiers: Comparison with nondeployed soldiers and associations with deployment experiences, and post deployment stress. *Journal of traumatic stress*. 2010; 23(1):41–51.10.1002/jts.20487 [PubMed: 20135698]

- Vogt DS, Proctor SP, King DW, King LA, Vasterling JJ. Validation of scales from the deployment risk and resilience inventory in a sample of Operation Iraqi Freedom veterans. *Assessment*. 2008; 15(4):391–403.10.1177/1073191108316030 [PubMed: 18436857]
- Vogt D, Smith B, Elwy R, Martin J, Schultz M, Drainoni ML, Eisen S. Predeployment, deployment, and post deployment risk factors for posttraumatic stress symptomatology in female and male OEF/OIF veterans. *Journal of abnormal psychology*. 2011; 120(4):819–831.10.1037/a0024457 [PubMed: 21707125]
- Weathers FW, Keane TM, Davidson JRT. Clinician-Administered PTSD Scale: A review of the first ten years of research. *Depression and Anxiety*. 2001; 13(3):132–156.10.1002/da.1029 [PubMed: 11387733]
- Yehuda, R., editor. Risk factors for posttraumatic stress disorder. Vol. 17. American Psychiatric Pub; 1999.

Table 1
Correlations Among Sociodemographic and Military Characteristics, Deployment Risk and Resilience subscales, and Alcohol Use Variables

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	
1. PTSD severity	-																										
2. Gender	-.01	-																									
3. Age	-.02	.07	-																								
4. Deployments	.08	-.13	.08	-																							
5. Months deployed	.04	-.13	.09	.82**	-																						
6. Number of children	.14	-.02	.44**	.13	.14	-																					
7. Income	.10	.06	.19*	.05	.14	.14	-																				
8. Education	-.03	.24**	.22**	.04	-.01	-.03	.15	-																			
9. Ethnicity	-.04	.16*	.24**	.04	.01	.25**	-.13	.01	-																		
10. Employment	-.19*	.06	.17*	-.10	-.08	.03	.12	.04	-.07	-																	
11. Relationship	.07	-.16*	.19*	.15	.13	.26**	.29**	-.11	-.03	.12	-																
12. Pre-deployment	.12	-.03	.00	-.01	-.01	.18*	.04	.10	-.04	-.08	-.06	-															
13. Childhood	-.10	.01	-.07	-.10	-.04	-.12	-.02	.03	-.04	-.07	-.05	-.04	-														
14. Preparedness	-.15	.10	.07	.02	.00	.07	-.21*	-.02	.05	-.02	-.07	-.13	.04	-													
15. Work environment	.35**	-.23**	-.13	.11	.11	.08	.07	-.09	-.05	-.03	.01	.18*	.08	-.36**	-												
16. Family concerns	.12	.16	.37**	.02	.02	.30**	-.05	.02	.17*	.18*	.16	-.04	-.11	.04	-.04	-											
17. Unit support	.04	.01	.00	.12	.09	.06	-.01	-.04	-.10	.10	.07	-.07	.09	.41**	-.08	-.02	-										
18. General harassment	.11	.02	-.10	-.15	-.08	-.12	-.09	-.01	.04	-.07	-.13	-.03	-.09	-.27**	.08	.02	-.57*	-									
19. Sexual harassment	.13	.34**	-.10	-.02	.03	-.07	.03	-.03	.17*	-.03	-.10	.02	-.08	-.01	-.02	.04	-.12	.23**	-								
20. Deploy concerns	.22**	-.01	.09	.09	.12	.00	.10	.11	.07	-.18*	-.06	.03	.07	-.28**	.46**	.16*	-.11	.20*	.02	-							
21. Combat	.32**	-.30**	-.12	.19*	.32**	.08	.08	-.19**	-.24**	-.15	.12	.14	.15	-.10	.49**	-.11	.13	-.01	-.09	.27**	-						
22. Post-battle	.24**	-.29**	-.11	.18*	.29**	-.02	.07	-.10	-.22**	-.03	.10	.18*	.20*	-.11	.48**	-.15	.20*	-.08	-.15	.27*	.81**	-					
23. NBC's	.13	-.06	.15	.16	.12	.09	-.01	-.06	.06	.02	.15	.07	.13	-.13	.36**	.03	.11	.04	.07	.41**	.30**	.34**	-				
24. Post-deploy support	-.43**	.00	-.15	.04	.08	-.13	.09	-.12	-.19*	.14	.07	-.10	.18*	.17*	-.19*	-.07	.17*	-.13	.00	-.24**	.01	.02	-.14	-			
25. Post-life events	.33**	.06	-.11	-.02	-.04	.12	-.18*	-.08	.09	-.21**	-.13	.36**	-.13	.12	.12	-.06	.02	.15	.16	.08	.19*	.14	.10	-.26**	-		

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.
26. AUDIT severity	.46**	-.22**	-.16*	.05	.08	-.03	.03	-.11	-.26**	.09	.05	-.02	-.01	-.13	.33**	.02	.14	.05	-.07	.11	.34**	.35**	.05	-.06	.11	-

Note. Gender: 1 = male, 2 = female; Ethnicity: 1 = Caucasian 2 = ethnic minority; Relationship: 1 = single, 2 = partnered/married; PTSD= posttraumatic stress disorder; AUDIT= Alcohol Use Disorders Identification Test.

* p < .05, two-tailed.

** p < .01 two-tailed.

Table 2
Hierarchical Multiple Regression Analysis Predicting PTSD Severity

Step and Predictor	R ²	R ²	B	SE B	β
Step 1	0.06**	0.06**			
Number of Children			2.60	1.39	0.15
Employed (yes/no)			-8.48	3.55	-0.19*
Step 2	0.16**	0.10**			
Number of Children			2.26	1.35	0.13
Employed (yes/no)			-5.67	3.52	-0.13
Deployment Concerns			0.32	0.19	0.14
Combat Experiences			1.42	0.75	0.26
Aftermath of Battle			0.03	0.69	0.01
Step 3	0.46**	0.30**			
Number of Children			1.34	1.12	0.08
Employed (yes/no)			-5.74	3.03	-0.15*
Deployment Concerns			-0.01	0.17	-0.01
Combat Experiences			0.89	0.62	0.16
Aftermath of Battle			-0.41	0.57	-0.08
Post-Deployment Life Event			1.18	0.56	0.15*
Post-Deployment Support			-0.76	0.16	-0.32**
Training and Preparedness			-0.04	0.15	-0.02
Deployment Environment			0.20	0.17	0.10
AUDIT Score			1.14	0.22	0.37**

Note.

* $p < .05$,

** $p < .01$,

R² = unadjusted, R² = change in r square, β = standardized regression coefficient, B = unstandardized coefficient, SE B = standard error of B