

## Sex differences in posttraumatic stress disorder screening outcomes following combat injury among U.S. military personnel

Andrew J. MacGregor<sup>1,2</sup>; Jessica R. Watrous<sup>2,3</sup>; Amber L. Dougherty<sup>2,3</sup>; Daniel J. Crouch<sup>2</sup>

<sup>1</sup>Axiom, San Diego, CA; <sup>2</sup>Naval Health Research Center, San Diego, CA; <sup>3</sup>Leidos, Inc., San Diego, CA

**Summary:** Service women were at risk of combat exposure and injury during the Iraq and Afghanistan conflicts. Previous research has yielded mixed results when comparing posttraumatic stress disorder (PTSD) in women with men during military service and following operational deployment. To date, no study has explored sex differences in PTSD following combat injury.

**Methods and Results:** All records of combat injury from Iraq and Afghanistan with a corresponding Post-Deployment Health Assessment (PDHA) completed within 1 year of injury were obtained from the Expeditionary Medical Encounter Database. The PDHA is given at the end of deployment and includes the 4-item Primary Care PTSD Screen. Prevalence of screening positive for PTSD was evaluated by sex using a chi-square test. Multivariable logistic regression was used to assess the association between sex and PTSD, while adjusting for covariates.

The study sample included 15,859 injured military personnel (649 females and 15,210 males). The average time between injury and PDHA was 131 days (SD = 91.5). Overall, females had a higher prevalence of screening positive for PTSD than males (48.8% vs. 41.1%,  $p < .001$ ). In multivariable regression, females had higher odds than males of screening positive for PTSD (odds ratio [OR] 1.30, 95% confidence interval [CI] 1.11–1.52). Irrespective of sex, psychiatric history was the strongest predictor of screening positive for PTSD (OR 1.64, 95% CI 1.50–1.80).

**Conclusion:** In this novel study of military service members, females were more likely than males to screen positive for PTSD after combat injury. More research is necessary to determine whether sex differences in PTSD are directly related to combat injury, or result from disparities in trauma history or self-disclosure of mental health symptoms. Strategies to mitigate PTSD and enhance resiliency may be needed for future U.S. military conflicts where women will play a larger role in combat operations.



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