

From Trauma to Addiction: Understanding Gender Differences in Suicide Risk Among U.S Military Personnel

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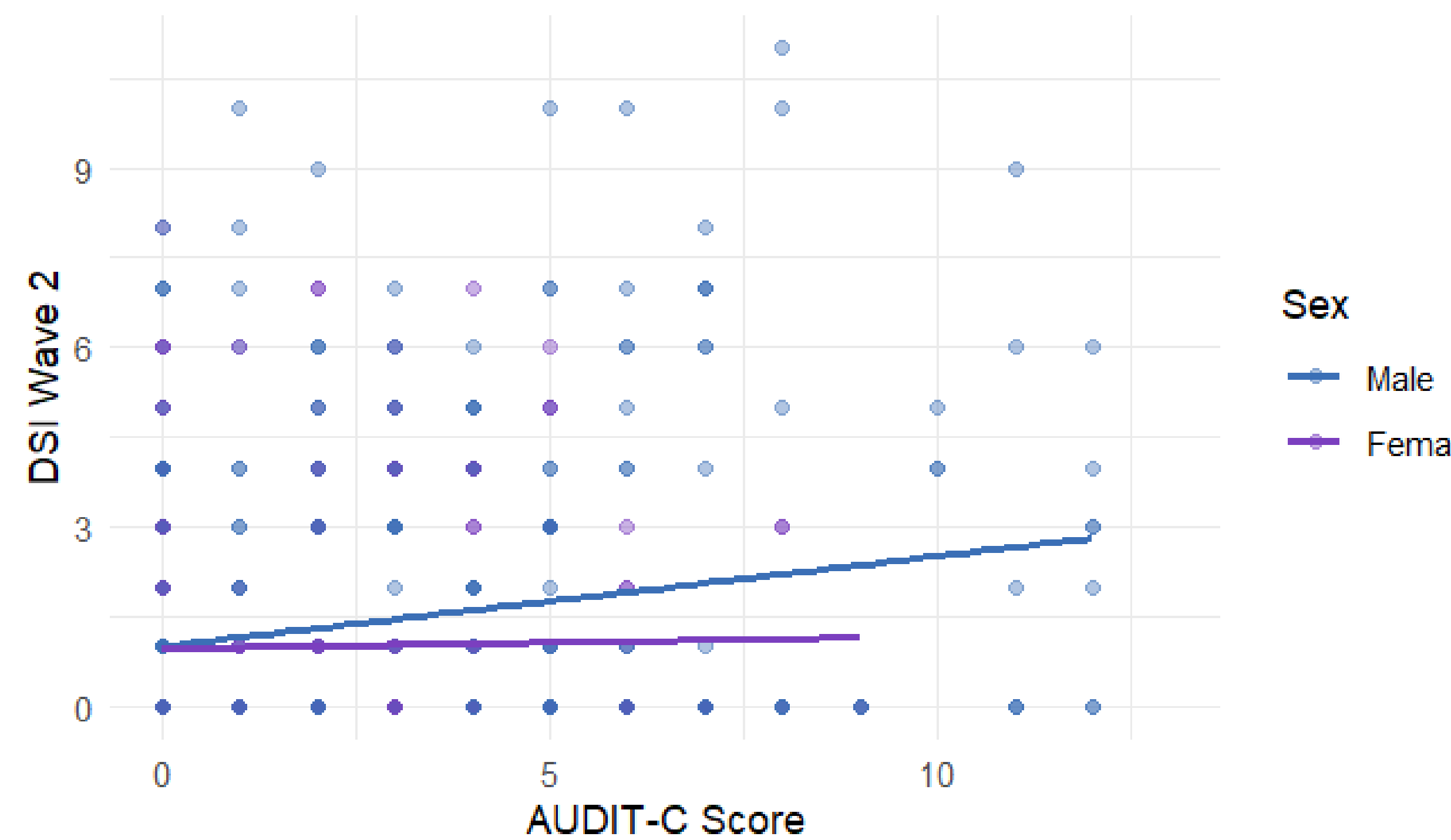
Introduction

- Post-Traumatic Stress Disorder and Substance Use Disorder are both established risk factors for suicidal ideation
- Suicide rates among U.S. military personnel and veterans have increased over the past decade, making suicide prevention a critical public health priority.
- Suicide risks are higher when PTSD and SUD co-occur as it heightens symptoms like social isolation, emotional dysregulation, and poor judgment (Najavits, 2002).
- Research indicates that men and women experience different types of trauma and exhibit different symptom patterns (Greenfield et al., 2010).
- Previous studies have analyzed the effects of PTSD and SUD independently rather than their combined effects and symptoms on men and women.
- This study focuses on sex differences in symptom presentation
- Hypothesis: We expected to see an elevated suicide ideation in military personnel with comorbidity of PTSD and SUD, with men and women differing in symptom severity. The aim is to find ways of gender-specific treatment approaches.

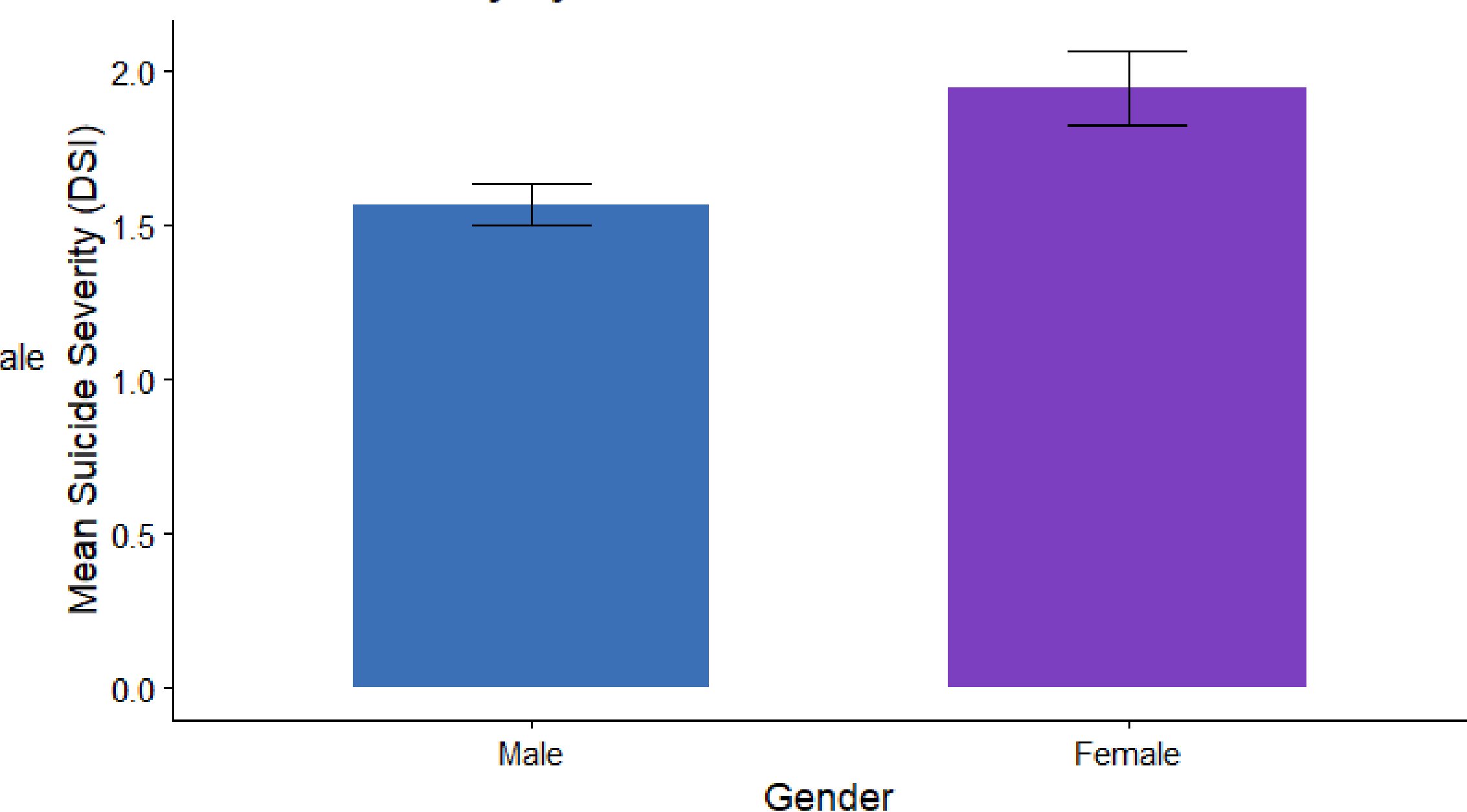
Methods

- The data was longitudinal and collected through the Military Suicide Research Consortium (MSRC) and Common Data Elements (CDE) between 2016 and 2023 at 15 different study sites (n = 3153). Participants were active-duty service members and veterans.
- Self Report Measures:
 - Depressive Symptom Inventory – Suicidality Subscale (DSI-SS): assessment of suicide ideation
 - PTSD Checklist (PCL-5): assessment of PTSD symptoms severity
 - AUDIT-C: assessment of alcohol use
 - Drug Use: assessment of drug use
 - This questionnaire is not from a standard measure, but created for MSRC data collection by Dr. Joiner and Gutierrez
- Data Analysis was run using the coding language R. The following tests were conducted:
 - Hierarchical multiple regression analyses were conducted to determine whether PTSD symptoms (PCL), alcohol use (AUDIT), drug use (DU), gender, and baseline suicidal ideation (DSI Wave 1) predicted suicidal ideation severity at Wave 2 (DSI2).
 - Interaction effects were tested within the regression models to determine whether the relationship between PTSD symptoms, substance use, and suicidal ideation differed by gender.
 - T-tests were conducted to examine whether there were significant differences between men and women in suicidal ideation severity, alcohol use, and drug use.

Alcohol Use × Sex Predicting Suicidal Ideation



Suicide Severity by Gender



Results

- Regression analysis showed that DSI at time 1 was a strong predictor of DSI at time 2 ($p < .001$, $t = 17.90$)
- When controlling for other time 1 variables, but before including interactions, only the AUDIT-C was a significant predictor of DSI at time 2 ($p < .001$)
- Audit and Birthsex was a significant interaction that effected suicide ideation ($t = -2.416$, $p < .01$)
 - No three-way interactions were significant.
- An independent samples t-test examined whether suicide severity differed by sex and the results showed a significant difference of suicide severity in men and women.
 - Women showed higher suicidal ideation severity than men ($p < 0.01$)
- Results indicate a significant difference in PTSD symptoms by gender ($p < 0.01$)
 - Women showed higher PTSD symptoms severity than men ($p < 0.01$)
- Symptom severity differed between men and women on an individual item level.
 - CDE 49, which asks about how often frequently one-use prescription drugs at greater quantities than prescribed, significantly predicted suicide severity in the full sample.
 - CDE 48, which asks about how often does one have six or more drinks on one occasion, and CDE 49 were significant predictors among women.
 - There were no significant symptoms by question for the male data.
- Limitations:
 - The study is based on self-report measures, which may include reporting bias or inaccurate symptom reporting. The sample size for men is 1369 and 561 for women.
 - The PTSD checklist assesses for symptoms and is not a formal diagnosis.

References and Acknowledgements ->

