

# CDP

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## **Research Update -- March 11, 2021**

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- Resource of the Week: Study on Effects of Sleep Deprivation on Readiness of Members of the Armed Forces (Under Secretary of Defense for Personnel and Readiness)

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<https://doi.org/10.1002/da.23145>

**Moral injury and suicidal behavior among US combat veterans: Results from the 2019–2020 National Health and Resilience in Veterans Study.**

Brandon Nichter Sonya B. Norman Shira Maguen Robert H. Pietrzak

Depression & Anxiety

First published: 05 March 2021

## Background

Recent research suggests that exposure to potentially morally injurious experiences (PMIEs) may be associated with increased risk for suicidal behavior among US combat veterans, but population-based data on these associations are scarce. This study examined the association between PMIEs with current suicidal ideation (SI), lifetime suicide plans (SP), and suicide attempts (SA) in a contemporary, nationally representative sample of combat veterans.

## Methods

Data were analyzed from the 2019–2020 National Health and Resilience in Veterans Study, which surveyed a nationally representative sample of US combat veterans ( $n = 1321$ ). PMIEs were assessed using the Moral Injury Events Scale (MIES). Multivariable logistic regression analyses were conducted to examine associations between MIES total scores and specific types of PMIEs with suicidal behavior.

## Results

Thirty-six point three percent of veterans reported at least one PMIE. Perceived transgressions by self, others, and betrayal were associated with SI, SP, and SA (odds ratios [ORs] = 1.21–1.27, all  $p$ s < .05), after adjusting for sociodemographic, trauma, and psychiatric characteristics. MIES total scores were significantly, albeit weakly, associated with SP (OR = 1.03,  $p$  < .01), but not SI/SA. Depression, posttraumatic stress disorder (PTSD), and age emerged as the strongest correlates of SI/SP/SA (14.9%–38.1% of explained variance), while PMIEs accounted for a comparatively modest amount of variance (3.3%–8.9%).

## Conclusions

Reports of potentially morally injurious experiences are prevalent among US combat veterans, and associated with increased risk for suicidal behavior, above and beyond severity of combat exposure, PTSD, and depression. Implications for clinical practice and future research are discussed, including the need for methodological advancements in the measurement of moral injury.

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<https://doi.org/10.1016/j.jpsychires.2021.01.004>

**Comparative associations of problematic alcohol and cannabis use with suicidal behavior in U.S. military veterans: A population-based study.**

Hill, M. L., Nichter, B., Loflin, M., Norman, S. B., & Pietrzak, R. H.

Alcohol use disorder (AUD) and cannabis use disorder (CUD) are each associated with increased suicidal behavior, but it is unclear how their comorbidity relates to suicide risk. Understanding these associations in U.S. military veterans is especially important, given their heightened risk for suicide, high prevalence of AUD, and increasing access to cannabis. We compared associations of probable AUD, CUD, and AUD/CUD with suicide ideation, plan(s), and attempt(s) in a nationally representative sample of 4,069 veterans surveyed in 2019-2020 as part of the National Health and Resilience in Veterans Study. Among veterans who screened positive for current AUD, 8.7% also screened positive for current CUD. Among veterans who screened positive for current CUD, 33.3% screened positive for current AUD. Current and lifetime positive screens for AUD, CUD, and AUD/CUD were each strongly and independently associated with past-year suicide ideation and lifetime suicide ideation, plan(s), and attempt(s) [odds ratios (ORs) = 1.6-8.7]. Relative to veterans who screened positive for AUD only, veterans who screened positive for AUD/CUD and CUD only had higher odds of past-year suicide ideation (AUD/CUD: OR = 3.3; CUD only: OR = 2.4), lifetime suicide ideation (AUD/CUD: OR = 1.9; CUD only: OR = 2.6) and lifetime suicide plan(s) (AUD/CUD: OR = 1.7; CUD only: OR = 6.1). Collectively, findings suggest that screening positive for CUD might be an especially strong indicator of suicide ideation and planning in veterans with and without AUD, independent of sociodemographic, military, trauma, and other psychiatric factors. These findings underscore the importance of routine screening for CUD in suicide prevention efforts, especially as cannabis becomes more widely available.

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<https://doi.org/10.1002/jcop.22534>

### **Impact of military culture and experiences on eating and weight-related behavior.**

Emily L. Ferrell M.A. Abby Braden Ph.D. Rachel Redondo B.S.

Journal of Community Psychology  
First published: 02 March 2021

Disordered eating behaviors and obesity are becoming increasingly common among United States military personnel. However, little research has explored the role of the

military environment as it may influence the development of disordered eating among personnel. The present qualitative analysis examined beliefs about how military experiences affected eating and weight-related behaviors. Military personnel who served within the last year and a year or more ago ( $n = 250$ ) were recruited using Amazon's Mechanical Turk (mTurk). Data included in the present study consisted of participant responses to three open-ended questions, analyzed by means of content and thematic analysis. Analyses yielded eight themes: eating extremely quickly, strict mealtime regimens, the pressure to "make weight," food insecurity, difficulty after military, food quality/content, overeating behavior, and military superior maltreatment. The current study provides a preliminary examination of the role of the military culture and experiences in the development of unhealthy eating and weight-related behaviors and offers suggestions for future research and interventions.

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<https://doi.org/10.1002/eat.23501>

### **DSM-5 eating disorder prevalence, gender differences, and mental health associations in United States military veterans.**

Robin M. Masheb PhD Christine M. Ramsey PhD Alison G. Marsh BA Suzanne E. Decker PhD Shira Maguen PhD Cynthia A. Brandt MD Sally G. Haskell MD

International Journal of Eating Disorders  
First published: 05 March 2021

#### **Objective**

Little is known about prevalence estimates of new and revised DSM-5 eating disorders diagnoses in general, and especially among high-risk, underserved and diverse eating disorder populations. The aim of the current study was to determine prevalence, gender differences and correlates of DSM-5 eating disorders in veterans.

#### **Method**

Iraq and Afghanistan war era veterans ( $N = 1,121$ , 51.2% women) completed the Eating Disorder Diagnostic Scale-5 and validated measures of eating pathology and mental health between July 2014 and September 2019.

#### **Results**

Overall more women than men (32.8% vs. 18.8%,  $p < .001$ ) reported symptoms consistent with a DSM-5 eating disorder. Prevalence estimates (women vs. men) for the

specific diagnoses were: Anorexia Nervosa (AN; 0.0% vs. 0.0%), Bulimia Nervosa (BN; 6.1% vs. 3.5%), Binge-Eating Disorder (BED; 4.4% vs. 2.9%), Atypical AN (AAN; 13.6% vs. 4.9%), Subclinical BN (0.0% vs. 0.2%), Subclinical BED (1.4% vs. 0.6%), Purging Disorder (2.1% vs. 0.7%), and Night Eating Syndrome (NES; 5.2% vs. 6.0%). Women were more likely to have BN or AAN, and there was no difference for BED or NES among genders. The eating disorder group had a higher mean BMI, and significantly greater eating pathology and mental health symptoms than the non-eating disorder group.

## Discussion

Approximately one-third of women, and one-fifth of men, reported symptoms consistent with a DSM-5 eating disorder diagnosis. These high prevalence estimates across genders, and associated mental health concerns, suggest an urgent need to better understand and address eating disorders in military and veteran populations.

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<https://doi.org/10.1016/j.cpr.2021.102006>

## **Addressing the mental health impact of COVID-19 through population health.**

Matt Boden, Lindsey Zimmerman, Kathryn J. Azevedo, Josef I. Ruzek, ... Carmen P. McLean

Clinical Psychology Review

Available online 5 March 2021

## Highlights

- The COVID-19 pandemic will broadly and substantially impact the mental health of populations worldwide.
- Social determinants will heighten the impact of pandemic stressors among particular populations.
- With a population health perspective, we link mental health risks, negative outcomes and interventions.
- We provide a framework matching primary, secondary and tertiary targets to appropriate interventions.
- Scalability of interventions is impacted by target, population, modality, intensity and provider type.

## Abstract

The COVID-19 pandemic has and will continue to result in negative mental health outcomes such as depression, anxiety and traumatic stress in people and populations throughout the world. A population mental health perspective informed by clinical psychology, psychiatry and dissemination and implementation science is ideally suited to address the broad, multi-faceted and long-lasting mental health impact of the pandemic. Informed by a systematic review of the burgeoning empirical research on the COVID-19 pandemic and research on prior coronavirus pandemics, we link pandemic risk factors, negative mental health outcomes and appropriate intervention strategies. We describe how social risk factors and pandemic stressors will contribute to negative mental health outcomes, especially among vulnerable populations. We evaluate the scalability of primary, secondary and tertiary interventions according to mental health target, population, modality, intensity and provider type to provide a unified strategy for meeting population mental health needs. Traditional models, in which evidence-based therapies are delivered in-person, by a trained expert, at a specialty care location have proved difficult to scale. The use of non-traditional models, tailoring preventive interventions to populations based on their needs, and ongoing coordinated evaluation of intervention implementation and effectiveness will be critical to refining our efforts to increase reach.

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<https://doi.org/10.1016/j.cpr.2021.101998>

## **Social support and posttraumatic stress disorder: A meta-analysis of longitudinal studies.**

Yabing Wang, Man Cheung Chung, Na Wang, Xiaoxiao Yu, Justin Kenardy

Clinical Psychology Review

Available online 4 March 2021

## Highlights

- Meta-analysis of longitudinal studies with three types of effect sizes
- Social support and PTSD reciprocally predicted each other over time.
- The reciprocal relationship still holds after controlling for previous level of outcomes.

## Abstract

Social support has long been associated with posttraumatic stress disorder (PTSD), but

there is no consistent evidence on the strength and direction of this relationship. Whereas the social causation model claims that social support buffers against PTSD, the social selection model states that PTSD reduces social support resources. As the first meta-analysis of the prospective relationships between social support and PTSD, this study synthesized the available longitudinal data (75 samples including 32,402 participants) on these two constructs with a random-effects model. In total, three hundred and fifty-five effect sizes (including cross-sectional, prospective and cross-lagged coefficients) were included in the meta-analysis. With prior levels of the relevant outcomes controlled for, results showed that social support and PTSD reciprocally predicted each other over time with similar effect sizes: Social support predicted PTSD with  $\beta = -0.10$ ; PTSD predicted social support with  $\beta = -0.09$ . Moderator analyses suggested that the effects held across most sample characteristics and research designs except for several moderators (gender, time lag, publication year, source of support). These findings provided strong evidence for both the social causation and social selection models, suggesting that the link between social support and PTSD is symmetrically reciprocal and robust.

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<https://doi.org/10.1007/s10803-021-04936-7>

### **Brief Report: Identifying Concerns of Military Caregivers with Children Diagnosed with ASD Following a Military Directed Relocation.**

Britt E. Farley, Annette Griffith, Amanda Mahoney, Dorthy Zhang & Laura Kruse

Journal of Autism and Developmental Disorders

Published: 05 March 2021

Military families relocate three times more often than non-military families. Those whom have children diagnosed with Autism Spectrum Disorder face challenges related to inconsistencies in services, delay of services, and lack of continuity of care. The current study expands the limited research examining the experiences of military families with children with Autism by focusing on impact of relocation, specifically identifying potential causes of delays in services. An online survey of 25 military caregivers of children with autism suggests potential delays in service related to provider waitlists, obtaining new referrals, and lengthy intake processes. The impact of these inconsistencies is discussed in relation to child progress and the need for future research in this area.

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<https://doi.org/10.1002/jts.22662>

## **Treating Veterans at Risk for Suicide: An Examination of the Safety, Tolerability, and Outcomes of Cognitive Processing Therapy.**

Erika M. Roberge Julia A. Harris Harrison R. Weinstein David C. Rozek

Journal of Traumatic Stress

First published: 02 March 2021

Individuals with posttraumatic stress disorder (PTSD) are at increased risk for suicidal thoughts and behaviors; however, clinicians often report apprehension about recommending trauma-focused therapy to patients with an increased risk of suicide. The present study aimed to evaluate the safety, tolerability, and response to cognitive processing therapy (CPT) among a sample of military veterans with PTSD and increased suicide risk. A secondary aim was to provide a clinically useful definition of high suicide risk. Chart review was used to classify the suicide risk level of 290 veterans who participated in CPT at a Veterans Affairs clinic. Treatment outcomes in veterans with different suicide risk levels were also gathered and compared. Over 50% ( $n = 155$ ) of the sample demonstrated increased suicide risk, and 1.0% ( $n = 3$ ) engaged in suicidal behavior after initiating treatment. To date, hospital records show no suicide deaths since 2016 among clinic patients who received CPT. Suicide risk level was not associated with CPT tolerability, and PTSD symptom change was equivalent across groups,  $ps = .085-.976$ . Veterans across groups reported clinically significant reductions in PTSD symptoms. The tested suicide risk categorization schemes performed similarly in differentiating the odds of CPT completion and PTSD symptom reduction. These results suggest that veterans with PTSD and an increased risk of suicide, including those with previous suicide attempts and current ideation, can tolerate and benefit from CPT. Additional variables must be considered to truly determine the acute and imminent suicide risk that would deem CPT to be contraindicated.

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<https://doi.org/10.1093/pm/pnab087>

## **Relationship between Post-Traumatic Stress Disorder Symptoms and Chronic Pain Related Symptom Domains among Military Active Duty Service Members.**

Hongjin Li, PhD, MS, BSN, Diane M Flynn, MD, Krista B Highland, PhD, Patricia K Barr, PhD, Dale J Langford, PhD, Ardith Z Doorenbos, PhD, RN, FAAN

Pain Medicine

Published: 04 March 2021

### Objective

This study examined the relationships between symptom domains relevant to PTSD diagnosis, PTSD screening, and chronic pain-related symptoms (pain intensity, pain interference, physical function, fatigue, depression, anxiety, anger, satisfaction with social roles) experienced by active duty military service members with chronic pain.

### Design

Cross-sectional study.

### Setting

The Interdisciplinary Pain Management Center (IPMC) at Madigan Army Medical Center between 2014 and 2018.

### Subjects

Active duty service members receiving care at IPMC (N = 2,745).

### Methods

Independent sample t test was conducted to compare pain intensity and pain-related measures of physical, emotional and social functioning among patients with and without a PTSD diagnosis or PTSD positive screen ( $\geq 3$  symptoms). Relative weight analysis was used to identify the relative importance of each PTSD symptom cluster (e.g., intrusion, avoidance, hyperarousal, emotional numbness) to pain and related domains.

### Results

Approximately 27.9% patients had a positive screen for PTSD, and 30.5% of the patients had a PTSD diagnosis. Patients with PTSD diagnosis and positive screening had higher Pain Interference and lower Physical Function and Social Satisfaction scores ( $P < 0.001$ ), and had increased Anger, Anxiety, Fatigue, and Depression scores ( $P < 0.001$ ). Emotional numbness accounted for the largest proportion of variance in average pain intensity, pain interference, and psychological functioning; while avoidance accounted for the largest proportion of variance in physical function.

### Conclusion

To improve treatment effectiveness and overall functioning for active duty military patients, integrated treatment and therapies targeted to reducing chronic pain, and PTSD symptoms (focus on emotional numbness and avoidance) are recommended.

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<https://doi.org/10.1097/HTR.0000000000000647>

## **Psychosocial and Functional Predictors of Depression and Anxiety Symptoms in Veterans and Service Members With TBI.**

Benavides, Angela M. PhD; Finn, Jacob A. PhD; Tang, Xinyu PhD; Ropacki, Susan PhD; Brown, Racine M. PhD; Smith, Austin N. BA; Stevens, Lillian Flores PhD; Rabinowitz, Amanda R. PhD; Juengst, Shannon B. PhD; Johnson-Greene, Doug PhD; Hart, Tessa PhD

Journal of Head Trauma Rehabilitation  
February 22, 2021

### **Objective:**

To identify psychosocial and functional predictors of self-reported depression and anxiety symptoms at year 2 following traumatic brain injury (TBI).

### **Setting:**

Five Department of Veterans Affairs (VA) Polytrauma Rehabilitation Centers (PRCs) within the TBI Model Systems (TBIMS).

### **Participants:**

A total of 319 service members/veterans enrolled in VA TBIMS who were eligible for and completed both 1- and 2-year follow-up evaluations.

### **Design:**

Secondary analysis from multicenter prospective longitudinal study.

### **Main Measures:**

Demographic, injury-related, military, mental health, and substance use variables. Questionnaires included the Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), and Neurobehavioral Symptom Inventory. Rating scales included the Participation Assessment with Recombined Tools–Objective and Disability Rating Scale.

### **Results:**

The final sample was largely male (96%) and predominantly White (65%), with a median age of 27 years. In unadjusted analyses, pre-TBI mental health treatment

history and year 1 employment status, community activity, sleep difficulties, and self-reported depression and anxiety symptoms were associated with year 2 PHQ-9 scores; pre-TBI mental health treatment history and year 1 community activity, social contact, problematic substance use, sleep difficulties, and self-reported depression and anxiety symptoms were associated with year 2 GAD-7 scores. In multivariable analyses, only year 1 community activity and depression symptoms uniquely predicted year 2 PHQ-9 scores, and only year 1 employment status, community activity, problematic substance use, and anxiety symptoms uniquely predicted year 2 GAD-7 scores.

#### Conclusion:

Anxiety and depression commonly occur after TBI and are important treatment targets. Some predictors (eg, participation and substance use) are modifiable and amenable to treatment as well. Early identification of anxiety and depression symptoms is key.

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<https://doi.org/10.5664/jcsm.9182>

### **Prevalence, risk correlates and health comorbidities of insomnia in U.S. military veterans: results from the 2019-2020 National Health and Resilience in Veterans Study.**

Simon P. Byrne, PhD , Elissa McCarthy, PhD , Jason C. DeViva, PhD , Steven M. Southwick, MD , Robert H. Pietrzak, PhD, MPH

Journal of Clinical Sleep Medicine  
Published Online: March 3, 2021

#### STUDY OBJECTIVES:

Veterans experience high levels of trauma, psychiatric and medical conditions which may increase their risk for insomnia. To date, however, no known study has examined the prevalence, risk correlates and comorbidities of insomnia in a nationally representative sample of veterans.

#### METHODS:

A nationally representative sample of 4,069 U.S. military veterans completed a survey assessing insomnia severity; military, trauma, medical and psychiatric histories; health and psychosocial functioning. Multivariable analyses examined the association between insomnia severity, psychiatric and medical comorbidities, suicidality and functioning.

## RESULTS:

A total of 11.4% of veterans screened positive for clinical insomnia and 26.0% for subthreshold insomnia. Greater age and retirement were associated with a lower likelihood of insomnia. Adverse childhood experiences, traumatic life events, lower education and income were associated with greater risk for insomnia. A “dose response” association was observed for health comorbidities, with increasing levels of insomnia associated with elevated odds of psychiatric and medical conditions (clinical vs. no insomnia OR's=1.8-13.4) and greater reductions in health and psychosocial functioning (clinical vs. no insomnia d's=0.2-0.4). The prevalence of current suicidal ideation was three-to-five times higher in veterans with clinical and subthreshold insomnia relative to those without insomnia (23.9% and 13.6% vs. 4.5% respectively).

## CONCLUSIONS:

Nearly two in five U.S. veterans experience clinical or subthreshold insomnia, which is associated with substantial health burden and independent risk for suicidal ideation. Results underscore the importance of assessment, monitoring and treatment of insomnia in veterans as they transition from the military.

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<http://dx.doi.org/10.1136/bmjmilitary-2020-001700>

## **Correlates of e-cigarette use among active duty US military personnel: implications for cessation policy.**

Sarah Godby, R Dierst-Davies, D Kogut, L Degiorgi Winslow, M M Truslow, J Tuttle, P Koepl, K Marshall-Aiyelawo, K Elenberg

BMJ Military Health

Published Online First: 04 March 2021

## Background

Electronic cigarette (or e-cigarette) use has grown substantially since its US market introduction in 2007. Although marketed as a safer alternative to traditional cigarettes, studies have shown they can also be a gateway to their use. The purpose of this investigation is to identify factors associated with different patterns of tobacco use among active duty military personnel.

## Methods

A secondary analysis was conducted using the 2014 Defense Health Agency Health

Related Behaviors survey data. Results are based on 45 986 US military respondents, weighted to 1 251 606. Both univariate and regression analyses were conducted to identify correlates.

## Results

In 2014, approximately 7.8% of respondents reported using e-cigarettes at least once in the past year. Among e-cigarette users, 49% reported exclusive e-cigarette use. Prevalence of exclusive use is highest among white people (58%), Navy (33%), men (83%) and persons with income  $\leq$ \$45 000 (65%). Regression comparing exclusive cigarette with exclusive e-cigarette users revealed higher odds of being Air Force (OR=2.19; CI 1.18 to 4.06) or Navy (OR=2.25; CI 1.14 to 4.41) personnel and being male (OR=1.72; CI 1.12 to 2.64), and more likely to not receive smoking cessation messaging from healthcare providers in the last 12 months (OR=2.88; CI 1.80 to 4.62). When comparing exclusive e-cigarette users with poly-tobacco users, e-cigarette users had higher odds of being Hispanic (OR=2.20; CI 1.02 to 4.78), college educated (OR=4.25; CI 1.22 to 14.84) and not receiving tobacco prevention/cessation messaging (OR=4.80; CI 2.79 to 8.27).

## Conclusion

The results demonstrate that exclusive e-cigarette users in the military have unique characteristics when compared with groups of other/mixed tobacco users. Findings can inform cessation and prevention efforts to improve both the overall health and combat readiness of active duty military personnel.

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<https://doi.org/10.1002/jts.22663>

## **Associations Among Increases in Posttraumatic Stress Symptoms, Neurocognitive Performance, and Long-Term Functional Outcomes in U.S. Iraq War Veterans.**

Jackson, C.E., Ciarleglio, M.M., Aslan, M., Marx, B.P., Ko, J., Concato, J., Proctor, S.P. and Vasterling, J.J.

Journal of Traumatic Stress

First published: 02 March 2021

Cross-sectional research suggests that posttraumatic stress symptoms (PTSS) among war zone veterans are associated with functional impairment and poor quality of life.

Less is known about the long-term functional repercussions of PTSS. This study of Iraq War veterans examined the associations between increases in PTSS and long-term functional outcomes, including the potential contributions of neurocognitive decrements. Service members and veterans (N = 594) completed self-report measures of functioning and PTSS severity before Iraq War deployment and again after their return (M = 9.3 years postdeployment). Some participants (n = 278) also completed neurocognitive testing at both times. Multiple regression analyses with the full sample—adjusted for TBI, demographic characteristics, military variables, and predeployment PTSS and functioning—revealed that increased PTSS severity over time was significantly associated with unemployment, aOR = 1.04, 95% CI [1.03, 1.06]; poorer work performance; and poorer physical, emotional, and cognitive health-related functioning at long-term follow-up,  $f^2$ s = 0.37–1.79. Among participants who completed neurocognitive testing, a decline in select neurocognitive measures was associated with poorer functioning; however, neurocognitive decrements did not account for associations between increased PTSS and unemployment, aOR = 1.04, 95% CI [1.02, 1.07], with the size and direction upheld after adding neurocognitive variables, or poorer functional outcomes, with small increases after adding neurocognitive measures to the models,  $f^2$ s = 0.03–0.10. War zone veterans experiencing long-term increased PTSS and/or neurocognitive decrements may be at elevated risk for higher-level functional impairment over time, suggesting that early PTSS management may enhance long-term functioning.

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<https://doi.org/10.1037/ser0000519>

### **Factors contributing to PTSD treatment dropout in veterans returning from the wars in Iraq and Afghanistan: A systematic review.**

Psychological Services  
Advance online publication

Although treatment effectiveness among evidence-based psychotherapies (EBPs) for posttraumatic stress disorder (PTSD) has been well established, treatment dropout among veterans continues to be a concern within these treatments. Due to the uniqueness of the Operation Enduring Freedom (OEF)/Operation Iraqi Freedom (OIF)/Operation New Dawn (OND) veteran cohort, this article reviewed the literature examining factors contributing to treatment dropout from EBPs for PTSD among OEF/OIF/OND veterans. We conducted a systematic review of the published literature using PsycINFO, PubMed, and PTSDpubs with a restriction on year of publication



beginning in 2007, following the first VA national initiative to roll-out EBPs for PTSD, through May 1st, 2020. Articles were retained if treatment dropout for EBPs was examined among OEF/OIF/OND veterans with PTSD, which yielded a total of 26 manuscripts. Common themes associated with treatment dropout were identified, including demographic, psychological, cognitive, practical, and treatment-related factors. Specifically, younger age, concurrent substance use, and practical concerns (e.g., balancing multiple life roles) emerged as factors that consistently contributed to treatment dropout. Other findings were mixed (e.g., pretreatment symptom severity and presence of traumatic brain injury). While factors contributing to dropout are complex and interact uniquely for each veteran, improved understanding of these factors in combination with innovative strategies for treating OEF/OIF/OND veterans utilizing EBPs is needed to enhance treatment engagement, retention, and outcomes. Implications for these factors are discussed. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

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<https://doi.org/10.1002/jts.22664>

## **A Network Analysis of DSM-5 Posttraumatic Stress Disorder Symptoms and Event Centrality.**

Guineau, M.G., Jones, P.J., Bellet, B.W. and McNally, R.J.

Journal of Traumatic Stress

First published: 01 March 2021

The centrality of a traumatic event to one's autobiographical memory has been associated with posttraumatic stress disorder (PTSD) symptom severity. In the present study, we investigated the associations between specific features of event centrality (EC), as measured using the Centrality of Event Scale, and specific symptoms of PTSD. We computed a cross-sectional graphical lasso network of PTSD symptoms and specific features of EC in a sample of trauma-exposed individuals ( $n = 451$ ), many of whom met the clinical threshold for a PTSD diagnosis. The graphical lasso revealed intrusive memories, negative trauma-related feelings, and the perception that the traumatic event was central to one's identity to be influential nodes. Viewing the future through the lens of one's trauma exposure was the EC feature most strongly linked to PTSD. Among all PTSD symptoms, blaming oneself or others for the traumatic event showed the strongest link to EC. The network was stable, allowing for reliable



interpretations. Future longitudinal research is needed to clarify the associations among EC features and PTSD symptoms over time.

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<https://doi.org/10.1097/WNN.0000000000000264>

## **Posttraumatic Stress Disorder Subsequent to Apparent Mild Traumatic Brain Injury.**

Rieke, J. D., Lamb, D. G., Lewis, G. F., Davila, M. I., Schmalfuss, I. M., Murphy, A. J., Tran, A. B., Bottari, S. A., & Williamson, J. B.

Cognitive and Behavioral Neurology  
2021 Mar 3;34(1):26-37

Posttraumatic stress disorder (PTSD) is prevalent among veterans with a history of traumatic brain injury (TBI); however, the relationship between TBI and PTSD is not well understood. We present the case of a 31-year-old male veteran with PTSD who reported TBI before entering the military. The reported injury appeared to be mild: He was struck on the head by a baseball, losing consciousness for ~10 seconds. Years later, he developed severe PTSD after combat exposure. He was not receiving clinical services for these issues but was encountered in the context of a research study. We conducted cognitive, autonomic, and MRI assessments to assess brain function, structure, and neurophysiology. Next, we compared amygdala volume, uncinate fasciculus diffusion, functional connectivity, facial affect recognition, and baroreceptor coherence with those of a control group of combat veterans ( $n = 23$ ). Our veteran's MRI revealed a large right medial-orbital prefrontal lesion with surrounding atrophy, which the study neuroradiologist interpreted as likely caused by traumatic injury. Comparison with controls indicated disrupted structural and functional connectivity of prefrontal-limbic structures and impaired emotional, cognitive, and autonomic responses. Detection of this injury before combat would have been unlikely in a clinical context because our veteran had reported a phenomenologically mild injury, and PTSD is a simple explanation for substance abuse, sleep impairment, and psychosocial distress. However, it may be that right prefrontal-limbic disruption imparted vulnerability for the development of PTSD and exacerbated our veteran's emotional response to, and recovery from, PTSD.

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<https://doi.org/10.1016/bs.irn.2020.09.003>

## **Traumatic brain injury and the misuse of alcohol, opioids, and cannabis.**

Jacotte-Simancas, A., Fucich, E. A., Stielper, Z. F., & Molina, P. E.

International Review of Neurobiology  
2021;157:195-243

Traumatic brain injury (TBI), most often classified as concussion, is caused by biomechanical forces to the brain resulting in short- or long-term impairment in brain function. TBI resulting from military combat, sports, violence, falls, and vehicular accidents is a major cause of long-term physical, cognitive, and psychiatric dysfunction. Psychiatric disorders associated with TBI include depression, anxiety, and substance use disorder, all having significant implications for post-TBI recovery and rehabilitation. This chapter reviews the current preclinical and clinical literature describing the bidirectional relationship between TBI and misuse of three commonly abused drugs: alcohol, opioids, and cannabis. We highlight the influence of each of these drugs on the incidence of TBI, as well as trends in their use after TBI. Furthermore, we discuss factors that may underlie post-injury substance use. Understanding the complex relationship between TBI and substance misuse will enhance the clinical treatment of individuals suffering from these two highly comorbid conditions.

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<https://doi.org/10.1093/milmed/usaa321>

## **A Qualitative Examination of Factors That Influence Sleep Among Shipboard Sailors.**

Schmied, E. A., Harrison, E. M., Dell'Acqua, R. G., Perez, V. G., Glickman, G., & Hurtado, S. L.

Military Medicine  
2021 Jan 30;186(1-2):e160-e168

### **Introduction:**

Sleep disturbance is prevalent among service members; however, little is known about factors that compromise sleep in unique operational environments, such as naval ships. Given the importance of sleep to health and performance, it is critical to identify both

causes and potential solutions to this serious issue. The objective of this qualitative study was to elucidate the barriers to sleep and the strategies service members use to improve their sleep and combat fatigue while living and working aboard ships (i.e., underway).

#### Methods and materials:

Interviews were conducted with 22 active duty service members assigned to sea duty. The semi-structured interview guide assessed the experiences of service members sleeping in shipboard environments. Interview transcripts were analyzed using applied thematic content analysis by two independent coders.

#### Results:

Participants were largely male (77.8%) and enlisted (88.9%). The most common barrier to obtaining sufficient sleep was stress, followed by rotating schedules, and environmental factors (e.g., noise and light). Additionally, many participants reported prioritizing other activities over sleep when off duty. Many participants did not report using any specific strategies to improve their sleep while underway. Among those who did, most described mitigating environmental barriers (e.g., noise-cancelling headphones or sleep masks). However, some participants also acknowledged these strategies are not always feasible, either attributable to cost or because sailors must be able to respond to alarms or commands. Notably, few sailors reported using stress mitigation or relaxation strategies to help sleep. Ingesting caffeine was the only strategy sailors reported using to alert themselves while fatigued.

#### Conclusions:

Service members reported many unique barriers to sleep in the shipboard environment, yet many did not report the use of strategies to mitigate them. Further, few used alerting techniques when fatigued. This at-risk population could benefit from targeted educational interventions on sleep-promoting behaviors, prioritization of sleep, and fatigue mitigation.

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<https://doi.org/10.12788/cp.0082>

#### **Key questions to ask patients who are veterans.**

David C. Fipps, DO, and Elisabet Rainey, MD

The Mission Act--signed into law in 2018--recognizes that the health care needs of patients who are veterans can no longer be fully served by the Veterans Health Administration. (1) This act allows some veterans who are enrolled in the Veterans Affairs (VA) health care system or otherwise entitled to VA care to access treatment outside of VA facilities. (1) As a result, psychiatrists may treat veterans more frequently.

During such patients' initial visit, obtaining a detailed history of their military service can reveal vital clinical information and establish a therapeutic alliance that can help foster positive treatment outcomes. Here we offer an A-to-L list of important questions to ask veterans about their military service, and explanations of why these questions are valuable.

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### **Links of Interest**

Army tests fitness benefits of yoga and meditation in basic training

<https://www.stripes.com/news/us/army-tests-fitness-benefits-of-yoga-and-meditation-in-basic-training-1.663284>

The Army's sexual assault prevention program is broken. These soldiers have ideas on how to fix it

<https://taskandpurpose.com/news/army-sharp-program-18th-airborne-corps/>

Plan to remove handling of military sexual misconduct from chain of command sees new momentum

<https://www.militarytimes.com/news/pentagon-congress/2021/02/24/plan-to-remove-handling-of-military-sexual-misconduct-from-chain-of-command-sees-new-momentum/>

Military academies sex assault numbers were steady, then COVID hit

<https://www.militarytimes.com/news/your-military/2021/02/25/military-academies-sex-assault-numbers-were-steady-then-covid-hit/>

Fort Bliss Commander Wants Leaders in Barracks More Often to Stop Sexual Harassment, Assault

<https://www.military.com/daily-news/2021/02/25/fort-bliss-commander-wants-leaders-barracks-more-often-stop-sexual-harassment-assault.html>

A seat at the table (commentary)

<https://www.militarytimes.com/opinion/commentary/2021/02/24/a-seat-at-the-table/>

Military families on advisory boards would be a force multiplier for DoD policies (commentary)

<https://www.militarytimes.com/opinion/commentary/2021/02/25/military-families-on-advisory-boards-would-be-a-force-multiplier-for-dod-policies/>

Vets' depression, social support & psychological resilience play role in later well being

<https://www.newswise.com/articles/vets-depression-social-support-psychological-resilience-play-role-in-later-well-being>

Brain Tissue Analysis Yields Clues to Causes of PTSD

<https://scitechdaily.com/brain-tissue-analysis-yields-clues-to-causes-of-ptsd/>

Military Homecoming During COVID-19

<https://blog-brigade.militaryonesource.mil/2021/01/22/military-homecoming-during-covid-19/>

Secretary orders review of VA's transgender policies

<https://blogs.va.gov/VAntage/85152/secretary-orders-review-vas-transgender-policies/>

Studying sleep problems that affect Veterans

How sleep is affected by traumatic brain injury and posttraumatic stress disorder

<https://blogs.va.gov/VAntage/84912/studying-sleep-problems-affect-veterans/>

Paratroopers in Alaska Are Wearing Wrist Sensors to Track Their Stress Levels

<https://www.military.com/daily-news/2021/02/24/paratroopers-alaska-are-wearing-wrist-sensors-track-their-stress-levels.html>

How USAF and the Space Force Can Move Forward on Diversity and Inclusion

<https://www.airforcemag.com/how-usaf-and-the-space-force-can-move-forward-on-diversity-and-inclusion/>

Practicing cultural humility encourages patients to use digital health

<https://health.mil/News/Articles/2021/03/03/Practicing-cultural-humility-encourages-patients-to-use-digital-health>

Study: PTSD raises suicide risk for those with prostate cancer

<https://blogs.va.gov/VAntage/85232/85232/>

Part of plan to curb Alaska suicides, Army installs blackout window shades at Fort Wainwright

<https://www.stripes.com/news/us/part-of-plan-to-curb-alaska-suicides-army-installs-blackout-window-shades-at-fort-wainwright-1.665155>

Women's health emerging priorities series highlights mental health

<https://health.mil/News/Articles/2021/03/04/Womens-health-emerging-priorities-series-highlights-mental-health>

Just One 6-Pack: NAS Pensacola Limits Alcohol Sales as Discipline Problems Increase

<https://www.military.com/daily-news/2021/03/05/just-one-6-pack-nas-pensacola-limits-alcohol-sales-discipline-problems-increase.html>

Service Dogs Better Than Emotional Support Dogs at Reducing PTSD Symptoms, Study Finds

<https://www.military.com/daily-news/2021/03/05/service-dogs-better-emotional-support-dogs-reducing-ptsd-symptoms-study-finds.html>

'Troubling new gap' based on gender, race and politics growing among military officers, study warns

<https://www.stripes.com/news/us/troubling-new-gap-based-on-gender-race-and-politics-growing-among-military-officers-study-warns-1.665070>

Social Workers are Essential

<https://www.pdhealth.mil/news/blog/social-workers-are-essential>

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**Resource of the Week: [Study on Effects of Sleep Deprivation on Readiness of Members of the Armed Forces](#)**

New, from the office of the Under Secretary of Defense for Personnel and Readiness:

Background

This report is in response to Section 749 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2020 (Public Law 116–92), which requires the Secretary of Defense (SecDef) to conduct a study of the effects of sleep

deprivation on the readiness of members of the Armed Forces and submit a report on the study results. Study requirements include: 1) a standardized definition of sleep deprivation; 2) an assessment of the prevalence of sleep deprivation on members of the Armed Forces related to circadian rhythm disturbances from crossing multiple time zones, mission related maladaptive sleep practices, uncomfortable or otherwise inhospitable sleeping environments, and the use of stimulants and hypnotics to support operational tempo; 3) an assessment of whether there may be a relationship between sleep deprivation and medical conditions such as traumatic brain injury (TBI), post-traumatic stress disorder (PTSD), and depression; and 4) recommendations on efforts to mitigate sleep deprivation, pursuant to study findings.

## Findings

### Definition:

Following a comprehensive literature review, for purposes of this study, the Department identified an empirically-derived definition of sleep deprivation germane to the examination of sleep deprivation on readiness and health promotion to inform the Department's prioritization of policy pertaining to sleep in the military context: Inadequate sleep that negatively impacts a Service member's military effectiveness, evidenced by a reduced ability to execute complex cognitive tasks, communicate effectively, quickly make appropriate decisions, maintain vigilance, and sustain a level of alertness required to carry out assigned duties.

### Prevalence of Sleep Deprivation:

Amongst active duty personnel, inadequate sleep appears to be more the rule than the exception. In general, rates of individuals sleeping less than seven hours per night in the military are roughly twice of those in the civilian population. The prevalence of sleep deprivation varies across the Military Services and occupations. Several mission-related factors contribute to inadequate sleep in Service members, including austere deployment and training environments, cross-time-zone travel and its impact on circadian rhythm, operational and occupational requirements such as operations tempo, and inhospitable sleep environments. Use of stimulants and hypnotics can mitigate operational impacts of sleep deprivation and promote sleep in inhospitable sleep environments, but such pharmaceutical interventions offer short-term solutions and are neither intended nor suitable for sustained implementation.

### Relationship with Other Conditions:

Sleep deprivation is a symptom of—and a contributing factor to—mental health

disorders and physical diseases, conditions, and syndromes. The presence of externally caused sleep deprivation may contribute to the development of PTSD, depressive disorders, and risk for TBI, and may exacerbate symptom severity in established cases. On the other hand, sleep deprivation can also be a sign or symptom of an underlying medical condition, such as depression, a side effect from medication or substance such as caffeine, or an endocrine disorder. The role of sleep deprivation as a contributing factor may be particularly important in relation to TBI, principally caused by accidents in the military population and more likely to occur when an individual is sleep deprived. Sleep deprivation substantially increases accident risk, which, in turn, increases the risk of TBI. Results of the comprehensive review of the impact of sleep deprivation on the readiness and health promotion of members of the Armed Forces are informing the Department's policy development.

<b>Table 2. Service members seeking medical care for sleep deprivation and related medical conditions</b>				
<b>CONDITION</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<b>SLEEP DEPRIVATION</b>				
Total Cases	2,267	1,863	2,374	2,350
Prevalence Estimate*	148.42	122.70	154.86	150.44
<b>INSUFFICIENT SLEEP SYNDROME</b>				
Total Cases	1,186	1,371	1,388	1,407
Prevalence Estimate*	77.65	90.30	90.54	90.07
<b>INSOMNIA</b>				
Total Cases	88,606	85,360	80,654	80,815
Prevalence Estimate*	5,801.01	5,621.92	5,261.32	5,173.66
<b>ANY CONDITION RELATED TO SLEEP DEPRIVATION</b>				
Total Cases	90,444	87,223	82,889	83,056
Prevalence Estimate*	5,921.34	5,744.62	5,407.11	5,317.13
*Cases per 100,000 Service members. Data retrieved from the MHS Management Analysis and Reporting Tool reflect medical transactions in both the purchased care and direct care systems across both inpatient and outpatient settings, wherein target diagnoses were recorded in any available diagnostic position.				

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