



Research Update -- October 7, 2021

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<https://doi.org/10.1097/TA.0000000000003133>

Long-term prescription opioid use among US military service members injured in combat.

Dalton, M. K., Manful, A., Jarman, M. P., Pisano, A. J., Learn, P. A., Koehlmoos, T. P., Weissman, J. S., Cooper, Z., & Schoenfeld, A. J.

Long-term prescription opioid use among US military service members injured in combat.

The Journal of Trauma and Acute Care Surgery
2021 Aug 1; 91(2S Suppl 2): S213-S220

Introduction:

During the Global War on Terrorism, many US Military service members sustained injuries with potentially long-lasting functional limitations and chronic pain. We sought to understand the patterns of prescription opioid use among service members injured in combat.

Methods:

We queried the Military Health System Data Repository to identify service members injured in combat between 2007 and 2011. Sociodemographics, injury characteristics, treatment information, and costs of care were abstracted for all eligible patients. We surveyed for prescription opioid utilization subsequent to hospital discharge and through 2018. Negative binomial regression was used to identify factors associated with cumulative prescription opioid use.

Results:

We identified 3,981 service members with combat-related injuries presenting during the study period. The median age was 24 years (interquartile range [IQR], 22-29 years), 98.5% were male, and the median follow-up was 3.3 years. During the study period, 98% (n = 3,910) of patients were prescribed opioids at least once and were prescribed opioids for a median of 29 days (IQR, 9-85 days) per patient-year of follow-up. While nearly all patients (96%; n = 3,157) discontinued use within 6 months, 91% (n = 2,882) were prescribed opioids again after initially discontinuing opioids. Following regression analysis, patients with preinjury opioid exposure, more severe injuries, blast injuries, and enlisted rank had higher cumulative opioid use. Patients who discontinued opioids within 6 months had an unadjusted median total health care cost of US \$97,800 (IQR,

US \$42,364-237,135) compared with US \$230,524 (IQR, US \$134,387-370,102) among those who did not discontinue opioids within 6 months ($p < 0.001$).

Conclusion:

Nearly all service members injured in combat were prescribed opioids during treatment, and the vast majority experienced multiple episodes of prescription opioid use. Only 4% of the population met the criteria for sustained prescription opioid use at 6 months following discharge. Early discontinuation may not translate to long-term opioid cessation in this population.

Level of evidence: Epidemiology study, level III.

<https://doi.org/10.1001/jamapsychiatry.2021.2669>

Effect of Pain Reprocessing Therapy vs Placebo and Usual Care for Patients With Chronic Back Pain: A Randomized Clinical Trial.

Ashar, Y. K., Gordon, A., Schubiner, H., Uipi, C., Knight, K., Anderson, Z., Carlisle, J., Polisky, L., Geuter, S., Flood, T. F., Kragel, P. A., Dimidjian, S., Lumley, M. A., & Wager, T. D.

JAMA Psychiatry
September 29, 2021

Importance:

Chronic back pain (CBP) is a leading cause of disability, and treatment is often ineffective. Approximately 85% of cases are primary CBP, for which peripheral etiology cannot be identified, and maintenance factors include fear, avoidance, and beliefs that pain indicates injury.

Objective:

To test whether a psychological treatment (pain reprocessing therapy [PRT]) aiming to shift patients' beliefs about the causes and threat value of pain provides substantial and durable pain relief from primary CBP and to investigate treatment mechanisms.

Design, setting, and participants:

This randomized clinical trial with longitudinal functional magnetic resonance imaging (fMRI) and 1-year follow-up assessment was conducted in a university research setting

from November 2017 to August 2018, with 1-year follow-up completed by November 2019. Clinical and fMRI data were analyzed from January 2019 to August 2020. The study compared PRT with an open-label placebo treatment and with usual care in a community sample.

Interventions:

Participants randomized to PRT participated in 1 telehealth session with a physician and 8 psychological treatment sessions over 4 weeks. Treatment aimed to help patients reconceptualize their pain as due to nondangerous brain activity rather than peripheral tissue injury, using a combination of cognitive, somatic, and exposure-based techniques. Participants randomized to placebo received an open-label subcutaneous saline injection in the back; participants randomized to usual care continued their routine, ongoing care.

Main outcomes and measures:

One-week mean back pain intensity score (0 to 10) at posttreatment, pain beliefs, and fMRI measures of evoked pain and resting connectivity.

Results:

At baseline, 151 adults (54% female; mean [SD] age, 41.1 [15.6] years) reported mean (SD) pain of low to moderate severity (mean [SD] pain intensity, 4.10 [1.26] of 10; mean [SD] disability, 23.34 [10.12] of 100) and mean (SD) pain duration of 10.0 (8.9) years. Large group differences in pain were observed at posttreatment, with a mean (SD) pain score of 1.18 (1.24) in the PRT group, 2.84 (1.64) in the placebo group, and 3.13 (1.45) in the usual care group. Hedges g was -1.14 for PRT vs placebo and -1.74 for PRT vs usual care ($P < .001$). Of 151 total participants, 33 of 50 participants (66%) randomized to PRT were pain-free or nearly pain-free at posttreatment (reporting a pain intensity score of 0 or 1 of 10), compared with 10 of 51 participants (20%) randomized to placebo and 5 of 50 participants (10%) randomized to usual care. Treatment effects were maintained at 1-year follow-up, with a mean (SD) pain score of 1.51 (1.59) in the PRT group, 2.79 (1.78) in the placebo group, and 3.00 (1.77) in the usual care group. Hedges g was -0.70 for PRT vs placebo ($P = .001$) and -1.05 for PRT vs usual care ($P < .001$) at 1-year follow-up. Longitudinal fMRI showed (1) reduced responses to evoked back pain in the anterior midcingulate and the anterior prefrontal cortex for PRT vs placebo; (2) reduced responses in the anterior insula for PRT vs usual care; (3) increased resting connectivity from the anterior prefrontal cortex and the anterior insula to the primary somatosensory cortex for PRT vs both control groups; and (4) increased connectivity from the anterior midcingulate to the precuneus for PRT vs usual care.

Conclusions and relevance:

Psychological treatment centered on changing patients' beliefs about the causes and threat value of pain may provide substantial and durable pain relief for people with CBP.

<https://www.cureus.com/abstracts/641-the-role-of-readiness-to-change-to-level-of-depression-in-pain-management>

The role of readiness to change to level of depression in pain management.

Shawn Rutledge

Cureus Journal of Medical Science

Published: September 07, 2021

Background:

Patients suffering from chronic pain often deal with other comorbid conditions such as depression that could significantly affect functional ability and recovery. The purpose of this present study is to identify the role that depression plays, if any, on the level of readiness to change towards in a pain management program. It is hypothesized that as a person shows more symptoms of Major Depression, they will be less likely to be engaged in active change in their pain management program.

Methods:

The sample consisted of a total of 32 subjects (male=10, Female=22) with an average age of 44.3 years. The subjects were all given the Pain Stages of Change Questionnaire (PSOCQ) as well as the Beck Depression Inventory-II (BDI-II) upon admission to the pain management program. A simple correlational analysis was performed, and analysis of the Pearson correlations noted that the direction of the correlations was as expected.

Results:

The analysis showed no statistically significant relationship with score on the BDI-II and the varying levels of readiness to change based on the PSOCQ. This finding does not support the initial hypothesis regarding depression as having an impact on the person's readiness to make changes to manage chronic pain.

Conclusion:

Overall, the results are noted as what would be expected in determining the levels of

change and the role depression has on a person's ability to engage in treatment. Limitations noted in this study are the sample size, it is observed, while the sample size showed the direction that the correlations, it is possible that a large sample would yield more definitive results and show the role that depressive symptoms have in a person's ability to fully engage or make the cognitive and/or behavioral changes required in a chronic pain management treatment program.

<https://doi.org/10.1080/08995605.2021.1962181>

Military and Veteran help-seeking behaviors: Role of mental health stigma and leadership.

James J. McGuffin, Shelley A. Riggs, Emily M. Raiche & Daniel H. Romero

Military Psychology

Volume 33, 2021 - Issue 5

Published online: 24 Sep 2021

Mental health stigma has been identified as a barrier to help-seeking in the United States. This may be particularly salient for military personnel who tend to report higher mental health stigma than the general population. Evidence suggests that both supportive and destructive military leadership are related to service members' attitudes toward seeking help. In the current study, a sample of military service members and Veterans (N = 232) completed an online survey regarding mental health stigma, previous experiences with military leaders, and mental health help-seeking behaviors. Findings indicated that destructive and supportive leadership experiences were significantly related to self stigma, public stigma, and help-seeking. Military members and Veterans who experienced destructive leadership were more likely to report internalized mental health stigma, which decreased the likelihood of seeking help. Supportive leadership, on the other hand, was associated with greater likelihood of seeking help for mental health concerns, and was indirectly related to help-seeking through lower self-stigma. Findings suggest that the military leadership style plays a significant role in service members' and Veterans' willingness to seek assistance for mental health concerns.

<https://doi.org/10.1007/s10943-021-01227-4>

Moral Injury and the Absurd: The suffering of moral paradox.

Fleming W. H.

Journal of Religion and Health
2021 Oct; 60(5): 3012-3033

Drawing upon qualitative and construct validity evidence within MI research and the oral histories of combat-exposed Veterans, this paper explores the role of moral paradox (MP) as a precondition of moral injury (MI). Research is recommended to clearly delineate MP as a causative factor leading to more intractable cases of MI in the definitional literature, beyond the recognized impact of perpetration and betrayal-based conditions. Veteran stories collected during the normal course of providing spiritual care to combat-exposed Veterans and used by permission will provide insight into the theoretical concepts and interrelations of MP; proposed here as: circumstances in which moral obligations and/or ethical values come into conflict, forcing a choice between sides, none of which can be honored without violating the other. Acquainted with religious traditions that elucidate the perplexity and liberating effects of paradox, the work of Chaplains will also be recommended to address the problem of MP in wartime situations, highlighting the efficacy of acceptance-based spiritual interventions and therapeutic programs. Psychological and spiritual interventions that facilitate self-transcendence and non-dual awareness through experiential acceptance and a subscale measuring paradox-induced injury will be recommended for future research as well.

<https://doi.org/10.1017/S1754470X21000192>

A cognitive behavioural therapy (CBT) approach for working with strong feelings of guilt after traumatic events.

Young, K., Chessell, Z., Chisholm, A., Brady, F., Akbar, S., Vann, M., Rouf, K., Dixon, L.

The Cognitive Behaviour Therapist

Published online by Cambridge University Press: 09 September 2021

This article outlines a cognitive behavioural therapy (CBT) approach to treating feelings of guilt and aims to be a practical 'how to' guide for therapists. The therapeutic techniques were developed in the context of working with clients with a diagnosis of post-traumatic stress disorder (PTSD); however, the ideas can also be used when working with clients who do not meet a diagnosis of PTSD but have experienced trauma or adversity and feel guilty. The techniques in this article are therefore widely applicable: to veterans, refugees, survivors of abuse, the bereaved, and healthcare professionals affected by COVID-19, amongst others. We consider how to assess and formulate feelings of guilt and suggest multiple cognitive and imagery strategies which can be used to reduce feelings of guilt. When working with clients with a diagnosis of PTSD, it is important to establish whether the guilt was first experienced during the traumatic event (peri-traumatically) or after the traumatic event (post-traumatically). If the guilt is peri-traumatic, following cognitive work, this new information may then need to be integrated into the traumatic memory during reliving.

<https://doi.org/10.1097/HTR.0000000000000711>

Risk Factors Associated With the Prescription of Opioids Among Service Members Following a First Mild Traumatic Brain Injury.

Adams, Rachel Sayko; Hoover, Peter; Johnson, Dara; Wu, Tim; French, Louis M.; Caban, Jesus

Journal of Head Trauma Rehabilitation

Volume 36, Number 5, 22 September/October 2021, pp. 345-353(9)

Objective:

To evaluate factors impacting opioid receipt among active-duty service members (SMs) following a first mild traumatic brain injury (mTBI).

Setting:

Active-duty SMs receiving care within the Military Health System.

Participants:

In total, 14 757 SMs who have sustained an initial mTBI, as documented within electronic health records (EHRs), between 2016 and 2017.

Design:

A retrospective analysis of EHR metadata.

Main Measures:

Multivariable logistic regression assessed factors impacting opioid receipt and initiation. Factors include demographics, military characteristics, and preexisting clinical conditions, including prior opioid prescription.

Results:

Of the sample population, 33.4% (n = 4927) were prescribed opioids after their initial mTBI, of which, 60.6% (n = 2985) received opioids for the first time following injury. Significant risk factors associated with the increased probability of opioid receipt included age, gender, and preexisting behavioral health and musculoskeletal conditions. Military characteristics also exhibited changes in the probability of opioid receipt, both among initiation and new prescription. No changes were observed among race, nor among those with preexisting headaches or migraines.

Conclusion:

Despite concerns about the negative impact on recovery, the prescribing of opioids is common in this population of active-duty SMs first diagnosed with an mTBI. As several demographic and preexisting health conditions are factors in the receipt of opioids post-mTBI, the entire medical history of these patients should be considered prior to prescription. Understanding these factors may further inform policy for opioid use in the Military Health System.

<https://doi.org/10.1037/tra0001058>

The association of self-reported romantic relationship satisfaction and anhedonia symptoms secondary to posttraumatic stress among trauma-exposed male service members/veterans.

Blais, R. K.

Psychological Trauma: Theory, Research, Practice, and Policy
Advance online publication

Objective.

Higher posttraumatic stress disorder (PTSD) symptoms are associated with poorer

romantic relationship satisfaction in military samples. Studies have examined PTSD symptom clusters and their association with relationship satisfaction, but these studies are limited to the pre-Diagnostic and Statistical Manual (DSM)-5 PTSD models or samples of women. The current study explored the best fitting model of PTSD using contemporary symptoms and examined the association of symptom clusters and relationship satisfaction in a sample of partnered male service members/veterans who reported exposure to a probable Criterion A event.

Method.

Factor analyses of 6 competing PTSD models were compared using confirmatory factor analysis in a sample of 499 men. Path analysis was then used to examine which symptom clusters were uniquely associated with relationship satisfaction after accounting for covariates in a subsample of 217 men who reported probable Criterion A exposure.

Results.

The Anhedonia and Hybrid Models had the best fit to the data in both the larger sample and subsample of men reporting probable trauma exposure. Models had comparable model fit, thus symptom clusters from both models were examined as predictors of relationship satisfaction in 2 separate analyses adjusted for covariates. In both analyses, only higher anhedonia symptoms were associated with lower romantic relationship satisfaction.

Conclusions.

Data was cross-sectional so causality cannot be inferred, but it appears that poorer relationship satisfaction is more common when symptoms of anhedonia are high. Interventions to improve relationship satisfaction among those reporting posttraumatic stress symptoms may be most effective if they focus on reducing anhedonia. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

<https://doi.org/10.1037/tra0001108>

A review of the inclusion of ethnoracial groups in empirically supported posttraumatic stress disorder treatment research.

Grau, P. P., Kusch, M. M., Williams, M. T., Loyo, K. T., Zhang, X., Warner, R. C., & Wetterneck, C. T.

Objective:

Empirically supported treatments (ESTs) have been criticized for lack of ethnoracial representation, which may limit the generalizability of findings for non-White patients. This study assessed ethnoracial representation in United States-based randomized controlled trials (RCTs) for three evidence-based treatments for posttraumatic stress disorder (PTSD)—Prolonged Exposure (PE), Cognitive Processing Therapy (CPT), and Eye-Movement Desensitization and Reprocessing (EMDR).

Method:

Representation was measured by explicit inclusion of people of color in published PTSD RCTs. Follow-up emails were sent to corresponding authors if full demographic information was not included in the reviewed manuscripts. Information concerning participant remuneration was collected for descriptive purposes.

Results:

All three treatment modalities reported White participants as the majority in their sample. PE and CPT trials reported similar levels of ethnoracial diversity, while EMDR efficacy studies reported the least ethnoracial diversity. Across the reviewed studies, with few exceptions, we found low numbers of non-White participants in the majority of reviewed studies, which was compounded by poor or unclear methods of reporting ethnoracial information.

Conclusions:

This study demonstrates that the ESTs for PTSD are not adequately representative of the majority of non-White participants. Future RCTs should place a stronger emphasis on broad ethnoracial diversity in study participants to improve generalizability of findings. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

<https://doi.org/10.1037/ser0000577>

Table for two: Perceptions of social support from participants in a weight management intervention for veterans with PTSD and overweight or obesity.

Robustelli, B. L., Campbell, S. B., Greene, P. A., Sayre, G. G., Sulayman, N., & Hoerster, K. D.

Individuals with posttraumatic stress disorder (PTSD) are at an increased risk of being classified as overweight or with obesity in part due to PTSD symptoms (e.g., sleep disturbance and social isolation) interfering with activity and healthy eating. MOVE!+UP is a 16-week behavioral weight management program, tailored to address such barriers for people with PTSD, by combining evidence-based weight loss education and support with cognitive behavior therapy skills to reduce PTSD symptom-based weight management barriers. This qualitative study examined veterans' (n = 37) perceptions of social support relevant to weight management, health behaviors, and mental health while participating in an uncontrolled pilot of MOVE!+UP. Template analysis of transcripts from 1-hr semistructured qualitative interviews identified four main categories of participant responses. Participants described positive aspects, particularly cohesiveness around a shared veteran identity, feeling less alone, accountability, and having others eat healthier and exercise with them. Conversely, relationship-based barriers included other participants' poor MOVE!+UP group session attendance and engagement, and loved ones' encouragement of making unhealthy choices. Many described having limited relationships or trouble accessing available support. Finally, PTSD symptoms were a significant barrier to utilizing social support to facilitate weight loss. Findings suggest future behavioral weight management programs should recruit members with similar backgrounds to capitalize on shared experience, encourage consistent attendance and meaningful participation, deliver education about how to leverage social support from others outside the program, and address mental health symptoms that impede social support and healthy lifestyles. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

<https://doi.org/10.1037/pla0000168>

Serving together: Play therapy to foster attachment for grieving military families.

Villarreal-Davis, C. E., Watts-Figueroa, C. M., & Turner, R.

International Journal of Play Therapy
2021; 30(4), 231–243

Military-connected children are forced to manage the unique challenges that characterize military life. These experiences include frequent relocations, deployments, recovery from combat, and sometimes the death or injury of their caregiver. Although military-connected children are known to be very resilient, they are faced with the difficult task of adjusting to frequent changes and coping with experiences of grief and loss, particularly in the case of combat-related death. In addition, military-connected children face constant disruptions of attachment bonds, which can complicate the grief process. In order to promote a secure attachment after a combat-related loss, military-connected children would benefit from a family-based and attachment-based play therapy approach that centers on rebuilding the parent–child relationship, repairing disruptions and ruptures in parental attachment, and restoring attachment bonds. Child–Parent Relationship Therapy (CPRT) is one approach that focuses on repairing the parent–child relationship by using the parent as the therapeutic agent of change, hope, and healing. Through CPRT, military-connected children can repair and restore disruptions and ruptures of attachment. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

<https://doi.org/10.1037/tra0001104>

Diminished responses to external threat as a possible link between chronic/severe posttraumatic stress disorder and suicide.

Albanese, B. J., Preston, T. J., Capron, D. W., & McTeague, L.

Psychological Trauma: Theory, Research, Practice, and Policy
Advance online publication

Objective:

Posttraumatic stress disorder (PTSD) is linked with suicide attempt history, but the neurobehavioral mechanisms explaining this association are unclear. The narrative review presented here proposes that blunted neurobehavioral responses to acute external threat represent one pathway via which chronic, severe, and/or multitrauma PTSD may increase risk for a suicide attempt among those with suicidal desire.

Method:

A brief review of theoretical perspectives on diminished responding to external threats in suicide and PTSD is provided (Part 1) followed by the presentation of existing evidence using neurophysiological (Part 2), startle reflex and autonomic (Part 3), and behavioral

(Part 4) measures of threat reactivity among individuals with past suicide attempts and PTSD.

Results:

Findings generally support the proposal that blunted neurobehavioral responses to threat may link chronic and severe PTSD with suicide, though more evidence from all levels of analysis is needed. Additional questions also remain, including the relative influences of multiple traumatic events and PTSD severity as well as the directionality of the associations among PTSD, suicide, and blunted threat responses.

Conclusions:

Blunted neurobehavioral responses to external threats appear to be one plausible mechanism via which chronic, severe, and/or multitrauma PTSD may elevate risk for a suicide attempt when combined with suicidal desire. Future research should seek to use intensive longitudinal designs to evaluate the directionality of relations between PTSD, suicide, and threat reactivity across multiple levels of analysis, including the behavioral freeze response. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

<https://doi.org/10.1016/j.amepre.2021.06.014>

Legal System Involvement and Opioid-Related Overdose Mortality in U.S. Department of Veterans Affairs Patients.

AK Finlay, KM Palframan, M Stimmel, JF McCarthy

American Journal of Preventive Medicine

Available online 12 September 2021

Introduction

Opioid-related overdose risks are elevated after incarceration. The rates of opioid-related overdose mortality have risen in recent years, including among Veterans Health Administration patients. To inform Veteran overdose prevention, this study evaluates whether opioid-related overdose risks differ for Veterans Health Administration patients with versus those without indicators of legal system involvement.

Methods

This retrospective national cohort study, conducted in 2019–2021, used Veterans Health Administration electronic health records and death certificate data from the

Department of Veterans Affairs/Department of Defense Mortality Data Repository to examine opioid-related overdose mortality from January 1, 2013 through December 31, 2017. The cohort included 5,390,902 Veterans with Veterans Health Administration inpatient or outpatient encounters in 2012 who were alive as of January 1, 2013, of whom 32,284 (0.60%) patients had legal system involvement in 2012, indicated by Veterans Justice Programs outpatient encounters. Cox proportional hazards regression models assessed the associations between legal involvement and risk of opioid-related overdose mortality.

Results

There were 4,670 opioid-related overdose deaths, including 295 (6.31%) among legal-involved Veterans. Veterans with legal involvement had a higher opioid-related overdose mortality rate per 100,000 person-years (191.22, 95% CI=169.40, 213.04 vs 17.76, 95% CI=17.23, 18.29, $p<0.001$) and an elevated risk of opioid-related overdose mortality (adjusted hazard ratio=1.38, 95% CI=1.22, 1.57, $p<0.001$) compared with those without.

Conclusions

Among Veterans receiving Veterans Health Administration care in 2012, documented legal system involvement was associated with an increased risk of opioid-related overdose mortality. Targeting overdose education and naloxone distribution programs and integrating opioid overdose prevention efforts into mental health care may reduce opioid overdose deaths among Veterans with legal involvement.

<https://doi.org/10.1080/10550887.2021.1972747>

Psychological well-being and alcohol misuse among community-based veterans: results from the Veterans' Health Study.

Richard E. Adams, Joseph A. Boscarino, Stuart N. Hoffman, Thomas G. Urosevich, H. Lester Kirchner, Joseph J. Boscarino, Ryan J. Dugan, Carrie A. Withey & Charles R. Figley

Journal of Addictive Diseases
Published online: 14 Sep 2021

Background

Maladaptive drinking is an increasing concern among military policy makers and

healthcare providers. The goal of this study was to assess how social and psychological factors relate to alcohol problems among post-deployed US veterans and how problematic drinking is associated with well-being.

Methods

Data were collected via a telephone survey from a random sample of veterans receiving their healthcare from a large non-VA hospital system in central Pennsylvania (N = 1730). Interviewers inquired about participants' current alcohol consumption, using the CAGE and AUDIT-C scales, and health-related outcomes (general psychological distress, major depression, and self-reported health status). Analyses included demographic, military and nonmilitary stressful events, use of alcohol or drugs to cope post-deployment, use of psychiatric services, and personality characteristics as independent variables. Our sample was 95% male, 96% White, and had a mean age of 59 years old (SD = 12 years).

Results

Analyses included demographic, military and nonmilitary stressful events, use of alcohol or drugs to cope post-deployment, use of psychiatric services, and personality characteristics as independent variables. Our sample was 95% male, 96% White, and had a mean age of 59 years old (SD = 12 years). Analyses for our drinking measures show that those who used drugs or alcohol to cope post-deployment were more likely to be problematic drinkers, while positive personality characteristics such as agreeableness and conscientiousness were related to fewer drinking problems. Multivariate logistic regressions for our well-being measures found that alcohol misuse was not related to distress or depression, but that a positive score on the AUDIT-C was associated with a lower likelihood of poor self-rated health. Using alcohol or drugs to cope was related to higher distress.

Discussion

We conclude that service providers might consider using post-deployment AUDIT-C and the drugs and alcohol coping questions when screening for possible alcohol and mental health problems among veterans.

<https://doi.org/10.1016/j.bbih.2021.100346>

Characterization of the gut microbiota among Veterans with unique military-related exposures and high prevalence of chronic health conditions: A United States-Veteran Microbiome Project (US-VMP) study.

Maggie A. Stanislawski, Christopher E. Stamper, Kelly A. Stearns-Yoder, Andrew J. Hoisington, ... Lisa A. Brenner

Brain, Behavior, & Immunity - Health
Volume 18, December 2021, 100346

Highlights

- Mental health disorders/symptoms were associated with gut microbiome composition.
- Several medication classes were associated with gut microbiome characteristics.
- Military deployments were associated with decreased abundance of *Bifidobacterium*.
- Most military-related exposures were not related to microbiome characteristics.

Abstract

The gut microbiome is impacted by environmental exposures and has been implicated in many physical and mental health conditions, including anxiety disorders, affective disorders, and trauma- and stressor-related disorders such as posttraumatic stress disorder (PTSD). United States (US) military Veterans are a unique population in that their military-related exposures can have consequences for both physical and mental health, but the gut microbiome of this population has been understudied. In this publication, we describe exposures, health conditions, and medication use of Veterans in the US Veteran Microbiome Project (US-VMP) and examine the associations between these characteristics and the gut microbiota. This cohort included 331 US Veterans seeking healthcare with the Veterans Health Administration who were 83% male with an average (\pm SD) age of 47.6 ± 13.4 years. The cohort displayed a high prevalence of PTSD (49.8%) and history of traumatic brain injuries (76.1%), and high current use of prescription medications (74.9%) to treat various acute and chronic conditions. We observed significant associations between the gut microbiota composition and gastroenteritis, peripheral vascular disease (PVD), bipolar disorders, symptoms of severe depression based on the Beck Depression Inventory, stimulant and opioid use disorders, beta-blockers, serotonin and norepinephrine reuptake inhibitor antidepressants, diabetes medications, and proton pump inhibitors. Many of the Veteran characteristics examined were associated with altered relative abundances of specific taxa. We found that PVD and cardiovascular disease were associated with lower microbiota diversity in the gut (i.e., α -diversity), while supplemental vitamin use was associated with higher α -diversity. Our study contributes novel insights as to whether the unique exposures of Veterans in this cohort correlate with gut microbiota characteristics and, in line with previous findings with other population-level studies of

the microbiome, confirms associations between numerous health conditions and medications with the gut microbiome.

<https://doi.org/10.1093/milmed/usab379>

Military Exposures Predict Mental Health Symptoms in Explosives Personnel but Not Always as Expected.

Nikki E Barczak-Scarboro, PhD, Lisa M Hernández, MS, Marcus K Taylor, PhD

Military Medicine

Published: 11 September 2021

Objective

The aim of this study was to determine the unique and combined associations of various military stress exposures with positive and negative mental health symptoms in active duty service members.

Materials and Methods

We investigated 87 male U.S. Navy Explosive Ordnance Disposal (EOD) technicians (age $M \pm SE$, range 33.7 ± 0.6 , 22-47 years). Those who endorsed a positive traumatic brain injury diagnosis were excluded to eliminate the confounding effects on mental health symptoms. Using a survey platform on a computer tablet, EOD technicians self-reported combat exposure, deployment frequency (total number of deployments), blast exposure (vehicle crash/blast or 50-m blast involvement), depression, anxiety, posttraumatic stress, perceived stress, and life satisfaction during an in-person laboratory session.

Results

When controlling for other military stressors, EOD technicians with previous involvement in a vehicle crash/blast endorsed worse mental health than their nonexposed counterparts. The interactions of vehicle crash/blast with deployment frequency and combat exposure had moderate effect sizes, and combat and deployment exposures demonstrated protective, rather than catalytic, effects on negative mental health scores.

Conclusions

Military stressors may adversely influence self-reported symptoms of negative mental health, but deployment experience and combat exposure may confer stress inoculation.

<https://doi.org/10.1080/13854046.2021.1974566>

Mechanisms through which executive dysfunction influences suicidal ideation in combat-exposed Iraq and Afghanistan veterans.

Laura D. Crocker, Sarah M. Jurick, Victoria C. Merritt, Amber V. Keller, Samantha N. Hoffman, Delaney K. Davey & Amy J. Jak

The Clinical Neuropsychologist

Published online: 15 Sep 2021

Objective:

Executive dysfunction has previously been associated with suicidality, but it remains unclear how deficits in executive functioning contribute to increased suicidal thoughts and behaviors. Although it has been proposed that poorer executive functioning leads to difficulty generating and implementing appropriate coping strategies to regulate distress and inhibit suicidal thoughts and behaviors, studies have not systematically examined these relationships. Therefore, the present study examined various hypotheses to elucidate the mechanisms through which executive dysfunction influences suicidal ideation (SI) in combat-exposed Iraq/Afghanistan veterans.

Method:

Veterans who endorsed SI were compared to those who denied SI on demographic and diagnostic variables and measures of neuropsychological functioning, psychological symptoms, coping styles, and combat experiences. Serial mediation models were tested to examine mechanistic relationships among executive functioning, psychological distress, coping, and SI.

Results:

Those who endorsed SI had worse executive functioning, greater psychological distress, and greater avoidant coping relative to those who denied SI. Serial mediation model testing indicated a significant indirect path, such that executive dysfunction increased psychological distress, which in turn increased avoidant coping, leading to SI.

Conclusions:

Findings support and extend previous hypotheses regarding how executive functioning contributes to increased risk of suicidality via increased distress and avoidant coping. Intervention efforts focused on reducing suicidality may benefit from techniques that enhance executive functioning (e.g. computerized training, cognitive rehabilitation) and in turn reduce distress prior to targeting coping strategies.

<https://doi.org/10.1080/02699052.2021.1959058>

Health symptoms after war zone deployment-related mild traumatic brain injury: contributions of mental disorders and lifetime brain injuries.

McDonald, S. D., Walker, W. C., Cusack, S. E., Yoash-Gantz, R. E., Pickett, T. C., Cifu, D. X., Mid-Atlantic Mirecc Workgroup, V., & Tupler, L. A.

Brain Injury

2021 Sep 20; 1-11

Primary objective:

To gain a better understanding of the complex relationship between combat deployment-related mild traumatic brain injury (mTBI) and persistent post-concussive symptoms (PPCSs), taking into consideration a wide range of potentially mediating and confounding factors.

Research design:

Cross-sectional.

Methods and procedures:

Subjects were 613 U. S. military Veterans and Service Members who served during operations Enduring Freedom, Iraqi Freedom, or New Dawn (OEF/OIF/OND) and completed a structured interview of mental disorders and a battery of questionnaires. Hierarchical binary logistic regression analyses were used to test the hypotheses.

Main outcomes and results:

After accounting for mental disorders, lifetime mTBIs outside of OEF/OIF/OND deployment, medical conditions, and injury/demographic characteristics, deployment-related mTBI continued to be associated with several PPCSs (headaches, sleep disturbance, and difficulty making decisions). Deployment-related mTBI was also

associated with two symptoms not normally associated with mTBI (nausea/upset stomach and numbness/tingling).

Conclusions:

After adjusting for a wide range of factors, OEF/OIF/OND deployment-related mTBI was still associated with PPCSs on average 10 years after the injury. These findings suggest that mTBI sustained during OEF/OIF/OND deployment may have enduring negative health effects. More studies are needed that prospectively and longitudinally track health and mental health outcomes after TBI.

<https://doi.org/10.1136/bmjopen-2021-049651>

What work-related exposures are associated with post-traumatic stress disorder? A systematic review with meta-analysis.

Coenen, P., & van der Molen, H. F.

BMJ Open

2021 Aug 25; 11(8): e049651

Objectives:

Although there is evidence that work-related exposures cause post-traumatic stress disorder (PTSD), there are few quantitative studies assessing the degree to which these factors contribute to PTSD. This systematic review with meta-analysis identified work-related exposures associated with PTSD, and quantified their contribution to this disorder.

Methods:

We searched Medline, PsycINFO, Embase, PILOTS and Web of Science (2005-10 September 2019) for longitudinal studies on work-related exposures and PTSD. We described included articles, and conducted meta-analyses for exposures with sufficient homogeneous information. We performed subgroup analyses for risk of bias, study design and PTSD ascertainment. We assessed evidence quality using Grades of Recommendations, Assessment, Development and Evaluation, and estimated population attributable fractions.

Results:

After screening 8590 records, we selected 33 studies (n=5 719 236). From what was

moderate quality evidence at best, we identified various work-related exposures that were associated with PTSD, mainly involving individuals in the military and first responder (eg, police or fire brigade) occupations. These exposures included the number of army deployments (OR: 1.15 (95% CI 1.14 to 1.16)), combat exposure (OR 1.89 (95% CI 1.46 to 2.45)), army deployment (OR 1.79 (95% CI 1.45 to 2.21)) and confrontation with death (OR 1.63 (95% CI 1.41 to 1.90)). Effects were robust across subgroups and exposures attributed modestly (7%-34%) to PTSD. We identified additional exposures in other occupations, including life threats, being present during an attack, and hearing about a colleague's trauma.

Conclusions:

We identified various work-related exposures associated with PTSD and quantified their contribution. While exposure assessment, PTSD ascertainment and inconsistency may have biased our findings, our data are of importance for development of preventive interventions and occupational health guidelines.

<https://doi.org/10.1016/j.addbeh.2021.107081>

The buffering role of higher romantic relationship satisfaction on the association of hazardous drinking with PTSD and depression symptoms among female military service members/veterans.

Blais, R. K., Hess, R. A., & Serang, S.

Addictive Behaviors

2021 Dec; 123: 107081

Studies show that more positive relationship satisfaction can mitigate the effects of posttraumatic stress disorder (PTSD) and depression severity on hazardous drinking in military samples. However, past studies were not circumscribed to female service members/veterans (SM/V), who represent the fastest growing demographic in the military. Moreover, studies did not examine moderators of specific symptom clusters of PTSD and depression with hazardous drinking. Indeed, recent studies have shown that the more depressive and cognitive clusters are associated with greater dysfunction. The current study extended this literature in a convenience sample of 584 female SM/V who completed self-report measures of hazardous drinking, PTSD, depression, and relationship satisfaction. PTSD or depression severity, relationship satisfaction, and their interaction, were examined as correlates of hazardous drinking after accounting for

relationship, demographic, and military characteristics. For both overall PTSD and depression severity, higher relationship satisfaction weakened their association with hazardous drinking. Such results were consistent when global scores were replaced with PTSD-related negative alterations in cognitions and mood and somatic depression symptom clusters, but not for PTSD-related dysphoric arousal, anhedonia, or non-somatic depression symptom clusters. Findings suggest that to lessen the association of PTSD or depressive symptoms with problematic drinking, interventions aimed at improving relationship satisfaction may be worth considering among women in relationships. Moreover, symptom cluster analyses show that the cognitive and depressive components of PTSD, as well as the physical symptoms of depression, are most problematic, pinpointing specific areas of function on which to intervene.

<https://doi.org/10.1037/tra0001115>

Consultation competencies in prolonged exposure therapy for posttraumatic stress disorder.

Burton, M. S., Sherrill, A. M., Zwiebach, L. C., Fenlon, E. E., Rauch, S. A. M., & Rothbaum, B. O.

Psychological Trauma: Theory, Research, Practice, and Policy
Advance online publication

Introduction:

The Emory University Prolonged Exposure (PE) Consultant Training Program seeks to develop a national network of competent PE consultants. Comprehensive training in empirically supported treatment (EST), such as PE, includes a didactic training followed by a period of experiential learning through consultation during real-world clinical practice (Karlin & Cross, 2014). Expert consultants are needed to meet demand as ESTs are disseminated.

Method:

The Emory program has developed a training model to develop 18 consultation skills within five competency domains: the consultation relationship, general psychotherapy skills, PE-specific skills, trainee barriers to delivery, and implementation.

Results:

The current article outlines these domains and discusses their theoretical background

and applied value for PE consultant training, drawing on examples from the Emory program.

Discussion:

Just as manualizing therapy has allowed for EST dissemination, the operationalizing of consultation competencies can provide a first step in disseminating evidence-based consultation practice. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

<https://doi.org/10.4088/JCP.21br13951>

Firearm Storage Practices Among Military Service Members With Suspected Traumatic Brain Injury.

Stanley IH, Marx BP, Keane TM, Anestis MD

Journal of Clinical Psychiatry

Published online: September 14, 2021

The prevalence of suicide among US military service members has increased markedly, and most military suicides (60%–70%) are enacted with a firearm.¹ One suicide risk factor relevant to service members is traumatic brain injury (TBI).² Strikingly, the US Centers for Disease Control and Prevention found that 97% of all TBI-related suicides (2000–2017) were enacted with a firearm.³ However, the reasons for this high proportion of firearm-enacted suicides are unknown. One potential mechanism is greater unsafe storage practices among individuals with a TBI. Unsafe firearm storage practices (eg, loaded, non-secure location) are associated with increased suicide risk.⁴ In this cross-sectional secondary data analysis,⁵ we examined if service members with a suspected TBI, compared with those without, are more likely to store their firearms unsafely.

METHODS

Participants were 378 firearm-owning US National Guard personnel (mean [SD] age = 27.4 [8.4] years; 91.0% male; 74.6% white; 68.0% deployment history; 62.7% active duty; 97.1% Army). A convenience sample was recruited from a joint forces training center in the southern US; units were drawn from across the country, and some were actively demobilizing from deployment. Participants provided written informed consent. Study procedures were approved by the university's institutional review board

and the Department of Defense Human Research Protection Office, and the data were collected from November 2013–June 2014.

We assessed suspected TBI via the self-report Traumatic Brain Injury-4 (TBI-4), which has moderately high specificity (0.77) against a structured clinical interview for establishing a TBI diagnosis.⁶ Per recommendations,⁶ we classified service members as having a suspected TBI if they responded affirmatively to item 2 (“Have you ever been knocked out or unconscious following an accident or injury?”). We examined the TBI-4 summed score ($\alpha = .77$) as an index of the severity of a suspected TBI history. We assessed firearm storage practices via a structured self-report questionnaire and classified firearms as stored (1) unsafely (ie, loaded, non-secure location), (2) safely (ie, unloaded, secure location), or (3) mixed-secureness (ie, loaded, secure location or unloaded, non-secure location). Participants who owned more than one firearm were instructed to report on their least secure firearm. We used χ^2 tests of independence and logistic regression analyses.

RESULTS

Overall, 27.0% ($n = 102$) of firearm-owning service members screened positive for a suspected TBI. Service members with a suspected TBI, compared with those without, were significantly more likely to report storing their firearms unsafely (26.5% vs 14.9%; $\chi^2_{21} = 6.81$, $P = .009$). By contrast, service members with a suspected TBI were less likely than those without a suspected TBI to store their firearms safely (35.3% vs 48.9%; $\chi^2_{21} = 5.58$, $P = .018$). The severity of a suspected TBI history was positively associated with storing a firearm unsafely (OR = 2.06, 95% CI = 1.19–3.58, $P = .010$) and negatively associated with storing a firearm safely (OR = 0.57, 95% CI = 0.36–0.91, $P = .019$). There were no significant differences in mixed-secureness of firearms regarding suspected TBI status or severity of suspected TBI history (P s > .05).

DISCUSSION

Findings of this initial investigation suggest that suspected TBI is associated with unsafe firearm storage practices among military personnel. Neuropsychiatric sequelae of TBI, such as impaired executive functioning and attendant impulsivity, may present challenges for the initiation and maintenance of safe firearm storage practices. Other potential confounders include psychiatric comorbidity associated with unsafe firearm storage practices (eg, posttraumatic stress disorder⁷) and sociodemographic factors (eg, education level). Limitations of this study include a lack of examination of confounders, reliance on a brief self-report TBI screener, use of a non-representative sample, and cross-sectional design. Pending future studies that address these limitations, interventions that promote secure firearm storage practices may need to be attentive to the unique needs of individuals with a TBI.

Links of Interest

Your Pain on a Scale of 1-10? Check Out a New DOD Way to Evaluate Pain

<https://health.mil/News/Articles/2021/09/17/DVPRS-pain-scale>

Prevent Opioid Misuse and Overdose with These Safety Tips

<https://health.mil/News/Gallery/Videos/2021/09/01/Prevent-Opioid-Misuse-and-Overdose-with-These-Safety-Types>

Back from the Brink: One Marine's Recovery from Suicidal Thoughts

<https://www.health.mil/News/Articles/2021/09/29/Back-from-the-Brink-One-Marines-Recovery-from-Suicidal-Thoughts>

Concussion Linked to Depression, Anxiety and PTSD, Studies Show

<https://health.mil/News/Articles/2021/09/28/Mild-TBI-may-be-linked-to-Depression-Anxiety-and-PTSD-Studies-Show>

What Military Spouses Need to Know About Red Cross Emergency Messages

<https://www.military.com/spouse/military-life/what-military-spouses-need-know-about-red-cross-emergency-messages.html>

Military suicides up 16 percent in 2020, but officials don't blame pandemic

<https://www.militarytimes.com/news/pentagon-congress/2021/09/30/military-suicides-up-15-percent-in-2020-but-officials-dont-blame-pandemic/>

The Tomb of the Unknown Soldier was guarded by an all-woman team for the first time ever

<https://taskandpurpose.com/news/tomb-of-unknown-soldier-women-team/>

For many veterans, finding treatment for mental wounds proves difficult

<https://www.npr.org/2021/10/04/1042969636/for-many-veterans-finding-treatment-for-mental-wounds-proves-difficult>

Staff Perspective: Might ACT Provide an Important Inroad in the Treatment of Suicidal Thinking and Behaviors During COVID-19 and Beyond?

<https://deploymentpsych.org/blog/staff-perspective-might-act-provide-important-inroad-treatment-suicidal-thinking-and-behaviors>

Staff Perspective: The Impacts of the Withdrawal in Afghanistan

<https://deploymentpsych.org/blog/staff-perspective-impacts-withdrawal-afghanistan>

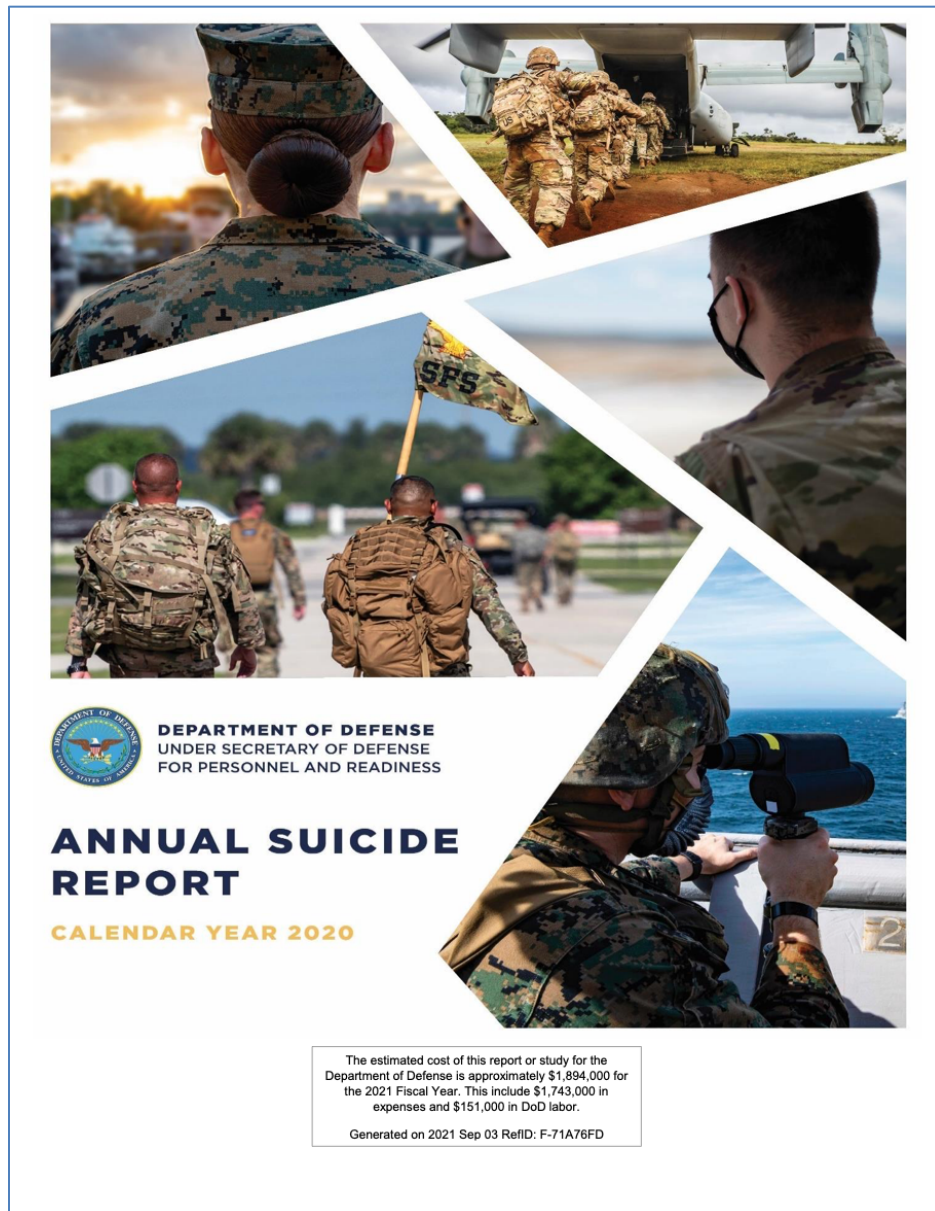
Resource of the Week: [Calendar Year \(CY\) 2020 Annual Suicide Report \(ASR\)](#)

From [press release](#):

In CY 2020, there were 580 Service members who tragically died by suicide. The ASR for CY 2020 shows that the suicide rate for the Active Component statistically increased from CY 2015 to CY 2020. There was no statistically significant increase or decrease for the Reserve and National Guard from CY 2015 to CY 2020. In the near-term for the Reserve, the CY 2020 rate was statistically comparable to both CY 2019 and CY 2018; the National Guard rate had statistically decreased from CY 2018 to CY 2019, returning to a comparable level in CY 2020.

We see continued risk for young and enlisted members. The CY 2019 military suicide rates for the Active Component, Reserve, and National Guard were comparable to the U.S. population, after accounting for age and sex. With respect to CY 2020, the most recent U.S. population suicide data available is for CY 2019. Accordingly, the data needed to compare for CY 2020 are not yet available.

The Department uses both internal and civilian data sources to determine military family member suicide deaths. The ASR includes CY 2019 data, as that is the most recent annual civilian source data available. In CY 2019, 202 military family members tragically died by suicide. The suicide rates for military spouses and dependents in CY 2019 were statistically comparable with CY 2017 and CY 2018, and to the U.S. population rates, except for male spouses, which was higher.



Shirl Kennedy, BS, MA
Research Editor
Henry M. Jackson Foundation employee collaborating with Center for Deployment
Psychology
Office: (727) 537-6160
Email: shirley.kennedy.ctr@usuhs.edu