

# Research Update -- September 12, 2019

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- Interaction Between Psychiatric Symptoms and History of Mild TBI When Evaluating Postconcussion Syndrome in Veterans.

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- Links of Interest
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   Generation (Pew Research Center)

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# https://journals.sagepub.com/doi/pdf/10.1177/2470547019872172

Purpose in Life and Conscientiousness Protect Against the Development of Suicidal Ideation in U.S. Military Veterans With PTSD and MDD: Results From the National Health and Resilience in Veterans Study.

Elizabeth Straus, Sonya B. Norman, Jessica C. Tripp, Michelle Pitts, and Robert H. Pietrzak

Chronic Stress Accepted 28 July 2019

DOI: 10.1177/2470547019872172

#### Background:

Although several studies have examined risk factors for suicidal ideation among veterans, little is known about risk and protective factors for suicidal ideation in high-risk veteran samples. Thus, this study examined a broad range of risk and protective factors associated with the development of suicidal ideation in a high-risk sample of U.S. veterans who screened positive for current posttraumatic stress disorder (PTSD) and/or major depressive disorder (MDD).

# Methods:

Data were analyzed from the National Health and Resilience in Veterans Study, a nationally representative, prospective cohort study of U.S. veterans. Veterans completed self-report measures to screen for PTSD and MDD and to assess for risk and protective factors. The sample included 222 veterans with PTSD and/or MDD who did not endorse suicidal ideation at baseline and completed at least one assessment over a seven-year follow-up period. A multivariable binary logistic regression analysis was conducted to examine baseline factors associated with incident suicidal ideation.

### Results:

Nearly one in three (27.1%) of veterans with PTSD and/or MDD developed suicidal ideation over the seven-year follow-up period. Non-Caucasian race and lower scores on measures of purpose in life, conscientiousness, and frequency of religious service attendance were independently associated with incident suicidal ideation. Lower purpose in life (52.3%) and conscientiousness (33.2%) explained the vast majority of variance in incident suicidal ideation.

#### Conclusion:

Nearly 30% of veterans with PTSD and/or MDD who did not endorse suicidal ideation at baseline developed suicidal ideation over a seven-year period. Prevention and treatment efforts designed to bolster purpose in life and con- scientiousness may help mitigate risk for suicidal ideation in this high-risk population.

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https://www.ncbi.nlm.nih.gov/pubmed/31201752

J Spec Oper Med. 2019 Summer;19(2):57-66

Resilience and Suicide in Special Operations Forces: State of the Science via Integrative Review.

Rocklein Kemplin K, Paun O, Godbee DC, Brandon JW.

### Abstract

#### **BACKGROUND:**

Due to alarming rates of suicide in Special Operations Forces (SOF) and associated effects of traumatic stress in military populations writ large, resilience initiatives thought to influence Servicemembers' mitigation of traumatic stress and thus lower suicide risks have been implemented throughout the services. Since combat operations commenced

in multiple theaters of war nearly two decades ago, resilience in conventional military populations became a topic of keen interest throughout departments of defense worldwide as well. Despite researchers' consistent assertions that SOF are highly resilient and at low risk for suicide, granular analysis of pertinent research and escalating suicide in SOF reveals no empirical basis for those beliefs.

#### **METHODS:**

We report findings from an integrative review of resilience research in SOF and larger military populations to contextualize and augment understanding of the phenomenon.

#### **RESULTS:**

Throughout the literature, conceptual and operational definitions of resilience varied based on country, context, investigators, and military populations studied. We identified critical gaps in resilience knowledge in the military, specifically: Resilience has not been studied in SOF; resilience is not concretely established to reduce suicide risk or proven to improve mental health outcomes; resilience differs when applied as a psychological construct; resilience research is based on specific assumptions of what composes resilience, depending on methods of measurement; resilience studies in this population lack rigor; research methodologies and conflicting interests invite potential bias.

## CONCLUSION:

This integrative review highlights emergent issues and repetitive themes throughout military resilience research: resilience program inefficacy, potential investigator bias, perpetuated assumptions, and failure to capture and appropriately analyze germane data. Because of overall inconsistency in military resilience research, studies have limited external validity, and cannot be applied beyond sampled populations. Resilience cannot be responsibly offered as a solution to mitigating posttraumatic stress disorder nor suicide without detailed study of both in SOF.

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https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2735127

Comparative Efficacy and Acceptability of Pharmacological, Psychotherapeutic, and Combination Treatments in Adults With Posttraumatic Stress Disorder: A Network Meta-analysis.

Merz J, Schwarzer G, Gerger H.

JAMA Psychiatry

Published online June 12, 2019

76(9): 904–913

doi:10.1001/jamapsychiatry.2019.0951

# **Key Points**

#### Question

Is there evidence for the superiority of pharmacological, psychotherapeutic, or combination treatment in treating adults with posttraumatic stress disorder?

# **Findings**

This network meta-analysis including 12 randomized clinical trials comprising 922 participants with 23 comparisons demonstrated similar findings for the 3 approaches at the end of treatment, but long-term benefits of psychotherapeutic and combined treatments were superior to pharmacological treatments across 6 randomized clinical trials that reported follow-up data.

# Meaning

The available evidence is sparse and appears not to support the use of pharmacological therapy as first-line treatment for posttraumatic stress disorder; furthermore, this study suggests that direct comparisons reporting long-term outcomes for all 3 types of therapy are needed.

## Abstract

#### Importance

Posttraumatic stress disorder (PTSD) is a prevalent mental disorder, with a high risk of chronicity, comorbidity, and functional impairment; PTSD is complicated to treat, and the debate on the best treatment approach is ongoing.

# Objective

To examine comparative outcomes and acceptability of psychotherapeutic and pharmacological treatments and their combinations in adults with PTSD.

# **Data Sources**

Embase, MEDLINE, PsycINFO, Cochrane Controlled Trials Register, and PSYNDEX were searched for studies published from January 1, 1980, to February 28, 2018. Reference lists of included studies and of previously published guidelines and systematic reviews were also searched.

# Study Selection

Of 11 417 records identified, 12 published randomized clinical trials (RCTs) comprising 922 participants, contributing 23 direct comparisons between psychotherapeutic and pharmacological treatments or their combinations were included.

# Data Extraction and Synthesis

Standardized mean differences (SMDs) and odds ratios were aggregated using random-effects network and pairwise meta-analyses. Risk of bias and indirectness was rated for each study, and network confidence was rated using the Confidence in Network Meta-Analysis framework.

# Main Outcomes and Measures

The primary outcome was the comparative benefit between 2 treatment approaches to PTSD symptom improvement, and secondary outcome was the comparative acceptability of the treatment approaches, as indicated by patient dropout rates before treatment termination.

#### Results

No treatment approach was found to be superior at the end of treatment (for all, 95% CI included 0). At the last follow-up, psychotherapeutic treatments showed greater benefit than pharmacological treatments in both network (SMD, -0.83; 95% CI, -1.59 to -0.07) and pairwise (SMD, -0.63; 95% CI, -1.18 to -0.09, 3 RCTs) meta-analyses. No difference was found between combined treatments and psychotherapeutic treatments at long-term follow-up, and combined treatments were associated with better outcomes than pharmacological treatments in the network meta-analysis (SMD, -0.96; 95% CI, -1.87 to -0.04), but not in the pairwise meta-analysis, which included 2 RCTs (SMD, -1.02; 95% CI, -2.77 to 0.72). No evidence was found for differential acceptability of the 3 treatment approaches.

## Conclusions and Relevance

These results suggest superiority of psychotherapeutic treatments over pharmacological treatments; network, but not pairwise, meta-analyses suggest superiority of combined treatments over pharmacological treatments in improving PTSD symptom severity in the long term. The scarcity of reported long-term findings hampers definite conclusions and demonstrates the need for robust evidence from large-scaled comparative trials providing long-term follow-up data.

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# https://www.sciencedirect.com/science/article/pii/S0165032719313242

# Large posttraumatic stress disorder improvement and antidepressant medication adherence.

Joanne Salas, Jeffrey F. Scherrer, Peter Tuerk, Carissa van den Berk-Clark, ... Patrick Lustman

Journal of Affective Disorders Volume 260, 1 January 2020, Pages 119-123 https://doi.org/10.1016/j.jad.2019.08.095

# Highlights

- PTSD is associated with poor antidepressant medication (ADM) adherence.
- PTSD and depressive symptoms change similarly over time.
- Significant PTSD symptom improvement is associated with greater ADM adherence.
- PTSD symptom reduction may improve depression treatment outcomes.

#### Abstract

# Background

Patients with vs. without posttraumatic stress disorder (PTSD) are more likely to have poor antidepressant medication (ADM) adherence but it is unclear if improved PTSD is associated with ADM adherence. We determined if clinically meaningful PTSD symptom reduction was associated with ADM adherence.

### Methods

Electronic health record data (2008–2015) was obtained from 742 Veterans Health Affairs (VHA) patients using PTSD specialty clinics with a PTSD diagnosis and PTSD checklist (PCL) score ≥50. The last PCL in the exposure year after the first PCL≥50 was used to identify patients with a clinically meaningful PCL decrease (≥20 point) versus those without (< 20 point). Patients had a depression diagnosis in the 12-months before the exposure year and received an ADM in the exposure year. Proportion of days covered ≥80% in exposure year defined adherence. Confounding was controlled using propensity scores and inverse probability of treatment weighting.

#### Results

Patients were  $42.2 \pm 13.1$  years of age, 63.9% white and 18.9% had a clinically meaningful PCL decrease. After controlling for confounding variables, patients with vs. without a clinically meaningful PCL decrease were significantly more likely to be

adherent (OR = 1.78; 95% CI:1.16–2.73). However, adherence remained low in both patients with and without meaningful PCL decrease (53.5% vs. 39.3%).

#### Limitations

The sample was limited to VHA patients. Patients may not have taken medication as prescribed.

#### Conclusions

Large reductions in PTSD symptoms are associated with ADM adherence. Prior literature suggests ADM adherence improves depression symptoms. Thus, PTSD symptom reduction may lead to better depression outcomes.

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https://link.springer.com/article/10.1007/s12671-019-01221-8

# Self-Compassion and Suicide Risk in Veterans: When the Going Gets Tough, Do the Tough Benefit More from Self-Compassion?

Jessica Kelliher Rabon, Jameson K. Hirsch, Andrea R. Kaniuka, Fuschia Sirois, Byron D. Brooks, Kristin Neff

## Mindfulness

First Online: 03 September 2019

https://doi.org/10.1007/s12671-019-01221-8

# Objectives

Veterans are at particular risk for suicide due to psychopathological, emotional, and interpersonal risk factors. However, the presence of individual-level protective factors, such as self-compassion, may reduce risk, becoming more salient at increasing levels of distress and psychopathology, per theory. We examined the relation between self-compassion and suicide risk, and the moderating effects of depression, PTSD symptoms, anger, shame, and thwarted interpersonal needs.

### Methods

Our sample of US veterans (n = 541) in our cross-sectional study were mostly male (69.1%) with an average age of 49.90 (SD = 16.78), who completed online self-report measures: Suicidal Behaviors Questionnaire-Revised, Multidimensional Health Profile-Psychosocial Functioning Screening Tool, PTSD Checklist-Military Version, Differential Emotions Scale-IV, and the Interpersonal Needs Questionnaire.

## Results

The linkage between self-compassion and suicidal behavior in our veteran sample was moderated by distress-evoking risk factors, including depression, anger, shame, and thwarted interpersonal needs, such that, as level of risk severity increases, the inverse association between self-compassion and suicidal behavior is strengthened.

#### Conclusions

Our findings highlight an emergent protective process that may prevent suicide in times of distress. Therapeutically bolstering the ability for self-compassion may provide a proactive coping strategy that can be brought to bear in times of crisis, reducing suicide risk for veterans.

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https://academic.oup.com/milmed/advance-article/doi/10.1093/milmed/usz272/5559257

Self-report Pain Scale Reliability in Veterans and Service Members With Traumatic Brain Injuries Undergoing Inpatient Rehabilitation.

Michelle R Hoot, PhD, Bilal Khokhar, PhD, William C Walker, MD

Military Medicine

Published: 09 September 2019

https://doi.org/10.1093/milmed/usz272

### Introduction:

Pain in trauma patients with traumatic brain injury (TBI) may heighten cognitive-behavioral impairment and impede rehabilitation efforts. Multiple self-report pain assessment tools have been shown reliable in cognitively intact adults and children but are understudied in the cognitively impaired, particularly in persons with TBI. The objective of this study was to assess the utility and reliability of four pain assessment instruments among TBI patients during inpatient rehabilitation and the influence of cognitive impairment.

#### Methods:

Participants self-completed four pain intensity measures, the Verbal Descriptor Scale, Faces Pain Scale (Faces), Numerical Rating Scale (NRS), and Color-Enhanced Visual Analog Scale (CAS), during five study visits over a 2-week period. Data were collected on time to completion and most preferred pain measure. To assess scale reliability,

participants re-rated their current pain. To assess scale responsiveness, standard mean response was measured across time and a worst past pain experience was rated. Cognitive impairment was assessed with the Memory, Orientation, and Amnesia Test.

#### Results:

The NRS was the most preferred measure by participants at every time point in the study. Mean pain measure completion time for all measures was under 11 seconds and did not significantly change during the study period. All scales showed very high test-retest reliability, with very strong correlations. Standard mean response from day 0 to 14 ranged from 0.387 to 0.532 across the scales. When stratified by cognitive impairment, the mean scores were consistently nominally higher for impaired participants, reaching statistical significance only for the CAS and Faces at baseline. In the cognitive impaired group, reliability for the Faces showed some weakening, as did the VAS to a milder degree.

#### Conclusions:

All four pain measures demonstrated good utility, very high test-retest reliability, and satisfactory responsiveness. Greater cognitive impairment was associated with elevated pain ratings, especially in the Faces and CAS. The NRS was the most preferred by patients, regardless of cognitive impairment level.

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https://www.sciencedirect.com/science/article/abs/pii/S0165178119313484

Insomnia and posttraumatic stress symptoms: Evidence of shared etiology.

Rebecca C. Cox, Steven Taylor, Eric Strachan, Bunmi O. Olatunji

Psychiatry Research Available online 31 August 2019 https://doi.org/10.1016/j.psychres.2019.112548

## Highlights

- Examined the genetic contributions to the relation between insomnia and PTSD symptoms.
- Results indicated a significant association between insomnia and trauma intrusions.
- Results indicated a significant association insomnia and avoidance.
- 36–44% of phenotypic variance was accounted for by genetic contributions.

# **Abstract**

Posttraumatic stress disorder (PTSD) and insomnia are comorbid clinical conditions that are thought to result from genetic and environmental effects. Though studies have established the heritability of these disorders independently, no study to date has examined the genetic contributions to the relation between insomnia and PTSD symptoms (PTSS). The present study assessed this gap in the literature using a behavioral genetics approach to symptom dimensions. The sample consisted of 242 twin pairs who endorsed lifetime trauma exposure. Insomnia symptoms were assessed with the Women's Health Initiative Survey, and intrusion and avoidance PTSS were assessed with the Impact of Events Scale. Structural equation modeling was then employed to test the relative contributions of genetic, shared environmental, and nonshared environmental components to the relations between insomnia symptoms and intrusions and avoidance. Results indicated a significant association between insomnia symptoms and intrusions (r = 0.33, p < 0.01) and insomnia symptoms and avoidance (r = 0.20, p < 0.01), and 36–44% of phenotypic variance was accounted for by genetic contributions. These findings highlight a significant role for genetic factors in the mechanisms underlying the comorbidity between insomnia and PTSS. The implications for current etiological models of PTSD and insomnia are discussed.

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https://journals.lww.com/headtraumarehab/Abstract/publishahead/Unique\_Features\_of\_the US\_Department\_of\_Defense.99390.aspx

# Unique Features of the US Department of Defense Multidisciplinary Concussion Clinics.

Lee, Katherine M. MS; Greenhalgh, Walter M. MD; Sargent, Paul MD; Chae, Heechin MD; Klimp, Scott MPAS; Engel, Scot PsyD; Merritt, Bryan P. MD; Kretzmer, Tracy PhD; Bajor, Laura DO; Scott, Steve DO; Pyne, Scott MD

The Journal of Head Trauma Rehabilitation August 29, 2019 - Volume Publish Ahead of Print doi: 10.1097/HTR.000000000000526

The US Department of Defense (DoD) and the Department of Veterans Affairs (VA) actively address care needs for a subset of service members (SMs) who experience prolonged symptoms and adverse sequelae interfering with their usual level of function

after sustaining mild traumatic brain injury. The development of multidisciplinary concussion clinics and implementation of several reinforcing policies within the DoD and the VA address this unique patient population. A network known as the National Intrepid Center of Excellence and Intrepid Spirit Centers and the VA, primarily support these patients through intensive outpatient programs. The VA also has an inpatient program that utilizes specialized capabilities. The features unique to several of these centers are described in this article. While providing for similar patient care needs, each clinical setting implements unique evaluation and treatment modalities to target analogous goals of return to the highest functional level possible and develop life skills to enhance health, quality of life, and readiness to perform military duties. Currently, patient-reported outcomes are being collected.

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https://academic.oup.com/milmed/advance-article/doi/10.1093/milmed/usz193/5559249

Interaction Between Psychiatric Symptoms and History of Mild TBI When Evaluating Postconcussion Syndrome in Veterans.

Sadie E Larsen, PhD, Eric R Larson, PhD, Joshua C Hunt, PhD, William G Lorber, PhD, Terri A deRoon-Cassini, PhD

Military Medicine

Published: 09 September 2019

https://doi.org/10.1093/milmed/usz193

### Introduction:

Symptoms of postconcussive syndrome (PCS) after mild TBI (mTBI) have been shown to resolve quickly, yet new research raises questions about possible long-term effects of this condition. It is not clear how best to address assessment and treatment when someone reports lingering symptoms of PCS. One self-report measure used by the VA and the DoD is the Neurobehavioral Symptom Inventory (NSI), but this measure may be affected by underlying psychiatric symptoms. We investigated whether the NSI is sensitive to mTBI after considering a number of psychiatric and demographic factors.

#### Methods:

This study examined which factors are associated with NSI scores in a Veteran sample (n = 741) that had recently returned from deployment.

#### Results:

Post-traumatic stress disorder (PTSD) and depression accounted for most of the variance on the NSI. Although history of mTBI was initially related to NSI, this association was no longer significant after other covariates were considered.

#### Conclusions:

The NSI score was primarily explained by symptoms of PTSD and depression, suggesting that the NSI is not specific to the experience of a brain injury. We recommend cautious interpretation when this measure is used in the chronic phase after mTBI, especially among patients with comorbid depression or PTSD.

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https://www.sciencedirect.com/science/article/abs/pii/S0031938419300812

Repeated caffeine administration aggravates post-traumatic stress disorder-like symptoms in rats.

Santosh Kumar Prajapati, Durgesh Singh Dangi, Sairam Krishnamurthy

Physiology & Behavior Volume 211, 1 November 2019 https://doi.org/10.1016/j.physbeh.2019.112666

# Highlights

- SRS-induced PTSD-like behaviour was aggravated by caffeine.
- Repeated administration of caffeine caused PTSD-like effect in unstressed rats.
- Caffeine does not modulate SRS-induced decrease in plasma corticosterone.
- SRS-induced increase in 5-HT levels remain unaltered by caffeine.
- SRS-induced decrease in MR and GR receptor expression remain unchanged by caffeine.

# Abstract

### Background

Caffeine is the widely consumed central nervous system stimulant in form of coffee and other beverages. However, the repeated administration of caffeine induces anxiety, disturbance in hypothalamic-pituitary-adrenal (HPA) axis and psychiatric symptoms in humans. As much evidence links PTSD to HPA axis dysfunction, and anxiety is a hallmark symptom, repeated and/or large doses of caffeine may exacerbate symptoms of PTSD.

# Objective

In our present study, we evaluated the effect of repeated administration of caffeine on stress re-stress (SRS) model of PTSD.

#### Methods

As per the protocol, male rats were restrained for 2 h followed by 20 min forced swim and halothane anaesthesia on day 2 (D-2). Then the rats were re-stressed (forced swim) at 6-days interval between D-8 to D-32. After exposure to SRS, depressive, anxiety-like behaviour, and cognitive functions were evaluated by forced swim test (FST), elevated plus maze (EPM) and Y-maze tests respectively. Caffeine (10, 20 and 30 mg/kg, i.p.) dosing was started from D-8 and continued up to D-32. The corticosterone level was measured in plasma followed by serotonin and glucocorticoid receptor (GR) and mineralocorticoid receptors (MR) estimation in hippocampus (HIP), prefrontal cortex (PFC) and amygdala (AMY).

#### Results

SRS-induced depressive and anxiety-like behaviour was aggravated by caffeine at dose of 20 and 30 mg/kg. Caffeine (30 mg/kg) treated control animals showed depressive, anxiety-like behaviour and cognitive impairments. SRS-induced decrease in plasma corticosterone level and increase in serotonin (5HT) levels in the PFC, HIP and AMY were not altered by caffeine. Caffeine did not modulate the SRS-induced decrease in glucocorticoid receptor (GR) and mineralocorticoid receptor (MR). In contrast, caffeine per se decreased GR and MR expression and their ratio in unstressed animals.

# Conclusion

Repeated intake of caffeine aggravates PTSD-like symptoms in stress-exposed rats and induces PTSD-like symptoms in unstressed rats by altering the expression of glucocorticoid receptors.

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# https://onlinelibrary.wiley.com/doi/abs/10.1002/da.22954

Interactive effects of PTSD and substance use on suicidal ideation and behavior in military personnel: Increased risk from marijuana use.

Allan, NP, Ashrafioun, L, Kolnogorova, K, Raines, AM, Hoge, CW, Stecker, T.

Depression & Anxiety

First published: 02 September 2019 https://doi.org/10.1002/da.22954

# Background

The current study examines the unique and interactive effects of posttraumatic stress disorder (PTSD) symptoms and days using alcohol, opioids, and marijuana on PTSD symptoms, suicidal ideation, and suicidal behavior up to 1 year, later in a high-risk sample of military personnel not active in mental health treatment.

#### Methods

Current and former military personnel at risk for suicide (N = 545; M age = 31.91 years, standard deviation = 7.27; 88.2% male) completed self-report measures of PTSD symptoms, past 30 days heavy alcohol use, opioid use, marijuana use, and current suicidal ideation via telephone at baseline and 1, 3, 6, and 12 months later. PTSD symptoms and the substance use variables (and relevant covariates) were entered as predictors of changes in PTSD symptoms, the likelihood of suicidal ideation, suicidal ideation severity, and the likelihood of suicidal behavior during the 11-month follow-up period.

#### Results

PTSD symptoms predicted PTSD symptoms 1 month later. PTSD symptoms and marijuana use predicted the likelihood of suicidal ideation 1 month later and suicidal behavior during the 11-month follow-up period. The interaction between PTSD symptoms and marijuana use significantly predicted increased PTSD symptoms over time and suicidal behavior. At high, but not low levels of PTSD symptoms, more days using marijuana predicted increased PTSD symptoms over time and the likelihood of suicidal behavior.

### Conclusions

Results suggest marijuana, especially for military personnel experiencing elevated PTSD symptoms may negatively impact suicidal thoughts and behavior. These results are relevant to suggestions that medical marijuana could be used in treating or augmenting treatment for PTSD.

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# https://onlinelibrary.wiley.com/doi/abs/10.1002/jts.22441

Depression Suppresses Treatment Response for Traumatic Loss–Related Posttraumatic Stress Disorder in Active Duty Military Personnel.

Jacoby, V. M., Hale, W., Dillon, K., Dondanville, K. A., Wachen, J. S., Yarvis, J. S., Litz, B. T., Mintz, J., Young-McCaughan, S., Peterson, A. L., Resick, P. A., for the STRONG STAR Consortium

Journal of Traumatic Stress First published: 28 August 2019 https://doi.org/10.1002/jts.22441

There are multiple well-established evidence-based treatments for posttraumatic stress disorder (PTSD). However, recent clinical trials have shown that combat-related PTSD in military populations is less responsive to evidence-based treatments than PTSD in most civilian populations. Traumatic death of a close friend or colleague is a common deployment-related experience for active duty military personnel. When compared with research on trauma and PTSD in general, research on traumatic loss suggests that it is related to higher prevalence and severity of PTSD symptoms. Experiencing a traumatic loss is also related to the development of prolonged grief disorder, which is highly comorbid with depression. This study examined the association between having traumatic loss-related PTSD and treatment response to cognitive processing therapy in active duty military personnel. Participants included 213 active duty service members recruited across two randomized clinical trials. Results showed that service members with primary traumatic loss-related PTSD (n = 44) recovered less from depressive symptoms than those who reported different primary traumatic events (n = 169), B = -4.40. Tests of mediation found that less depression recovery suppressed recovery from PTSD symptoms in individuals with traumatic loss-related PTSD, B = 3.75. These findings suggest that evidence-based treatments for PTSD should better accommodate loss and grief in military populations.

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https://www.ncbi.nlm.nih.gov/pubmed/31482815

J Clin Sleep Med. 2019 Aug 20. pii: jc-19-00192. [Epub ahead of print]

National Expansion of Sleep Telemedicine for Veterans: The TeleSleep Program.

Sarmiento KF, Folmer RL, Stepnowsky CJ, Whooley MA, Boudreau EA, Kuna ST, Atwood CW, Smith CJ, Yarbrough WC

#### Abstract

## STUDY OBJECTIVES:

(1) Review the prevalence and comorbidity of sleep disorders among United States military personnel and veterans. (2) Describe the status of sleep care services at Veterans Health Administration (VHA) facilities. (3) Characterize the demand for sleep care among veterans and the availability of sleep care across the VHA. (4) Describe the VA TeleSleep Program that was developed to address this demand.

#### **METHODS:**

PubMed and Medline databases (National Center for Biotechnology Information, United States National Library of Medicine) were searched for terms related to sleep disorders and sleep care in United States military and veteran populations. Information related to the status of sleep care services at VHA facilities was provided by clinical staff members at each location. Additional data were obtained from the VA Corporate Data Warehouse.

## **RESULTS:**

Among United States military personnel, medical encounters for insomnia increased 372% between 2005-2014; encounters for obstructive sleep apnea (OSA) increased 517% during the same period. The age-adjusted prevalence of sleep disorder diagnoses among veterans increased nearly 6-fold between 2000-2010; the prevalence of OSA more than doubled in this population from 2005-2014.

### **CONCLUSIONS:**

Most VA sleep programs are understaffed for their workload and have lengthy wait times for appointments. The VA Office of Rural Health determined that the dilemma of limited VHA sleep health care availability and accessibility might be solved, at least in part, by implementing a comprehensive telehealth program in VA medical facilities. The VA TeleSleep Program is an expansion of telemedicine services to address this need, especially for veterans in rural or remote regions.

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# https://www.ncbi.nlm.nih.gov/pubmed/31156198

The investigation of four technologies to assist in detecting mild to moderate traumatic brain injury of U.S. Military service members.

Rice V, Boykin G, Alfred P, Lindsay G, Overby C, Jeter A, Lester M, Allison S, Cooper D

#### Abstract

## **BACKGROUND:**

A standard, reliable, objective measure is needed for identifying individuals with mild to moderate traumatic brain injury (TBI).

# **OBJECTIVE:**

The purpose of this study was to examine balance using an AMTI OR6-7 force platform (FP), neurocognition and mood using the Automated Neuropsychological Assessment Metric4 (ANAM4), blood flow comparisons using a Brain Acoustic Monitor (BAM), and voice using Voice Analysis software (VA) for screening service members for a mild to moderate TBI.

# **METHODS:**

Active duty and retired service member volunteers (n=88, 35 with a diagnosis of mild to moderate TBI and 53 who never had a TBI) completed an informed consent document, and evaluations using the four technologies.

# **RESULTS:**

Development of a clinical prediction rule yielded two FP variables and one ANAM4 Mood Scale variable (vigor) as helpful in predicting the presence of a TBI. Assuming a 15% pre-test probability, these predictors yield a post-test probability of 75.7% for a positive result with any two or more measures being positive, and a post-test probability of 2.3% for a negative result with zero measures being positive.

### **CONCLUSIONS:**

This study demonstrated the usefulness of a force platform and a self-reported mood scale for predicting presence of mild to moderate TBI.

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### **Links of Interest**

Mental Health Disorders in Troops Far Below National Average <a href="https://www.military.com/daily-news/2019/09/04/mental-health-disorders-troops-far-below-national-average.html">https://www.military.com/daily-news/2019/09/04/mental-health-disorders-troops-far-below-national-average.html</a>

'Team Richardson:' Married three-star generals say teamwork is critical for dual-military families

https://www.armytimes.com/news/your-army/2019/09/04/team-richardson-married-three-star-generals-say-teamwork-is-critical-for-dual-military-families/

Pentagon Suspends Mental Health Counseling Referral Services for DoD Civilians <a href="https://www.military.com/daily-news/2019/09/08/pentagon-suspends-mental-health-counseling-referral-services-dod-civilians.html">https://www.military.com/daily-news/2019/09/08/pentagon-suspends-mental-health-counseling-referral-services-dod-civilians.html</a>

Two Years After Nude Photo Scandal, Marines Assess Gender Issues in the Corps <a href="https://www.military.com/daily-news/2019/09/07/two-years-after-nude-photo-scandal-marines-assess-gender-issues-corps.html">https://www.military.com/daily-news/2019/09/07/two-years-after-nude-photo-scandal-marines-assess-gender-issues-corps.html</a>

'You've Got To Talk About Your Stuff': The Air Force Stands Down To Discuss Suicide <a href="https://americanhomefront.wunc.org/post/youve-got-talk-about-your-stuff-air-force-stands-down-discuss-suicide">https://americanhomefront.wunc.org/post/youve-got-talk-about-your-stuff-air-force-stands-down-discuss-suicide</a>

Planning for the Worst: A Commander's Guide to Suicide Postvention <a href="https://www.pdhealth.mil/news/blog/planning-worst-commander-s-guide-suicide-postvention">https://www.pdhealth.mil/news/blog/planning-worst-commander-s-guide-suicide-postvention</a>

My best friend died by suicide. I wish I had seen the warning signs. https://www.nytimes.com/2019/09/10/magazine/air-force-suicide-prevention.html

New blood test could help identify troops and veterans with PTSD <a href="https://www.militarytimes.com/news/2019/09/10/new-blood-test-could-help-identify-troops-and-veterans-with-ptsd/">https://www.militarytimes.com/news/2019/09/10/new-blood-test-could-help-identify-troops-and-veterans-with-ptsd/</a>

Most Army Families Say They'd Move Off-Base If They Could to Escape Poor Housing <a href="https://www.military.com/daily-news/2019/09/09/most-army-families-say-theyd-move-base-if-they-could-escape-poor-housing.html">https://www.military.com/daily-news/2019/09/09/most-army-families-say-theyd-move-base-if-they-could-escape-poor-housing.html</a>

The VA is investigating allegations that one of its physicians sexually assaulted 'more than a dozen' patients

https://taskandpurpose.com/va-hospital-sexual-assault-allegation

How to bridge the divide between civilians and the military, first responders <a href="https://www.militarytimes.com/opinion/commentary/2019/09/10/how-to-bridge-the-divide-between-civilians-and-the-military-first-responders/">https://www.militarytimes.com/opinion/commentary/2019/09/10/how-to-bridge-the-divide-between-civilians-and-the-military-first-responders/</a>

Six Men Tell Their Stories of Sexual Assault in the Military https://www.nytimes.com/interactive/2019/09/10/us/men-military-sexual-assault.html

'Maybe this is how Vietnam vets felt': Americans who fought in Afghanistan wait to see how their war ends

https://www.washingtonpost.com/world/national-security/maybe-this-is-how-vietnam-vets-felt-americans-who-fought-in-afghanistan-wait-to-see-how-their-war-ends/2019/09/10/d4747474-3e95-11e9-9361-301ffb5bd5e6 story.html

Why younger veterans more likely to struggle after leaving the military <a href="https://www.militarytimes.com/news/pentagon-congress/2019/09/10/younger-veterans-more-likely-to-struggle-after-leaving-the-military-survey/">https://www.militarytimes.com/news/pentagon-congress/2019/09/10/younger-veterans-more-likely-to-struggle-after-leaving-the-military-survey/</a>

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# Resource of the Week: <u>The American Veteran Experience and the Post-9/11</u> **Generation**

New, from the Pew Research Center:

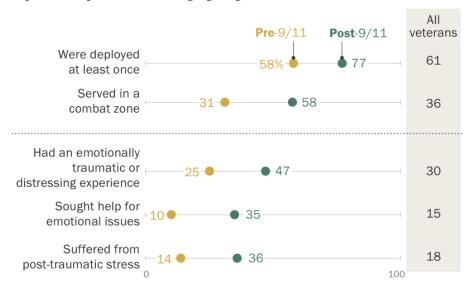
What it means to be a military veteran in the United States is being shaped by a new generation of service members. About one-in-five veterans today served on active duty after the terrorist attacks of Sept. 11, 2001. Their collective experiences – from deployment to combat to the transition back to civilian life – are markedly different from those who served in previous eras.

Roughly three-quarters of post-9/11 veterans were deployed at least once, compared with 58% of those who served before them. And post-9/11 veterans are about twice as likely as their pre-9/11 counterparts to have served in a combat zone.

Because they are more likely to have been deployed and to have seen combat, post-9/11 veterans are also more likely to bear the scars of battle, whether physical or not. Roughly half say they had emotionally traumatic or distressing experiences related to their military service, and about a third say they sought professional help to deal with those experiences. In addition, 36% say that – regardless of whether they have sought help – they think they have suffered from post-traumatic stress (PTS), according to a new Pew Research Center survey of U.S. military veterans.

# Post-9/11 veterans more likely to have been deployed, seen combat, experienced emotional trauma

% of veterans from each era saying they ...



Source: Survey of U.S. veterans conducted May 14-June 3, 2019. "The American Veteran Experience and the Post-9/11 Generation"

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