

# CDP



## Research Update -- July 29, 2021

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- Understanding Heart Rate Reactions to Post-Traumatic Stress Disorder (PTSD) Among Veterans: A Naturalistic Study.
- Links of Interest
- Resource of the Week: Traumatic Brain Injury: A Guide for Caregivers of Service Members and Veterans (Traumatic Brain Injury Center of Excellence)

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<https://doi.org/10.1016/j.jad.2021.07.023>

## **Examining Correlates of Suicidal Ideation between those with and without Psychosis in a Psychiatric Inpatient Sample.**

A Lieberman, ML Rogers, A Graham, TE Joiner

Journal of Affective Disorders

Volume 294, 1 November 2021, Pages 254-260

### Highlights

- Patients without psychosis but with other mental illnesses experienced higher suicidal ideation.
- Perceived burdensomeness and thwarted belongingness were also elevated.
- Agitation and insomnia were elevated in those without psychosis, as well.
- Perceived burdensomeness and agitation may explain the relationship to ideation.
- This study explores psychosis compared to other acute populations (e.g., depression).

### Abstract

#### Background

The present study explored group differences in suicide-related variables between those with and without psychosis within the context of a psychiatric inpatient sample that included a range of affective disorder diagnoses.

#### Methods

54 individuals with psychosis and 103 individuals without psychosis (but experiencing other severe and acute mental health issues) were compared, and analyses of indirect effects were conducted to test specificity of thwarted belongingness, perceived burdensomeness, capability for suicide, agitation, and insomnia as accounting for group differences in suicidal ideation.

#### Results

Patients without psychosis experienced higher levels of suicidal ideation, perceived burdensomeness, thwarted belongingness, agitation, and insomnia than patients with psychosis. Additionally, perceived burdensomeness and agitation emerged as robust explanatory factors for the relationship between psychosis status and suicidal ideation.

## Limitations

Future work should include longitudinal analyses to understand temporal relationships between study variables. Additionally, stability of patients' psychotic symptoms was required and therefore may not reflect those at greatest acuity.

## Conclusions

Although several studies have investigated suicide-related variables among those with psychosis as compared to the general population, the present study is novel in that the severity of these symptoms in those with psychosis is compared to that of those in other acutely ill populations (e.g., major depression, substance use).

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<https://doi.org/10.1002/jts.22709>

## **Childhood Adversity and the Association Between Stress Sensitivity and Problematic Alcohol Use in Adults.**

O. Trent Hall, K. Luan Phan, Stephanie Gorka

Journal of Traumatic Stress  
First published: 15 July 2021

Early life adversity (ELA) increases the risk of problematic alcohol use and alcohol use disorder (AUD). However, it is unclear why some but not all ELA-exposed individuals develop problematic alcohol use. Research is needed to determine how this environmental risk factor interacts with underlying neurobehavioral vulnerabilities to problem alcohol use. Hypersensitivity to uncertain threats (U-threat) has been posited as an endophenotype for AUD that might aid in the refinement of mechanistic models of problematic alcohol use. Therefore, U-threat hypersensitivity requires examination as a possible individual difference factor that facilitates problematic alcohol use among ELA-exposed individuals. We examined the unique and interactive effects of ELA and U-threat reactivity on problem drinking and depressive and anxiety symptom severity. Participants (N = 131) completed a well-validated threat-of-shock task, and startle eyeblink potentiation was recorded to index aversive responding. Individuals also completed self-report measures of alcohol use, anxiety, and depressive symptoms. Results demonstrated a positive association between ELA and higher levels of problematic alcohol use at high levels of U-threat reactivity,  $\beta = .75$ ,  $t = 3.93$ ,  $p < .001$ . Conversely, at low levels of U-threat reactivity, ELA exposure was negatively associated

with problematic alcohol use,  $\beta = -.49$ ,  $t = -2.30$ ,  $p = .023$ . There was no significant ELA x U-Threat reactivity interaction on anxiety or depression. U-threat response strongly interacts with ELA exposure, affecting the direction of the association between ELA and problem drinking. U-threat reactivity may be a promising target for the prevention and treatment of problematic drinking among ELA-exposed individuals.

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<https://doi.org/10.1089/tmr.2021.0013>

## **Development, Acceptability, and Feasibility of a Digital Module for Coping with COVID-19 Distress: Pragmatic Retrospective Study.**

Monica S. Wu, Jocelyn Lau, Chelsey Wilks, Connie Chen, and Anita Lungu

Telemedicine Reports

Published Online: 15 Jul 2021

### Background:

The coronavirus disease 2019 (COVID-19) pandemic and the measures to help contain it have taken a significant toll on mental health. Blended care psychotherapy combining provider-led care with digital tools can help alleviate this toll. This study describes the development of digital activities designed to teach cognitive-behavioral skills for coping with COVID-19 distress, and evaluates initial acceptability and feasibility data.

### Materials and Methods:

Using a pragmatic retrospective cohort design, data from 664 U.S.-based individuals enrolled in blended care psychotherapy were analyzed. Descriptive analyses summarized acceptability for the digital activities. Ordinal logistic regression analyses were conducted on a subsample ( $n = 162$ ) to explore the association between clients' attitudes toward the digital lesson and reported practice of skills in the exercise.

### Results:

The majority of clients completed the assigned digital lesson and exercise. Clients reported finding the lesson valuable and relevant for coping with COVID-19 distress, and they intended to apply the skills to their lives. Higher agreement with these attitude questions was associated with a significantly greater number of skills practiced on the digital exercise.

#### Discussion:

Clients who were assigned a cognitive-behaviorally oriented digital lesson and/or exercise within a blended care model largely engaged with the materials and found them valuable. Clients with more positive attitudes about the digital lesson reported using more coping skills.

#### Conclusions:

Digital modules that teach specific skills for coping with COVID-19 can be integrated into treatment and minimize provider burden. Future study should investigate the clinical impact of these digital activities on psychiatric symptoms and personalizing the content.

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<https://doi.org/10.1002/jts.22715>

### **Posttraumatic Stress Disorder Symptoms and Coping Motives are Independently Associated with Cannabis Craving Elicited by Trauma Cues.**

Kyra N. Farrelly, Pablo Romero-Sanchiz, Tiberiu Mahu, Sean P. Barrett, Pamela Collins, Daniel Rasic, Sherry H. Stewart

Journal of Traumatic Stress  
First published: 19 July 2021

Cannabis use is common among individuals with posttraumatic stress disorder (PTSD), although its use can ultimately worsen PTSD outcomes. Cannabis-use coping motives may help explain the PTSD–cannabis relationship. Frequent pairing of trauma cues with substance use to cope with negative affect can lead to conditioned substance craving. For the present cue-reactivity study, we examined if PTSD symptoms were associated with cannabis craving elicited by a personalized trauma cue and explored whether coping motives mediated this hypothesized relationship; enhancement motives were included as a comparison mediator. Participants (N = 51) were trauma-exposed cannabis users who completed validated assessments on PTSD symptom severity and cannabis use motives. They were then exposed to a personalized audiovisual cue based on their own traumatic experience after which they responded to questions on a standardized measure regarding their cannabis craving. The results demonstrated that PTSD symptoms were associated with increased cannabis craving following trauma cue exposure,  $B = 0.43$ ,  $p = .004$ , 95% CI [0.14, 0.72]. However, the results did not support our hypothesis of an indirect effect through general coping motives, indirect effect = .03, SE = .08, 95% CI [-.10, .21]. We found an independent main effect of general coping

motives on trauma cue–elicited cannabis craving,  $B = 1.86$ ,  $p = .002$ , 95% CI [0.72, 3.01]. These findings have important clinical implications suggesting that clinicians should target both PTSD symptoms and general coping motives to prevent the development of conditioned cannabis craving to trauma reminders in trauma-exposed cannabis users.

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<https://doi.org/10.1016/j.jad.2021.07.015>

## **A Sex-Stratified Analysis of Suicidal Ideation Correlates among Deployed Post-9/11 Veterans: Results from the Survey of Experiences of Returning Veterans.**

CA Hoffmire, LL Monteith, LM Denneson, R Holliday, CL Park, CM Mazure, RA Hoff

Journal of Affective Disorders

Available online 19 July 2021

### Highlights

- Prevalence of recent SI did not differ by sex in this sample of post-9/11 veterans.
- Sex differences in SI correlates were observed among post-9/11 veterans.
- Combat experience was associated with a higher prevalence of SI among females only.
- Gender-tailored approaches may be effective in mitigating SI among post-9/11 veterans.

### Abstract

#### Background

Suicide rates are higher among veterans than non-veterans; this difference is particularly salient for females. Knowledge is sparse regarding correlates of suicidal ideation (SI) among female veterans, particularly in non-VHA samples. As such, and given that SI confers a strong risk for subsequent suicidal behavior, this study aimed to: (1) compare prevalence of recent SI by sex; and (2) determine whether deployment stressors, mental health symptoms, and recent psychosocial stressors are associated with recent SI, by sex, among post-9/11 veterans.

#### Methods

A sex-stratified analysis of cross-sectional data from 809 post-9/11, deployed veterans was conducted using the Survey of Experiences of Returning Veterans (SERV); statistical interactions between sex and correlates of interest were assessed.

## Results

Self-reported prevalence of recent SI did not differ by sex. A statistically significant interaction between sex and combat was observed; greater combat experience was associated with increased SI for females only. While significant interactions were not observed for other correlates, differences in significant predictors and predictor effect sizes were noted across sex-stratified models. Recent housing and financial concerns were only associated with increased SI prevalence among females, whereas concern about other recent stressful life events was associated with increased SI prevalence only among males.

## Limitations

This is a cross-sectional analysis of a national survey with limited power to detect statistical sex interactions.

## Conclusions

While correlates of SI are relatively consistent for males and females notable differences suggest that tailored assessment and intervention based on sex may hold merit in mitigating SI among post-9/11 era Veterans.

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<https://doi.org/10.1038/s41380-021-01223-w>

## **Post-traumatic stress symptoms in COVID-19 survivors: a self-report and brain imaging follow-up study.**

Yiheng Tu, Yuqi Zhang, Yu Li, Qing Zhao, Yanzhi Bi, Xuejing Lu, Yazhuo Kong, Li Wang, Zhijie Lu & Li Hu

Molecular Psychiatry

Published: 20 July 2021

Previous coronavirus pandemics were associated elevated post-traumatic stress symptoms (PTSS), but the self-report and neurological basis of PTSS in patients who survived coronavirus disease 2019 (COVID-19) are largely unknown. We conducted a two-session study to record PTSS in the COVID-19 survivors discharged from hospitals for a short (i.e., about 3 months, Session 1) to a medium period (i.e., about 6 months, Session 2), as well as brain imaging data in Session 2. The control groups were non-COVID-19 locals. Session 1 was completed for 126 COVID-19 survivors and 126



controls. Session 2 was completed for 47 COVID-19 survivors and 43 controls. The total score of post-traumatic stress disorder (PTSD) checklist for DSM-5 (PCL-5) score was significantly higher in COVID-19 survivors compared with controls in both sessions. The PCL-5 score in COVID-19 survivors was positively correlated with the duration after discharge ( $r = 0.27$ ,  $p = 0.003$  for Session 1), and increased by 20% from Session 1 to Session 2 for the survivors who participated both sessions. The increase was positively correlated with individual's test-retest duration ( $r = 0.46$ ,  $p = 0.03$ ). Brain structural volume and functional activity in bilateral hippocampus and amygdala were significantly larger in COVID-19 survivors compared with controls. However, the volumes of the left hippocampus and amygdala were negatively correlated with the PCL-5 score for the COVID-19 survivors. Our study suggests that COVID-19 survivors might face possible PTSS deteriorations, and highlights the importance of monitoring mental wellness of COVID-19 survivors.

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<https://doi.org/10.2196/26492>

### **Implementation of Telemental Health Services Before COVID-19: Rapid Umbrella Review of Systematic Reviews.**

Barnett P, Goulding L, Casetta C, Jordan H, Sheridan-Rains L, Steare T, Williams J, Wood L, Gaughran F, Johnson S

Journal of Medical Internet Research  
Published on 20.7.2021 in Vol 23, No 7 (2021): July

#### **Background:**

Telemental health care has been rapidly adopted for maintaining services during the COVID-19 pandemic, and a substantial interest is now being devoted in its future role. Service planning and policy making for recovery from the pandemic and beyond should draw on both COVID-19 experiences and the substantial research evidence accumulated before this pandemic.

#### **Objective:**

We aim to conduct an umbrella review of systematic reviews available on the literature and evidence-based guidance on telemental health, including both qualitative and quantitative literature.

#### Methods:

Three databases were searched between January 2010 and August 2020 for systematic reviews meeting the predefined criteria. The retrieved reviews were independently screened, and those meeting the inclusion criteria were synthesized and assessed for risk of bias. Narrative synthesis was used to report these findings.

#### Results:

In total, 19 systematic reviews met the inclusion criteria. A total of 15 reviews examined clinical effectiveness, 8 reported on the aspects of telemental health implementation, 10 reported on acceptability to service users and clinicians, 2 reported on cost-effectiveness, and 1 reported on guidance. Most reviews were assessed to be of low quality. The findings suggested that video-based communication could be as effective and acceptable as face-to-face formats, at least in the short term. Evidence on the extent of digital exclusion and how it can be overcome and that on some significant contexts, such as children and young people's services and inpatient settings, was found to be lacking.

#### Conclusions:

This umbrella review suggests that telemental health has the potential to be an effective and acceptable form of service delivery. However, we found limited evidence on the impact of its large-scale implementation across catchment areas. Combining previous evidence and COVID-19 experiences may allow realistic planning for the future implementation of telemental health.

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<https://doi.org/10.1016/j.jadr.2021.100202>

### **A randomized controlled trial comparing a manual and computer version of CALM in VA community-based outpatient clinics.**

Michael A. Cucciare, Kathy Marchant, Traci Abraham, Anthony Ecker, ... Jan Lindsay

Journal of Affective Disorders Reports  
Volume 6, December 2021

#### Highlights

- Computerized treatment delivery may help providers better adhere to a care model.

- Compared to a manual, computer-delivered care produces better anxiety outcomes.
- Both treatment modalities improved general mental health and depression.
- Neither modality improved PTSD symptoms.

## Abstract

### Background

This study compared a computer and manual version of a tailored Coordinated Anxiety Learning and Management (VA CALM) protocol on provider fidelity to CBT and patient outcomes.

### Methods

This study was a cluster randomized controlled trial. Providers (N = 32) were randomized to deliver VA CALM by computer or manual. Veteran patients (N = 135), treated by study providers, were recruited. The primary outcome was CBT fidelity, measured by rating audiotaped sessions. Secondary outcomes were Veterans' general (BSI-18 GSI, SF-12) and disorder-specific (GAD-7, PCL-5, PHQ-9) outcomes assessed at baseline, three and six month follow-up.

### Results

We found a large ( $d = 0.88$ ) but not statistically significant difference in mean fidelity rating scores between conditions. Compared with the manual, participants with generalized anxiety disorder receiving VA CALM by computer reported lower GAD-7 scores at three ( $-5.88$ ; 95% CI= $-11.37, -0.39$ ) and six month ( $-5.25$ ; 95% CI= $-10.29, -0.22$ ) follow-ups ( $d = 0.37$  to  $0.55$ ). Participants in the computer and manual conditions reported lower PHQ-9 ( $-3.11$ ; 95% CI= $-5.51, -0.71$ ;  $-4.06$ ; 95% CI= $-7.22, -0.90$ , respectively) and BSI-18 GSI ( $0.78$ ; 95% CI= $0.68, 0.90$ ;  $0.71$ ; 95% CI= $0.58, 0.87$ , respectively) scores from baseline to six month follow-up. We did not find statistically significant differences over time or between conditions on SF-12 or PCL-5 scores.

### Limitations

This study was underpowered to test the primary outcome. Small samples sizes in the disorder-specific subgroup analysis may limit the generalizability of findings.

### Conclusions

Neither modality proved to be superior on VA CALM fidelity. The computer version of VA CALM, compared to the manual, may provide modest benefit to Veterans with GAD.

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<https://doi.org/10.1002/jclp.23225>

## **Posttraumatic stress disorder, complex PTSD and subtypes of loneliness among older adults.**

Robert Fox, Philip Hyland, Andrew N. Coogan, Marylène Cloitre, Joanna McHugh Power

Journal of Clinical Psychology  
First published: 20 July 2021

### **Objectives**

Research examining the relationship between loneliness and Complex Posttraumatic Stress Disorder (CPTSD) is scarce, particularly among older adults. CPTSD includes the core symptoms of PTSD along with additional symptoms reflecting “disturbances in self-organisation” (DSO). This study examined the cross-sectional relationships between loneliness (emotional and social loneliness) and CPTSD symptoms (i.e., PTSD and DSO symptoms) in older adults.

### **Methods**

Structural equation modelling was used to examine these relationships in a nationally representative sample of US adults aged 60–70 years ( $n = 456$ ).

### **Results**

Controlling for covariates, emotional loneliness was associated with PTSD ( $\beta = 0.31$ ) and DSO ( $\beta = 0.57$ ) symptoms whereas social loneliness was only associated with DSO symptoms ( $\beta = 0.25$ ). The model explained 35.0% of the variance in PTSD symptoms and 71.3% in DSO symptoms.

### **Conclusion**

These findings have important implications for treating and understanding PTSD/CPTSD and their correlates among older adults.

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<https://doi.org/10.1016/j.biopsycho.2021.07.013>

## **Does TBI Cause Risky Substance Use or Substance Use Disorder?**

Christopher M. Olsen, PhD; John D. Corrigan, PhD

There is a high co-occurrence of risky substance use among adults with traumatic brain injury (TBI), although it is unknown if the neurological sequelae of TBI can promote this behavior. We propose that to conclude TBI can cause risky substance use, it must be determined that TBI precedes risky substance use, that confounders with the potential to increase the likelihood of both TBI and risky substance use must be ruled out, and that there must be a plausible mechanism of action. In this review, we address these factors by providing an overview of key clinical and preclinical studies, and list plausible mechanisms by which TBI could increase risky substance use. Human and animal studies have identified an association between TBI and risky substance use, though the strength of this association varies. Factors that may limit detection of this relationship include differential variability due to substance, sex, age of injury, and confounders that may influence the likelihood of both TBI and risky substance use. We propose possible mechanisms by which TBI could increase substance use that include damage associated neuroplasticity, chronic changes in neuroimmune signaling, and TBI-associated alterations in brain networks.

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<https://doi.org/10.1016/j.jsat.2021.108567>

**Frequency and recency of non-medical opioid use and death due to overdose or suicide among individuals assessed for risky substance use: A national registry study in Sweden.**

L Lundgren, M Padyab, M Sandlund, D McCarty

Journal of Substance Abuse Treatment  
Available online 21 July 2021

Highlights

- Assessed cause of death in 15,000 individuals assessed for substance use disorder
- Suicide (n = 136) and death due to overdose (n = 405) were common.
- Suicide and overdose deaths were associated with mental health severity score.
- Suicide prevention should be a standard of care in opioid use disorders treatment.

## Abstract

Sweden and many other countries have experienced increases in suicide and accidental overdose deaths. An analysis examined the associations between recency of non-medical opioid misuse and frequency of use of non-medical opioids with death due to either suicide or accidental overdose within a sample of 15,000 Swedish adults who completed an Addiction Severity Index (ASI) assessment for risky substance use or a substance use disorder.

## Methods and materials

Suicide (n = 136) and death due to overdose (n = 405) were identified in the official Cause of Death Registry from the Swedish National Board of Health and Welfare. Control variables included demographic characteristics and risks associated with either overdose or suicide. Cox regression analyses controlled for variables statistically significantly at the bivariate level.

## Results

At the multivariable level: a) a higher (revised) ASI Composite Score for mental health; b) history of suicide attempt; c) having used non-medical opioids for 1–2 times per week for at least a year; d) history of injection drug use; and, e) early onset of drug use, were all significantly and positively associated with death due to suicide. At the multivariable level: a) a higher the revised ASI Composite Score for mental health; b) recency of use of non-medical opioids; c) frequency of non-medical opioid use; d) being a male; e) history of injection drug use; and, f) being of ages 18–24 years compared to ages 43–51 years were all positively and significantly associated with death due to accidental overdose.

## Conclusion

These findings underscore the need to integrate mental health and substance use disorder treatment and provide suicide and overdose prevention interventions for individuals with an opioid use disorder. Recency and frequency of non-medical opioids were only associated with death due to overdose and not suicide. However, other drug use related variables (using opioids 1–2 times per week for at least a year, early onset of drug use and drug injection) were significantly associated with death due to suicide.

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<https://doi.org/10.1177/08862605211031251>

**Interracial Comparisons of Intimate Partner Violence Among Military Perpetrators.**

Denise Espinoza, Roberto Cancio

Journal of Interpersonal Violence  
First Published July 20, 2021

Interracial violence is a high-profile issue in the United States; however, there is little empirical research on interracial intimate partner violence (IPV). Interracial relationships are becoming more common. However, interracial couples continue to face stressors (e.g., discrimination) that likely impact the relationship (e.g., IPV) than their monoracial counterparts. Research indicates that military populations more likely oppose interracial marriages than nonmilitary counterparts. Yet, no study to date has investigated IPV within military monoracial and interracial couples. To understand the intersecting effects of race/ethnicity among military couples, this study investigates male perpetrated IPV in interracial and monoracial relationships. Using structural equation modeling, this study sample contains information about 449 male veterans from the National Longitudinal Study of Adolescent to Adult Health (1994-2008): Waves I and IV. Findings indicate that (a) White and Black veterans are more violent in monoracial relationships, meanwhile, Latino veterans have a higher IPV prevalence in interracial relationships; (b) Black and White veterans were more likely to use alcohol and other drugs (AOD) after IPV perpetration in interracial relationships, in contrast to Latino veterans' post IPV perpetrations AOD use in monoracial relationships; (c) veteran mental health status was affected after perpetration of IPV, similar to the effects experienced after combat. In an attempt to address the lack of research on the characteristics associated with interracial violence this study addresses the following questions: (a) Are veterans in interracial families more likely to commit IPV and use of alcohol and other drugs (AOD) than in monoracial families? (b) Among the military samples, is AOD a facilitator for IPV? (c) How does mental health status affect IPV perpetration?

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<https://doi.org/10.1002/ajmq.b.32868>

**Polygenic risk for major depression is associated with lifetime suicide attempt in US soldiers independent of personal and parental history of major depression.**

Murray B. Stein, Sonia Jain, Laura Campbell-Sills, Erin B. Ware, Karmel W. Choi, Feng He, Tian Ge, Joel Gelernter, Jordan W. Smoller, Ronald C. Kessler, Robert J. Ursano

Suicide is a major public health problem. The contribution of common genetic variants for major depressive disorder (MDD) independent of personal and parental history of MDD has not been established. Polygenic risk score (using PRS-CS) for MDD was calculated for US Army soldiers of European ancestry. Associations between polygenic risk for MDD and lifetime suicide attempt (SA) were tested in models that also included parental or personal history of MDD. Models were adjusted for age, sex, tranche (where applicable), and 10 principal components reflecting ancestry. In the first cohort, 417 (6.3%) of 6,573 soldiers reported a lifetime history of SA. In a multivariable model that included personal [OR = 3.83, 95% CI:3.09–4.75] and parental history of MDD [OR = 1.43, 95% CI:1.13–1.82 for one parent and OR = 1.64, 95% CI:1.20–2.26 for both parents), MDD PRS was significantly associated with SA (OR = 1.22 [95% CI:1.10–1.36]). In the second cohort, 204 (4.2%) of 4,900 soldiers reported a lifetime history of SA. In a multivariable model that included personal [OR = 3.82, 95% CI:2.77–5.26] and parental history of MDD [OR = 1.42, 95% CI:0.996–2.03 for one parent and OR = 2.21, 95% CI:1.33–3.69 for both parents) MDD PRS continued to be associated (at  $p = .0601$ ) with SA (OR = 1.15 [95% CI:0.994–1.33]). A soldier's PRS for MDD conveys information about likelihood of a lifetime SA beyond that conveyed by two predictors readily obtainable by interview: personal or parental history of MDD. Results remain to be extended to prospective prediction of incident SA. These findings portend a role for PRS in risk stratification for suicide attempts.

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<https://doi.org/10.1111/jsr.13448>

### **Large-scale implementation of insomnia treatment in routine psychiatric care: patient characteristics and insomnia-depression comorbidity.**

Martin Kraepelien, Erik Forsell, Kerstin Blom

Journal of Sleep Research  
First published: 23 July 2021

Treating comorbid insomnia is important for recovery from, and prevention of, depression. The objective of this study was to compare comorbidity and patient characteristics among patients having treatment for depression before and after implementation of cognitive behavioural therapy for insomnia (CBT-I) in a routine care



internet treatment clinic. We hypothesized that insomnia comorbidity would be lower among patients having treatment for depression after the treatment for insomnia became available, and that depression levels would be high among patients in the insomnia treatment group compared to previous studies of insomnia. Patients were assessed face-to-face by physicians and guided through internet-delivered treatment by psychologists in a psychiatric setting. We retrieved patient data from 3 years before and 3 years after the CBT-I implementation. Measures were the Montgomery-Åsberg Depression Rating Scale-Self rated (MADRS-S) and Insomnia Severity Index (ISI). Pretreatment symptom levels were high in both the depression (MADRS-S = 23, n = 1467) and insomnia treatment (ISI = 20, n = 552) groups, indicating a true psychiatric sample. Contrary to the hypothesis, there were no significant changes in the group having treatment for depression regarding insomnia severity or comorbid insomnia diagnosis (from 66% to 68%) after CBT-I implementation. Also contrary to the hypothesis, comorbid depression levels among insomnia patients having CBT-I were similar to or slightly higher than in previous studies. It is likely that more patients with this comorbidity, who currently receive treatment for depression, would benefit from CBT-I. We suggest an emphasis on information on the benefits of CBT-I among patients and clinical staff involved in the implementation of treatments for insomnia in psychiatry, and further research into possible differences between patients actively seeking treatment for insomnia or depression.

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<https://doi.org/10.1002/jts.22721>

### **Shame as a Mediator in the Association Between Emotion Dysregulation and Posttraumatic Stress Disorder Symptom Reductions Among Combat Veterans in a Residential Treatment Program.**

Alexander Puhalla, Aidan Flynn, Amanda Vaught

Journal of Traumatic Stress  
First published: 22 July 2021

Emotion dysregulation (ED) can be defined as one's inability to effectively respond to and manage internal experiences and the expression of emotion. ED has been linked to the development and maintenance of posttraumatic stress disorder (PTSD), with recent research suggesting that reductions in ED may predict improved treatment outcomes among both civilian and veteran populations. However, few studies have examined how changes in ED may predict treatment outcomes among veterans with PTSD and

whether certain core features of PTSD, such as shame, may act as potential mediators in the association between ED and PTSD symptom reductions. The present study sought to explore facets of ED, feelings of shame, and PTSD symptoms among 43 combat veterans upon their admission and discharge to a residential PTSD program. The results demonstrated that all variables of interest significantly decreased from admission to discharge,  $d_s = 0.75\text{--}1.84$ . Correlations indicated that reductions in ED,  $R^2 = .184$ , and shame,  $R^2 = .228$ , were associated with reductions in PTSD symptoms. However, the association between reductions in ED and PTSD was significantly mediated by reductions in shame. Overall, these results suggest that higher levels of emotion regulation may partially affect PTSD symptoms through reductions in shame. This may explain the efficacy of frontline PTSD treatments, as they explicitly focus on the processing of one's traumatic experience by reducing PTSD symptoms through regulation techniques that target emotional-behavioral cycles, which may include the shame-withdraw cycle.

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<https://doi.org/10.1001/jamapsychiatry.2021.1813>

### **Suicide Attempts of Muslims Compared With Other Religious Groups in the US.**

Rania Awaad, MD; Osama El-Gabalawy, MD, MS; Ebony Jackson-Shaheed, MPH; Belal Zia, MA; Hooman Keshavarzi, PsyD; Dalia Mogahed, MBA; Hamada Altalib, DO, MPH

Despite the stigma associated with suicide among Muslim individuals,<sup>5</sup> US Muslim adults were 2 times more likely to report a history of suicide attempt compared with respondents from other faith traditions, including atheists and agnostics. The proportion of US Muslim respondents who reported suicide attempts was larger than the proportion reported from Muslim-majority communities.<sup>6</sup> Unlike other studies, self-reported level of religiosity was not a protective factor for reporting suicide attempts.

Limitations of this study include a difference in sampling methods between Muslim respondents and other religious groups that could account for reported results despite weighting procedures. Additionally, only 1 question from the Columbia-Suicide Severity Rating Scale was included in the survey because of concern for respondent fatigue. The study underscores the importance to further understand and address social, cultural, and spiritual factors in suicide and mental health among US Muslim individuals.

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<https://doi.org/10.1093/arclin/aaa119>

## **Number of Concussions Does Not Affect Treatment Response to Cognitive Rehabilitation Interventions Following Mild TBI in Military Service Members.**

Ord, A. S., Shura, R. D., Curtiss, G., Armistead-Jehle, P., Vanderploeg, R. D., Bowles, A. O., Kennedy, J. E., Tate, D. F., & Cooper, D. B.

Archives of Clinical Neuropsychology  
2021 Jul 19; 36(5): 850-856

### **Objective:**

The study objective was to determine whether number of concussions would affect symptom improvement following cognitive rehabilitation (CR) interventions.

### **Method:**

Service members (N = 126) with concussion history completed a 6-week randomized control trial of CR interventions. Participants were stratified based on self-reported lifetime concussion frequency. Outcome measures included the Paced Auditory Serial Addition Test (PASAT), the Global Severity Index (GSI) from the Symptom Checklist-90-Revised, and the Key Behaviors Change Inventory (KBCI).

### **Results:**

Mixed-model analyses of variance revealed a significant main effect for time on cognitive, psychological, and neurobehavioral functioning. A significant main effect for the number of concussions was observed for GSI and KBCI, but not PASAT. Interactions between the number of concussions and time were not significant for any of the outcome variables.

### **Conclusions:**

Over the 6-week interval, improvements were found for all participants across all outcome measures. Number of concussions did not affect improvements over time.

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<https://doi.org/10.3233/BMR-200123>

## **Identifying prognostic factors to determine the level of recovery in servicemembers with chronic low back pain: A prospective cohort study.**

Mourits, B., Meulekamp, M. Z., van der Wurff, P., & Lucas, C.

Journal of Back and Musculoskeletal Rehabilitation  
2021; 34(4): 697-705

**Objective:**

The main objective of this study was to identify general and military-related factors that are associated with the level of recovery in Dutch service members with chronic low back pain (CLBP) who followed a rehabilitation program.

**Material and method:**

One hundred five consecutive service members with CLBP were included in this study. The level of disability, was used to distinguish a recovered and non-recovered group. Level of pain and self-perceived recovery were used as secondary outcome measurements. Differences were evaluated within and between the groups using the Student's t-test Bivariate logistic regression analyses were used for identifying the prognostic factors related to various outcomes of recovery

**Results:**

After following the rehabilitation program, 64.8% of the service members recovered from CLBP. The recovered group, demonstrated significant effect sizes in disability and in pain The non-recovered group showed on disability a non-significant effect and in pain a significant effect. The self-perceived recovery in the recovered group was "much improved" and the non-recovered group "slightly improved". The results of the bivariate regression analyses showed no significant independent prognostic factors related to recovery.

**Conclusions:**

In this study, no significant independent prognostic factors could be identified that were associated to the various outcomes of recovery in service members with CLBP who followed a rehabilitation program.

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<https://doi.org/10.1037/dhe000024>

**Bended womanhood bended back: The intersection of race, gender, and culture in women of color veterans and their transition into higher education.**

Saunders, R., Lim, J. H., & Harris, H. L

Journal of Diversity in Higher Education  
Advance online publication

Despite the increasing attention given to veterans in higher education, few studies have explored the transitional experiences of women of color student veterans (WOCSVs). This study examines the gendered and racialized experiences of WOCSVs and the impact of their intersecting identities on the transition through higher education. Considering the overlapping marginalities of the WOCSV participants, we grounded this study in the concept of Intersectionality, intrinsically aligned to Critical Race Theory. Based on the thematic analysis of 10 participants' narratives, this study revealed four interrelated themes that characterize their transition journey: (a) suppressed and redemanded identity, (b) fighting for visibility, (c) marginalized academic identity, and (d) no belonging. The sense of no belonging is evident through the participants' transition experiences, thus setting them apart from other groups of student veterans. However, the participants showed critical insight and resilience that evolved from their intersecting identities. In addition, they proactively constructed their own support system on and off campus, which further served as a psychological sanctuary and motivational cradle. We conclude with recommendations for institutions of higher education, including the reimagining and restructuring of the current cultural climate of veteran-friendly campuses grounded in the stereotypes of White men as the prototype of U.S. military veterans. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

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<https://doi.org/10.1177/01454455211033515>

### **Behavioral and Occupational Health in Military Firefighters: An Understudied Population.**

Brian A. Moore, Jason L. Judkins, Mari-Amanda Dyal, Michael Schlenk, Eric Meyer, Casey L. Straud, Vincent Mysliwec, Alan L. Peterson, Monty T. Baker

Behavior Modification

First Published July 22, 2021

To our knowledge, no studies on health conditions in U.S. military firefighters exist. Data and demographics from the Defense Medical Epidemiology Database were analyzed on several shared medical issues among military personnel and civilian firefighters.

Descriptive statistics and Chi-Square goodness of fit tests were conducted to support study aims. Between 2001 and 2015, substantial incidence rate increases (per 10,000) of tinnitus, PTSD, insomnia, and OSA (2005–2015) were observed. Modest to large increases in depressive disorders, adjustment reaction, generalized anxiety disorder, and panic disorder were observed. Decreasing rates were observed for alcohol dependence, hypertension, and tobacco use disorder. While efforts have examined the impact of sustained operations on military members, first responder military subgroups like firefighters are deficient. Cognitive Behavior Therapy interventions are efficacious for preventing and reducing behavioral health problems; therefore, tailoring them specifically for U.S. military firefighters could significantly improve quality of life and long-term health.

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<https://doi.org/10.1136/bmjmilitary-2021-001801>

## **Physical sleeping environment is related to insomnia risk and measures of readiness in US army special operations soldiers.**

J Mantua, BM Ritland, JA Naylor, G Simonelli, C A Mickelson, J J Choynowski, A F Bessey, W J Sowden, T M Burke and A B McKeon

BMJ Military Health

Published Online First: 22 July 2021

### Background

US military service members have characteristically poor sleep, even when ‘in garrison’ or at one’s home base. The physical sleeping environment, which is often poor in military-provided housing or barracks, may contribute to poor sleep quality in soldiers. The current study aimed to assess whether the sleeping environment in garrison is related to sleep quality, insomnia risk and military readiness.

### Methods

Seventy-four US army special operations soldiers participated in a cross-sectional study. Soldiers were queried on their sleeping surface comfort and the frequency of being awakened at night by excess light, abnormal temperatures and noise. Subjective sleep quality and insomnia symptoms were also queried, via the Pittsburgh Sleep Quality Index and Insomnia Severity Index, respectively. Lastly, measures of soldier readiness, including morale, motivation, fatigue, mood and bodily pain, were assessed.

## Results

Soldiers reporting temperature-related and light-related awakenings had poorer sleep quality higher fatigue and higher bodily pain than soldiers without those disturbances. Lower ratings of sleeping surface comfort were associated with poorer sleep quality and lower motivation, lower morale, higher fatigue and higher bodily pain. Each 1-point increase in sleeping surface comfort decreased the risk for a positive insomnia screen by 38.3%, and the presence of temperature-related awakenings increased risk for a positive insomnia screen by 78.4%. Those living on base had a poorer sleeping environment than those living off base.

## Conclusion

Optimising the sleep environment—particularly in on-base, military-provided housing—may improve soldier sleep quality, and readiness metrics. Providers treating insomnia in soldiers should rule out environment-related sleep disturbances prior to beginning more resource-intensive treatment.

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<https://doi.org/10.1037/ocp0000278>

## **News from the front: A monthly study on stress and social support during a military deployment to a war zone.**

Ragsdale, J. M., Kochert, J. F., & Beehr, T. A.

Journal of Occupational Health Psychology  
Advance online publication

Soldiers deployed to combat zones are likely to experience some stressful situations that can result in individual strains or ill health. In addition to the stressors originating in situ, problems at home can also affect soldiers' strains and attitudes about deployment. However, they may also possess resources in the form of social support from both their comrades and family that, based on resources theories of occupational stress, can lessen strains or enhance attitudes. A serious problem in examining this issue is the difficulty of studying their occupational stress, because collecting data in their work situation—a combat zone—is inherently complicated. Most studies rely on past recollection of the deployment situation in post-deployment data collections, with some studies including a pre-deployment measure or one data collection during deployment. The present study was the first to collect data from soldiers periodically (monthly) over the course of their entire deployment to a combat zone, which has the advantage of

providing more accurate tracking of stressor and resource effects on both their strains and positive deployment attitudes closer to real time. This monthly diary study found that, consistent with resource theories of occupational stress, the previous month's combat stressors had a detrimental effect on many outcomes, and the resource of social support from work and home during the previous month improved physical health and depression, respectively. Future research should not only replicate this approach to data collection but also extend the measurement periods to examine soldiers' readjustment process after returning home. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

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<https://doi.org/10.1177/00187208211034024>

## **Understanding Heart Rate Reactions to Post-Traumatic Stress Disorder (PTSD) Among Veterans: A Naturalistic Study.**

Sadeghi M, Sasangohar F, McDonald AD, Hegde S

Human Factors

First Published July 22, 2021

### Objective

We collected naturalistic heart rate data from veterans diagnosed with post-traumatic stress disorder (PTSD) to investigate the effects of various factors on heart rate.

### Background

PTSD is prevalent among combat veterans in the United States. While a positive correlation between PTSD and heart rate has been documented, specific heart rate profiles during the onset of PTSD symptoms remain unknown.

### Method

Veterans were recruited during five cycling events in 2017 and 2018 to record resting and activity-related heart rate data using a wrist-worn device. The device also logged self-reported PTSD hyperarousal events. Regression analyses were performed on demographic and behavioral covariates including gender, exercise, antidepressants, smoking habits, sleep habits, average heart rate during reported hyperarousal events, age, glucocorticoids consumption, and alcohol consumption. Heart rate patterns during self-reported PTSD hyperarousal events were analyzed using Auto Regressive



Integrated Moving Average (ARIMA). Heart rate data were also compared to an open-access non-PTSD representative case.

## Results

Of 99 veterans with PTSD, 91 participants reported at least one hyperarousal event, with a total of 1023 events; demographic information was complete for 38 participants who formed the subset for regression analyses. The results show that factors including smoking, sleeping, gender, and medication significantly affect resting heart rate. Moreover, unique heart rate patterns associated with PTSD symptoms in terms of stationarity, autocorrelation, and fluctuation characteristics were identified.

## Conclusion

Our findings show distinguishable heart rate patterns and characteristics during PTSD hyperarousal events.

## Application

These findings show promise for future work to detect the onset of PTSD symptoms.

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## Links of Interest

Fighting battles, finding peace – my grandfather and me

<https://blogs.va.gov/VAntage/90256/fighting-battles-finding-peace-grandfather/>

Coaching Into Care helps loved ones help Veterans

<https://blogs.va.gov/VAntage/90142/coaching-care-helps-loved-ones-help-veterans/>

Suicide Among Veterans

Veterans' Issues in Focus

<https://www.rand.org/pubs/perspectives/PEA1363-1.html>

Alcohol-Related Diseases Increased as Some People Drank More During the COVID-19 Pandemic

<https://jamanetwork.com/journals/jama/fullarticle/2781739>

'Mental health is health. Period.' Defense Secretary Lloyd Austin decries stigma in message to troops

<https://www.usatoday.com/story/news/politics/2021/07/26/defense-sec-lloyd-austin-troops-mental-health-health-period/8090427002/>

Brain games help restore function after mild TBIs, study finds

<https://www.militarytimes.com/news/your-military/2021/07/27/brain-games-help-restore-function-after-mild-tbis-study-finds/>

Ways to Help Your Children Cope With Moving

<https://www.militaryonesource.mil/moving-housing/moving/planning-your-move/nine-ways-to-help-your-kids-cope-with-moving/>

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**Resource of the Week: [Traumatic Brain Injury: A Guide for Caregivers of Service Members and Veterans](#)**

From the [Traumatic Brain Injury Center of Excellence](#):

The 2021 Traumatic Brain Injury: A Guide for Caregivers of Service Members and Veterans is a recovery support tool to assist caregivers of service members and veterans who have sustained a traumatic brain injury at any severity level. This revision replaces the original guide released in 2010.

Providers should recommend this guide to caregivers for additional information on TBI and how to support their service member or veteran, particularly newly diagnosed patients. The guide can help the caregiver understand clinical terminology used by providers and empower them to advocate for their service member.

Topics in the 2021 caregiver guide include:

- Understanding TBI: This section includes information on types and diagnosis of TBI, the health care team, and what the recovery process may look like.
- Caregiver Strategies for Managing the Effects of TBI: This section includes information about understanding and addressing the different symptoms of TBI for the caregiver.
- Becoming a Family Caregiver: This section covers starting the caregiver journey, becoming an advocate, and learning how to take care of oneself.
- Caregiver Resources: This section includes helpful links for caregivers, printable forms and a glossary.



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