

# CDP



## Research Update -- April 27, 2023

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- Resource of the Week – Exploring Sleep Disturbance in Central Nervous System Disorders: Proceedings of a Workshop (National Academies of Sciences, Engineering, and Medicine)

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<https://doi.org/10.1089/can.2022.0239>

## **Cannabis Use Disorder Symptoms in Weekly Cannabis Users: A Network Comparison Between Daily Cigarette Users and Nondaily Cigarette Users.**

René Freichel, Emese Kroon, Lauren Kuhns, Francesca Filbey, Ilya M. Veer, Reinout Wiers, and Janna Cousijn

Cannabis and Cannabinoid Research  
Published Online: 18 Apr 2023

### Background:

Concurrent use (co-use) of cannabis and tobacco is common and associated with worse clinical outcomes compared with cannabis use only. The mechanisms and interactions of cannabis use disorder (CUD) symptoms underlying co-use remain poorly understood.

### Methods:

We examined differences in the symptom presence and symptom network configurations between weekly cannabis users who use tobacco daily (co-users, n=789) or non- or nondaily (nondaily co-users, n=428).

### Results:

First, we identified a range of symptoms (craving, failed reduce or quit attempts, neglected responsibilities, and negative social effects) that are most central to the highly interconnected CUD symptom network. Risky cannabis use was mostly associated with negative social and health effects, and independent of other CUD symptoms. Craving symptoms act as a bridge between different CUD and withdrawal symptoms. Among co-users, (1) craving is more strongly associated with negative psychosocial effects, (2) feelings of depression and negative health effects are more central to the network, and (3) the negative health effects are more strongly associated with failed attempts to reduce or quit attempts compared with nondaily co-users.

### Discussion:

Our results go beyond existing findings focused on the mere increase in CUD symptom presence, and speak to the potential synergistic effects of co-use on dependence and withdrawal symptoms. We outline clinical implications with respect to targeting specific

CUD symptoms in co-users, and point to future research to disentangle tobacco and cannabis craving symptoms.

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<https://doi.org/10.1080/20008066.2023.2178203>

**Acceptance and commitment therapy for co-occurring gambling disorder and posttraumatic stress disorder in veterans: a narrative review.**

Hitch, C., Leightley, D., Murphy, D., Trompeter, N., & Dymond, S.

European Journal of Psychotraumatology  
2023; 14(1): 2178203

**Background:**

PTSD and gambling disorder (GD) are frequently comorbid. Gambling may provide escape-based coping for the emotions experienced by PTSD sufferers. Military personnel may be at increased risk of PTSD and/or GD. Acceptance and Commitment Therapy (ACT) has been found to improve both PTSD and GD outcomes, yet research into the potential effectiveness of ACT for PTSD and/GD in veterans is scarce.

**Objective:**

This review aimed to systematically assess and describe the evidence relating to the use of ACT and acceptance-based therapy for military populations with PTSD and/or GD.

**Method:**

Six databases were searched. Selection criteria included studies that featured the armed forces/military, delivered ACT/acceptance-based therapy, and aimed to improve PTSD and/or GD outcomes. A narrative synthesis approach was adopted.

**Results:**

From 1,117 results, 39 studies were fully screened and 14 met inclusion criteria. All studies originated from the USA and 9 were associated with United States Department of Veterans Affairs. Therapy use within each study produced an improvement in PTSD and/or GD, yet only one study examined GD and no studies considered comorbid PTSD/GD. The broad range of study designs made it difficult to compare the findings or make generalisations from the collective results. It is unclear which method of ACT

delivery is superior (app-based, telehealth, face-to-face, groups, one-to-one, manualised, or unstructured), or what the true effect size is of ACT for PTSD and/or GD.

#### Conclusions:

These preliminary findings are promising, yet more research is needed on the delivery format and content of ACT sessions, and whether findings generalise beyond USA-recruited military samples. The cost-effectiveness of remote-based ACT also warrants investigation.

#### HIGHLIGHTS

Among veterans, psychological interventions such as Acceptance and Commitment Therapy (ACT) may be effective for Post-Traumatic Stress Disorder (PTSD) and/or Gambling Disorder (GD). There is a paucity of evidence on ACT approaches for treating PTSD and GD in veterans. Further work is needed on context-specific delivery (in-person vs. group), method of ACT intervention (manualised vs unstructured, digital therapeutics) with non-US samples.

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<https://doi.org/10.1016/j.sxmr.2022.06.002>

#### **Male Sexual Health Related Complications Among Combat Veterans.**

Castillo, O., Chen, I. K., Amini, E., Yafi, F. A., & Barham, D. W.

Sexual Medicine Reviews  
2022 Oct 1; 10(4): 691-697

#### Introduction:

With improved armor and combat trauma care, more male service members in the 21st century are surviving devastating injuries to their genitourinary (GU) system. The impact of these injuries can have long lasting effect on their sexual function and fertility status.

#### Objectives:

To review the current literature on sexual health-related complications and fertility implications among male service members sustaining combat related injuries.

#### Methods:

We performed a literature search that included male sexual health complications and combat injuries using PubMed and Google Scholar. We reviewed the impact of

traumatic injuries to the pelvis and perineum on sexual function and fertility, and we also discuss sexual dysfunction from posttraumatic stress disorder (PTSD) and traumatic brain injuries (TBI).

#### Results:

Injuries sustained during combat are usually polytraumatic, especially in recent conflicts with improvised explosive devices. The majority of GU combat injuries involve the scrotum, testes, and penis resulting in lasting structural dysfunction. PTSD is associated with higher levels of erectile dysfunction, hypoactive sexual desire, and premature ejaculation. Overall, veterans diagnosed with PTSD had a higher risk of developing sexual dysfunction. Veterans with TBI experience sexual health complications, such as decreased libido, difficulties with arousal maintenance, and the ability to achieve orgasm. Combat related injuries can have significant fertility implications on service members as they typically serve in their peak fertility years.

#### Conclusions:

Traumatic GU injuries, PTSD, TBI, and associated endocrine dysfunction can all contribute to sexual dysfunction among combat veterans. Given the complex nature of sexual dysfunction in this population, these patients are best managed by a multidisciplinary team.

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<https://doi.org/10.1002/jts.22918>

### **Altered bed nucleus of the stria terminalis and amygdala responses to threat in combat veterans with posttraumatic stress disorder.**

Feola, B., Flook, E. A., Gardner, H., Phan, K. L., Gwirtsman, H., Olatunji, B., & Blackford, J. U.

Journal of Traumatic Stress  
2023 Apr ;36(2): 359-372

Posttraumatic stress disorder (PTSD) significantly impacts many veterans. Although PTSD has been linked to alterations in the fear brain network, the disorder likely involves alterations in both the fear and anxiety networks. Fear involves responses to imminent, predictable threat and is driven by the amygdala, whereas anxiety involves responses to potential, unpredictable threat and engages the bed nucleus of the stria terminalis (BNST). The BNST has been implicated in PTSD, but the role of the BNST in

combat veterans with PTSD has yet to be examined. Identifying alterations in BNST responses to unpredictable threat could provide important new targets for treatment. The current study examined whether veterans with PTSD have altered BNST or amygdala responses (function and connectivity) to unpredictable and predictable threat. The fMRI task involved viewing predictable threat cues followed by threat images, predictable neutral cues followed by neutral images, and unpredictable threat cues followed by either a threat or neutral image. Participants included 32 combat-exposed veterans with PTSD and 13 combat-exposed controls without PTSD. Across all conditions, veterans with PTSD had heightened BNST activation and displayed stronger BNST and amygdala connectivity with multiple fear and anxiety regions (hypothalamus, hippocampus, insula, ventromedial prefrontal cortex) relative to controls. In contrast, combat controls showed a pattern of stronger connectivity during neutral conditions (e.g., BNST-vmPFC), which may suggest a neural signature of resilience to developing PTSD,  $\eta^2 = .087-.527$ ,  $ps < .001$ . These findings have implications for understanding fear and anxiety networks that may contribute to the development and maintenance of PTSD.

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<https://doi.org/10.1016/j.psychres.2023.115182>

### **A historical comparison of U.S. Army & U.S. civilian suicide rates, 1900-2020.**

Smith, J. A., Doidge, M., Hanoa, R., & Frueh, B. C.

Psychiatry Research  
2023 May; 323: 115182

Studies examining the perceived association of war time and increasing suicide rates in the U.S. military and U.S. civilian populations have proliferated since the beginning of the Global War on Terror (GWOT). However, additional historical analysis is needed to better place the recent surge in active-duty U.S. Army and U.S. civilian suicide rates into context and better inform researchers, healthcare providers, and policy makers. To do so, a cross sectional study that extracted empirical data from U.S. government websites, publications, and journal articles published from 1900 to 2022 was conducted to identify longitudinal trends. From 1900 to 2020, active-duty U.S. Army soldier and U.S. civilian suicide rates appear to fluctuate similarly, but with soldier rates often displaying more dramatic changes. Since 1900, active-duty U.S. Army soldier and similarly aged U.S. civilian male suicide rates have gradually converged, with the differences in rates narrowing over time. War does not historically appear to increase

suicide rates in active-duty U.S. Army soldiers or U.S. civilians. More recently, given the apparent convergence of U.S. Army and similarly aged U.S. civilian male annual suicide rates, larger more universal factors than combat may be similarly affecting both populations.

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### **Social isolation and well-being in veterans with mental illness.**

Grenawalt, T. A., Lu, J., Hamner, K., Gill, C., & Umucu, E.

Journal of Mental Health  
2023 Apr; 32(2): 407-411

#### Background:

Veterans with mental illness are a growing population in the United States (US). For some veterans, their military service has a negative effect on well-being. Social isolation is problematic for veterans' mental health by increasing incidence of depression, suicidal ideation or attempts, and readmittance to psychiatric hospitals. Social support is a protective factor for individuals with mental illness and is key to a successful military-to-civilian transition.

#### Aim:

Thus, we examine the relationship of social isolation on well-being among veterans with any mental illness.

#### Methods:

This cross-sectional correlational study consisted of a sample of 146 US veterans with any mental illness. A three-step hierarchical regression analysis was used to determine if social isolation is a predictor of well-being after controlling for demographics, functional limitations and depression.

#### Results:

Findings revealed social isolation was positively correlated with functional limitations ( $r = 0.48, p < 0.001$ ), depression ( $r = 0.66, p < 0.001$ ) and negatively correlated with well-being ( $r = -.64, p < 0.001$ ). Hierarchical regression analysis revealed social isolation was negatively correlated ( $\beta = -.44, p < 0.001$ ) with well-being. Overall, our three-step model accounted a total of 50% of variance in well-being, a large effect size.



Conclusion:

The findings underscore the importance of assessing the relationship of social isolation on well-being in veterans with mental illness. The findings also highlight promising targets to improve prevention and psychosocial interventions to improve well-being among veterans with mental illness.

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<https://doi.org/10.1136/bmjopen-2022-063125>

**Mental health issues and illness and substance use disorder (non-)disclosure to a supervisor: a cross-sectional study on beliefs, attitudes and needs of military personnel.**

Bogaers, R., Geuze, E., van Weeghel, J., Leijten, F., van de Mheen, D., Greenberg, N., Rozema, A. D., & Brouwers, E.

BMJ Open

2023 Apr 12; 13(4): e063125

Objectives:

Research suggests that military personnel frequently delay disclosing mental health issues and illness (MHI), including substance use disorder, to supervisors. This delay causes missed opportunities for support and workplace accommodations which may help to avoid adverse occupational outcomes. The current study aims to examine disclosure-related beliefs, attitudes and needs, to create a better understanding of personnel's disclosure decision making.

Design:

A cross-sectional questionnaire study among military personnel with and without MHI. Beliefs, attitudes and needs regarding the (non-)disclosure decision to a supervisor were examined, including factors associated with (non-)disclosure intentions and decisions. Descriptive and regression (logistic and ordinal) analyses were performed.

Setting:

The study took place within the Dutch military.

#### Participants:

Military personnel with MHI (n=324) and without MHI (n=554) were participated in this study.

#### Outcome measure:

(Non-)disclosure intentions and decisions.

#### Results:

Common beliefs and attitudes pro non-disclosure were the preference to solve one's own problems (68.3%), the preference for privacy (58.9%) and a variety of stigma-related concerns. Common beliefs and attitudes pro disclosure were that personnel wanted to be their true authentic selves (93.3%) and the desire to act responsibly towards work colleagues (84.5%). The most reported need for future disclosure (96.8%) was having a supervisor who shows an understanding for MHI. The following factors were associated both with non-disclosure intentions and decisions: higher preference for privacy (OR (95% CI))=(1.99 (1.50 to 2.65)intention, 2.05 (1.12 to 3.76)decision) and self-management (OR (95% CI))=(1.64 (1.20 to 2.23)intention, 1.79 (1.00 to 3.20)decision), higher stigma-related concerns (OR (95% CI))=(1.76 (1.12 to 2.77)intention, 2.21 (1.02 to 4.79)decision) and lower quality of supervisor-employee relationship (OR (95% CI))=(0.25 (0.15 to 0.42)intention, 0.47 (0.25 to 0.87)decision).

#### Conclusion:

To facilitate (early-)disclosure to a supervisor, creating opportunities for workplace support, interventions should focus on decreasing stigma and discrimination and align with personnels' preference for self-management. Furthermore, training is needed for supervisors on how to recognise, and effectively communicate with, personnel with MHI. Focus should also be on improving supervisor-employee relationships.

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<https://doi.org/10.1136/medethics-2022-108163>

#### **Repairing moral injury takes a team: what clinicians can learn from combat veterans.**

Cahill, J. M., Kinghorn, W., & Dugdale, L.

Journal of Medical Ethics  
2023 May; 49(5): 361-366

Moral injury results from the violation of deeply held moral commitments leading to emotional and existential distress. The phenomenon was initially described by psychologists and psychiatrists associated with the US Departments of Defense and Veterans Affairs but has since been applied more broadly. Although its application to healthcare preceded COVID-19, healthcare professionals have taken greater interest in moral injury since the pandemic's advent. They have much to learn from combat veterans, who have substantial experience in identifying and addressing moral injury—particularly its social dimensions. Veterans recognise that complex social factors lead to moral injury, and therefore a community approach is necessary for healing. We argue that similar attention must be given in healthcare, where a team-oriented and multidimensional approach is essential both for ameliorating the suffering faced by health professionals and for addressing the underlying causes that give rise to moral injury.

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<https://doi.org/10.1007/s40501-023-00284-8>

## **Assessing and Addressing Functioning and Quality of Life in PTSD.**

Benfer, N., Litz, B.T.

Current Treatment Options in Psychiatry

Published: 30 January 2023

### Purpose of review

Arguably, the most important goal of psychotherapy is to improve patients' functioning and quality of life (QoL). Because the field of post-traumatic stress disorder (PTSD) has been driven by the disease model, outcomes are solely indexed by symptom change. We review the barriers to assessing functioning and QoL in PTSD and examine the available evidence that evidence-based treatments for PTSD that focus on symptom change address functioning and QoL.

### Recent findings

Assessments of functioning and QoL are limited because current methods are nomothetic and fail to capture the breadth and depth of functioning (while still being feasible to implement in routine practice). Notwithstanding this limitation, cognitive processing and prolonged exposure therapies are not superior to other treatments in improving functioning and QoL.

## Summary

Clinicians and clinical researchers should attend to functioning and QoL to plan treatment and track change. Ideally, assessments of functioning and QoL require an idiographic approach that identifies unique domains of functional problems. In contrast to the disease model, a recovery-oriented framework is better suited to advance knowledge about treatment-valid assessment approaches in PTSD.

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<http://doi.org/10.1017/S1041610222001223>

## **Identifying significant correlates of purpose in life in older US military veterans: results from the national health and resilience in veterans study.**

Fischer, I. C., Feldman, D. B., Tsai, J., Harpaz-Rotem, I., Lucas, K. A., Schulenberg, S. E., & Pietrzak, R. H.

International Psychogeriatrics

Published online by Cambridge University Press: 30 January 2023

### Objective:

Perceived purpose in life (PIL) has been linked to a broad range of adverse physical, mental, and cognitive outcomes. However, limited research has examined factors associated with PIL that can be targeted in prevention and treatment efforts in aging populations at heightened risk of adverse outcomes. Using data from predominantly older US veterans, we sought to identify important correlates of PIL.

### Methods:

Cross-sectional data were analyzed from the 2019–2020 National Health and Resilience in Veterans Study, which surveyed a nationally representative sample of 4069 US military veterans (M age = 62.2). Elastic net and relative importance analyses were conducted to evaluate sociodemographic, military, health, and psychosocial variables that were strongly associated with PIL.

### Results:

Of the 39 variables entered into an elastic net analysis, 10 were identified as significant correlates of PIL. In order of magnitude, these were resilience (18.7% relative variance explained [RVE]), optimism (12.1%), depressive symptoms (11.3%), community integration (10.7%), gratitude (10.2%), loneliness (9.8%), received social support

(8.6%), conscientiousness (8.5%), openness to experience (5.4%), and intrinsic religiosity (4.7%).

#### Conclusions:

Several modifiable psychosocial factors emerged as significant correlates of PIL in US military veterans. Interventions designed to target these factors may help increase PIL and mitigate risk for adverse health outcomes in this population.

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<https://doi.org/10.1176/appi.ps.202100730>

### **Differences Between VHA-Delivered and VHA-Purchased Behavioral Health Care in Service and Patient Characteristics.**

Megan E. Vanneman, Ph.D., M.P.H., Amy K. Rosen, Ph.D., Todd H. Wagner, Ph.D., Michael Shwartz, Ph.D., M.B.A., Sarah H. Gordon, Ph.D., M.S., Greg Greenberg, Ph.D., Tianyu Zheng, M.S., James Cook, M.Sc., Erin Beilstein-Wedel, M.A., Tom Greene, Ph.D., A. Taylor Kelley, M.D., M.P.H.

Psychiatric Services

Published Online: 30 Aug 2022

#### Objective:

Federal legislation has expanded Veterans Health Administration (VHA) enrollees' access to VHA-purchased "community care." This study examined differences in the amount and type of behavioral health care delivered in VHA and purchased in the community, along with patient characteristics and area supply and demand factors.

#### Methods:

This retrospective cross-sectional study examined data for 204,094 VHA enrollees with 448,648 inpatient behavioral health stays and 3,467,010 enrollees with 55,043,607 outpatient behavioral health visits from fiscal years 2016 to 2019. Standardized mean differences (SMDs) were calculated for patient and provider characteristics at the outpatient-visit level for VHA and community care. Linear probability models assessed the association between severity of behavioral health condition and site of care.

#### Results:

Twenty percent of inpatient stays were purchased through community care, with severe behavioral health conditions more likely to be treated in VHA inpatient care. In the

outpatient setting, community care accounted for 3% of behavioral health care visits, with increasing use over time. For outpatient care, veterans receiving community care were more likely than those receiving VHA care to see clinicians with fewer years of training (SMD=1.06).

#### Conclusions:

With a large portion of inpatient behavioral health care occurring in the community and increased use of outpatient behavioral health care with less highly trained community providers, coordination between VHA and the community is essential to provide appropriate inpatient follow-up care and address outpatient needs. This is especially critical given VHA's expertise in providing behavioral health care to veterans and its legislative responsibility to ensure integrated care.

See also: [Veteran Behavioral Health Care in the VHA and Elsewhere](#)

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<https://doi.org/10.1176/appi.ajp.23180001>

### **The American Psychiatric Association Practice Guideline for the Treatment of Patients With Eating Disorders.**

Catherine Crone, M.D. (Chair), Laura J. Fochtmann, M.D., M.B.I. (Vice-Chair, Methodologist), Evelyn Attia, M.D., Robert Boland, M.D., Javier Escobar, M.D., Victor Fornari, M.D., Neville Golden, M.D., Angela Guarda, M.D., Maga Jackson-Triche, M.D., Laurie Manzo, M.Ed., R.D., L.D.N., Margherita Mascolo, M.D., Karen Pierce, M.D., Megan Riddle, M.D., Ph.D., M.S., Andreea Seritan, M.D., Blair Uniacke, M.D., Nancy Zucker, Ph.D., Systematic Review: Joel Yager, M.D., Thomas J. Craig, M.D., Seung-Hee Hong, Jennifer Medicus

The American Journal of Psychiatry

Published Online: 1 Feb 2023

At its April 2021 meeting, the American Psychiatric Association (APA) Board of Trustees approved "The American Psychiatric Association Practice Guideline for the Treatment of Patients With Eating Disorders." The full guideline is available at APA's Practice Guidelines website.

The goal of this guideline is to improve the quality of care and treatment outcomes for patients with eating disorders, as defined by the Diagnostic and Statistical Manual of

Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR; American Psychiatric Association 2022). Since publication of the last American Psychiatric Association (APA) practice guideline on eating disorders (American Psychiatric Association 2006), there have been many studies on psychotherapies for individuals with these diagnoses as well as some studies on pharmacotherapies. Despite this, there are still substantial gaps in the availability and use of evidence-based treatments for individuals with an eating disorder (Kazdin et al. 2017). This practice guideline aims to help clinicians enhance care for their patients by reviewing current evidence and providing evidence-based statements (Box 1) that are intended to increase knowledge, improve assessment, and optimize treatment of eating disorders.

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<https://doi.org/10.1080/08995605.2022.2156200>

### **Prospective associations of psychedelic treatment for co-occurring alcohol misuse and posttraumatic stress symptoms among United States Special Operations Forces Veterans.**

Stacey B. Armstrong, Yitong Xin, Nathan D. Sepeda, Martín Polanco, Lynnette A. Averill & Alan K. Davis

Military Psychology

Published online: 01 Feb 2023

This study evaluated prospective associations of ibogaine and 5-MeO-DMT treatment for risky alcohol use and post-traumatic stress disorder (PTSD) symptoms among United States (US) Special Operations Forces Veterans (SOFV). Data were collected during standard clinical operations at pre-treatment and 1-month (1 m), 3-months (3 m), and 6-months (6 m) post-treatment in an ibogaine and 5-MeO-DMT treatment program in Mexico. Of the 86 SOFV that completed treatment, 45 met criteria for risky alcohol use at pre-treatment (mean age = 44; male = 100%; White = 91%). There was a significant reduction in alcohol use from pre-treatment ( $M = 7.2$ ,  $SD = 2.3$ ) to 1 m ( $M = 3.6$ ;  $SD = 3.5$ ) post-treatment, which remained reduced through 6 m ( $M = 4.0$ ;  $SD = 2.9$ ;  $p < .001$ , partial eta squared = .617). At 1 m, 24% were abstinent, 33% were non-risky drinking, and 42% were risky drinkers. At 6 m, 16% were abstinent, 31% were non-risky drinking, and 53% were risky drinkers. There were no differences between responders (abstinent/non-risky drinkers) and non-responders (risky drinkers) in demographics/clinical characteristics. However, there were significant and very large differences between responders and non-responders in PTSD symptom ( $p < .01$ ,  $d =$

–3.26) and cognitive functioning change ( $p < .01$ ,  $d = -0.99$ ). Given these findings, future clinical trials should determine whether psychedelic-assisted therapy holds promise for individuals with complex trauma and alcohol misuse who have not been successfully treated with traditional interventions.

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<https://doi.org/10.1176/appi.ps.20220138>

## **Therapeutic and Economic Benefits of Service Dogs Versus Emotional Support Dogs for Veterans With PTSD.**

Joan T Richerson, M.S., D.V.M., Todd H. Wagner, Ph.D., Thad Abrams, M.D., Kelly Skelton, M.D., Ph.D., Kousick Biswas, Ph.D., Samantha Illarmo, M.P.H., Frances McSherry, M.A., Michael T. Fallon, D.V.M., Ph.D., Austin Frakt, Ph.D., Steven Pizer, Ph.D., Kathryn M. Magruder, M.P.H., Ph.D., Shirley Groer, Ph.D., Patricia A. Dorn, Ph.D., Grant D. Huang, M.P.H., Ph.D., Eileen M. Stock, Ph.D.

Psychiatric Services

Published Online: 31 Jan 2023

### Objective:

This work aimed to assess the therapeutic and economic benefits of service dogs versus emotional support dogs for veterans with posttraumatic stress disorder (PTSD).

### Methods:

Veterans with PTSD ( $N=227$ ) participating in a multicenter trial were randomly assigned to receive a service or emotional support dog; 181 veterans received a dog and were followed up for 18 months. Primary outcomes included overall functioning (assessed with World Health Organization Disability Assessment Scale II [WHODAS 2.0]) and quality of life (Veterans RAND 12-Item Health Survey [VR-12]). Secondary outcomes included PTSD symptoms (PTSD Checklist for DSM-5), suicidal ideation, depression, sleep quality, health care costs and utilization, medication adherence, employment, and productivity.

### Results:

Participants paired with a dog had a mean $\pm$ SD age of  $50.6\pm 13.6$  years (range 22–79), and most were male (80%), White (66%), and non-Hispanic (91%). Adjusted linear mixed repeated-measures models indicated no difference between the two groups on WHODAS 2.0 or VR-12 scores. Participants with service dogs had a 3.7-point greater



reduction in PTSD symptoms versus participants with emotional support dogs ( $p=0.036$ ). No reduced health care utilization or cost was associated with receiving a service dog. Veterans with service dogs had an increase of 10 percentage points in antidepressant adherence compared with those with emotional support dogs ( $p<0.01$ ).

#### Conclusions:

Both groups appeared to benefit from having a service or emotional support dog. No significant differences in improved functioning or quality of life were observed between the groups. Those in the service dog group had a greater reduction in PTSD symptoms and better antidepressant adherence, improvements that should be explored further.

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<https://doi.org/10.3390/ijerph20032500>

### **Grit but Not Help-Seeking Was Associated with Food Insecurity among Low Income, At-Risk Rural Veterans.**

Qin, Y., Sneddon, D. A., MacDermid Wadsworth, S., Topp, D., Sterrett, R. A., Newton, J. R., & Eicher-Miller, H. A.

International Journal of Environmental Research and Public Health  
Published: 31 January 2023

Rural veterans have poorer health, use healthcare services less often than their urban counterparts, and have more prevalent food insecurity than average U.S. households. Food insecurity and resource use may be influenced by modifiable psychological attributes such as grit and help-seeking behaviors, which may be improved through interventions. Grit and help-seeking have not been previously evaluated among rural veterans. Thus, this cross-sectional study evaluated the hypothesis that grit and help-seeking were associated with food insecurity and the use of resources. Food security, resource use, grit, and help-seeking behavior were assessed among rural veterans ( $\geq 18$  years) from five food pantries in southern Illinois counties ( $n = 177$ ) from March 2021 to November 2021. Adjusted multiple regression was used to estimate the relationship between the odds of food insecurity and the use of resources with grit and help-seeking scores. Higher grit scores were significantly associated with lower odds of food insecurity (OR = 0.5,  $p = 0.009$ ). No other associations were detected. The results provided evidence to inform the content of future educational interventions to improve food insecurity and address health disparities among rural veterans by addressing grit.

The enhancement of psychological traits such as grit is related to food security and has the potential to benefit other aspects of well-being.

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<https://doi.org/10.1371/journal.pone.0279166>

## **The association between vitamin D serum levels, supplementation, and suicide attempts and intentional self-harm.**

Jill E. Lavigne, Jason B. Gibbons

PLoS ONE

Published: February 1, 2023

### Objectives

The purpose of this study is to determine the associations between Vitamin D supplementation, 25(OH) blood serum levels, suicide attempts, and intentional self-harm in a population of veterans in the Department of Veterans Affairs (VA).

### Methods

A retrospective cohort study of US Veterans supplemented with Vitamin D. Veterans with any Vitamin D3 (cholecalciferol) or Vitamin D2 (ergocalciferol) fill between 2010 and 2018 were matched 1:1 to untreated control veterans having similar demographics and medical histories. Cox proportional hazards regression was used to estimate the time from the first Vitamin D3 (cholecalciferol) or Vitamin D2 (ergocalciferol) prescription fill to the first suicide attempt or intentional self-harm. Analyses were repeated in stratified samples to measure associations by race (Black or White), gender (male or female), blood levels (0–19 ng/ml, 20–39 ng/ml, and 40+ ng/ml), and average daily dosage.

### Results

Vitamin D3 and D2 supplementation were associated with a 45% and 48% lower risk of suicide attempt and self-harm ((D2 Hazard Ratio (HR) = 0.512, [95% CI, 0.457, 0.574]; D3 HR = 0.552, [95% CI, 0.511, 0.597])). Supplemented black veterans and veterans with 0–19 ng/ml vitamin D serum levels were at ~64% lower risk relative to controls (Black Veteran HR: 0.362 [95% CI: 0.298,0.440]; 0–19 ng/ml HR: 0.359 [95% CI: 0.215,0.598]). Supplementation with higher vitamin D dosages was associated with greater risk reductions than lower dosages (Log Average Dosage HR: 0.837 [95% CI: 0.779,0.900]).

## Conclusions

Vitamin D supplementation was associated with a reduced risk of suicide attempt and self-harm in Veterans, especially in veterans with low blood serum levels and Black veterans.

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<https://doi.org/10.1007/s12529-023-10157-2>

## **Associations Among Stress, Internalized Weight Stigma, Emotional Eating, and Body Composition in Active-Duty Service Members Enrolling in a Randomized Controlled Trial of a Weight Management Program.**

Jessica L. Morse, Jennalee S. Wooldridge, Matthew S. Herbert, Mara Tynan, Cara Dochat & Niloofar Afari

International Journal of Behavioral Medicine

Published: 02 February 2023

## Background

Obesity is a critical public health concern with particular relevance to US military personnel. Stress and internalized weight stigma (“stigma”) may contribute to and maintain obesogenic processes and behaviors, including emotional eating. In this secondary cross-sectional analysis, we examined (1) associations among stress and stigma with emotional eating and body fat percentage (BF%), (2) whether stress explains the association between stigma and emotional eating, and (3) whether emotional eating explains associations between stress and stigma with BF%.

## Method

Active-duty military service members (N = 178) completed BF% assessment and questionnaires assessing stress, stigma, and emotional eating.

## Results

Structural equation modeling path analyses showed that stress and stigma were both significantly associated with emotional eating ( $b = 0.35$ ,  $p < 0.001$  and  $b = 0.23$ ,  $p < 0.001$ , respectively) and with BF% ( $b = 0.38$ ,  $p < 0.001$  and  $b = 0.29$ ,  $p < 0.001$ , respectively) such that individuals who reported higher stress and stigma tended to report more emotional eating and had higher BF%. Stress partially explained the association between internalized weight stigma and emotional eating, and emotional

eating partially explained the relationship between stress and BF% but did not significantly mediate the association between stigma and BF%.

#### Conclusion

Greater stress and internalized weight stigma were associated with more emotional eating and higher BF%; however, emotional eating only partially explained the association between stress and BF%. Results highlight the importance of interventions targeting stress management skills, but additional research is needed to identify mechanisms that explain the association between stigma and BF%.

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<https://doi.org/10.1016/j.pmn.2023.01.002>

### **Patterns of Change in Pain-related Physical, Mental, and Social Health Outcomes in a Military Population.**

Christine E. Bader, Diane M. Flynn, Chester C. Buckenmaier, Catherine C. McDonald, ... Rosemary C. Polomano

Pain Management Nursing

Available online 4 February 2023

#### Objective:

Military persons frequently experience pain conditions stemming from noncombat and combat injuries. This study assessed the patterns of change over time and the associations of pain intensity and interference with physical, mental, and social health domains in a military sample.

#### Methods:

A secondary analysis of Pain Assessment Screening Tool and Outcomes Registry (PASTOR) was conducted using data collected over 10 months. Participants selected for analysis completed  $\geq 3$  assessments with an interval of  $\geq 14$  days between assessments. The Defense and Veterans Pain Rating Scale (DVPRS) measured average and worst pain intensity, and Patient-Reported Outcomes Measurement Information System (PROMIS®) T-scores measured pain and health outcomes.

#### Results:

The sample (N = 190) majority reported being active duty (96%); serving in the U.S. Army (93%); and being enlisted (86%). The percent difference from assessment one to

assessment three showed improvement for DVPRS average pain (−4.85%) and worst pain (−2.16%), and PROMIS Pain Interference T-score (−1.98%). Improvements were observed for all PROMIS outcomes except depression. The Defense and Veterans Pain Rating Scale average and worst pain intensity and PROMIS pain interference were strongly correlated with physical function. Multilevel models showed that an increase in average and worst pain, and pain interference were associated with a decrease in satisfaction with social roles.

#### Conclusion:

Analysis identified patterns of change over time in physical, mental, and social health outcomes, as well as associations important to understanding the complexities of pain. This work has implications for pain management nursing in ambulatory settings where ongoing collection and analyses of multivariable outcomes data can inform clinical care.

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<https://doi.org/10.1177/21650799221148650>

### **Helping the Helpers: Adaptation and Evaluation of Stress First Aid for Healthcare Workers in the Veterans Health Administration During the COVID-19 Pandemic.**

Carmen P. McLean, PhD; Deborah Betsworth, PhD; [...]; and Patricia Watson, PhD

Workplace Health & Safety

First published online February 1,

#### Background:

Early interventions are needed to support the behavioral health of healthcare staff in the context of the COVID-19 pandemic. Stress First Aid (SFA) is a self-care and peer support model for reducing burnout and stress that is designed for use in high-stress occupations.

#### Methods:

We conducted a mixed-methods evaluation of an SFA program in the Veterans Health Administration (VHA). This brief, multi-session, didactic program was adapted for hospital workgroups. Program attendees completed a survey assessing implementation outcomes, burnout, stress, mood, and SFA skills at the beginning (N = 246) and end (n = 94) of the SFA program and a subgroup (n = 11) completed qualitative feedback interviews.

## Findings:

Program acceptability, appropriateness, and feasibility were rated highly. From pre- to post-SFA, the impact of the pandemic on stress and anxiety, as well as proficiency in supporting peers increased. Qualitative findings suggest the program provided a shared language to discuss stress, normalized stress reactions, met a need for stress management tools, and helped staff feel valued, empowered, connected with each other. Staff reported being more aware of their stress, but SFA was insufficient to address many of the systemic sources of burnout and stress.

## Conclusions and Applications to Practice:

While the SFA program was well received, the impact of brief programs is likely to be modest when implemented in the middle of an ongoing pandemic and when burnout arises from chiefly from systemic sources. Lessons learned during the program implementation that may guide future efforts are discussed.

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<https://doi.org/10.1016/j.jpsychires.2023.02.009>

## **Phenotypic predictors of suicide subtypes from pre-to postdeployment in active duty military personnel.**

Lily A. Brown, Yiqin Zhu, Hillary Coon, Stacey Young-McCaughan, ... Douglas E. Williamson

Journal of Psychiatric Research  
Volume 160, April 2023, Pages 163-170

## Highlights

- Three classes were identified based on predeployment characteristics in veterans
- Class 1 had the highest scores on PTSD severity at postdeployment.
- Class 1 had the highest proportion of suicide ideation and attempts at postdeployment.
- It is possible to predict suicide risk at postdeployment based on predeployment data.

## Abstract

Military service members are at increased risk for suicide, but there are few strategies for detecting those who are at highest risk after a deployment. Using all available data

collected from 4119 Military service members before and after their deployment to Iraq for Operation Iraqi Freedom, we tested whether predeployment characteristics clustered together to predict postdeployment suicidal risk. Latent class analysis showed that three classes best characterized the sample at predeployment. Class 1 had significantly higher scores on PTSD severity pre- and postdeployment than Classes 2 and 3 ( $P_s < .001$ ). At postdeployment, Class 1 also had a greater proportion of endorsement of lifetime and past year suicidal ideation than Classes 2 and 3 ( $P_s < .05$ ) and a greater proportion of lifetime suicide attempts than Class 3 ( $P < .001$ ). Class 1 also had a greater proportion of endorsement of past-30-days intention to act on suicidal thoughts than Classes 2 and 3 ( $P_s < .05$ ) and past-30-days specific plan for suicide than Classes 2 and 3 ( $P_s < .05$ ). The study showed that based only on predeployment data, it is possible to determine which service members might be at highest risk for suicidal ideation and behavior at postdeployment.

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<https://doi.org/10.1016/j.jad.2023.02.019>

### **Characteristics of effective teletherapy for major depression: A systematic review.**

Marie Crowe, Maree Inder, Jenni Manuel, Dave Carlyle

Journal of Affective Disorders  
Volume 327, 14 April 2023, Pages 175-182

#### Background

People would prefer to have psychotherapy as treatment over medication for major depression. There is evidence that psychotherapy does not require in-person delivery to be effective. Other modes of delivery, such as videoconferencing teletherapy, may make it a more accessible treatment.

#### Method

The aim of this review was to identify the characteristics of effective psychotherapy delivered by videoconference for adults in primary care with a primary diagnosis of depression. A quantitative systematic review was conducted and reported according to PRISMA guidelines.

#### Results

There were 8 studies included in the review. The therapies studied were tele problem-

solving therapy, behavioural activation and cognitive behavioural therapy. All studies had a medium to high risk of bias. Six were randomized controlled trials, one was a pragmatic retrospective cohort study and one was an open-label design. Four studies found similar outcomes to the in-person comparators, one study found tele problem-solving therapy was more effective than behavioural activation, and one study found cognitive behavioural therapy to be similar to usual care.

#### Limitations

The search identified only 8 studies. Due to the heterogeneity of outcome measures and comparators, a meta-analysis could not be conducted.

#### Conclusions

No definitive conclusions can be drawn about the effectiveness of teletherapy in primary care based on this review, however, there is emerging evidence to suggest it has similar outcomes to in-person therapy for people with a primary diagnosis of depression. There is no evidence regarding the superiority of one model of therapy over the others.

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<https://doi.org/10.1177/0095327X221150819>

### **The State of Knowledge on Female Veterans Experiencing Homelessness: A Scoping Review of the Literature.**

Hassan, H., Serrato, J., & Forchuk, C.

Armed Forces & Society

First published online February 6, 2023

The primary goal of this scoping review was to assess and summarize existing research on homelessness among female Veterans to understand their unique experiences. A total of 52 relevant studies were found and included. All identified studies had been conducted in the United States, with one in the United States and Puerto Rico. The findings provided important insight on services access/utilization, indicating that homeless female Veterans with substance abuse, physical health conditions, and mental health issues have high rates of accessing services; however, there is a lack of housing services available for female Veterans with children. Although the findings revealed many studies conducted in the United States, research investigating the issue needs to be conducted across the international community. In doing so, alternative methods and policies for supporting female Veterans experiencing homelessness can



be identified and transferred. In particular, exploratory qualitative studies are needed to further understand the experience of homelessness for female Veterans.

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<https://doi.org/10.1371/journal.pone.0272599>

## **Development and cross-validation of a veterans mental health risk factor screen.**

Eve B. Carlson, Patrick A. Palmieri, Dawne Vogt, Kathryn Macia, Steven E. Lindley

PLoS ONE

Published: February 8, 2023

### Background

VA primary care patients are routinely screened for current symptoms of PTSD, depression, and alcohol disorders, but many who screen positive do not engage in care. In addition to stigma about mental disorders and a high value on autonomy, some veterans may not seek care because of uncertainty about whether they need treatment to recover. A screen for mental health risk could provide an alternative motivation for patients to engage in care.

### Method

Data from samples of veterans and traumatic injury survivors were analyzed to identify mental health risk factors that are characteristics of individuals or stressors or of post-trauma, post-deployment, or post-military service resources, experiences, or responses. Twelve risk factors were strongly related to PTSD ( $r > .50$ ): current PTSD, depression, dissociation, negative thinking, and emotional lability symptoms, life stress, relationship stress, social constraints, and deployment experiences of a difficult environment, concerns about life and family, perceived threat, and moral injury. Items assessing each of these risk factors were selected and their validity to prospectively predict PTSD and/or depression 6 months later was assessed in a new sample of 232 VA primary care patients.

### Results

Twelve items assessing dissociation, emotional lability, life stress, and moral injury correctly classified 86% of those who later had elevated PTSD and/or depression symptoms (sensitivity) and 75% of those whose later symptoms were not elevated (specificity). Performance was also very good for 110 veterans who identified as members of ethnic/racial minorities.

## Conclusions

Mental health status was prospectively predicted in VA primary care patients with high accuracy using a screen that is brief, easy to administer, score, and interpret, and fits well into VA's integrated primary care. When care is readily accessible, appealing to veterans, and not perceived as stigmatizing, information about mental health risk may result in higher rates of engagement than information about current mental disorder status.

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<https://doi.org/10.1177/08901171231156527>

## **Motives of Tobacco Use Among Young Adults in the United States Air Force.**

Pebley K, Pilehvari A, Krukowski RA, Morris JD, Little MA

American Journal of Health Promotion

First published online February 7, 2023

### Purpose

Research has focused on cigarette use motives and have not included military personnel. The current study assessed tobacco use motives for different products, and differences within males and females and those with different racial identities given historical disparities in tobacco use.

### Design

A cross-sectional survey about tobacco use was administered from October 2019 to February 2022.

### Setting

Four Technical Training bases in the US.

### Sample

Air Force Airmen who used tobacco (N = 3243).

### Measures

Questions were about sociodemographic characteristics, tobacco use, and the Tobacco Motives Inventory (representing affect regulation, boredom, enhancement, and social motives).

## Analysis

Linear regressions assessed associations between overall tobacco use and motives. Stratified analyses assessed associations between tobacco use and motives among males and females, and individuals from different racial backgrounds. Logistic regressions assessed differences in motives and use of different tobacco products between “some day” and “everyday” users.

## Results

Overall, boredom ( $B = .09$ ,  $SE = .01$ ) and affect regulation ( $B = .05$ ,  $SE = .00$ ) motives were associated with higher tobacco use. Males and females and individuals from different racial backgrounds endorsed different motives, but all endorsed boredom as a motive for higher tobacco use. Individuals who used cigarettes, e-cigarettes, or smokeless tobacco “some days” endorsed higher social motives than everyday users, but everyday users endorsed different motives across products.

## Conclusion

There are motives differentiating between “some day” and “everyday” users of tobacco products, which may need to be differentially targeted in intervention programs. Additionally, there are some overlapping motives (affect regulation, boredom) that may be beneficial to address with all tobacco users.

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## Links of Interest

New DoD survey delves into the good and bad of military relationships

<https://www.militarytimes.com/news/your-military/2023/04/14/new-dod-survey-delves-into-the-good-and-bad-of-military-relationships/>

To keep a strong military, help spouses secure the home front (opinion)

<https://thehill.com/opinion/national-security/3951127-to-keep-a-strong-military-help-spouses-secure-the-home-front/>

April is the Month of the Military Child. Make time to celebrate their resilience.

<https://www.courier-journal.com/story/opinion/2023/04/18/april-is-the-month-of-the-military-child-celebrate-their-resilience/70110872007/>

Caregivers for Severely Disabled Vets Getting Expanded Mental Health Services as Part of Biden Order

<https://www.military.com/daily-news/2023/04/19/caregivers-severely-disabled-vets-getting-expanded-mental-health-services-part-of-biden-order.html>

First female US Naval Academy superintendent nominated

<https://www.navytimes.com/news/your-navy/2023/04/21/first-female-us-naval-academy-superintendent-nominated/>

The Veterans Crisis Line is fielding a record number of cries for help, VA stats show

<https://www.nbcnews.com/news/us-news/veterans-crisis-line-fielding-record-number-cries-help-va-stats-show-rcna78979>

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**Resource of the Week – [Exploring Sleep Disturbance in Central Nervous System Disorders: Proceedings of a Workshop](#)**

New, from the National Academies of Sciences, Engineering, and Medicine:

Chronic sleep disorders affect one in five Americans, and sleep deprivation costs significant U.S. GDP loss annually. Despite the indisputable biological importance of sleep, much remains unknown about underlying mechanisms.

The National Academies Forum on Neuroscience and Nervous System Disorders convened a public workshop in November 2022. Experts and leaders from academia, industry, government, philanthropic foundations, and disease-focused non-profit organizations gathered to review current sleep science, examine the relationships between central nervous system disorders and sleep, identify potential cross-disciplinary collaborations, and discuss opportunities to better understand and mitigate sleep disturbances commonly associated with CNS disorders. This proceedings document summarizes workshop discussions.

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## Exploring Sleep Disturbance in Central Nervous System Disorders



Proceedings of a Workshop

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