

# CDP

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## Research Update -- July 27, 2023

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## **Comparison of Suicide Rates Among US Veteran and Nonveteran Populations.**

Morrall, A. R., Schell, T. L., & Smart, R.

JAMA Network Open  
July 18, 2023

### Introduction

The US Department of Veterans Affairs (VA) estimates that between 2017 and 2020 veteran suicide rates were 1.57 to 1.66 times greater than nonveterans in the US, after adjusting for age and sex differences.<sup>1</sup> This finding does not mean that veteran suicide rates are 1.57 to 1.66 times greater than nonveterans with the same age and sex distributions. The US government approach to age and sex adjustment compares suicide rates under counterfactual conditions in which veteran and nonveteran populations share a common age and sex distribution, namely that of the population of the US in 2000. In this study we compare the relative risk of suicide among veterans and nonveterans using the government's method called direct standardization with an alternative approach that compares the true veteran population with an age- and sex-matched nonveteran population (indirect standardization).

### Methods

We aggregated and used 4 years (2017-2020) of data published by the VA<sup>1</sup> on suicide counts and population sizes for veterans and nonveterans to calculate their relative risk of suicide using 2 standard procedures. First, we compared suicide rates using a direct standardization approach, which weights mortality rates for each demographic stratum of veteran and nonveteran populations to match the US population age and sex distribution. Second, we compared these rates using indirect standardization, which weights nonveteran suicide rates to match the age and sex distribution of the veteran population. The study was determined to be not human participant research by the RAND institutional review board. As such, it was exempt from the requirement to obtain informed consent. This study follows SQUIRE 2.0 guidelines for quality improvement reporting excellence. Analyses were conducted using Excel version 16.67 (Microsoft Corp).

## Results

The veteran population is older and includes a much higher percentage of men than does the nonveteran population (Table). These differences, and differences in the relative risk of suicide within these strata, lead to notable differences in estimates produced by the 2 methods. Although both methods show veteran risk as elevated relative to nonveterans, the direct method produces an adjusted mortality ratio of 1.59, nearly 6 times greater elevation in risk than found by indirect standardization, which produces a standardized mortality ratio of 1.10.

The 2 approaches apply weights to create aggregate mortality ratios across strata (Table). Direct standardization gives far more weight to the relatively small groups of young and female veterans compared with indirect standardization, precisely the groups for which veteran suicide risk is highest relative to nonveterans.

## Discussion

Both direct and indirect standardization are legitimate methods of producing adjusted comparisons of mortality rates. Direct standardization is especially useful for comparing disease burdens across several groups, but the absolute value of such weighted rates “have no intrinsic meaning,”<sup>2</sup> and do not correspond to the actual mortality risk of either of the populations being compared.<sup>2</sup> When a group is demographically dissimilar from the reference population, as are veterans compared with the US population, direct estimates are strongly weighted toward the relative mortality risk of groups least well represented in the reference population used for standardization.

An advantage of the indirect standardization approach is that it counts all veteran suicides as equal in establishing relative risks. In contrast, the direct standardization approach we used would require more than 50 additional suicides among male veterans aged more than 75 years to move the resulting adjusted mortality ratio as much as a single additional suicide by a female veteran less than age 34 years.

Due to the large differences in relative suicide risk across strata, age- and sex-specific mortality ratios are the most useful statistics for most purposes. When an aggregate statistic is required to compare suicide risk among veterans and nonveterans, the correct interpretation of indirect standardization results might be more easily conveyed to general audiences because it compares actual veteran suicide rates with those of similar nonveterans.

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## **Suicide-Specific Training Experiences and Needs Among Military Mental Health Providers.**

E A Schmied, L H Glassman, S R Carinio, R G Dell'Acqua, C J Bryan, C J Thomsen

Archives of Suicide Research

2023 Jul-Sep; 27(3): 851-865

**Background:** Military suicide rates have risen over the past two decades, with a notable spike in recent years. To address this issue, military mental health providers must be equipped with the skills required to provide timely and effective care; yet little is known about the suicide-specific training experiences or needs of these professionals.

**Methods:** Thirty-five mental health care providers who treat active duty personnel at military treatment facilities participated in this mixed-methods study. All participants completed a survey assessing training and clinical experiences, comfort and proficiency in working with patients at risk for suicide, and perceived barriers to obtaining suicide-specific training. A sub-set of participants (n = 8) completed a telephone interview to further describe previous experiences and perceived challenges to obtaining training.

### **Results:**

The majority of participants (79.4%) had 6+ years of clinical experience, had a patient who had attempted suicide (85.3%), and completed at least one suicide-related training since finishing their education (82.4%). Survey results showed the leading barrier to enrolling in suicide-specific trainings was perceived lack of training opportunities (40.7% reported it was a barrier "quite often" or more), followed by lack of time (25%). Interview results revealed lack of time, location and logistical issues, and low perceived need for additional training among providers could impede enrollment.

### **Conclusions:**

Study results identified several modifiable barriers to receiving suicide-specific continuing education among military mental health providers. Future efforts should develop accessible training programs that can be easily integrated into routine clinical operations to mount the best defense against suicide. **HIGHLIGHTS** Military mental health providers report significant experience and relatively high degrees of comfort and proficiency working with patients at high risk for suicide. Most providers reported receiving training in suicide assessment and screening; few reported prior training in management of suicidality. Study results identified several modifiable barriers to

receiving suicide-prevention continuing education among military mental health care providers; future efforts should seek to develop accessible training programs that can be easily integrated into routine clinical operations to mount the best defense against suicide.

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<https://doi.org/10.1177/0095327X231118>

### **Who Supports the Troops? Social Support Domains and Sources in Active Duty Army Networks**

Barr, N., Petry, L., Fulginiti, A., Arora, A., Cederbaum, J., Castro, C., & Rice, E.

Armed Forces & Society

First published online July 17, 2023

Social support is a critical determinant of military service members' mental and behavioral health outcomes, but few studies have investigated social support types and sources in the mixed family and military social networks in which service members are embedded. We applied multilevel logistic regression modeling to investigate links between active-duty Army Soldiers' individual demographic and military characteristics, relational characteristics, and social support outcomes, in sample of 241 active-duty U.S. Army personnel. Results showed that participants who rated unit cohesion higher were more likely to report receiving informational, emotional, and mental health help-seeking support. Participants were more likely to receive informational, emotional, and help-seeking support from a romantic partner or deployment buddy than a relative and less likely to receive help-seeking support from males than females. Findings highlight the critical importance of both unit level and external relationships in meeting Soldiers' social support needs.

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### **Running High: Cannabis Users' Subjective Experience of Exercise During Legal Market Cannabis Use Versus No Use in a Naturalistic Setting.**

Laurel P. Gibson and Angela D. Bryan

## Cannabis and Cannabinoid Research

Published Online:13 Jul 2023

### Background:

The use of cannabis with various forms of exercise (e.g., running) has received increased media attention in recent years, contradicting the popular stereotype that cannabis is associated with sedentary behavior. Although cross-sectional evidence suggests a positive association between cannabis use and exercise engagement, to date, the acute effects of cannabis on exercise remain unclear.

### Methods:

The present within-subjects crossover study compared participants' experiences of running after ad libitum use of legal market cannabis (cannabis run) to running without cannabis (non-cannabis run) in a real-world setting. Participants (n=49) were cannabis users between the ages of 21 and 49 years (mean=30.82, standard deviation [SD]=6.21). The majority of participants were male (61.5%) and non-Hispanic White (81.6%).

### Results:

Participants (n=49) ran an average of 3.88 miles (SD=2.28) during their cannabis and non-cannabis runs. Although participants ran an average of 31 seconds/mile slower during their cannabis run, this difference was not statistically significant ( $p=0.12$ ). Participants reported experiencing (1) less negative affect ( $p=0.03$ ), (2) greater feelings of positive affect ( $p<0.001$ ), tranquility ( $p=0.004$ ), enjoyment ( $p=0.004$ ), and dissociation ( $p=0.001$ ), and (3) more runner's high symptoms ( $p<0.001$ ) during their cannabis (vs. non-cannabis) runs. Participants also reported lower pain levels after their cannabis (vs. non-cannabis) run ( $p=0.03$ ). Perceived exertion did not differ between runs ( $p=0.33$ ). Cannabis form, cannabinoid content, and feelings of "high" were largely unrelated to participants' experience of exercise while under the influence of cannabis.

### Conclusions:

Results suggest that acute cannabis use may be associated with a more positive exercise experience among regular cannabis users. Research using varied methodologies, a range of exercise modalities, and diverse populations is needed to establish the long-term harms and benefits associated with this behavior, as well as the generalizability of these findings to other populations and settings.

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## **Kratom Alkaloids, Cannabinoids, and Chronic Pain: Basis of Potential Utility and Role in Therapy.**

Daniel J. Farkas, Ziva D. Cooper, Laila N. Heydari, Amanda C. Hughes, Scott M. Rawls, and Sara Jane Ward

Cannabis and Cannabinoid Research

Published Online: 19 Jul 2023

### Introduction:

Chronic neuropathic pain is as a severe detriment to overall quality of life for millions of Americans. Current pharmacological treatment options for chronic neuropathic pain are generally limited in efficacy and may pose serious adverse effects such as risk of abuse, nausea, dizziness, and cardiovascular events. Therefore, many individuals have resorted to methods of pharmacological self-treatment. This narrative review summarizes the existing literature on the utilization of two novel approaches for the treatment of chronic pain, cannabinoid constituents of *Cannabis sativa* and alkaloid constituents of *Mitragyna speciosa* (kratom), and speculates on the potential therapeutic benefits of co-administration of these two classes of compounds.

### Methods:

We conducted a narrative review summarizing the primary motivations for use of both kratom and cannabis products based on epidemiological data and summarize the pre-clinical evidence supporting the application of both kratom alkaloids and cannabinoids for the treatment of chronic pain. Data collection was performed using the PubMed electronic database. The following word combinations were used: kratom and cannabis, kratom and pain, cannabis and pain, kratom and chronic pain, and cannabis and chronic pain.

### Results:

Epidemiological evidence reports that the self-treatment of pain is a primary motivator for use of both kratom and cannabinoid products among adult Americans. Further evidence shows that use of cannabinoid products may precede kratom use, and that a subset of individuals concurrently uses both kratom and cannabinoid products. Despite its growing popularity as a form of self-treatment of pain, there remains an immense gap in knowledge of the therapeutic efficacy of kratom alkaloids for chronic pain in comparison to that of cannabis-based products, with only three pre-clinical studies having been conducted to date.



Conclusion:

There is sufficient epidemiological evidence to suggest that both kratom and cannabis products are used to self-treat pain, and that some individuals actively use both drugs, which may produce potential additive or synergistic therapeutic benefits that have not yet been characterized. Given the lack of pre-clinical investigation into the potential therapeutic benefits of kratom alkaloids against forms of chronic pain, further research is warranted to better understand its application as a treatment alternative.

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<https://doi.org/10.1001/jamapsychiatry.2023.1685>

### **Cannabis and Cannabinoids for Pain and Posttraumatic Stress Disorder in Military Personnel and Veterans. (Viewpoint)**

JAMA Psychiatry

July 12, 2023

Cannabis is now legal for medical use in at least 37 states and the District of Columbia (DC) and for recreational use in 21 states and DC. With the gradual expansion of legal access to cannabis over the past 2 decades, the prevalence of cannabis use has increased in both the general population and veterans.<sup>1</sup> Although the reported use of cannabis within the past year among US military personnel remains low at less than 1%, this low rate is likely attributable to regulations that prohibit its use, with severe penalties (eg, administrative separation and potentially other-than-honorable discharge with reduced benefits) for military personnel.

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<https://doi.org/10.1126/scitranslmed.abn0441>

### **Precision functional MRI mapping reveals distinct connectivity patterns for depression associated with traumatic brain injury.**

Siddiqi, S. H., Kandala, S., Hacker, C. D., Bouchard, H., Leuthardt, E. C., Corbetta, M., Morey, R. A., & Brody, D. L.

Science Translational Medicine

2023 Jul 5; 15(703): eabn0441

Depression associated with traumatic brain injury (TBI) is believed to be clinically distinct from primary major depressive disorder (MDD) and may be less responsive to conventional treatments. Brain connectivity differences between the dorsal attention network (DAN), default mode network (DMN), and subgenual cingulate have been implicated in TBI and MDD. To characterize these distinctions, we applied precision functional mapping of brain network connectivity to resting-state functional magnetic resonance imaging data from five published patient cohorts, four discovery cohorts (n = 93), and one replication cohort (n = 180). We identified a distinct brain connectivity profile in TBI-associated depression that was independent of TBI, MDD, posttraumatic stress disorder (PTSD), depression severity, and cohort. TBI-associated depression was independently associated with decreased DAN–subgenual cingulate connectivity, increased DAN-DMN connectivity, and the combined effect of both. This effect was stronger when using precision functional mapping relative to group-level network maps. Our results support the possibility of a physiologically distinct “TBI affective syndrome,” which may benefit from individualized neuromodulation approaches to target its distinct neural circuitry.

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<https://doi.org/10.1089/tmj.2023.0116>

## **Coaching with Internet-Based Mental Health Program: Patient and Coach Experiences.**

McKenzie K. Roddy, Patricia V. Chen, Terri L. Fletcher, Miryam Wassef, Jan A. Lindsay, Marylène Cloitre, and Julianna B. Hogan

Telemedicine and e-Health

Published Online: 22 May 2023

### **Introduction:**

The COVID-19 pandemic has laid bare the need for mental health treatment and the shortage of available providers. Internet-based, asynchronous mental health programs that incorporate coaching with a licensed provider address this widespread challenge. This study provides an in-depth exploration of both the patient and provider experience in webSTAIR, a coached, internet-based psychoeducational program, where coaching took place over video-telehealth. We focus on how patients and licensed mental health providers understood their coaching relationship in an internet-based mental health program.

#### Materials and Methods:

We interviewed a purposive sample of 60 patients who completed the coached, internet-based program and all 9 providers who provided coaching from 2017 to 2020. The project team and interviewers took notes during interviews. Patient interviews were studied using content and matrix analysis. Coach interviews were studied using thematic analysis.

#### Results:

Interviews across patients and coaches reveal the continued importance of relationship building and rapport and emphasized the central role of the coach in providing content clarification and application of skills.

#### Discussion:

For patients, coaches were critical for understanding and completing the internet-based program. As well, positive relationship with their coach further enhanced their experience in the program. Providers echoed the importance of relationship building and rapport for program success and saw their main role as helping patients to understand content and apply skills.

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<https://doi.org/10.1089/tmj.2022.0300>

### **Patterns of Telehealth Use for Mental Health Treatment Among Hispanic Veterans.**

Emmanuel Guajardo, Amber B. Amspoker, Melinda Anne Stanley, Julianna Hogan, Anthony H. Ecker, and Jan A. Lindsay.

Telemedicine and e-Health

Published Online: 8 May 2023

#### Background:

Video-to-home telehealth (VTH) is promising for increasing access to mental health (MH) services. VA Video Connect (VVC) facilitates video-based teleconferencing between patients and providers and can reduce barriers while maintaining clinical effectiveness. Little is known about the preferences of Hispanic veterans for VTH.

#### Methods:

A retrospective cohort investigation of VTH for MH care utilization among veterans having at least one MH visit from October 2019 to September 2020. The veterans consisted of 155,492 Hispanic/Latino and 1,544,958 non-Hispanic/Latino. VVC involved face-to-face synchronous video-based teleconferencing between patients and providers, enabling care at home or another private location. The main measures included the percentage of MH encounters delivered through VVC.

#### Results:

Compared with non-Hispanic veterans, Hispanic veterans had 3.28% greater percentage of VVC MH encounters. Furthermore, there was a 2.65% increase per month in percentage of VVC MH encounters.

#### Conclusions:

Contrary to preconceived notions, Hispanic veterans access VTH at higher rates than their non-Hispanic counterparts.

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<https://doi.org/10.1001/jamanetworkopen.2023.24252>

### **Association Between Telehealth and Missed Appointments Among Patients Experiencing Behavioral Health Challenges.**

Bhatta, D., Sizer, M. A., & Acharya, B.

JAMA Network Open  
July 19, 2023

#### Introduction

Missed appointments, or no-shows, can affect patients' health due to delays in receiving timely care and result in inefficient use of health care resources. Telehealth has generally been considered effective and is widely implemented to treat behavioral health conditions. Although knowledge about no-shows is critical to inform health care institutions for effective management of resources and better health outcomes,<sup>1</sup> a limited body of literature has compared no-shows between telehealth and in-person care in behavioral health clinics in rural settings that cater to patients with relatively low income.

## Methods

This cohort study is a retrospective analysis of electronic health records of patients with behavioral health conditions who scheduled appointments in outpatient clinics in rural Louisiana from May 1, 2022, to January 31, 2023. The description of clinics and community context is provided elsewhere<sup>2</sup>; additional details are in the eMethods in Supplement 1. This research followed the STROBE reporting guideline. Propensity scores were estimated by adjusting for gender, age, primary target group (mental health, substance use, or co-occurring), health insurance (Medicaid, Medicare, or other), residence type (private or other), marital status, employment status, and source of referral (self or other). Kernel matching was performed between the treated group (telehealth users) and the control group (in-person users) such that each treated observation was matched against a weighted composite of the control pool, in which control observations are weighted by their distance in propensity score from the treated observation.<sup>3</sup> Logistic regression analysis was performed to calculate the average treatment effect (ATE) of telehealth (vs in-person care) on no-shows in the matched sample. The Louisiana Department of Health institutional review board considered this study exempt from review and waived the consent requirement because the data were deidentified. Statistical tests were performed with Stata, version 17 (StataCorp LP). All P values were from 2-sided tests and results were deemed statistically significant at  $P < .05$ .

## Results

Our analysis included 9715 appointments (3318 in-person and 6397 telehealth) involving 1421 patients 18 years or older (929 [65%] were telehealth users; 804 [57%], women; 478 [34%], aged 31-45 years; 267 [19%], without private residence; 801 [56%], never married; and 1075 [76%], unemployed) (Table 1). The no-show rate was 13% for in-person appointments (436 of 3318) and 17% for telehealth appointments (1108 of 6397). The standardized mean differences in the matched sample were less than 10% for all variables, demonstrating a good covariate balance. Comparison of no-shows between patients using telehealth and in-person care after matching indicated that patients in the telehealth cohort had statistically significantly higher odds of no-shows than patients in the in-person cohort (odds ratio of ATE for the treated, 1.42 [95% CI, 1.09-1.84]) (Table 2).

## Discussion

These results suggest that, although telehealth was widely implemented after the beginning of the COVID-19 pandemic to limit the spread of the virus, it may have unintentionally prompted patients experiencing behavioral health challenges to miss their scheduled appointments at a rate higher than it would have been for in-person care. Although the reasons behind no-shows can be multifaceted, difficulty in

establishing a therapeutic patient-clinician relationship, loss of nonverbal cues and psychological support, and unfamiliarity with the use of technology may discourage patients from attending telehealth sessions for mental health.<sup>4</sup> The main limitation of this study is that we focused on behavioral health clinics serving rural populations; therefore, the findings may not be generalizable to community contexts with different levels of the digital divide and socioeconomic status.<sup>5</sup> This study analyzed no-shows in rural Louisiana, where 19% of the patients did not have stable housing and many lacked private residential space, internet connectivity, a sufficient cellular data plan, and stable income—all constituting some forms of unmet social needs—which may present barriers to telehealth and can be associated with increased no-shows.<sup>6</sup> Reducing no-shows should incorporate strategies to address unmet social needs along with programs such as sending reminders, offering flexible scheduling, and providing incentives.

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<http://doi.org/10.1089/tmr.2023.0016>

## **Virtual Care and Mental Health: Dismantling Silos to Strengthen Care Delivery.**

John Scott, Peter Yellowlees, Daniel F. Becker, and Christopher Chen

Telemedicine Reports

Published Online: 11 Jul 2023

### Background:

During the COVID-19 pandemic, many Americans experienced new or worsened mental health conditions. Concurrently, much care switched from in-person to virtual care, highlighting the value of virtual care but also some of the underlying challenges.

### Methods:

This paper explores one such challenge, the separation of mental health care from physical health care, and a potential solution, collaborative care. It is a team-based approach linking psychiatrists to primary care providers that can help break down the silos of care created through reimbursement models.

### Results:

In this context of collaborative care, high quality virtual care further bridges the divide between physical and mental health care. Asynchronous virtual care for mental and

behavioral health is an innovation that can create efficiencies while still supporting collaborative care.

Discussion:

The barriers and weaknesses of using virtual care exclusively for mental and behavioral health are discussed, as well as examples of policy changes which can improve mental health care through collaborative virtual care.

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<https://doi.org/10.1001/jamapediatrics.2023.2117>

### **Prevalence and Trends in Diagnosed Learning Disability Among US Children and Adolescents From 1997 to 2021.**

Li, Y., Li, Q., Zheng, J., Zeng, X., Shen, T., Chen, Q., & Yang, W.

JAMA Pediatrics  
2023 Jul 10; e232117

Learning disability (LD) is a group of heterogeneous disorders manifested by substantial difficulties in listening, speaking, reading, writing, reasoning, or mathematical abilities. Research indicates that LD has become a major health concern for children in the US. Literature reported that the prevalence of LD among children varied from 8.7% to 9.7% based on data from the National Health Interview Survey (NHIS) from 2004 to 2006 and the 2003 National Survey of Children's Health, respectively. However, research on long-term trend over the past decades is lacking. The aim of this cross-sectional study was to estimate the prevalence of LD and its long-term trend among US children and adolescents aged 6 to 17 years from 1997 to 2021.

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<https://doi.org/10.1001/jamapsychiatry.2023.2295>

### **Intersectional Prevalence of Suicide Ideation, Plan, and Attempt Based on Gender, Sexual Orientation, Race and Ethnicity, and Rurality.**

Forrest, L. N., Beccia, A. L., Exten, C., Gehman, S., & Ansell, E. B.

JAMA Psychiatry  
July 19, 2023

## Key Points

### Question

Does the prevalence of suicide ideation, plan, and attempt vary across intersectional combinations of gender, sexual orientation, race and ethnicity, and rurality?

### Findings

In this cross-sectional study of 189 800 adults based on 5 years of data from an annual population-based US survey, prevalence of suicide ideation, plan, and attempt were highest among Hispanic and non-Hispanic Black bisexual women living in nonmetropolitan counties.

### Meaning

The findings suggest that Hispanic and non-Hispanic Black bisexual women living in nonmetropolitan counties may experience high prevalence of suicide ideation, plan, and attempt, possibly due to experiencing compounding forms of structural discrimination.

## Abstract

### Importance

Suicidal thoughts and behaviors (STBs) are major public health problems, and some social groups experience disproportionate STB burden. Studies assessing STB inequities for single identities (eg, gender or sexual orientation) cannot evaluate intersectional differences and do not reflect that the causes of inequities are due to structural-level (vs individual-level) processes.

### Objective

To examine differences in STB prevalence at the intersection of gender, sexual orientation, race and ethnicity, and rurality.

### Design, Setting, and Participants

This cross-sectional study used adult data from the 2015-2019 National Survey on Drug Use and Health (NSDUH), a population-based sample of noninstitutionalized US civilians. Data were analyzed from July 2022 to March 2023.

### Main Outcomes and Measures

Outcomes included past-year suicide ideation, plan, and attempt, each assessed with a single question developed for the NSDUH. Intersectional multilevel analysis of individual heterogeneity and discriminatory accuracy (MAIHDA) models were estimated, in which



participants were nested within social strata defined by all combinations of gender, sexual orientation, race and ethnicity, and rurality; outcome prevalence estimates were obtained for each social stratum. Social strata were conceptualized as proxies for exposure to structural forms of discrimination that contribute to health advantages or disadvantages (eg, sexism, racism).

## Results

The analytic sample included 189 800 adults, of whom 46.5% were men; 53.5%, women; 4.8%, bisexual; 93.0%, heterosexual; 2.2%, lesbian or gay; 18.8%, Hispanic; 13.9%, non-Hispanic Black; and 67.2%, non-Hispanic White. A total of 44.6% were from large metropolitan counties; 35.5%, small metropolitan counties; and 19.9%, nonmetropolitan counties. There was a complex social patterning of STB prevalence that varied across social strata and was indicative of a disproportionate STB burden among multiply marginalized participants. Specifically, the highest estimated STB prevalence was observed among Hispanic (suicide ideation: 18.1%; 95% credible interval [CrI], 13.5%-24.3%) and non-Hispanic Black (suicide plan: 7.9% [95% CrI, 4.5%-12.1%]; suicide attempt: 3.3% [95% CrI, 1.4%-6.2%]) bisexual women in nonmetropolitan counties.

## Conclusions and Relevance

In this cross-sectional study, intersectional exploratory analyses revealed that STB prevalence was highest among social strata including multiply marginalized individuals (eg, Hispanic and non-Hispanic Black bisexual women) residing in more rural counties. The findings suggest that considering and intervening in both individual-level (eg, psychiatric disorders) and structural-level (eg, structural discrimination) processes may enhance suicide prevention and equity efforts.

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<https://doi.org/10.1080/08995605.2023.2236924>

## **The effect of a reduction in irrational beliefs on Posttraumatic Stress Disorder (PTSD), depression, and anxiety symptoms in a group treatment for post-9/11 Veterans.**

Allen B. Grove, Christina M. Sheerin, Rachel E. Wallace, Brooke A. Green, Angela H. Minnich & Erin D. Kurtz

Military Psychology

Published online: 24 Jul 2023

Previous research has indicated that a Rational Emotive Behavior Therapy (REBT)-Informed Group focused on changing irrational beliefs to address comorbid depression and anxiety (as well as anger and guilt) in a combat Veteran population diagnosed with Posttraumatic Stress Disorder (PTSD) demonstrated significant reductions in depression and PTSD symptoms at posttreatment. However, mechanisms of change associated with improvement have not been evaluated. REBT theory suggests that a decline in irrational beliefs predicts a decrease in PTSD, depression, and anxiety symptoms. This study aimed to test this tenet of REBT theory in a naturalistic treatment setting. Participants (N = 86) were post-9/11 combat Veterans, engaged in the REBT-Informed Group between October 2016 and February 2020. Results of hierarchical multiple regression analyses indicated that a reduction in irrational beliefs predicted notable decreases in PTSD, depression, and anxiety symptoms controlling for several covariates. This study extends previous research demonstrating the success of the REBT-Informed Group with combat Veterans and gives support to REBT theory regarding the effect of a decline in irrational beliefs. Future directions include replication of findings with Veterans who experienced military sexual trauma (MST), pre-9/11 Veterans, those at other military or Veterans Affairs (VA) medical centers, and civilians to determine generalizability.

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### **War trauma impacts in Ukrainian combat and civilian populations: Moral injury and associated mental health symptoms.**

Larysa Zasiiekina, Tamara Duchyminska, Antonia Bifulco & Giacomo Bignardi

Military Psychology

Published online: 24 Jul 2023

This is the first study to compare active-duty soldiers and student civilian samples during the first three months of the Ukrainian-Russian war in relation to moral injury and its association with PTSD, anxiety and depression. A total of 350 participants, including 191 active-duty soldiers of the Ukrainian Armed Force (UAF), who were on the frontline during the full-scale invasion of Russian troops in February 2022, and 159 students from different HEIs in Volyn oblast, were recruited into the study through their attendance at the Ukrainian Psychotrauma Center. Prior to the in-person group-intervention program of psychosocial support for military and civil populations at the

Ukrainian Psychotrauma Center, moral injury, PTSD, depression, and anxiety were assessed. Results showed significantly higher moral injury, PTSD, depression, and anxiety scores in civilian students, with a two-way ANOVA indicating a significant impact of female gender in civilians only. A hierarchical regression indicated that moral injury is a predictor of PTSD symptoms in both active-duty and civilian student groups. However, previous family trauma of genocide is associated with PTSD symptoms in active soldiers only. The findings of the current study could contribute insights for clinical practice for combatants and civilians during the current war.

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<https://doi.org/10.1089/jwh.2022.0538>

### **Physical Fitness in Relationship to Depression and Post-Traumatic Stress Disorder During Pregnancy Among U.S. Army Soldiers.**

Panelli, D. M., Nelson, D. A., Wagner, S., Shaw, J. G., Phibbs, C. S., & Kurina, L. M.

Journal of Women's Health  
2023 Jul; 32(7): 816-822

#### **Background:**

Depression and post-traumatic stress disorder (PTSD) are prevalent in pregnancy, especially among military members. These conditions can lead to adverse birth outcomes, yet, there's a paucity of evidence for prevention strategies. Optimizing physical fitness is one understudied potential intervention. We explored associations between prepregnancy physical fitness and antenatal depression and PTSD in soldiers.

#### **Materials and Methods:**

This was a retrospective cohort study of active-duty U.S. Army soldiers with live births between 2011 and 2014, identified with diagnosis codes from inpatient and outpatient care. The exposure was each individual's mean Army physical fitness score from 10 to 24 months before childbirth. The primary outcome was a composite of active depression or PTSD during pregnancy, defined using the presence of a code within 10 months before childbirth. Demographic variables were compared across four quartiles of fitness scores. Multivariable logistic regression models were conducted adjusting for potential confounders selected a priori. A stratified analysis was conducted for depression and PTSD separately.

#### Results:

Among 4,583 eligible live births, 352 (7.7%) had active depression or PTSD during pregnancy. Soldiers with the highest fitness scores (Quartile 4) were less likely to have active depression or PTSD in pregnancy (Quartile 4 vs. Quartile 1 adjusted odds ratio 0.55, 95% confidence interval 0.39-0.79). Findings were similar in stratified analyses.

#### Conclusion:

In this cohort, the odds of active depression or PTSD during pregnancy were significantly reduced among soldiers with higher prepregnancy fitness scores. Optimizing physical fitness may be a useful tool to reduce mental health burden on pregnancy.

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<https://doi.org/10.1016/j.genhosppsy.2023.06.013>

### **Incidence and risk factors for postpartum mood and anxiety disorders among women veterans.**

Pratt, A. A., Sadler, A. G., Thomas, E. B. K., Syrop, C. H., Ryan, G. L., & Mengeling, M. A.

General Hospital Psychiatry  
2023 Jun 25; 84: 112-124

#### Background:

Our aim was to determine rates of postpartum mood and anxiety disorders (PMADs) among U.S. women Veterans and the overlap among PMADs. We further sought to identify PMAD risk factors, including those unique to military service.

#### Methods:

A national sample of women Veterans completed a computer-assisted telephone interview (N = 1414). Eligible participants were aged 20-45 and had separated from service within the last 10 years. Self-report measures included demographics, general health, reproductive health, military exposures, sexual assault, childhood trauma, and posttraumatic stress disorder (PTSD). The PMADs of interest were postpartum depression (PPD), postpartum anxiety (PPA) and postpartum PTSD (PPPTSD). This analysis included 1039 women Veterans who had ever been pregnant and who answered questions about PPMDs related to their most recent pregnancy.

#### Results:

A third (340/1039, 32.7%) of participants were diagnosed with at least one PMAD and one-fifth (215/1039, 20.7%) with two or more. Risk factors common for developing a PMAD included: a mental health diagnosis prior to pregnancy, a self-report of ever having had a traumatic birth experience, and most recent pregnancy occurring during military service. Additional risk factors were found for PPD and PPPTSD.

#### Conclusion:

Women Veterans may be at an increased risk for developing PMADs due to high rates of lifetime sexual assault, mental health disorders, and military-specific factors including giving birth during military service and military combat deployment exposures.

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<https://doi.org/10.1080/02699052.2023.2209740>

### **Chronic frontal neurobehavioural symptoms in combat-deployed military personnel with and without a history of blast-related mild traumatic brain injury.**

Parsey, C. M., Kang, H. J., Eaton, J. C., McGrath, M. E., Barber, J., Temkin, N. R., & Mac Donald, C. L.

#### Brain Injury

2023 Aug 24; 37(10): 1127-1134

#### Objective:

This study evaluated frontal behavioural symptoms, via the FrSBe self-report, in military personnel with and without a history of blast-related mild traumatic brain injury (mild TBI).

#### Methods:

Prospective observational cohort study of combat-deployed service members leveraging 1-year and 5-year demographic and follow up clinical outcome data.

#### Results:

The blast mild TBI group (n = 164) showed greater frontal behavioural symptoms, including clinically elevated apathy, disinhibition, and executive dysfunction, during a 5-year follow-up, compared to a group of combat-deployed controls (n = 107) without mild TBI history or history of blast exposure. We also explored changes in behavioural symptoms over a 4-year span, which showed clinically significant increases in

disinhibition in the blast mild TBI group, whereas the control group did not show significant increases in symptoms over time.

Conclusion:

Our findings add to the growing evidence that a proportion of individuals who sustain mild TBI experience persistent behavioural symptoms. We also offer a demonstration of a novel use of the FrSBe as a tool for longitudinal symptom monitoring in a military mild TBI population.

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<https://doi.org/10.1017/S0033291721005274>

**Moral injury and peri- and post-military suicide attempts among post-9/11 veterans.**

Maguen, S., Griffin, B. J., Vogt, D., Hoffmire, C. A., Blosnich, J. R., Bernhard, P. A., Akhtar, F. Z., Cypel, Y. S., & Schneiderman, A. I.

Psychological Medicine  
2023 May; 53(7): 3200-3209

Background:

Our goal was to examine the association between moral injury, mental health, and suicide attempts during military service and after separation by gender in post-9/11 veterans.

Methods:

A nationally representative sample of 14057 veterans completed a cross-sectional survey. To examine associations of exposure to potentially morally injurious events (PMIEs; witnessing, perpetrating, and betrayal) and suicidal self-directed violence, we estimated two series of multivariable logistic regressions stratified by gender, with peri- and post-military suicide attempt as the dependent variables.

Results:

PMIE exposure accounted for additional risk of suicide attempt during and after military service after controlling for demographic and military characteristics, current mental health status, and pre-military history of suicidal ideation and attempt. Men who endorsed PMIE exposure by perpetration were 50% more likely to attempt suicide during service and twice as likely to attempt suicide after separating from service. Men

who endorsed betrayal were nearly twice as likely to attempt suicide during service; however, this association attenuated to non-significance after separation in the fully adjusted models. In contrast, women who endorsed betrayal were over 50% more likely to attempt suicide during service and after separation; PMIE exposure by perpetration did not significantly predict suicide attempts before or after service among women in the fully adjusted models.

#### Conclusions:

Our findings indicate that suicide assessment and prevention programs should consider the impact of moral injury and attend to gender differences in this risk factor in order to provide the most comprehensive care.

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<https://doi.org/10.1007/s11126-023-10041-y>

### **Psychological Resilience in U.S. Military Veterans: Results from the 2019-2020 National Health and Resilience in Veterans Study.**

Georgescu, M. F., Fischer, I. C., Lowe, S., & Pietrzak, R. H.

The Psychiatric Quarterly  
2023 Jul 13

Following exposure to traumatic life events, most individuals are psychologically resilient, and experience minimal-to-no symptoms of posttraumatic stress, major depressive, or generalized anxiety disorders. To date, however, most research has focused on factors associated with adverse post-trauma mental health outcomes rather than understanding those associated with psychological resilience. In particular, little is known about factors associated with psychological resilience in veterans, despite their high rates of trauma exposure, such as combat and military sexual trauma. To address this gap, we used a discrepancy-based psychiatric resilience (DBPR) analytic approach to operationalize psychological resilience, and to identify modifiable health and psychosocial factors associated with resilience in a nationally representative sample of U.S. veterans (N = 4,069). DBPR scores were computed by regressing a composite measure of distress (posttraumatic stress, major depressive, and generalized anxiety disorder symptoms) onto measures of adverse childhood experiences, combat exposure, military sexual trauma, and cumulative potentially traumatic events (e.g., natural disaster, life-threatening illness/injury). Psychological resilience was operationalized as lower actual, relative to predicted, composite distress scores. Results

revealed that greater emotional stability (22.9% relative variance explained [RVE]) and mindfulness (13.4% RVE), lower likelihood of lifetime histories of MDD or PTSD (12.8% RVE), greater purpose in life (11.9% RVE), and lower severity of somatic symptoms (10.8% RVE) explained the majority of the variance in resilience scores (total R2 = 0.40). Taken together, results of this study illustrate the utility of a DBPR score approach to operationalizing psychological resilience to traumatic stress in U.S. veterans, and identify several modifiable health and psychosocial factors that can be targeted in prevention and treatment efforts designed to bolster resilience in this population.

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<https://doi.org/10.1016/j.jpainsymman.2023.04.011>

### **Factors Associated With Distress Related to Posttraumatic Stress Disorder at the End of Life Among U.S. Veterans.**

Pless Kaiser, A., Moye, J., Baird, L., Sager, Z., & Wachterman, M.

Journal of Pain and Symptom Management  
2023 Aug; 66(2): 102-115

#### **Context:**

Posttraumatic stress disorder (PTSD) may emerge or re-emerge at end of life (EOL), increasing patient suffering. Understanding factors associated with PTSD at EOL may assist clinicians in identifying high risk veterans.

#### **Objectives:**

To determine rates of and variables associated with PTSD-related distress at EOL.

#### **Methods:**

Retrospective observational cohort study including veterans who died within a Veterans Affairs (VA) inpatient setting between October 1, 2009 and September 30, 2018 whose next-of-kin completed the Bereaved Family Survey (BFS; N = 42,474). Our primary outcome was PTSD-related distress at EOL, as reported by veteran decedents' next-of-kin on the BFS. Predictors of interest included combat exposure, demographic variables, medical and psychiatric comorbidity, primary serious illness, and palliative care support.



### Results:

Veteran decedents were majority male (97.7%), non-Hispanic white (77.2%), 65 years or older (80.5%), without combat exposure (80.1%). Almost one in ten (8.9%) veteran decedents experienced PTSD-related distress at EOL. In adjusted analyses, combat exposure, younger age, male sex, and non-white race were associated with PTSD-related distress at EOL. High overall medical comorbidity, dementia, and psychiatric comorbidities including both substance use disorder and depression, were also associated with PTSD-related distress at EOL. Palliative care consultation and emotional support were associated with decreased odds of PTSD-related distress, while pain was associated with increased odds of PTSD-related distress at EOL.

### Conclusion:

Trauma and PTSD screening, pain management, and providing palliative care and emotional support at EOL, particularly in at-risk groups such as veterans from racial/ethnic minority backgrounds and those with dementia, are critical to decreasing PTSD-related distress at EOL.

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<https://doi.org/10.1016/j.psychres.2023.115350>

### **Associations between trauma-related guilt, symptoms of posttraumatic stress disorder, and problematic alcohol use.**

Davis, J. P., Canning, L., Saba, S. K., Bravo, A. J., Amone-P'Olak, K., Sedano, A., Tran, D., Castro, C., & Pedersen, E. R.

Psychiatry Research  
2023 Jul 22; 326: 115350

Trauma-related guilt, or a belief that one should have felt, thought, or acted differently during a traumatic event in which someone's life or physical integrity was threatened, has been consistently associated with mental health disorders such as posttraumatic stress disorder (PTSD). Theories of trauma-related guilt suggest that some avoidant coping behaviors, such as problematic alcohol use, are crucial pathways connecting trauma-related guilt to PTSD but have not been thoroughly investigated. The present study uses data from a longitudinal cohort of veterans to examine two models: the first assessed problematic alcohol use as a mechanism linking trauma-related guilt and PTSD. The second explored PTSD as a mechanism linking trauma-related guilt to problematic alcohol use. Results indicated that problematic alcohol use was a

significant mechanism linking global guilt and guilt cognitions with PTSD. Further, results indicated that PTSD was a significant mechanism linking global guilt and distress with problematic alcohol use. Results of our study indicate that alcohol use is a key construct that has been overlooked in the trauma-related guilt literature, despite the high prevalence of co-occurring PTSD and alcohol use (and alcohol use disorder). Targeting trauma-related guilt during integrated treatments for PTSD and alcohol use disorder may be particularly important for veterans.

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<https://doi.org/10.1016/j.jpsychires.2023.05.067>

### **Military sexual trauma among Veterans using and not using VA justice-related programing: A national examination.**

Holliday, R., Holder, N., Smith, A. A., Desai, A., Hoffmire, C. A., Forster, J. E., & Monteith, L. L.

Journal of Psychiatric Research  
2023 Aug; 164: 46-50

Veterans accessing Department of Veterans Affairs (VA) Veterans Justice Program (VJP) services have high rates of depression, substance misuse, and posttraumatic stress disorder. Although factors that may confer risk for mental health sequelae among these Veterans have been identified (e.g., childhood abuse, combat exposure), limited research has examined report of military sexual trauma (MST) among Veterans accessing VJP services. As survivors of MST experience myriad chronic health conditions which necessitate identification and referral to evidence-based care, identifying MST survivors among those accessing VJP services may facilitate referral to appropriate services. We examined whether MST prevalence differed between Veterans with and without a history of VJP service use. Sex-stratified analyses were conducted with 1,300,252 male (13.34% accessing VJP) and 106,680 female (10.14% accessing VJP) Veterans. In crude models, male and female Veterans accessing VJP services were significantly more likely to screen positive for MST (PR = 3.35 and 1.82 respectively). Significance was maintained in models that adjusted for age, race/ethnicity, VA service use, and VA mental health use. VJP service settings may serve as a critical intercept for identifying male and female survivors of MST. Using a trauma-informed approach to screen for MST in VJP settings is likely warranted. Moreover, integration of MST programing into VJP settings may be beneficial.

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<https://doi.org/10.1177/08862605231173909>

**Individual and Military Factors That Modify the Association Between Recent Sexual Trauma and Health Outcomes Among U.S. Service Members and Veterans.**

Seelig, A. D., Rivera, A. C., LeardMann, C. A., Daniel, S. M., Jacobson, I. G., Stander, V. A., Moore, B. L., Millard, D. C., Boyko, E. J., & Millennium Cohort Team

Journal of Interpersonal Violence  
2023 Sep; 38(17-18): 10150-10181

Sexual trauma (ST), which includes both sexual harassment and sexual assault, is associated with a variety of adverse mental and physical health outcomes in military and civilian populations. However, little is known about whether certain individual or military attributes or prior experiences may modify the relationship between recent ST and mental or physical health outcomes. Data from a longitudinal cohort study of current and former military members were used to examine whether individual and military factors modify the association between recent ST and health outcomes (posttraumatic stress disorder, depression, multiple somatic symptoms, and insomnia). Results indicated that demographic (sex, sexual orientation, race/ethnicity) and military factors (service branch, service component, military separation) generally did not modify the main effect of ST on the outcomes examined. On the other hand, factors known to be protective (spirituality, social support) and risk factors (childhood trauma, combat deployment, and mental health status) did modify the effect of ST on multiple outcomes examined; notably, protective effects were diminished among those who experienced recent ST. Protective factors were associated with the lowest risk of adverse outcomes among those with no ST, while risk reduction was less among survivors of ST. Diminished impacts also were found for cumulative risk factors, with the influence of multiple individual risk factors associated with increased risk but in a subadditive manner. We conclude that the effect of recent ST on the outcomes examined was persistent in the presence of potential protective factors, but that it may be impacted by ceiling effects in combination with other risk factors.

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## Links of Interest

VA lays groundwork for first major survey of moral injury in veterans

<https://www.militarytimes.com/veterans/2023/07/17/va-lays-groundwork-for-first-major-survey-of-moral-injury-in-veterans/>

Sailors aboard USS George Washington visit with pups on a mission for mental health

<https://www.pilotonline.com/2023/07/14/no-mission-accomplished-when-it-comes-to-mental-health/>

Opinion: In national security, autism is in the closet. Here's why.

<https://www.militarytimes.com/opinion/2023/07/17/in-national-security-autism-is-in-the-closet-heres-why/>

Military comedian Ashley Guthermuth on the not-so-funny topic of spousal unemployment

<https://www.youtube.com/watch?v=QoCz551bOk>

Neurodiversity at Work

<https://newsbreaks.infotoday.com/NewsBreaks/Neurodiversity-at-Work-159579.asp>

Connecting military-affiliated students and civilians on campus

<https://www.militarytimes.com/education-transition/2023/07/24/connecting-military-affiliated-students-and-civilians-on-campus/>

Do Good News Stories Accurately Represent Military Families?

<https://www.military.com/daily-news/2023/07/24/do-good-news-stories-accurately-represent-military-families.html>

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## Resource of the Week – [Screening for Anxiety Disorders in Adults: US Preventive Services Task Force Recommendation Statement](#)

Via JAMA:

Importance

Anxiety disorders are commonly occurring mental health conditions. They are often unrecognized in primary care settings and substantial delays in treatment initiation occur.

### Objective

The US Preventive Services Task Force (USPSTF) commissioned a systematic review to evaluate the benefits and harms of screening for anxiety disorders in asymptomatic adults.

### Population

Asymptomatic adults 19 years or older, including pregnant and postpartum persons. Older adults are defined as those 65 years or older.

### Evidence Assessment

The USPSTF concludes with moderate certainty that screening for anxiety disorders in adults, including pregnant and postpartum persons, has a moderate net benefit. The USPSTF concludes that the evidence is insufficient on screening for anxiety disorders in older adults.

### Recommendation

The USPSTF recommends screening for anxiety disorders in adults, including pregnant and postpartum persons. (B recommendation) The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for anxiety disorders in older adults. (I statement)

See also: [Anxiety Disorders in Adults: Screening](#) (USPSTF)

### Recommendation Summary

Population	Recommendation	Grade
Adults 64 years or younger, including pregnant and postpartum persons	The USPSTF recommends screening for anxiety disorders in adults, including pregnant and postpartum persons.	<b>B</b>
Older adults 65 years or older	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for anxiety disorders in older adults.	<b>I</b>

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