

## Research Update – December 19, 2024

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### https://doi.org/10.1176/appi.ps.20240180

### Clinic-Level Predictors of Psychotherapy Dosage in the Military Health System.

McLean, C. P., Fong, C., Haddock, C. K., Cook, J., Peterson, A. L., Riggs, D. S., Young-McCaughan, S., Conforte, A. M., Flores, A., Jinkerson, J., Jones, Z. K., Kim, H. J., Link, J. S., Nofziger, D., Ringdahl, E. N., Woodworth, C., McCullen, J., Ho, E., Rosen, C. S., & TACTICS Research GroupRosen, C. S., & TACTICS Research Group

Psychiatric Services 2024 Nov 5

### Objective:

This study aimed to describe the demand for, supply of, and clinic processes associated with behavioral health care delivery in the Military Health System and to examine the clinic-level factors associated with receipt of a minimally adequate dosage of psychotherapy.

### Methods:

This retrospective study used administrative behavioral health data from eight military treatment facilities (N=25,433 patients; N=241,028 encounters) that were participating in a larger implementation study of evidence-based psychotherapy for posttraumatic stress disorder. Minimally adequate dosage of psychotherapy was defined in two ways: at least three sessions within a 90-day period and at least six sessions within a 90-day period. The authors then used a path model to examine clinic-level factors hypothesized to predict psychotherapy dosage, including care demand, supply, and processes.

### Results:

Patients had an average of 2.5 psychotherapy appointments per quarter. Wait times for intake, between intake and the first psychotherapy session, and between follow-up sessions all averaged 17 days or longer. Path modeling showed that a higher patient-to-encounter ratio was associated with a longer wait time between follow-up psychotherapy appointments. In turn, a longer wait time between appointments was associated with a lower probability of receiving an adequate dosage of psychotherapy. However, a greater proportion of care delivered in groups was associated with a greater probability of receiving at least six sessions of psychotherapy.

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Conclusions:

Receipt of a minimally adequate dosage of psychotherapy in the Military Health System is hindered by clinic staffing and workflows that increase wait times between follow-up psychotherapy appointments.

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https://doi.org/10.1016/j.amepre.2024.12.005

## Prospective Associations of Exposure to Discrimination and Alcohol Use: A National Longitudinal Study.

Nicholas Guenzel, Cheryl L. Beseler, Adam M. Leventhal, Junhan Cho, Hongying Daisy Dai

American Journal of Preventive Medicine Available online 11 December 2024

Introduction:

This study examined prospective associations of perceived discrimination experience and past-week alcohol use among U.S. adults.

### Methods:

This longitudinal study analyzed 22 biweekly surveys from the Understanding America Study (UAS) during June 2020-July 2021, a nationally representative U.S. adult panel. Multivariable regressions were conducted to examine prospective associations of perceived discrimination experiences (any vs. none) or mean levels of discrimination (never[0] to almost every day [4]) and past-week alcohol use frequency [days: 0-7]) or binge drinking (yes/no) 2 weeks later, after disaggregating within-person and between-person effects of discrimination regressor and adjusting for covariates. Analyses were conducted in 2024.

### Results:

Among 8,026 participants, 18.9% reported perceived discrimination experiences. The mean of past-week alcohol drinking was 1.27 days and 9.3% reported past-week binge drinking. Within-person discrimination prevalence and levels of discrimination were associated with higher drinking frequency (IRR[95% CI]=1.05[1.02-1.08], p=.0003 and IRR[95% CI]=1.06[1.02-1.10], p=.002, respectively), and between-person discrimination prevalence was associated with higher drinking frequency (IRR[95% CI]=1.16[1.05-1.30], p=.005) and higher likelihood of binge drinking (AOR[95% CI]=1.90[1.49-2.42],

p<.0001). The associations of discrimination prevalence and drinking frequency differed by sex (interaction effect, p-value=.02) and race/ethnicity (interaction effect of Whites vs. Blacks, p-value=.006), with significantly higher numbers of past-week drinking among females (AOR[95% CI]=1.10[1.05-1.15] and Black adults (AOR[95% CI]=1.17[1.07-1.28]), but not among males and Hispanic/other race adults.

### Conclusions:

Discrimination experiences were prospectively associated with an increased risk of alcohol-drinking outcomes, and the effect was more pronounced among certain demographic groups. Efforts to mitigate the adverse effects of recurrent exposure to discrimination are critical to advance health equity.

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## https://doi.org/10.1001/jamainternmed.2024.6211

## Depression Treatment After a Positive Depression Screen Result.

Garcia, M. E., Ochoa-Frongia, L., Neuhaus, J., Hong, J. C., Hinton, L., Livaudais-Toman, J., Feldman, M. D., Mangurian, C., Appelle, N., & Karliner, L. S.

JAMA Internal Medicine December 9, 2024

## Key Points

Question

Is depression screening associated with appropriate and equitable initial care for patients with elevated depressive symptoms and/or suicidal ideation (SI)?

## Findings

In this cohort study including 3980 adults with elevated depressive symptoms, African American or Black and Asian patients, older adults, and those screened via the patient portal had lower odds of initial care than White patients, younger patients, and those with in-person visits. Patients with SI had increased odds of care compared with those without SI.

## Meaning

To improve depression care, results of this study suggest that health systems need strategies to increase treatment initiation after screening, particularly for groups at risk for undertreatment.

### Abstract

### Importance

As primary care practices increase depression screening, it is unknown whether screening is associated with appropriate and equitable treatment.

### Objective

To investigate factors associated with initial treatment among patients who screen positive for depression and/or suicidal ideation (SI).

### Design, Setting, and Participants

Cohort study using electronic health record data from September 2017 to September 2021, from a large US academic health system. Participants were adult primary care patients with elevated depressive symptoms (Patient Health Questionnaire-9 score ≥10) and/or SI, excluding patients with baseline depression, bipolar disorder, schizophrenia, schizoaffective disorder, or dementia. Data were analyzed from December 30, 2022, to February 17, 2024.

### Exposure

Patient characteristics including gender, age, preferred language, and race and ethnicity.

### Main Outcomes and Measures

Primary outcome was antidepressant or mental health referral ordered at screening. Secondary outcomes were antidepressant/referral and antidepressant/referral or followup visit within 8 weeks.

## Results

Of 60 062 patients screened, 3980 (7%) reported elevated depressive symptoms or SI. The cohort was 68.1% women (2711), and the mean (SD) age was 46.5 (17.6) years; 0.8% were 12.4% African American or Black (493), American Indian or Alaska Native (30), 24.8% Asian (988), 14.6% Latino/Latina/Latinx (582), 1.5% Pacific Islander (58), and 36.9% White (1470), and 9.0% other/unknown (359); 5.6% preferred a non-English language (223). Approximately 38% (1518) received antidepressants/referrals when screened (including 44% of 461 patients [203] with SI). By 8 weeks, 2785 patients (70%) received antidepressant/referral and/or follow-up (including 75% of 783 patients with SI). In multivariable logistic regression models adjusting for site and clustered on primary care physician, there were no statistically significant differences in the primary outcome by gender, preferred language, or health insurance. African American or Black and Asian patients had lower estimated probabilities of treatment ordered when

screened (34.0% [95% CI, 28.4%-39.6%] for Black patients and 35.4% [95% CI, 31.5%-39.4%] for Asian patients) than White patients (40.5% [95% CI 37.4%-43.5%]). Estimated treatment decreased with increasing age (46.4% [95% CI, 41.2%-51.5%] for patients aged 18-30 years and 17.5% [95% CI, 12.1%-22.9%] for patients aged  $\geq$ 75 years). Patients with SI had greater estimated treatment than those without SI (43.5% [95% CI, 39.9%-47.1%] vs 35.2% [95% CI, 33.0%-37.5%]), although treatment was overall low for this high-risk group. Secondary outcomes were consistent, although there were no statistically significant differences in follow-up visits for African American or Black and Asian patients compared with White patients.

### Conclusions and Relevance

In this cohort study, moderate rates of initial treatment among patients with elevated depressive symptoms and/or SI were found. Targeted interventions are needed for patients at risk of undertreatment, including patients with SI, African American or Black and Asian patients, and older adults.

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### https://doi.org/10.1001/jamanetworkopen.2024.51931

# Loneliness and Social and Emotional Support Among Sexual and Gender Minority Caregivers.

Xie, Z., Hamadi, H., Terrell, K., George, L., Wells, J., & Liang, J.

JAMA Network Open December 13, 2024

Key Points

Question

Is informal caregiving associated with perceived social connections (loneliness and lack of social and emotional support) differently among US adults with various sexual orientations and gender identities?

### Findings

In this population-based, cross-sectional study of 43 693 US adults, there was a consistently higher risk of loneliness among various sexual and gender minority groups, as well as caregivers, compared with their specific counterparts. In addition, individuals who identified as bisexual reported significantly greater lack of social and emotional support, regardless of their caregiving status.

### Meaning

These findings suggest that sexual and gender minority caregivers, particularly those who identify as bisexual, experience poorer social connections vs their straight counterparts.

### Abstract

### Importance

Sexual and gender minority (SGM) adults in the US are more likely than their non-SGM counterparts to provide informal care to their family members and/or friends. Caregiving can impose substantial physical, mental, and social connection issues on caregivers.

### Objective

To examine the associations among loneliness, lack of social and emotional support, sexual orientation, gender identity, and informal caregiving status.

### Design, Setting, and Participants

This population-based, cross-sectional study used data from the 2022 Behavioral Risk Factor Surveillance System collected from noninstitutionalized US civilian residents aged 18 years or older. Data analysis was conducted from June to July 2024.

### Main Outcomes and Measures

The primary dependent variables included self-reported dichotomized (yes vs no) loneliness and lack of social and emotional support. The primary independent variables were sexual orientation (straight, gay or lesbian, bisexual, or something else), gender identity (cisgender and transgender), and informal caregiving status (yes vs no). A binomial distribution and log link function were used to derive adjusted prevalence ratios (APRs) and their respective 95% CIs for each outcome measure.

### Results

The analytic sample included 43 693 US adults (23 223 [51.6%] female at birth). In multivariable regression analyses adjusting for sociodemographic and health factors, among caregivers only, and compared with straight individuals, loneliness was significantly more likely among lesbian or gay individuals (APR, 1.30; 95% CI, 1.11-1.51), bisexual individuals (APR, 1.26; 95% CI, 1.12-1.43), and those who identify as something else (APR, 1.26; 95% CI, 1.09-1.46). Similarly, for noncaregivers, lesbian or gay individuals (APR, 1.34; 95% CI, 1.15-1.57), bisexual individuals (APR, 1.47; 95% CI, 1.34-1.61), and individuals identifying as something else (APR, 1.41; 95% CI, 1.25-1.58) experienced significantly higher risk of loneliness than straight noncaregivers. Transgender caregivers were more likely than cisgender caregivers to report loneliness

(APR, 1.34; 95% CI, 1.24-1.46). In terms of lack of social and emotional support, bisexual caregivers (APR, 1.21; 95% CI, 1.00-1.48) and caregivers identifying as something else (APR, 1.34; 95% CI, 1.09-1.66) were significantly more likely than straight caregivers to report a lack of social and emotional support. Similarly, both bisexual noncaregivers (APR, 1.44; 95% CI, 1.28-1.63) and noncaregivers identifying as something else (APR, 1.38; 95% CI, 1.18-1.61) experienced a significantly higher risk of lacking support compared with straight noncaregivers.

### Conclusions and Relevance

In this cross-sectional study of social connections, SGM adults experienced significantly higher levels of loneliness compared with straight adults, irrespective of caregiving status. Furthermore, caregiving exacerbated these disparities across SGM subgroups. Patterns of lack of social and emotional support mirrored those of loneliness across different SGM and caregiving subpopulations, with nuances emerging upon adjustment for individual characteristics.

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### https://doi.org/10.1111/sltb.13105

# Entrapment in the military context: Factor structure and associations with suicidal thoughts and behaviors.

Baker, J. C., Cacace, S., Cramer, R. J., Rasmussen, S., Martin, C., May, A. M., Thomsen, C., Bryan, A. O., & Bryan, C. J.

Suicide and Life-Threatening Behavior 2024 Dec; 54(6): 1006-1028

### Background

Improved understanding of how US service members transition from chronic/baseline to acute suicide risk is warranted. One such model, the Integrated Motivational Volitional Model of Suicide, posits entrapment as central to this process. However, entrapment has not been extensively investigated within military populations.

### Methods

This study examines the factor structure, reliability, and predictive validity of the Entrapment Scale (E-Scale) within a military population. Exploratory structural equation modeling (SEM) and confirmatory factor analysis compared one- versus two-factor structures of the E-Scale. Autoregressive SEM assessed if E-Scale scores predicted

suicidal ideation and suicide attempt likelihood at 6- and 12-month follow-up, and examined whether the impact of entrapment was moderated by social support (i.e., appraisal, tangible, and belonging).

### Results

Results favored a two-factor solution (external and internal) of entrapment. The relationship between entrapment and suicide outcomes was moderated by perceived social support but in unexpected directions. Unexpectedly, social support strengthened the relationship between external entrapment and suicide outcomes for most models. Only tangible support moderated the relationship between internal entrapment (IE) and suicide outcomes as predicted.

### Conclusions

IE is linked with suicidal ideation in the short-term, whereas external entrapments relationship with suicide outcomes may reflect more persistent social challenges for military members.

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### https://doi.org/10.1111/sltb.13113

## Beliefs about mental health treatment, treatment initiation, and suicidal behaviors among veterans and service members at-risk for suicide and not in treatment.

Short, N. A., Allan, N. P., Ashrafioun, L., & Stecker, T.

Suicide and Life-Threatening Behavior 2024 Dec; 54(6): 1083-1091

### Introduction:

Previous research has identified a variety of barriers to mental health care among military personnel and veterans, despite high rates of mental health symptoms. The current study is the first to examine beliefs about mental health treatment barriers among post-9/11 military personnel and veterans at elevated suicide risk not involved in treatment and whether these beliefs are associated with treatment initiation, engagement, or suicidal behaviors.

### Methods:

Four hundred and twenty-two participants reported on beliefs about treatment during a cognitive behavioral treatment session and responded to follow-up questionnaires on

mental health treatment initiation, engagement, and suicidal behaviors over 12 months. Beliefs identified in the therapy session were coded thematically, and rates of treatment initiation, engagement, and suicidal behavior were examined by belief category.

### Results:

Nine belief themes emerged. Participants reporting logistical barriers and preferences about treatment type were least likely to initiate mental health treatment and participated in the fewest number of sessions, respectively. Participants endorsing beliefs about stigma or using other ways to cope were most likely to engage in suicidal behavior.

### Conclusions:

The current findings point to specific beliefs that may identify individuals who would benefit from systemic and individual interventions for mental health treatment engagement.

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### https://doi.org/10.1136/military-2022-002309

## Suicide rates in the UK Armed Forces, compared with the general workforce and merchant shipping during peacetime years since 1900.

Roberts, S. E., John, A., Carter, T., & G Williams, J.

BMJ Military Health Online issue publication: December 11, 2024

### Introduction

The main objective was to compare suicide rates and their trends across the three UK Armed forces (Royal Navy, Army and Royal Air Force) from 1900 to 2020. Further objectives were to compare suicide rates with those in the corresponding general population and in UK merchant shipping and to discuss preventative measures.

#### Methods

Examination of annual mortality reports and returns, death inquiry files and official statistics. The main outcome measure was the suicide rate per 100 000 population employed.

#### Results

Since 1990, there have been significant reductions in suicide rates in each of the Armed

Forces, although a non-significant increase in the Army since 2010. Compared with the corresponding general population, during the most recent decade from 2010 up to 2020, suicide rates were 73% lower in the Royal Air Force, 56% lower in the Royal Navy and 43% lower in the Army. Suicide rates have been significantly decreased in the Royal Air Force since the 1950s, in the Royal Navy since the 1970s and in the Army since the 1980s (comparisons for the Royal Navy and the Army were not available from the late 1940s to the 1960s).

During the earliest decades from 1900 to the 1930s, suicide rates in the Armed Forces were mostly quite similar or moderately increased compared with the general population, but far lower than in merchant shipping. Following legislative changes in the last 30 years, suicide rates through poisoning by gases and through firearms or explosives have fallen sharply.

### Conclusions

The study shows that suicide rates in the Armed Forces have been lower than in the general population over many decades. The sharp reductions in suicide rates over the last 30 years suggest the effectiveness of recent preventative measures, including reductions in access to a method of suicide and well-being initiatives.

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https://doi.org/10.1016/j.jad.2024.11.038

## Symptoms of depression, but not PTSD, influence cognitive performance in healthy Army National Guard Soldiers.

Ridgewell, C., Donovan, A., Haven, C., Proctor, S. P., & Heaton, K. J.

Journal of Affective Disorders Volume 371, 15 February 2025, Pages 352-360

Highlights

- Comorbid depression and PTSD may contribute to more severe cognitive impairment.
- Greater symptoms of depression led to poorer attention in National Guard soldiers.
- Symptoms of PTSD had no effect on cognitive performance in National Guard soldiers.
- Monitoring of attention is critical even in those with minor depressive symptoms.

### Abstract

### Introduction

Research suggests that comorbid depression and PTSD may contribute to cognitive impairment. However, few studies have explored this dynamic in military personnel who report only subclinical symptoms of PTSD and depression.

### Methods

Army National Guard Soldiers (ARNG; N = 1415) completed the Automated Neuropsychological Assessment Metrics (ANAM), the PTSD Checklist (PCL), and the Center for Epidemiological Studies Depression Scale (CES-D). The effects of PTSD and depression symptoms on ANAM performance were examined using multiple linear regression analyses. Exploratory factor analysis and regression models examined the relationship between symptom clusters and ANAM performance.

### Results

Six factors were identified: avoidance/flashbacks, cognitive/social difficulty, depressed mood, positive mood, sleep difficulty, and hypervigilance. Elevated symptoms of depression (measured using factor scores) were associated with poorer attention ( $\beta$  range -0.19–0.18, p range < 0.01–0.04, f2 effect size range 0.02–0.94).

### Conclusion

Depression symptoms were associated with diminished attentional performance in a large sample of ARNG Soldiers who reported no clinical diagnosis. This study was limited in that unmeasured factors other than depression, PTSD, or demographics may explain much of the variance in cognitive performance. These findings highlight the importance of careful mental health screening and strategies to heighten awareness of the potential detrimental effects of depression and PTSD on health and performance.

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## https://doi.org/10.1002/jts.23080

An evaluation of the associations among posttraumatic stress disorder, depression, and complicated grief in active duty military personnel with traumatic loss.

Jacoby, V. M., Straud, C. L., Tyler, H., Dondanville, K. A., Yarvis, J. S., Mintz, J., Young-McCaughan, S., Peterson, A. L., Wachen, J. S., Resick, P. A., & STRONG STAR Consortium Journal of Traumatic Stress Volume 37, Issue 6, December 2024, Pages 984-997

Between 44% and 87% of active duty service members and veterans who deployed following the September 11, 2001, terrorist attacks know someone who was killed or seriously injured in combat. Considering the high frequency and known impact of traumatic loss, it is important to understand if and how traumatic loss may impede posttraumatic stress disorder (PTSD) treatment progress in military personnel. Additionally, experiencing a traumatic loss elevates the risk of developing prolonged grief disorder (PGD), which is associated with higher levels of PTSD symptoms, more functional impairment, and more lifetime suicide attempts among military personnel. Given what is known about the association between PGD and PTSD in treatmentseeking service members and veterans, it is also important to understand whether griefrelated symptom severity negatively impacts PTSD treatment response. The current study examined associations among traumatic loss, complicated grief, depressive symptoms, and PTSD treatment response among military personnel (N = 127) who participated in variable-length cognitive processing therapy (CPT). There was no direct, F(2, 125) = 0.77, p = .465, or indirect,  $\beta = .02$ , p = .677, association between a traumatic loss index event and PTSD treatment response compared with other trauma types. Prior assessments of depressive symptom severity were directly related to PTSD at later assessments across two models, ps < .001–p = .021 Participants with a traumatic loss index trauma demonstrated significant reductions in complicated grief, depressive symptoms, and PTSD following CPT, ps < .001, ds = -0.61 - 0.83. Implications, study limitations, and suggestions for future research are presented.

https://doi.org/10.1080/08995605.2023.2276638

Effectiveness of the TSL (Thank you, Sorry, and Love) program for adaptability of military children.

Lee, H., & Kim, J. Y.

Military Psychology Volume 37, 2025 - Issue 1

This study aims to assess the effectiveness of the TSL (Thank you, Sorry, and Love) program in enhancing the adaptability of military children in the Republic of Korea. A

total of 30 military children were selected as participants and assigned to three groups: an experimental group receiving the TSL program, a comparison group receiving a resilience program, and a control group. Measures of adaptability (including resilience, perceived stress, depression, family function, and school adaptation) were administered to the military children at pre, post, and follow-up stages. The results reveal significant differences in adaptability between the TSL program participants and the other groups' participants at the post-intervention and follow-up assessments. These findings suggest that the TSL program has the potential to effectively enhance the adaptability of military children and maintain their adaptive capacities across various domains in the long term.

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### https://doi.org/10.3389/fpsyg.2024.1437070

6-Fold path to self-forgiveness: an interdisciplinary model for the treatment of moral injury with intervention strategies for clinicians.

DeMarco M. J.

Frontiers in Psychology 24 November 2024

Conscience is the indestructible core of one's personal identity and their sense of agency in the world. When it passes judgment against them, it generates inner conflict (i.e., moral injury). At its core, moral injury is about trust and sacred relationships, particularly the loss of safe connection with self, society, God/Divine/a Higher Power, and the world. The clash between a person's conscience and overwhelming existential or psychospiritual experiences, which uniquely defines moral injury, alienates them from life-sustaining relationships. Healing requires more than reordering fractured belief systems. Reestablishing bonds of self-worth, trust, and life-sustaining relationships are essential. This paper presents the 6-Fold Path to Self-Forgiveness (6-FPSF), an interdisciplinary, narrative-based healing writing process for the treatment of moral injury, particularly self-induced moral injury. Self-forgiveness has been associated with psychospiritual and relational well-being. The protocol draws upon theoretical literature, evidence-based psychological interventions, spiritual-oriented practices, creative arts, and somatic exercises for mental health counseling and spiritual/religious ministration. In addition to describing the 6-component therapeutic model, the author offers intervention strategies for clinicians.

#### https://doi.org/10.2196/57748

The Complex Interaction Between Sleep-Related Information, Misinformation, and Sleep Health: Call for Comprehensive Research on Sleep Infodemiology and Infoveillance.

Bragazzi, N. L., & Garbarino, S.

JMIR Infodemiology Published on 13.12.2024 in Vol 4 (2024)

The complex interplay between sleep-related information—both accurate and misleading—and its impact on clinical public health is an emerging area of concern. Lack of awareness of the importance of sleep, and inadequate information related to sleep, combined with misinformation about sleep, disseminated through social media, nonexpert advice, commercial interests, and other sources, can distort individuals' understanding of healthy sleep practices. Such misinformation can lead to the adoption of unhealthy sleep behaviors, reducing sleep guality and exacerbating sleep disorders. Simultaneously, poor sleep itself impairs critical cognitive functions, such as memory consolidation, emotional regulation, and decision-making. These impairments can heighten individuals' vulnerability to misinformation, creating a vicious cycle that further entrenches poor sleep habits and unhealthy behaviors. Sleep deprivation is known to reduce the ability to critically evaluate information, increase suggestibility, and enhance emotional reactivity, making individuals more prone to accepting persuasive but inaccurate information. This cycle of misinformation and poor sleep creates a clinical public health issue that goes beyond individual well-being, influencing occupational performance, societal productivity, and even broader clinical public health decisionmaking. The effects are felt across various sectors, from health care systems burdened by sleep-related issues to workplaces impacted by decreased productivity due to sleep deficiencies. The need for comprehensive clinical public health initiatives to combat this cycle is critical. These efforts must promote sleep literacy, increase awareness of sleep's role in cognitive resilience, and correct widespread sleep myths. Digital tools and technologies, such as sleep-tracking devices and artificial intelligence-powered apps, can play a role in educating the public and enhancing the accessibility of accurate, evidence-based sleep information. However, these tools must be carefully designed to avoid the spread of misinformation through algorithmic biases. Furthermore, research into the cognitive impacts of sleep deprivation should be leveraged to develop strategies that enhance societal resilience against misinformation. Sleep infodemiology and infoveillance, which involve tracking and analyzing the

distribution of sleep-related information across digital platforms, offer valuable methodologies for identifying and addressing the spread of misinformation in real time. Addressing this issue requires a multidisciplinary approach, involving collaboration between sleep scientists, health care providers, educators, policy makers, and digital platform regulators. By promoting healthy sleep practices and debunking myths, it is possible to disrupt the feedback loop between poor sleep and misinformation, leading to improved individual health, better decision-making, and stronger societal outcomes.

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### https://doi.org/10.1089/neu.2023.0315

## The Functional Connectome and Long-Term Symptom Presentation Associated With Mild Traumatic Brain Injury and Blast Exposure in Combat Veterans.

Rowland, J. A., Stapleton-Kotloski, J. R., Godwin, D. W., Hamilton, C. A., & Martindale, S. L.

Journal of Neurotrauma Published Online: 13 December 2024

Mild traumatic brain injury (TBI) sustained in a deployment environment (deployment TBI) can be associated with increased severity of long-term symptom presentation, despite the general expectation of full recovery from a single mild TBI. The heterogeneity in the effects of deployment TBI on the brain can be difficult for a casecontrol design to capture. The functional connectome of the brain is an approach robust to heterogeneity that allows global measurement of effects using a common set of outcomes. The present study evaluates how differences in the functional connectome relate to remote symptom presentation following combat deployment and determines if deployment TBI, blast exposure, or post-traumatic stress disorder (PTSD) are associated with these neurological differences. Participants included 181 Iraq and Afghanistan combat-exposed Veterans, approximately 9.4 years since deployment. Structured clinical interviews provided diagnoses and characterizations of TBI, blast exposure, and PTSD. Self-report measures provided characterization of long-term symptoms (psychiatric, behavioral health, and quality of life). Resting-state magnetoencephalography was used to characterize the functional connectome of the brain individually for each participant. Linear regression identified factors contributing to symptom presentation including relevant covariates, connectome metrics, deployment TBI, blast exposure PTSD, and conditional relationships. Results identified unique contributions of aspects of the connectome to symptom presentation. Furthermore,

several conditional relationships were identified, demonstrating that the connectome was related to outcomes in the presence of only deployment-related TBI (including blast-related TBI, primary blast TBI, and blast exposure). No conditional relationships were identified for PTSD; however, the main effect of PTSD on symptom presentation was significant for all models. These results demonstrate that the connectome captures aspects of brain function relevant to long-term symptom presentation, highlighting that deployment-related TBI influences symptom outcomes through a neurological pathway. These findings demonstrate that changes in the functional connectome associated with deployment-related TBI are relevant to symptom presentation over a decade past the injury event, providing a clear demonstration of a brain-based mechanism of influence.

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### https://doi.org/10.1177/00302228221113616

## An Analysis of Factors Predicting Post-Traumatic Stress Disorder and Grief Following Comrade Loss.

Yehene, E., Martin, Y., & Goldzweig, G.

OMEGA - Journal of Death and Dying 2025; 90(3), 971-989

This study explored how "inhibiting factors" associated with military-bereavement impact combatants' psychological sequelae following comrade loss. One hundred six eligible Israeli combat male-soldiers completed the Texas-Revised-Inventory of Grief, the post-traumatic-stress-disorder symptoms scale (PSS), the Male Role Norms Scale, the Social Acknowledgment Questionnaire, and a scale assessing Military Encouragement to Grieve (MEG-8). Time since loss had no impact on soldiers' levels of PSS or prolonged grief. Regression analysis indicated that higher masculinity-perception and disapproval from the family predicated higher PSS, above and beyond grief. Conversely, lower disapproval from the family, and higher disapproval from the general community, predicted higher grief, above and beyond PSS. Also, military encouragement significantly mediated the positive relationship between masculinity and sense of social-recognition. The results show how inhibiting factors contribute differently to the perpetuation of PSS and grief. This interplay sheds light on soldiers' "external" and "internal" loss processes of traumatic bereavement. The practical implications to treatment are also discussed.

### https://doi.org/10.1093/milmed/usae492

## Mechanisms of Injury for Traumatic Brain Injury Among U.S. Military Service Members Before and During the COVID-19 Pandemic.

Tajrina Hai, MHS, USA, Yll Agimi, PhD, USA, Tesfaye Deressa, MSDS, USA, Olivia Haddad, MPH, USA

Military Medicine Published: 02 November 2024

#### Objective

To understand the mechanisms of injury and demographic risk factors associated with traumatic brain injury (TBI) patients among active and reserve service members in the U.S. Military before and during the COVID-10 pandemic.

### Methods

Active and reserve service members diagnosed with an incident TBI from January 2019 through September 2021 were selected. Traumatic brain injury patients diagnosed before March 1, 2020 were categorized as pre-COVID (PC), and patients diagnosed on or after March 1, 2020 were categorized as the intra-COVID (IC) group, aligning closely with the date when the World Health Organization officially proclaimed the pandemic. We determined the frequency of causes of injuries associated with TBI separate by sex, age, occupation, and TBI severity. In addition, we conducted multivariate logistic regression analyses to assess the demographic risk factors associated with TBI severity during the PC and IC eras.

### Results

Our cohort included 48,562 TBI patients: 22,819 (47.0%) diagnosed during the PC era and 25,743 (53.0%) diagnosed during the IC era. The major mechanisms of injury within our TBI cohort were being struck by/against objects, falls/slips/trips, and motor vehicle traffic accidents before and during the pandemic. The most common causes of TBI were not impacted by COVID, but motor vehicle accidents did increase during the IC era. The mechanisms of injury associated with TBI differed by TBI severity: being struck by or against an object caused more mild and moderate TBI; motor vehicle accidents caused more severe TBI; and firearms was a major cause of penetrating TBI. In addition, the percentage of severe TBI because of firearms rose sharply during the IC era. Further, women were more likely to be diagnosed with mild TBI compared to men.

Conclusion

Military leaders should consider how different causes of injury are associated with differing TBI severities and how certain demographic groups were vulnerable to specific TBI severities when developing injury prevention programs.

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https://doi.org/10.18103/mra.v12i10.5900

### Mothers in the Military: Violence and Negative Perinatal Outcomes.

Kathleen Kendall-Tackett, PhD, IBCLC, FA

Medical Research Archives [S.I.], v. 12, n. 10, Oct. 2024

The number of women serving in the United States (US) armed forces has more than tripled since 2000. The increased number of women highlights some areas of vulnerability, especially during the perinatal period, that are not currently being addressed. Compared to civilians, women in the military are more likely to have experienced adverse childhood experiences and intimate partner violence. They are also at higher risk for military sexual trauma than their male counterparts. For pregnant women, past or current violence increases the risk for adverse birth outcomes, such as preterm birth and low birth weight. During pregnancy and postpartum, military mothers are at higher risk for depression, anxiety, posttraumatic stress disorder (PTSD), and suicidal ideation than civilian mothers. The purpose of this review is to summarize recent studies on women in the military, examining rates of violence and adverse outcomes related to their experiences of violence. The findings do not allow us to understand underlying mechanisms but can describe associations. Overall, the findings are bleak but could become a call to action. With intervention, these outcomes can improve. However, we must first realize that a problem exists, which the present article highlights.

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https://doi.org/10.1016/j.copsyc.2024.101936

A review of current and proposed behavioral nudge strategies to improve the readiness of the United States military.

RP Tucker, DW Capron, B Trachik, EJ Mangini, J Osgood, J Morton, BW Bauer

Current Opinion in Psychology Volume 60, December 2024, 101936

This review discusses findings on the use of behavioral nudges in both the Canadian and U.S. military. To date, most of this research has focused on improving recruitment and healthy eating behaviors in military personnel. The current review also highlights important areas of future research, focusing on the role behavioral nudges could potentially play in curbing three pressing issues in the U.S. military: 1) recruitment, 2) health-related readiness of the military, and 3) suicide prevention. The review concludes with an overview of unique challenges this work may face in the military context as well as unique resources available for this research and implementation not likely accessible in civilian communities.

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### https://doi.org/10.1080/08995605.2024.2423110

Associations among psychological health problems, intimate-relationship problems, and suicidal ideation among United States Air Force active-duty personnel.

Parsons, A. M., Slep, A. M. S., Heyman, R. E., Kim, S., Mitnick, D., Lorko, K., ... Snyder, D. K.

Military Psychology Published online: 04 Nov 2024

Linkages among psychological health problems, intimate relationship distress, and suicide risk have been widely studied, but less is known about how these factors interact, especially in military populations. With steady increases in suicide rates among active military and post-service members (SMs), it is critical to better understand the relation among known risk factors. The current study addresses this gap by testing a model hypothesizing that the association between intimate-relationship problems and suicidal ideation is mediated by individual mental health symptoms. We tested this model on a sample of 862 active-duty Air Force members in committed relationships. The sample consisted of 35.0% women and 64.8% men, with an average age of 21.9 years and a mean relationship length of 2.8 years. Findings supported the hypothesized statistical mediation model. Results indicated that relationship problems

contribute to psychological health problems, which, in turn, are related to suicidal ideation. These findings may help direct suicide intervention and prevention protocols that consider intimate relationship distress as a significant risk factor. Limitations and further implications for policies regarding suicide prevention in the armed forces are discussed.

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https://doi.org/10.1001/jamanetworkopen.2024.42979

### Food Insecurity Among LGBQ+ Veterans.

Haigh, S. V., Halladay, C. W., Kauth, M. R., Going, C., & Cohen, A. J.

JAMA Network Open November 4, 2024

#### Question

What are the prevalence of and risk factors for food insecurity among lesbian, gay, bisexual, queer, and similar (LGBQ+) veterans?

#### Findings

In this cross-sectional study of 3 580 148 veterans receiving medical care through the Veterans Health Administration, LGBQ+ veterans experienced food insecurity at nearly 2.5 times the rate of heterosexual veterans. While individual risk factors for food insecurity were similar for veterans of all sexual orientations, LGBQ+ veterans experienced higher rates of some of these risk factors, including homelessness and several mental health and trauma-related comorbidities.

### Meaning

These findings suggest that LGBQ+ veterans are uniquely vulnerable to experiencing food insecurity, which often co-occurs with other social and medical risks; tailored strategies are needed to improve how food insecurity is identified and addressed in this population.

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### https://doi.org/10.15766/mep\_2374-8265.11466

## The Application of Trauma-Informed Care to Health Care for Military-Connected Individuals.

B Chokshi, M Wido, S Prabhakar, E Hisle-Gorman

MedEdPORTAL November 5, 2024

### Introduction:

Military families face unique stressors beyond civilian life, such as deployments, frequent relocations, and the potential for combat, all of which can significantly impact well-being. A trauma-informed care (TIC) approach to military medicine is paramount; however, a critical gap exists, with no published curricula to guide practitioners in employing TIC in the care of military-connected individuals.

#### Methods:

We delivered a 50-minute interactive and virtual session to second-year medical students at the Uniformed Services University (USU) that reviewed the neurobiology of adversity and the relevance of TIC in caring for military-connected populations. Participants completed a 14-question pre- and posttest on perceived knowledge, attitudes, practice, and confidence, as well as posttest questions evaluating session quality. The USU Institutional Review Board approved this evaluation.

### Results:

One hundred sixty medical students participated in the session, with 78 matched preand posttest responses. We observed a statistically significant pre-post improvement (p  $\leq$  .05) in all category scores, with the largest changes in knowledge (1.33) and confidence (1.33). On a 5-point Likert scale, with 5 being best, mean scores for overall quality of the session and relevance of the material to participants' learning and future practice were 3.95 and 4.20, respectively.

#### Discussion:

By equipping health care providers with knowledge and confidence to apply TIC in military medicine, we can improve the well-being of service members and their families across both military and civilian health care settings. Broader implementation of this program has potential to improve patient outcomes and overall health care delivery for this population.

#### https://doi.org/10.1080/08995605.2024.2423985

## A qualitative assessment of perceptions of gender-based stigma among US Marine Corps officers in training.

Ricker, E. A., Schvey, N. A., Barrett, A. S., Hollis, B. F., & de la Motte, S. J.

Military Psychology Published online: 05 Nov 2024

Military culture is historically rooted in masculine characteristics and ideals. Yet, as of 2016, all occupational specialties in the United States military are open to women and, as such, the number of women that make up the Services is projected to continue rising. The growing presence of women within the military ranks may be at odds with the traditionally masculine military culture, potentially resulting in gender-based stigmatization of female Service members. The current study qualitatively assessed perceived gender stigmatization among newly commissioned male (n = 654, 87%) and female (n = 101, 13%) US Marine Corps officers entering The Basic Course (BOC) at The Basic School (TBS), a six-month secondary training course. A thematic analysis of open-ended survey questions identified that males and females described aspects of gender stigma similarly, with emphases on females' tendency to be viewed as weaker and needing to "prove themselves," and a call for equal physical fitness standards for both genders. There were mixed opinions as to whether gender stigmatization should be acknowledged and addressed or dismissed and ignored. Some participants voiced that bringing gender stigma to the attention of Service members could artificially inflate the magnitude of the issue and increase gender stigmatization that is otherwise negligible or non-existent. The insights offered by the participants of this study can help shape the direction of policies and procedures aimed at increasing equality and opportunities for success for Marine officers of all genders. Ultimately, the goal is to optimize physical and mental health and readiness for all Service members.

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https://doi.org/10.3390/bs14111040

The Impact of Relationships Within Combat Units on Post-Deployment Suicide Risk.

Leo Sher

Behavioral Sciences Published: 5 November 2024

### Abstract

Multiple deployment factors may affect suicidality in combat veterans. The relationships between combat deployments and suicidality are complex and not completely understood. Studies of stress in the military and psychological effects of military actions are mostly focused on stressors relating to combat operations. However, many studies suggest that interactions within combat units affect post-deployment psychiatric conditions, suicidal ideation, and behavior. The goal of this article is to review and discuss how relationships within combat units may influence post-deployment suicide risk. Studies of the relationships within combat units are generally focused on two aspects: unit cohesion and harassment/abuse. Considerable evidence suggests that service members who report strong unit cohesion have a lower risk of post-deployment psychiatric disorders and suicidal behavior. Studies examining deployment sexual and non-sexual harassment and abuse have found that combat veterans who experience harassment and abuse during deployment are at heightened post-deployment suicide risk. Sound post-deployment social support and the efficient treatment of psychiatric disorders may mitigate the suicide risk associated with adverse relationships within combat units. Improvements in units' cohesion and the prevention of harassment/abuse during a military deployment are necessary to reduce post-deployment psychiatric pathology, including suicidal behavior.

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### https://doi.org/10.3390/metabo14120667

### Eating- and Weight-Related Disorders in the Armed Forces.

Himmerich, H., Gravina, D., Schalinski, I., Willmund, G. -D., Zimmermann, P. L., Keeler, J. L., & Treasure, J.

Metabolites 2024; 14(12): 667

Background/Objectives: Like in the general population, the prevalences of eating- and weight-related health issues in the armed forces are increasing. Relevant medical conditions include the eating disorders (EDs) anorexia nervosa, bulimia nervosa, binge eating disorder, and avoidant restrictive food intake disorder (ARFID), as well as body dysmorphic disorder, muscle dysmorphia, and the relative energy deficiency in sport (RED-S) syndrome.

### Methods:

We performed a narrative literature review on eating- and weight-related disorders in the armed forces.

### Results:

Entry standards might exclude people with obesity, with EDs, or at high risk for EDs from entering the armed forces for military reasons and to protect the individual's health. Relevant potential risk factors of eating- and weight-related disorders in the military are the emphasis on appearance and fitness in the military, high levels of stress, military sexual trauma, post-traumatic stress disorder, deployment, relocation, long commutes, consumption of ultra-processed foods and beverages, limitations on food selection and physical exercise, and intensive combat training and field exercises. Eating- and weight-related disorders negatively impact professional military appearance and lead to problems with cardiorespiratory and neuromuscular fitness; daytime sleepiness; and a higher risk of musculoskeletal injuries, and other physical and mental health problems. Current and potential future therapeutic options include occupational health measures, psychosocial therapies, neuromodulation, and drug treatments.

## Conclusions:

Even though randomized controlled trials (RCTs) have been performed to test treatments for obesity in the armed forces, RCTs for the treatment of EDs, body dysmorphic disorder, muscle dysmorphia, and RED-S syndrome are lacking in the military context.

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## https://doi.org/10.1080/02701960.2024.2433205

# Enhancing trauma-informed care for older veterans: clinician perspectives on trauma practices and curricular needs.

O'Malley, K. A., Park, S. T., Tadmor, M., Kemp, K., Pless Kaiser, A., Bashian, H. M., ... Moye, J. A. Gerontology & Geriatrics Education Published online: 02 Dec 2024

Trauma-informed care is mandated in long-term care settings in the United States: however, little is known about clinicians' perspectives on trauma-informed care educational needs. To address this gap, we gathered responses to closed- and openended questions from two samples who work with older adults: (1) hospice and palliative care staff (N = 279) completing a recurring bi-annual survey, and (2) clinicians from diverse settings (N = 242) responding to live polling during a Veterans Affairs (VA) national webinar. Results of qualitative and quantitative analysis revealed that both routinely screened for trauma history or posttraumatic stress disorder (PTSD). Hospice and palliative care clinicians reported the least confidence in recognizing trauma and responding to trauma disclosures, while one-fifth of VA clinicians reported hesitancy to assess trauma history. Hospice and palliative staff were more confident in their knowledge of effects of trauma and applying the trauma-informed principle of "respect." Both groups expressed interest in additional training, specifically videos, case examples, toolkits, and attention to organizational and personal impacts of working with those with PTSD, aligning with SAMHSA recommendations. Findings identified focal areas for trauma-informed care curriculum; however, future work should fully assess current practices and gaps to inform practical, case-based, and self-efficacy focused curriculum development.

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https://doi.org/10.5281/zenodo.14224265

### Navigating Moral Injury and Trauma in US Army Soldiers: A Holistic Approach Incorporating Self-Care, CBT, Personal Strength, and Spiritual Resilience.

Dr. Ojore Solomon Akwue, Dr. Michael A.D. Smith, Dr. Jennifer Marazzo, and Ricardo A. Woolcock, PsyD(c), M.A.

Global Advanced Research Journal of Medicine and Medical Sciences November 2024, Vol. 11(1), pp. 001-017

This study explores a holistic approach to addressing trauma and moral injury in US Army soldiers, integrating four key elements: self-care, cognitive-behavioral therapy (CBT), personal strength, and spiritual resilience. Moral injury and trauma are essential experiences for military people at war that both challenge the individual's psychological and existential frameworks. The proposed multifaceted approach aims to provide

comprehensive support by addressing physical, emotional, cognitive, and spiritual aspects of well-being. Self-care practices form the foundation for overall health, while CBT offers tools for restructuring maladaptive thought patterns. Personal health is the basis of general well-being, and CBT is a set of skills that can change negative, distorted thinking patterns. The personal strength approaches include Resilience and post-trauma growth, where soldiers are encouraged to acknowledge their strengths. Spiritual resilience activities also build the subject's meaning and purpose for life to deal with moral dilemmas. Thus, the outlined approach provides an opportunity to adjust the work with participants depending on their needs and consider patient-oriented goals. providing the possibilities for their recovery and personal development during a more extended period. Aspects of this paper include analyzing activities and directions of these components, potential combined impacts of the components, and combined approaches of all the elements to adequately respond to multiple facets of well-being. While further research is needed to confirm this approach fully, its comprehensive nature and alignment with evidence-based practices suggest significant potential for supporting US Army soldiers in overcoming the impacts of moral injury and trauma.

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### Links of Interest

Brain Health Takes Center Stage at USU Symposium, Experts Call for Collaborative Action

https://news.usuhs.edu/2024/12/brain-health-takes-center-stage-at-usu.html

Military academies report drop in sex assaults for 2nd straight year <u>https://www.militarytimes.com/news/your-military/2024/12/12/military-academies-report-drop-in-sex-assaults-for-2nd-straight-year/</u>

VA sees rise in military sexual trauma claims, thanks to outreach work <u>https://www.militarytimes.com/veterans/2024/12/12/va-sees-rise-in-military-sexual-trauma-claims-thanks-to-outreach-work/</u>

DOD Releases 2025 Basic Allowance for Housing Rates https://www.defense.gov/News/News-Stories/Article/Article/4000790/dod-releases-2025-basic-allowance-for-housing-rates/

Most girls do not think they could succeed in the military: DOD data <u>https://www.militarytimes.com/news/your-military/2024/12/16/most-girls-do-not-think-they-could-succeed-in-the-military-dod-data/</u>

Get the Facts About Mental Health and Security Clearances <a href="https://health.mil/News/Dvids-Articles/2024/10/02/news482228">https://health.mil/News/Dvids-Articles/2024/10/02/news482228</a>

Top-Gun Navy Pilots Fly at the Extremes. Their Brains May Suffer. <u>https://www.nytimes.com/2024/12/08/us/navy-pilot-brain-injury-</u> topgun.html?unlocked\_article\_code=1.gE4.H0sJ.MImcDhDH2HN5&smid=url-share

Soldiers can now get \$2,000 if they travel for a family emergency https://taskandpurpose.com/military-life/soldiers-emergency-travel-2000/

Air Force Expands Waivers For Asthma, Allergies, Hearing Loss to Bring in More Recruits

https://www.airandspaceforces.com/air-force-waiver-asthma-allergies-hearing-loss/

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### Resource of the Week: MIRECC/CoE Educational Products

From the Department of Veterans South Central Mental Illness Research, Education and Clinical Center (SC MIRECC):

Our products aim to improve mental health for rural and other Veterans who face barriers to receiving health care. Our products are created by VA mental health providers through our <u>grant program</u> and are free to health care providers and the public.

New and Featured Products include:

- <u>A Veteran's Guide to Discussing STORES: Secure Storage to Reduce Suicide</u>
  <u>Risk</u>
- Moral Injury Psychoeducation Group
- <u>Two Sides of the Same Coin: Cultural Humility and Addressing Microaggressions</u> and Discriminatory Requests
- Updated Calmer Life Program for Cognitive Behavioral Therapy and Anxiety

## A Veteran's Guide to Discussing Secure Storage to Reduce Suicide Risk | South Central MIRECC



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Shirl Kennedy Research Editor HJF employee collaborating with Center for Deployment Psychology DoD and Uniformed Service Contractor Phone: (727) 537-6160 Email: shirley.kennedy.ctr@usuhs.edu



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