

## Research Update -- January 11, 2024

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- The Association Between Glasgow Coma Scale Scores and PTSD in Military Trauma Casualties: Does Mental Status Following Injury Play a Role in PTSD Development?
- Links of Interest
- Resource of the Week: Psych Health Evidence Briefs (Psychological Health Center of Excellence)

## https://doi.org/10.1037/cfp0000252

The impact of the military lifestyle on adult military children relationships.

Freeman, B., Georgia Salivar, E., & Thayer, K. K.

Couple and Family Psychology: Research and Practice Advance online publication

Military families face numerous stressors that civilian families do not typically experience, including frequent relocations, multiple school transitions, parental deployment, and foreign country residence. These unique stressors often disrupt military children's (MC) familial and social relationships, which may carry into their relationships in adulthood. The present study aimed to better understand the potential impact of military stressors on MC's relationships in adulthood. Emotional expression, attachment style (AS), relationship quality, and relationship status of MC (n = 291) were compared to adult children of civilian parents (n = 293). The results revealed that adult MC displayed significantly higher rates of insecure AS and alexithymia compared to adults raised by civilian parents. Parental deployment during certain developmental groups (i.e., 6-8, 9-11, 15-18 years) was associated with increased alexithymia. Adult MC did not differ in couple satisfaction, relationship commitment, intimate partner violence, and overall intimacy. The present study provides evidence that adult MC may differ from adult children of civilian parents in alexithymia and attachment. Mental health professionals are encouraged to utilize prevention strategies when working with military families to prevent negative outcomes. Limitations, research implications, and clinical implications are discussed. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

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## https://doi.org/10.1037/ser0000806

Mental health apps and U.S. military veterans: Perceived importance and utilization of the National Center for Posttraumatic Stress Disorder app portfolio.

Jaworski, B. K., Ramsey, K. M., Taylor, K., Heinz, A. J., Senti, S., Mackintosh, M.-A., Rosen, C. S., Owen, J. E., & Pietrzak, R. H.

Psychological Services Advance online publication U.S. veterans have historically experienced more mental health concerns as compared to the general population, yet face a variety of barriers to accessing care. Evidencebased and accessible resources, such as mobile apps, are needed to respond to the unique needs of a diverse veteran population. The U.S. Department of Veterans Affairs (VA's) National Center for Posttraumatic Stress Disorder has created a one-of-a-kind portfolio of mental health apps to target the needs of veterans and support the selfmanagement of common concerns related to posttraumatic stress disorder. Using data from a nationally representative sample of U.S. veterans, the present study sought to examine how veterans perceived the importance of making each self-management app available to other Veterans; factors impacting veterans' intent to try each app; and actual uptake of each app. Results revealed that while 46.7%–75.0% of veterans reported that the apps are important for veterans, 5.8%-19.2% reported that they would be likely to download the apps, and only 5.0% reported having ever used any of them. Veterans who used any of the apps were more likely to be employed, have served two or more deployments, be married or partnered, use the VA as their primary source of health care, had more medical conditions, and were less likely to identify as Black. With respect to future app use, Black veterans were to 2-5 times more likely than White veterans to indicate a desire to download each of the apps. Other variables that showed consistent associations with increased likelihood of app download included greater smartphone utilization, being married or having a partner, lower household income, and history of mental health treatment. Implications of these results for the broader dissemination of mental health apps and promotion of their uptake are discussed. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

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## https://doi.org/10.1037/ser0000818

Identifying predictors of the amount of veteran participation in cognitive behavioral therapy for insomnia in the Veterans Affairs health care system.

Tighe, C. A., Berlin, G. S., Boland, E. M., Miller, K. E., & Bramoweth, A. D.

Psychological Services Advance online publication

Insomnia is a prevalent and negatively impactful disorder among veterans. The Department of Veterans Affairs (VA) has committed significant resources to the development and dissemination of training related to cognitive behavioral therapy for

insomnia (CBT-I), the recommended first-line intervention for chronic insomnia disorder. It has been established that VA clinicians can be effectively trained to deliver high fidelity CBT-I and that treatment results in significant improvements in insomnia. However, there is a paucity of research examining rates and predictors of veterans' participation in CBT-I in routine VA clinical care. In this study, we conducted a secondary analysis of data from VA electronic health records (EHR) to determine individual predisposing, enabling, and need factors associated with CBT-I participation. The sample included veterans who had at least one CBT-I templated note from the VA mid-Atlantic region of the United States (VISN4) between 2015 and 2019 in their chart (N = 2,801). CBT-I participation was defined by number of CBT-I templated notes occurring within a 6-month period from the initial note. Findings indicated that veterans most often completed only one session of CBT-I and, on average, completed approximately three sessions. Results from multinomial logistic regression identified significant associations of race, the presence of comorbid mental health disorders, rurality, presence of insomnia diagnosis, and insomnia medication with CBT-I participation; associations varied depending on how CBT-I participation was defined. More work is needed to better understand factors contributing to participation and reasons for completion and noncompletion of CBT-I. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

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## https://doi.org/10.3928/00485713-20231012-01

## **Sleep Disturbances Associated With Posttraumatic Stress Disorder.**

Christine J. So, PhD, Katherine E. Miller, PhD, and Philip R. Gehrman, PhD

**Psychiatric Annals** 

Published Online: November 01, 2023

Sleep disturbances, namely insomnia and recurrent nightmares, are ubiquitous following trauma exposure and are considered hallmarks of posttraumatic stress disorder (PTSD). Other sleep disorders frequently co-occur with PTSD. This article describes research examining sleep problems most common in PTSD, including prevalence and clinical characteristics. Sleep disturbances are often robust to traumafocused treatment; thus, evidence for psychological and pharmacological interventions for insomnia and nightmares in PTSD are discussed. Given the high prevalence of sleep problems in PTSD, more work is needed to empirically study putative

mechanisms linking trauma exposure and sleep, as well as how to best target these symptoms in patients with PTSD.

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## https://doi.org/10.1037/ser0000815

Rates and reasons for veteran mental health service utilization following completion of evidence-based trauma-focused treatment for PTSD.

Baier, A. L., Nugent, S., Horton, D. M., Salameh, H., & Kehle-Forbes, S. M.

Psychological Services Advance online publication

Despite the effectiveness of prolonged exposure (PE) and cognitive processing therapy (CPT) for posttraumatic stress disorder (PTSD) in reducing symptoms of PTSD and cooccurring symptoms, emerging research suggests continued mental health service utilization (MHSU) following the completion of these interventions. Reasons for continued MHSU remain unknown despite its relevance to PE/CPT outcomes and implementation. The present study employed a mixed methods approach to explore rates and reasons for VA MHSU post PE/CPT. A national sample of 5,634 U.S. veterans who completed either PE or CPT were identified to quantitatively determine the frequency, type, and location of MHSU in the 12 months following PE/CPT completion. A random subsample of 60 veterans completed semistructured qualitative interviews to explore reasons for MHSU post PE/CPT. Findings suggest high MHSU; 98.4% of veterans attended at least one mental health appointment in the year following completion of PE/CPT, with an average attending 27.64 appointments in the year following treatment completion. Qualitatively, veterans, particularly those with low-tomoderate residual symptoms, described a preference for additional treatment to continue practicing and applying skills learned in treatment. Veterans expressed low self-efficacy to maintain treatment gains without support and accountability from their therapists and viewed ongoing treatment as a safety net until they felt more confident in their skills and stability of gains. Veterans with high residual symptoms indicated needing additional PTSD-specific treatment or treatment for a co-occurring condition. Notably, some veterans reported no additional treatment needs, despite continued engagement in care. Evidence-based strategies for facilitating self-efficacy and ongoing application of PE/CPT principles posttreatment are needed. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

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## https://doi.org/10.1037/int0000317

Assessing interpersonal impact of veterans with posttraumatic stress disorder and moral injury: A case study of how significant others perceive veterans undergoing a positive psychology intervention.

McGuire, A. P., Erickson, T. M., & Nabulsi, E.

Journal of Psychotherapy Integration Advance online publication

Given the risk for posttraumatic stress disorder (PTSD) and moral injury to negatively impact relationships of veterans, researchers have increasingly focused on social functioning assessment. However, extant studies have often relied on self-report methods and relatively broad relational measures. To better understand the dynamic process of social functioning, it is important to determine how others perceive those veterans and their interactions. Interpersonal circumplex assessments, such as the Impact Message Inventory-Circumplex (IMI-C), may provide that perspective by asking others to rate observations of veterans' social behaviors on a circular pattern of eight octants representing unique blends of two orthogonal dimensions: affiliation (coldwarm) and control (dominant-submissive). This case study demonstrated how the IMI-C can be used to examine significant others' perceptions of veterans with PTSD and moral injury in the context of a novel positive psychology treatment focused on inducing moral elevation. Using a fine-grained analysis of interpersonal behaviors, this study described two cases of veterans who demonstrated notable pre-post changes in how they were perceived by others, providing contextual information including quantitative changes in PTSD symptoms, moral injury, and quality of life, as well as qualitative reports of interpersonal changes. Clinical and research implications are discussed. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

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## https://doi.org/10.2196/48404

Freely Available Training Videos for Suicide Prevention: Scoping Review.

Wislocki K, Jager-Hyman S, Brady M, Weiss M, Schaechter T, Khazanov G, Young S, Becker-Haimes E

## JMIR Mental Health

Published on 3.11.2023 in Vol 10 (2023)

## Background:

Freely available and asynchronous implementation supports can reduce the resource burden of evidence-based practice training to facilitate uptake. Freely available webbased training videos have proliferated, yet there have been no efforts to quantify their breadth, depth, and content for suicide prevention.

## Objective:

This study presents results from a scoping review of freely available training videos for suicide prevention and describes a methodological framework for reviewing such videos.

#### Methods:

A scoping review of freely available training videos (≥2 minutes) for suicide prevention practices was conducted using 4 large video-sharing platforms: YouTube, Vimeo, Bing Video, and Google Video. Identified suicide prevention training videos (N=506) were reviewed and coded.

#### Results:

Most content was targeted toward gatekeepers or other lay providers (n=370) versus clinical providers (n=136). Videos most commonly provided content related to suicidal thoughts or behaviors (n=420). Many videos (n=274, 54.2%) included content designed for certain communities or organizations. Less than half (n=232, 45.8%) of training videos included formal clinical content pertaining to assessment or intervention for suicide prevention.

#### Conclusions:

Results suggested an abundance of videos providing broad informational content (eg, "signs and symptoms of someone at risk for suicide") and a limited portion of videos with instructional content aimed at clinical providers delivering formal evidence-based assessments or interventions for suicide prevention. Development of resources to address identified gaps may be needed. Future work may leverage machine learning techniques to expedite the review process.

## https://doi.org/10.1037/pas0001288

Intervening on high-risk responses during ecological momentary assessment of suicidal thoughts: Is there an effect on study data?

Bentley, K. H., Millner, A. J., Bear, A., Follet, L., Fortgang, R. G., Zuromski, K. L., Kleiman, E. M., Coppersmith, D. D. L., Castro-Ramirez, F., Millgram, Y., Haim, A., Bird, S. A., & Nock, M. K.

Psychological Assessment (2024); 36(1), 66–80

Ecological momentary assessment (EMA) is increasingly used to study suicidal thoughts and behaviors (STBs). There is a potential ethical obligation for researchers to intervene when receiving information about suicidal thoughts in real time. A possible concern, however, is that intervening when receiving responses that indicate high risk for suicide during EMA research may impact how participants respond to questions about suicidal thoughts and thus affect the validity and integrity of collected data. We leveraged data from a study of adults and adolescents (N = 434) recruited during a hospital visit for STBs to examine whether monitoring and intervening on high-risk responses affects subsequent participant responding. Overall, we found mixed support for the notion that intervening on high-risk responses influences participants' ratings. Although we observed some evidence of discontinuity in subsequent responses at the threshold used to trigger response-contingent interventions, it was not clear that such discontinuity was caused by the interventions; lower subsequent responses could be due to effective intervention, participant desire to not be contacted again, or regression to the mean. Importantly, the likelihood of completing surveys did not change from before to after response-contingent intervention. Adolescents were significantly more likely than adults, however, to change their initial suicidal intent ratings from above to below the high-risk threshold after viewing automated response-contingent pop-up messages. Studies explicitly designed to assess the potential impact of intervening on high-risk responses in real-time monitoring research are needed, as this will inform effective, scalable strategies for intervening during moments of high suicide risk. (PsycInfo Database Record (c) 2024 APA, all rights reserved)

## https://doi.org/10.1136/ip-2023-044976

Intimate partner violence and suicide mortality: a cross-sectional study using machine learning and natural language processing of suicide data from 43 states.

JM Kafka, KE Moracco, BW Pence, PJ Trangenstein, MD Fliss, LM Reyes

Injury Prevention
First published October 31, 2023

#### Introduction

Intimate partner violence (IPV) is associated with suicidal ideation, yet it remains unclear how often IPV precipitates suicide mortality. To overcome limitations with national data, we applied novel methods to: (1) document the prevalence of IPV-related suicide in the USA and (2) identify correlates for IPV-related suicide.

#### Methods

Using National Violent Death Reporting System data (NVDRS, 2015–2019, n=1 30 550), we recorded IPV circumstances (yes/no) by leveraging prior textual reviews of death narratives and applying a validated natural language processing tool. We could not systematically differentiate IPV perpetration versus victimisation given limited details in NVDRS. Logistic regression compared IPV-related suicides with referent group suicides (no evidence of IPV), stratified by sex.

#### Results

7.1% of suicides were IPV related (n=9210), most were isolated suicide events (82.8%, n=7625; ie, not homicide suicide). There were higher odds of IPV circumstances when the decedent had civil legal problems (aOR for men: 3.6 (3.3 to 3.9), aOR for women: 2.6 (2.2 to 3.2)), criminal legal problems (aOR men: 2.3 (2.2 to 2.5), aOR for women: 1.7 (1.4 to 2.1)), or used a firearm (aOR men: 1.9 (1.8 to 2.0), aOR for women: 1.9 (1.7 to 2.1)). There were lower odds of IPV circumstances when the decedent had a current mental health problem (aOR men: 0.7 (0.7 to 0.8), aOR for women: 0.7 (0.6 to 0.8)).

#### Conclusions

IPV circumstances contribute to a notable proportion of suicides. IPV-related suicides are distinct from other suicide deaths. Targeted suicide screening and intervention in IPV settings may be beneficial for prevention.

## https://doi.org/10.1037/tra0001599

## Anger and suicidality in veterans: Impact of postseparation time and combat.

Wagner, H. R., Lanier, M., Molloy, K., Van Male, L., Mid-Atlantic Mental Illness Research, Education and Clinical Center Workgroup, & Elbogen, E. B.

Psychological Trauma: Theory, Research, Practice, and Policy Advance online publication

## Objective:

The study investigated the association over time between the rates of anger/hostility and suicidality in post-9/11 veterans as a function of time following separation from the military and combat exposure.

#### Method:

Structured clinical interviews were conducted with N = 2,580 Iraq/Afghanistan-era U.S. military veterans serving since 9/11/01. For each participant, a postseparation interval was calculated as the time between military separation and the clinical interview, with a range of up to 9 years. Combat exposure was assessed using a three-level categorical proxy derived from the Combat Exposure Scale indexing levels of none, below, and above median exposure. Three separate estimates measuring anger/hostility and three separate measures of suicidality were modeled variously across separation intervals and levels of combat exposure.

#### Results:

In bivariate analyses, higher levels of combat exposure were associated with overall significantly higher levels of both anger/hostility and suicidality. Based on multivariable analyses, rates in measures indexing suicidality among veterans did not decrease as a function of the number of years postseparation. In contrast, rates in measures indexing anger/hostility among veterans endorsing above-median levels of combat exposure decreased significantly with increasing time since separation. Nonetheless, even at longer time points, both suicidality and anger/hostility remained elevated among respondents endorsing above-median combat exposure.

#### Conclusions:

These findings illustrate the importance of implementing suicide prevention and anger management programs for postseparation adjustment as well as for the period beyond the immediate postseparation, with particular attention paid to the level of combat exposure experienced. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

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## https://doi.org/10.1007/s11920-023-01473-1

## Gender Differences in Risks of Suicide and Suicidal Behaviors in the USA: A Narrative Review.

Carretta, R.F., McKee, S.A. & Rhee, T.G.

Current Psychiatry Reports
Published: 06 November 2023

#### Purpose of Review

We review recent research (2018–2023) on gender differences in suicidal behaviors (i.e., suicidal ideations and attempts, death by suicide). We examine research studies in the following areas: developmental period, substance use, and special populations (Veterans, sexual and gender minorities).

## Recent Findings

Novel results were found in these different areas. For example, suicide rates for female youth are increasing at a faster rate relative to male youth. Further, some evidence suggests that heavy alcohol use/binge drinking is a significant and growing risk factor for suicidal behaviors in women. Military service may be a more significant risk factor for suicidal behaviors among male Veterans compared to female Veterans. Additionally, suicide rates are rising for gender minority youth/young adults.

#### Summary

Recent research on gender differences in suicide outcomes demonstrates findings that align with previous research, as well as new insights on this important topic.

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#### https://doi.org/10.1080/19359705.2023.2265314

The impact of fluid attraction and fluid identity on stress, anxiety, and depression.

Elisabeth Counselman Carpenter, Kevin Lally, Alex Redcay & Wade Luquet

Journal of Gay & Lesbian Mental Health

Published online: 06 Nov 2023

#### Introduction

This study sought to determine whether gender, fluid identity, and fluid attraction groups differed significantly in stress, depression, and anxiety among LGBTQA + sexual minorities compared to non–sexual minorities.

#### Methods

Using the National Longitudinal Study of Adolescent to Adult Health (Add Health), this study conducted two-way analyses of variance to determine whether male or female sexual minorities had significantly different levels of stress, depression, and anxiety when compared to non—sexual minorities. Individuals were also placed in one of eight groups based on sexual orientation, fluid identity, and fluid attraction to determine whether fluidity played a unique role in contributing to mental health.

#### Results

Results showed that both gender and fluidity accounted for 3.7% to 9.7% of the variance in stress (R2 = 4.1%), depression (R2 = 3.7%), and anxiety (R2 = 9.7%). Non–sexual minorities who reported both fluid attraction and fluid identity also reported the highest rate of stress, anxiety, and depression, revealing that fluidity had a unique impact on mental health apart from sexual orientation. This consistent pattern did not occur among sexual minorities. Sexual minorities had varying degrees of stress, depression, and anxiety, depending on the combination of static or fluid attraction or identity.

#### Conclusion

Fluid attraction, fluid identity, and gender significantly impacted stress, depression, and anxiety regardless of sexual orientation.

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## https://doi.org/10.1037/cfp0000250

Relationship satisfaction of veterans and partners seeking couples therapy: Associations with posttraumatic stress, accommodation, and depression.

Giff, S. T., Teves, J., Petty, K., Kansky, J., & Libet, J.

Couple and Family Psychology: Research and Practice Advance online publication

Associations between symptoms of posttraumatic stress disorder (PTSD) and relationship distress are well-established in research examining veterans and their romantic partners. Partner accommodation of PTSD symptoms has been identified as an important construct that has ties to both veteran PTSD symptoms and relationship distress. However, our understanding of accommodation and PTSD has not been tested in couples who are seeking couples therapy. The present study sought to investigate the role of veterans' PTSD symptoms, partners' accommodation, and depression of both, in relationship satisfaction in 181 couples (male veterans and female partners) presenting for couples therapy at a VA Medical Center. Results suggest that in this sample, accommodation by partners of veterans is significantly negatively associated with their own and veterans' relationship satisfaction. Depression of both members of the couple was also negatively associated with relationship satisfaction, while veterans' PTSD symptoms were not consistently linked to relationship satisfaction of either partner. These findings highlight the importance of assessing for accommodation in couples therapy. Integrating modification of accommodation behaviors into couples therapy may help improve couples therapy outcomes. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

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## https://doi.org/10.1093/milmed/usad060

Mental Health Predictors of Response to Standard Medical Intervention at a Military Pain Specialty Clinic.

Emmanuel P Espejo, PhD, Tara M Sheridan, MD, Carlos A Pino, MD, Christopher R Phillips, MC, USN

## Military Medicine

Volume 188, Issue Supplement 6, November/December 2023, Pages 149-156

#### Introduction

Chronic pain among active duty service members can negatively impact operational readiness and contributes to significant health care costs within military treatment facilities. Response to standard medical intervention (SMI) for chronic pain is highly variable. The objective of the current study was to examine whether mental health

indicators predict individual variation in response to SMI for chronic pain in a military pain specialty clinic.

#### Methods

This is a retrospective observational study of data previously collected at the Pain Medicine Center at Naval Medical Center San Diego (NMCSD) approved by the NMCSD Institutional Review Board. We included 286 ADSMs who completed the Pain Assessment Screening Tool and Outcomes Registry (PASTOR) at two assessment points (mean = 118.45 days apart, SD = 37.22) as part of standard care. Hierarchical linear regression analyses were conducted to examine whether pretreatment mental health measures predict changes in the pain impact score (PIS)—a composite measure of pain intensity, pain interference, and physical functioning—over the course of treatment.

#### Results

After controlling for pretreatment PIS, pretreatment PTSD symptoms, fatigue, and anger were all significant predictors of posttreatment PIS: Higher PTSD symptoms, higher fatigue, and lower anger predicted poorer response to treatment (all Ps < .05).

#### Conclusion

Higher pretreatment PTSD and fatigue symptoms may portend poorer response to SMI for chronic pain. Poor response to treatment may also be predicted by lower pretreatment anger. Further investigation is warranted to identify the best strategies for treating chronic pain in military treatment facilities when these conditions are identified during initial evaluation.

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## https://doi.org/10.1093/milmed/usad211

Association of Chronic Pain With Alcohol Consumption and Tobacco Use in Active Duty Soldiers.

Stephanie K Skelly, MC, USA, Juliana S Ee, PhD, Godwin Y Dogbey, PhD, Robert N Agnello, DO

Military Medicine, Volume 188, Issue Supplement\_6, November/December 2023, Pages 488–493

#### Introduction

Chronic pain and lifestyle habits, namely alcohol consumption and tobacco use, impact soldier readiness. This study examines the relationship between chronic pain and these lifestyle habits in soldiers seen at the Interdisciplinary Pain Management Center (IPMC).

#### Materials and Methods

This cross-sectional retrospective review utilized data from active duty soldiers receiving treatment at the IPMC. Soldiers (N = 203, 85% men) treated at the IPMC completed an intake questionnaire that included the Defense and Veterans Pain Rating Scale, the Alcohol Use Disorders Identification Test-Concise, and inquiries about tobacco use. Tobacco use was quantified as the amount and frequency of cigarettes smoked. Other tobacco products were converted to an equivalent number of cigarettes. Data were analyzed using descriptive statistics, Pearson's correlation, and independent samples t-test analyses.

#### Results

The mean duration of pain reported was  $34.73 \pm 38.66$  months (median = 24.00). Soldiers engaging in hazardous drinking reported significantly higher interference with sleep (mean = 6.53 versus 5.40, P = .03) and greater negative effect on mood (mean = 6.33 versus 5.30, P = .04) compared to the no hazardous drinking group. Nonsignificant differences were found between tobacco users and non-tobacco users regarding pain intensity and pain effect on activity, sleep, mood, and stress (all P > .05). Among tobacco users, a significant negative correlation was found between a daily number of cigarettes used and sleep interference (r = -0.29, P = .024) as well as effect on mood (r = -0.33, P = .010). Years of tobacco use showed a significant negative correlation with the average pain intensity (r = -0.32, P = .025).

#### Conclusions

The results suggest that addressing alcohol consumption is an essential part of chronic pain treatment. The finding of a negative association between years of nicotine use and pain intensity suggests that nicotine use may have served as a coping mechanism. Further research is needed.

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https://doi.org/10.1093/milmed/usad244

Chronic Pain and Childhood Adversity Experiences Among U.S. Military Personnel.

Juliana S Ee, PhD, Phillip A Culp, MC, USA, Zachary J Bevis, MC, USA, Godwin Y Dogbey, PhD, Robert N Agnello, DO, Min Ho Chang, MC, USA

## Military Medicine

Volume 188, Issue Supplement 6, November/December 2023, Pages 561–566

#### Introduction

Chronic pain in a military population is prevalent, is costly, and can limit daily activities and affect soldier readiness. It has been associated with childhood adversity (CA) within the veteran, adult, and pediatric populations. Given the need to maximize soldier resiliency, an examination of the link between CA and chronic pain in an active duty population for a better understanding that informs treatment options is warranted.

#### Materials and Methods

The analytic sample comprised 32 men and 8 women drawn from a retrospective review of 203 intake assessments at an interdisciplinary pain management center. We identified a group (CA) of 20 patients who reported a history of pre-adolescent sexual abuse or living in an "abusive" childhood home and compared it with a control group (no-CA) of 20 patients, matched for age, gender, pain history duration, and pain problem. Validated measures were used to assess pain intensity, interference in functioning and well-being, emotional sequelae of pain as reflected in symptoms of depression and anxiety, and pain-related catastrophic thinking. Data were analyzed using descriptive statistics and independent samples t-test analyses.

#### Results

Differences in current, worst, and average pain ratings were non-significant between groups. The CA group reported significantly greater effect of pain on mood (mean: 6.20 versus 4.25, P < .02) and showed a trend toward higher pain interference in functioning (mean: 17.70 versus 15.05, P = .053). The CA patients had significantly more serious depression (mean: 12.65 versus 4.50, P < .001) and anxiety symptoms (mean: 10.60 versus 2.35, P < .001) and significantly higher pain catastrophizing tendency (mean: 30.05 versus 20.50, P < .03).

## Conclusions

Overall, the findings suggest that childhood trauma should be considered by providers when treating depression and anxiety in soldiers with chronic pain. Being mindful of trauma-informed care may have implications, perhaps, for cases perceived as treatment resistant.

#### https://doi.org/10.1093/pm/pnad148

A network analysis of pain intensity and pain-related measures of physical, emotional, and social functioning in US military service members with chronic pain.

Dahee Wi, PhD, RN, Chang Park, PhD, Jeffrey C Ransom, PhD, DNP, FNP-BC, Diane M Flynn, MD, MPH, Ardith Z Doorenbos, PhD, RN, FAAN

#### Pain Medicine

Published: 07 November 2023

## Objective

The purpose of this study was to apply network analysis methodology to better understand the relationships between pain-related measures among people with chronic pain.

#### Methods

We analyzed data from a cross-sectional sample of 4614 active duty service members with chronic pain referred to 1 military interdisciplinary pain management center between 2014 and 2021. Using a combination of Patient-Reported Outcomes Measurement Information System measures and other pain-related measures, we applied the "EBICglasso" algorithm to create regularized partial correlation networks that would identify the most influential measures.

#### Results

Pain interference, depression, and anxiety had the highest strength in these networks. Pain catastrophizing played an important role in the association between pain and other pain-related health measures. Bootstrap analyses showed that the networks were very stable and the edge weights accurately estimated in 2 analyses (with and without pain catastrophizing).

#### Conclusions

Our findings offer new insights into the relationships between symptoms using network analysis. Important findings highlight the strength of association between pain interference, depression and anxiety, which suggests that if pain is to be treated depression and anxiety must also be addressed. What was of specific importance was the role that pain catastrophizing had in the relationship between pain and other

symptoms suggesting that pain catastrophizing is a key symptom on which to focus for treatment of chronic pain.

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## https://doi.org/10.1093/milmed/usad060

## Mental Health Predictors of Response to Standard Medical Intervention at a Military Pain Specialty Clinic.

Emmanuel P Espejo, PhD, Tara M Sheridan, MD, Carlos A Pino, MD, Christopher R Phillips, MC, USN

## Military Medicine

Volume 188, Issue Supplement 6, November/December 2023, Pages 149–156

#### Introduction

Chronic pain among active duty service members can negatively impact operational readiness and contributes to significant health care costs within military treatment facilities. Response to standard medical intervention (SMI) for chronic pain is highly variable. The objective of the current study was to examine whether mental health indicators predict individual variation in response to SMI for chronic pain in a military pain specialty clinic.

#### Methods

This is a retrospective observational study of data previously collected at the Pain Medicine Center at Naval Medical Center San Diego (NMCSD) approved by the NMCSD Institutional Review Board. We included 286 ADSMs who completed the Pain Assessment Screening Tool and Outcomes Registry (PASTOR) at two assessment points (mean = 118.45 days apart, SD = 37.22) as part of standard care. Hierarchical linear regression analyses were conducted to examine whether pretreatment mental health measures predict changes in the pain impact score (PIS)—a composite measure of pain intensity, pain interference, and physical functioning—over the course of treatment.

#### Results

After controlling for pretreatment PIS, pretreatment PTSD symptoms, fatigue, and anger were all significant predictors of posttreatment PIS: Higher PTSD symptoms, higher fatigue, and lower anger predicted poorer response to treatment (all Ps < .05).

#### Conclusion

Higher pretreatment PTSD and fatigue symptoms may portend poorer response to SMI for chronic pain. Poor response to treatment may also be predicted by lower pretreatment anger. Further investigation is warranted to identify the best strategies for treating chronic pain in military treatment facilities when these conditions are identified during initial evaluation.

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## https://doi.org/10.1093/milmed/usad126

# Association Between Clinical Depression, Anxiety, and Chronic Pain in the Active Duty Army Personnel.

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## Military Medicine

Volume 188, Issue Supplement\_6, November/December 2023, Pages 311–315

#### Introduction

Chronic pain is highly prevalent among soldiers leading to costly impacts on disability and readiness. Depression and anxiety (D&A) are frequently comorbid with chronic pain, but previous studies tend to focus on reporting the odds of co-occurrence. The aim of this study was to examine the association of properly diagnosed D&A disorders on chronic pain indicators among active duty soldiers.

#### Materials and Methods

Data were drawn from the intake assessments of 203 soldiers seen at an Interdisciplinary Pain Management Center. The Diagnostic and Statistical Manual of Mental Disorders-5 diagnostic criteria and the D&A subscales of the Patient Health Questionnaire were used to identify patients who met criteria for clinical depression or anxiety. Of the 203 patients, 129 met neither depression nor anxiety criteria (No D&A), 12 met clinical depression criteria only, 16 met clinical anxiety only, and 46 showed coexisting D&A disorders. The D&A and No D&A groups were compared using validated measures to assess the pain intensity rating and pain effect on well-being, physical functioning, and catastrophizing tendency. Data were analyzed using descriptive statistics and independent samples t-test analyses.

#### Results

Significant differences were found between the D&A and No D&A groups on all pain-related measures (all Ps < .001). Patients in the D&A group reported higher average intensity of pain (6.11 versus 5.05) and greater effect of pain on activity (6.91 versus 5.37), sleep (7.20 versus 4.90), emotional state (7.74 versus 4.47), and stress (8.13 versus 4.78). Depression and anxiety patients also reported higher pain-catastrophizing tendency (38.56 versus 18.50) and greater physical disability (18.20 versus 12.22).

#### Conclusions

Soldiers who have chronic pain with coexisting D&A disorders experience a greater degree of perceived negative impacts. Consequently, attentiveness to proper diagnosis and treatment of coexisting clinical mood disorders is an essential step in fully addressing chronic pain management.

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## https://doi.org/10.1093/milmed/usad137

## Factors Associated With Chronic Pain Intensity in U.S. Army Soldiers.

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## Military Medicine

Volume 188, Issue Supplement 6, November/December 2023, Pages 340–345

#### Introduction

Chronic pain is prevalent among U.S. military personnel and veterans. The effectiveness of evidence-based pain treatments can be boosted with knowledge of factors associated with chronic pain perception. This study examined the factors that influence soldiers' self-rating of their chronic pain intensity.

#### Materials and Methods

The study design was a retrospective review of the intake questionnaire from 203 soldiers seen at an Interdisciplinary Pain Management Center. The intake covered various aspects of soldiers' chronic pain experience, including pain intensity, interference in functioning, emotional sequelae, and pain-related catastrophic thinking. Pain intensity and impact were measured using the Defense and Veterans Pain Rating Scale. The mood was measured using the depression (Patient Health Questionnaire

[PHQ]-9) and the anxiety (Generalized Anxiety Disorder-7) scales from the PHQ. Pain-related catastrophic thinking was measured using the Pain Catastrophizing Scale (PCS). Pain interference was assessed using a five-item scale that inquired about concentration, life and recreation enjoyment, task performance, and socializing. Data were analyzed using descriptive statistics and linear regression analyses.

#### Results

The mean duration of pain was  $34.73 \pm 38.66$  months. Regression analysis using scores from the PHQ-9, Generalized Anxiety Disorder-7, three PCS subscales (rumination, magnification, and helplessness), and pain interference scale as predictors showed that pain interference and PCS helplessness factors were significant predictors of average pain rating (R2 = 24%, P < .001).

#### Conclusions

Pain interference in functioning and pain-related thoughts of helplessness accounted for a significant degree of the variance in soldiers' self-rating of their chronic pain. The findings suggest that added attention should be directed at helping patients boost their self-efficacy in using pain-coping methods to improve their functioning and address the perception of helplessness about their pain.

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## https://doi.org/10.5664/jcsm.10774

Sex differences in US military personnel with insomnia, obstructive sleep apnea, or comorbid insomnia and obstructive sleep apnea.

Mysliwiec, V., Pruiksma, K. E., Matsangas, P., Powell, T., Straud, C. L., Taylor, D. J., Hansen, S., Foster, S. N., Mithani, S., Zwetzig, S., Martin, J., Gerwell, K., Young-McCaughan, S., Blue Star, J. A., Cassidy, D. G., Gomes, K. D., Moore, B. A., Peterson, A. L., Brock, M. S., & STRONG STAR Consortium

Journal of Clinical Sleep Medicine Published Online: January 1, 2024

## Study objectives:

The aim of this study was to evaluate sex-related differences in symptoms of sleep disorders, sleep-related impairment, psychiatric symptoms, traumatic brain injury, and polysomnographic variables in treatment-seeking military personnel diagnosed with insomnia, obstructive sleep apnea (OSA), or comorbid insomnia and OSA (COMISA).

#### Methods:

Participants were 372 military personnel (46.2% women, 53.8% men) with an average age of 37.7 (standard deviation = 7.46) years and median body mass index of 28.4 (5.50) kg/m2. Based on clinical evaluation and video-polysomnography, participants were diagnosed with insomnia (n = 118), OSA (n = 118), or COMISA (n = 136). Insomnia severity, excessive daytime sleepiness, sleep quality, nightmare disorder, sleep impairment, fatigue, posttraumatic stress disorder, anxiety, depression symptoms, and traumatic brain injury were evaluated with validated self-report questionnaires. Descriptive statistics, parametric and nonparametric t-tests, and effect sizes were used to assess sex differences between men and women.

#### Results:

There were no significant differences between women and men with insomnia or OSA in sleep-related symptoms, impairment, or polysomnography-based apnea-hypopnea index. Military men with COMISA had a significantly greater apnea-hypopnea index as compared to military women with COMISA, but women had greater symptoms of nightmare disorder, posttraumatic stress disorder, and anxiety.

#### Conclusions:

In contrast to civilian studies, minimal differences were observed in self-reported sleep symptoms, impairment, and polysomnography metrics between men and women diagnosed with the most frequent sleep disorders in military personnel (ie, insomnia, OSA, or COMISA) except in those with COMISA. Military service may result in distinct sleep disorder phenotypes that differ negligibly by sex.

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## https://doi.org/10.1093/milmed/usad103

Systematic Improvements to the Army's Deployment Cycle Resilience Training Using a Comprehensive, Iterative Process.

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## Military Medicine

Volume 188, Issue Supplement 6, November/December 2023, Pages 246–254,

#### Introduction

To support soldier readiness and mitigate the mental health consequences of deployments, Army regulation mandates soldiers to receive Deployment Cycle Resilience Training (DCRT) throughout their deployment cycle. A recent evaluation revealed several issues with the existing version that threatened the relevancy and usefulness of the training. The present article details the systematic approach taken by the Research Transition Office at the Walter Reed Army Institute of Research to revise the DCRT curriculum and presents the revision updates that are now included in DCRT version 3.

#### Method

Curriculum developers (n = 2) with subject matter expertise relevant to the project followed an iterative process that was critical to the efficacy of the revisions. Developers used the existing DCRT modules as the curriculum framework and utilized several materials to inform the revisions to include Army doctrine, data from the quality improvement evaluation conducted by the Walter Reed Army Institute of Research, and the current research related to the deployment cycle, resilience, and behavior change. Internal and external stakeholders (n = 31) provided iterative feedback to ensure each of the six modules met DCRT revision objectives.

#### Results

The revised DCRT curriculum was implemented in August 2021. The resulting revisions included an increase in inclusivity, an emphasis on growth opportunities, an integrative approach to the deployment cycle phases, and greater practical application. Additionally, the curriculum incorporates best practices found to enhance the delivery of resilience-based psychoeducational interventions, specifically within high-risk occupational settings like the military.

#### Conclusions

The revisions outlined in this article enhance the training quality and potential effectiveness of DCRT, which can positively influence soldier and family readiness and mission success. Furthermore, the deliberate and iterative curriculum revision process can serve as a guide to other curriculum development projects, specifically within the military context. Implementation considerations and potential limitations are provided, and future directions are discussed to include the ongoing evaluation.

## https://doi.org/10.1007/s11126-023-10061-8

Posttraumatic Growth in U.S. Military Veterans: Results from the National Health and Resilience in Veterans Study.

Psychiatric Quarterly

Published: 08 November 2023

Despite increasing recognition that positive psychological changes or posttraumatic growth (PTG) may develop after highly stressful or traumatic events, contemporary population-based data on the epidemiology of PTG in high-risk samples such as U.S. military veterans are lacking. Additionally, in light of emerging evidence suggesting an 8-factor model of posttraumatic stress disorder (PTSD) symptoms, an up-to-date characterization of how these symptom clusters relate to PTG can help inform efforts to help promote PTG. Data were analyzed from the 2019–2020 National Health and Resilience in Veterans Study (NHRVS), which surveyed a nationally representative sample of 3,847 trauma-exposed U.S. veterans. Participants completed assessments of potentially traumatic events, PTSD symptoms, and PTG, as well as a broad range of sociodemographic, military, trauma, health, personality, and psychosocial characteristics. Results revealed that 63.2% of trauma-exposed veterans and 86.4% of veterans who screened positive for PTSD endorsed moderate-or-greater PTG; these prevalences are higher than those reported in an independent U.S. veteran sample in 2011 (50.1% and 72.0%, respectively). An inverted U-shaped association was observed between PTSD symptom severity and PTG levels, with scores of 31 to 51 on the PTSD Checklist for DSM-5 associated with the highest likelihood of PTG. Intrinsic religiosity and internally- and externally-generated intrusive symptoms of PTSD were identified as the strongest correlates of PTG. Results suggest that prevention and treatment efforts to mitigate severe PTSD symptoms, and help promote intrinsic religiosity, and more deliberate and organized rumination about traumatic experiences may help foster PTG in veterans.

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#### https://doi.org/10.1093/milmed/usad180

The Association Between Glasgow Coma Scale Scores and PTSD in Military Trauma Casualties: Does Mental Status Following Injury Play a Role in PTSD Development?

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## Military Medicine

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## Background

Posttraumatic stress disorder (PTSD) is prevalent among military personnel and may arise following a wide range of traumatic exposures. Consciousness level following traumatic injury may play a role in the development of PTSD, but its effects have been primarily investigated in the context of traumatic brain injury.

#### Methods

Registry-based study surveying three databases documenting care from point of injury to long-term rehabilitation of traumatic injuries among military personnel. The study population was divided according to Glasgow Coma Scale (GCS) scores upon emergency department admission (GCS scores 15, 13 and 14, 9–12, and 3–8), with PTSD diagnoses being determined according to disability claim records. Multivariable logistic regression was utilized to determine the association between GCS score at admission and PTSD.

#### Results

Overall, 3,376 military personnel hospitalized following traumatic injuries between 1997 and 2020 were included. The majority were male (92.3%), with a median age of 20 (interquartile range 19–22) at the injury time. Of these, 569 (16.9%) were diagnosed with PTSD according to disability claims, with a median follow-up time of 10.9 years. PTSD diagnosis was most prevalent (30.3% of patients), with a GCS score of 13 and 14. In the adjusted multivariable model, a GCS score of 13 and 14 was associated with significantly higher odds of PTSD diagnosis when compared to a GCS score of 15 (odds ratio 2.19, 95% CI, 1.21–3.88). The associations of other GCS groupings with PTSD diagnosis were nonsignificant.

#### Conclusions

Minimally impaired consciousness following traumatic injuries is associated with increased odds of PTSD. The role of patient awareness, analgesia, and sedation following an injury in developing PTSD warrants further investigation and could guide early diagnosis and preventive interventions.

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#### **Links of Interest**

12 emerging trends for 2024 What's ahead for psychologists in the coming year? https://www.apa.org/monitor/2024/01/trends-report

The Rapidly Shifting Ketamine Landscape in the US (Viewpoint)

<a href="https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2813622?guestAccessKey=211c76a6-a34b-41a2-891b-605fc8f1d437">https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2813622?guestAccessKey=211c76a6-a34b-41a2-891b-605fc8f1d437</a>

New in 2024: Housing panel gives military families a voice <a href="https://www.militarytimes.com/news/your-military/2024/01/08/new-in-2024-housing-panel-gives-military-families-a-voice/">https://www.militarytimes.com/news/your-military/2024/01/08/new-in-2024-housing-panel-gives-military-families-a-voice/</a>

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Resource of the Week: Psych Health Evidence Briefs

From the Psychological Health Center of Excellence (PHCoE):

The Psychological Health Center of Excellence produces expert-reviewed evidence briefs on existing and potential treatments for psychological health conditions that are commonly experienced by service members. Psych Health Evidence Briefs provide summaries of the available scientific evidence and clinical guidance to inform providers, patients and others who may have questions about the effectiveness of these treatments.

#### Each brief includes:

- An introduction of the treatment or topic, including a brief description of the treatment and the potential mechanisms of action
- Guidance from existing VA/DOD evidence-based clinical practice guidelines when available
- Identification and summaries of reviews conducted by organizations recognized as employing rigorous methodology with similar grading systems as the VA/DOD CPGs
- For treatments with an emerging or inconsistent evidence base, a systematic literature search

 A conclusion that summarizes what is known and what has yet to be determined, as well as guidance about adoption

## **Psychological Health Center of Excellence**



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