Research Update -- March 7, 2024

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Association between body composition standards and eating disorder medical claims among active-duty service women.

Korona-Bailey, J., Banaag, A., Walker, J., Fortin, S., Eyeler, M., & Koehlmoos, T. P.

Introduction
Eating disorders are a worldwide public health concern with the United States having a particularly high prevalence. Eating disorders are of particular concern to the Department of Defense and Military Health System (MHS) because body composition standards are in place for active-duty service members.

Methods
We conducted a cross-sectional study of active-duty service women (ADSW) ages 18 and older in the U.S. Army, Air Force, Navy, and Marine Corps during fiscal years (FY) 2018–2019. Utilizing claims data from the MHS Data Repository (MDR), we identified ADSW with a Body Mass Index (BMI) measure during the study period and compared their BMI to Service-specific requirements and diagnosis of an eating disorder.

Results
We identified a total of 161,209 ADSW from the MDR in FYs 2018–2019 with a recorded BMI, of whom 61,711 (38.3%) had a BMI exceeding the maximum BMI Service-specific standards during the study period and 0.5% had an eating disorder diagnosis. Increased risk of an eating disorder was found in ADSW with an Underweight BMI. Further, we found that there was no association of disordered eating diagnoses among ADSW who were near the maximum height/weight standard set by their Service.

Conclusion
There appears to be no association between body composition standards of the Services and eating disorder diagnoses in ADSW. We were not able to investigate unhealthy habits around diet or exercise directly related to body composition standards.

Plain English summary
Eating disorders are a worldwide public health concern with the United States having a

particularly high prevalence. Active duty service women serving in the United States armed forces may be at an increased risk due to strict Service specific weight requirements. This study suggests that the height and weight standards do not increase the risk for eating disorder diagnoses in active duty service women. However, we were not able to investigate unhealthy habits around diet or exercise directly related to body composition standards near the time of measurement or assessment.

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Hardships at Home: The Portrayal of Military Families in Traditional, Military Community, and Military-Focused News Publications.

Parrott, S., Eckhart, N., Laha-Walsh, K., & Albright, D. L.

Armed Forces & Society
2024; 50(2), 339-361

Scholars have described a divide between military and civilian culture, often focusing on the relationship between civilian communities and the Armed Forces and its veterans. Equally important are the families of military personnel. News media are an important source of information about military society for many U.S. civilians. This study examined how three types of news publications portrayed military families on Twitter between 2010 and 2020. News content was drawn from 21 outlets that cater to (1) general audiences, (2) military communities, and (3) military personnel. News outlets often associated military families with terms related to hardship, including substandard housing, financial problems, and other issues. In 1,052 posts, news outlets used five frames to describe military families: hardship, support, education, honor, and politics. General news outlets focused on politics, covering PR events staged by politicians. News outlets in military communities focused on support and providing readers resources to help navigate life in a military family. News outlets catering to military personnel focused on hardships.

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Mental Health of Canadian Children Growing Up in Military Families: The Child Perspective.

Williams, A., Cramm, H., Khalid-Khan, S., Reddy, P., Groll, D., Rühland, L., & Hill, S.

A recent scoping review indicated military-connected children face stressors that may increase mental health issues. However, the majority of the included literature was American. To examine the experiences of Canadian military-connected children, we conducted in-depth interviews with a purposive sample of Canadian military-connected youth using a qualitative description approach. We conducted a content analysis on interview data, supported by qualitative data analysis software (MAXQDA), with coding done by two researchers who met regularly to discuss coding agreement. Thirteen children in military families participated and described the mental health impact of frequent mobility, parental absence, and risk of parental injury. The experiences of our participants were consistent with the results of an earlier scoping review on this topic. Our results suggest improving military cultural competence among health care providers and enhancing parental support may positively impact child well-being. More research is needed to understand resilience and vulnerability among Canadian military-connected children.

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Interracial Marriage and the U.S. Military: A Test of Status Exchange and Own Race Preferences.

Houseworth, C. A.

What roles do racial social distance and individual identity play in determining intermarriage among Black and White individuals in the U.S. military? This research uses interracial marriage as a measure of social distance and hypothesizes that the military lessens the social distance between White and Black individuals. More specifically, this article examines the relative education levels of Black and White married individuals in the military to test theories of market and dyadic exchange using the 2015–2019 American Community Survey (ACS) data. Evidence of weaker racial

group boundaries is found for Black male and White female pairings where at least one spouse is in the military. There is also evidence of stronger own race preferences among Black women in the military.

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Perspectives on Military Culture Among Veterans With a Recent Suicide Attempt: Illustrating Gender Differences and Informing Suicide Prevention.

Tompkins, K. J., Roth, B., Wu, T. Y., Somohano, V. C., & Denneson, L. M.

This article aims to expand our understanding of military culture as it relates to gender and veterans' mental health, drawing from rich qualitative data. Fifty in-depth interviews (25 men, 25 women) were conducted with veterans who had a recent suicide attempt (within 6 months). Interviews revealed major themes of unequal standards and a hostile environment in the military. Women strived to fit in and experienced differential treatment in their physical training, professional expectations, and family life; men recollected masculine bonds and camaraderie through drinking. Women described the hostile environment of the military through their experiences of sexual violence and both genders described a culture of silence where signs of weakness were shamed. Findings support a cultural shift toward equitable gender norms for military members. Policy should focus on increased transparency institutionally—and between members—as well as improving protection and response to reported abuse.

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Arrests, Mental Health Outcomes, and Discharge Status in U.S. Military Veterans: A Latent Class Analysis.

Barr, N., Kintzle, S., Lee, J. J., Mercado, S., & Castro, C. A.

Most U.S. military service members are discharged routinely, but about 15% receive non-routine discharges. Little is known about how patterns of arrests prior-to and in-service relate to neuropsychological symptoms acquired through military service, or how these symptoms and patterns are associated with discharge type. We investigated latent group differences in post-9/11 era veterans' patterns of arrests; examined mental health-related predictors of subgroup membership; and modeled associations between latent class structure and non-routine discharge. Veterans with traumatic brain injury, alcohol misuse, and post-traumatic stress disorder, had greater odds of belonging to a high-risk vs. low-risk class with the highest probabilities of arrests in-service. The high-risk class had a 45% chance of non-routine discharge compared with 35% for a stable-risk class and 6% for a low-risk class. Veterans with increased probabilities of arrests in-service compared with pre-service showed the highest odds of mental and behavioral health problems and non-routine discharge.

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Racial and Ethnic Disparities in Reproductive Health Outcomes Among Women Veterans: A Research Note.

Collison, K., Naftaly, J. P., & Colangelo, K.

There are a growing number of U. S. women veterans. The goal of this study was to examine the frequency of reproductive health conditions, as well as racial/ethnic disparities within reproductive health concerns, among a sample of women veterans who were referred by their primary care providers for a psychiatric evaluation. Cross-sectional data were collected from 701 women veterans in a Women's Health Clinic at a VA Medical Center. The most commonly reported reproductive health conditions were dyspareunia, pelvic pain, and sexually transmitted infections (STIs). Other reproductive health conditions reported by women veterans included endometriosis, polycystic ovary syndrome (PCOS), and osteoporosis. Black women veterans had significantly higher rates of endometriosis compared with the other racial/ethnic groups. Prevalence of PCOS, dyspareunia, osteoporosis, STIs, pelvic pain, perinatal loss, and infertility treatment did not differ across race/ethnicity. Health care providers working with women

veterans should engage in regular screening of reproductive health conditions for women across all demographic groups.

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Income Security for Vietnam-Era Veterans: A Research Note.

Bass, E., & Golding, H.

Armed Forces & Society
2024; 50(2), 574-587

Little is known about the financial security of Vietnam-era veterans now that most are over 65 and have left the labor force. Using 2018 survey data, we found that, on average, Vietnam-era veterans aged 63 to 78 had slightly less income than nonveterans of their ages: US$63,500 and US$65,000, respectively. Those veterans received more money from Social Security and retirement plans; nonveterans had more earnings and investment income. About 1.3 million Vietnam-era veterans collected an average of US$17,600 in disability compensation from the Department of Veterans Affairs, lifting their average total income above other veterans' by about US$5,000. Overall, veterans were less likely to be poor or very wealthy than were nonveterans. Information on income provides insight to Congress and the public about the economic stability and, by extension, overall well-being of Vietnam-era veterans as they age.

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Investigating insomnia in United States deployed military forces: A topic modeling approach.

D'Souza, E. W., MacGregor, A. J., Markwald, R. R., Elkins, T. A., & Zouris, J. M.

Sleep Health
2024; 10(1), 75–82

Study objectives
This retrospective study analyzed free-text clinical notes from medical encounters for

insomnia among a sample of deployed US military personnel. Topic modeling, a natural language processing technique, was used to identify thematic patterns in the clinical notes that were potentially related to insomnia diagnosis.

Methods
Clinical notes of patient clinical encounters coded for insomnia from the US Department of Defense Military Health System Theater Medical Data Store were analyzed. Following preprocessing of the free text in the clinical notes, topic modeling was employed to identify relevant underlying topics or themes in 32,864 unique patients. The machine-learned topics were validated using human-coded potential insomnia etiological issues.

Results
A 12-topic model was selected based on quantitative metrics, interpretability, and coherence of terms comprising topics. The topics were assigned the following labels: personal/family history, stimulants, stress, family/relationships, other sleep disorders, depression, schedule/environment, anxiety, other medication, headache/concussion, pain, and medication refill. Validation of these topics (excluding the two medication topics) against their corresponding human-coded potential etiological issues showed strong agreement for the assessed topics.

Conclusions
Analysis of free-text clinical notes using topic modeling resulted in the identification of thematic patterns that largely mirrored known correlates of insomnia. These findings reveal multiple potential etiologies for deployment-related insomnia. The identified topics may augment electronic health record diagnostic codes and provide valuable information for sleep researchers and providers. As both civilian and military healthcare systems implement electronic health records, topic modeling may be a valuable tool for analyzing free-text data to investigate health outcomes.

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Military Sexual Trauma and Menopause Symptoms Among Midlife Women Veterans.

Travis, K. J., Huang, A. J., Maguen, S., Inslicht, S., Byers, A. L., Seal, K. H., & Gibson, C. J.

Background
Sexual assault and/or sexual harassment during military service (military sexual trauma (MST)) can have medical and mental health consequences. Most MST research has focused on reproductive-aged women, and little is known about the long-term impact of MST on menopause and aging-related health.

Objective
Examine associations of MST with menopause and mental health outcomes in midlife women Veterans.

Design
Cross-sectional.

Participants
Women Veterans aged 45–64 enrolled in Department of Veterans Affairs (VA) healthcare in Northern California between March 2019 and May 2020.

Main Measures
Standardized VA screening questions assessed MST exposure. Structured-item questionnaires assessed vasomotor symptoms (VMS), vaginal symptoms, sleep difficulty, depressive symptoms, anxiety symptoms, and posttraumatic stress disorder (PTSD) symptoms. Multivariable logistic regression analyses examined associations between MST and outcomes based on clinically relevant menopause and mental health symptom thresholds.

Key Results
Of 232 participants (age = 55.95 ± 5.13), 73% reported MST, 66% reported VMS, 75% reported vaginal symptoms, 36% met criteria for moderate-to-severe insomnia, and almost half had clinically significant mental health symptoms (33% depressive symptoms, 49% anxiety, 27% probable PTSD). In multivariable analyses adjusted for age, race, ethnicity, education, body mass index, and menopause status, MST was associated with the presence of VMS (OR 2.44, 95% CI 1.26–4.72), vaginal symptoms (OR 2.23, 95% CI 1.08–4.62), clinically significant depressive symptoms (OR 3.21, 95% CI 1.45–7.10), anxiety (OR 4.78, 95% CI 2.25–10.17), and probable PTSD (OR 6.74, 95% CI 2.27–19.99). Results did not differ when military sexual assault and harassment were disaggregated, except that military sexual assault was additionally associated with moderate-to-severe insomnia (OR 3.18, 95% CI 1.72–5.88).

Conclusions
Exposure to MST is common among midlife women Veterans and shows strong and independent associations with clinically significant menopause and mental health symptoms. Findings highlight the importance of trauma-informed approaches to care that acknowledge the role of MST on Veteran women's health across the lifespan.

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Hypoglossal Nerve Stimulator in the Active Duty Population: Military Readiness and Satisfaction.

Ryan, M. T., Coulter, M., Kim, J., Noller, M., Mack, D., Huuki, E., Riley, C. A., & Tolisano, A. M.

Introduction
Because inadequate sleep impairs mission performance, the U.S. Army regards sleep as a core pillar of soldier readiness. There is an increasing incidence of obstructive sleep apnea (OSA) among active duty (AD) service members, which is a disqualifying condition for initial enlistment. Moreover, a new diagnosis of OSA in the AD population often prompts a medical evaluation board, and if symptomatic OSA proves refractory to treatment, this may result in medical retirement. Hypoglossal nerve stimulator implantation (HNSI) is a newer implantable treatment option, which requires minimal ancillary equipment to function and may provide a useful treatment modality to support AD service members while maintaining readiness in appropriate candidates. Because of a perception among AD service members that HNSI results in mandatory medical discharge, we aimed to evaluate the impact of HNSI on military career progression, maintenance of deployment readiness, and patient satisfaction.

Methods
The Department of Research Programs at the Walter Reed National Military Medical Center provided institutional review board approval for this project. This is a retrospective, observational study and telephonic survey of AD HNSI recipients. Military service information, demographics, surgical data, and postoperative sleep study results

were collected from each patient. Additional survey questions assessed each service member's experience with the device.

Results

Fifteen AD service members who underwent HNSI between 2016 and 2021 were identified. Thirteen subjects completed the survey. The mean age was 44.8 years (range 33-61), and all were men. Six subjects (46%) were officers. All subjects maintained AD status following HNSI yielding 14.5 person-years of continued AD service with the implant. One subject underwent formal assessment for medical retention. One subject transferred from a combat role to a support role. Six subjects have since voluntarily separated from AD service following HNSI. These subjects spent an average of 360 (37-1,039) days on AD service. Seven subjects currently remain on AD and have served for an average of 441 (243-882) days. Two subjects deployed following HNSI. Two subjects felt that HSNI negatively affected their career. Ten subjects would recommend HSNI to other AD personnel. Following HNSI, of the eight subjects with postoperative sleep study data, five achieved surgical success defined as >50% reduction of apnea–hypopnea index and absolute apnea–hypopnea index value of <20.

Conclusions

Hypoglossal nerve stimulator implantation for AD service members offers an effective treatment modality for OSA, which generally allows for the ability to maintain AD status, however: The impact on deployment readiness should be seriously considered and tailored to each service member based on their unique duties before implantation. Seventy-seven percent of HNSI patients would recommend it to other AD service members suffering from OSA.

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Combat Deployed Service Members by Blast TBI and Service Separation Status 5-years Post-deployment: Comparison of Cognitive, Neurobehavioral, and Psychological Profiles of Those Who Left vs. Those Still Serving.

Coppel, D., Barber, J., Temkin, N. R., & Mac Donald, C. L.

Military Medicine
2024; 189(3-4), e795–e801

Introduction

Longitudinal research regarding the pre- and post-separation experience has been relatively limited, despite its potential as a major life transition. Separating from the military and re-integration to civilian life is noted to be a period of increased risk of significant adjustment challenges, which impacts a service member in a multitude of areas. Active duty service members with combat-related physical or mental health or pre-existing adjustment conditions may be more likely to separate from service and more at risk for post-military service adjustment problems.

Materials and Methods

This is a secondary data analysis from a prospective, observational, longitudinal, multicohort study involving deployed service members originally enrolled between 2008 and 2013 in combat or following medical evacuation to Landstuhl, Germany. Two combat-deployed cohorts were examined: non-head-injured control without blast exposure (n = 109) and combat-related concussion arising from blast (n = 165). Comprehensive clinical evaluations performed at 1 year and 5 year follow-up included identical assessment batteries for neurobehavioral, psychiatric, and cognitive outcomes. In addition to demographics collected at each study visit, the current analysis leveraged the Glasgow Outcome Scale Extended (GOS-E), a measure of overall global disability. For neurobehavioral impairment, the Neurobehavioral Rating Scale-Revised (NRS) was used as well as the Headache Impact Test (HIT-6) to assess headache burden. To compare psychiatric symptom burden between those separated to those still serving, the Clinician-Administered PTSD Scale for DSM-IV (CAPS) and Montgomery-Asberg Depression Rating Scale (MADRS) for depression were used as well as the Michigan Alcohol Screening Test (MAST) to be able to compare alcohol misuse across groups. Overall cognitive function/performance was defined for each service member by aggregating the 19 neuropsychological measures.

Results

Overall comparisons following adjustment by linear regression and correction for multiple comparisons by separation status subgroup for non-blast control or blast traumatic brain injury (TBI) identified significant differences at 5 years post-enrollment in measures of global disability, neurobehavioral impairment, and psychiatric symptom burden. Those who separated had worse global disability, worse neurobehavioral symptoms, worse Post-Traumatic Stress Disorder symptoms, and worse depression symptoms than active duty service members. While service members who sustain a mild blast TBI during combat are more likely to separate from service within 5 years, there is a proportion of those non-injured who also leave during this time frame. Clinical profiles of both groups suggest service members who separated have elevated psychiatric and neurobehavioral symptoms but not cognitive dysfunction. Interestingly,

the symptom load in these same domains is lower for those without blast TBI who separated during this time frame.

Conclusions
These results appear to support previous research depicting that, for some service members, transitioning out of the military and re-integrating into civilian life can be a challenging adjustment. Many factors, including personal and social circumstances, prior mental or emotional difficulties, availability of social or community support or resources, can influence the adjustment outcomes of veterans. Service members with prior adjustment difficulties and/or those with blast TBI history (and ongoing neurobehavioral symptoms) may find the transition from military to civilian life even more challenging, given the potential substantial changes in lifestyle, structure, identity, and support.

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

Wi, D., Park, C., Ransom, J. C., Flynn, D. M., & Doorenbos, A. Z.

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/usad363

Transition Needs Among Veterans Living With Chronic Pain: A Systematic Review.

Patel, M., Jomy, J., Couban, R. J., Scelleur, H. L., & Busse, J. W.

Military Medicine
2024; 189(3-4), 556–565

Introduction:
A third of Canadian Armed Forces veterans report difficulty adjusting to post-military life. Moreover, an estimated 40% of Canadian veterans live with chronic pain, which is likely associated with greater needs during the transition from military to civilian life. This review explores challenges and transition needs among military personnel living with chronic pain as they return to civilian life.

Methods:
We searched MEDLINE, EMBASE, CINAHL, Scopus, and Web of Science from inception to July 2022, for qualitative, observational, and mixed-method studies exploring transition needs among military veterans released with chronic pain. Reviewers, working independently and in duplicate, conducted screening and used a

standardized and pilot-tested data collection form to extract data from all included studies. Content analysis was used to create a coding template to identify patterns in challenges and unmet needs of veterans transitioning to civilian life, and we summarized our findings in a descriptive manner.

Results:
Of 10,532 unique citations, we identified 43 studies that reported transition challenges and needs of military personnel; however, none were specific to individuals released with chronic pain. Most studies (41 of 43; 95%) focused on military personnel in general, with one study enrolling individuals with traumatic brain injury and another including homeless veterans. We identified military-to-civilian challenges in seven areas: (1) identity, (2) interpersonal interactions/relationships, (3) employment, (4) education, (5) finances, (6) self-care and mental health, and (7) accessing services and care.

Conclusions:
Military personnel who transition to civilian life report several important challenges; however, the generalizability to individuals released with chronic pain is uncertain. Further research is needed to better understand the transition experiences of veterans with chronic pain to best address their needs and enhance their well-being.

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https://doi.org/10.1016/j.jad.2024.01.254

Polygenic risk for suicide attempt is associated with lifetime suicide attempt in US soldiers independent of parental risk.

Stein, M. B., Jain, S., Papini, S., Campbell-Sills, L., Choi, K. W., Martis, B., Sun, X., He, F., Ware, E. B., Naifeh, J. A., Aliaga, P. A., Ge, T., for International Suicide Genetics Consortium, for MVP Suicide Exemplar Workgroup, for VA Million Veteran Program, for Suicide Working Group of the Psychiatric Genomics Consortium, Smoller, J. W., Gelernter, J., Kessler, R. C., & Ursano, R. J.

Journal of Affective Disorders
2024; 351, 671–682

Highlights
- Polygenic risk for suicide attempt (SA) is associated with history of suicide attempts in US Army soldiers.
- This association is seen for suicide attempts but not with non-suicidal self-injury

- Polygenic risk indices for SA may contribute in the future to the identification of at-risk individuals.

Abstract

Background
Suicide is a leading cause of death worldwide. Whereas some studies have suggested that a direct measure of common genetic liability for suicide attempts (SA), captured by a polygenic risk score for SA (SA-PRS), explains risk independent of parental history, further confirmation would be useful. Even more unsettled is the extent to which SA-PRS is associated with lifetime non-suicidal self-injury (NSSI).

Methods
We used summary statistics from the largest available GWAS study of SA to generate SA-PRS for two non-overlapping cohorts of soldiers of European ancestry. These were tested in multivariable models that included parental major depressive disorder (MDD) and parental SA.

Results
In the first cohort, 417 (6.3 %) of 6573 soldiers reported lifetime SA and 1195 (18.2 %) reported lifetime NSSI. In a multivariable model that included parental history of MDD and parental history of SA, SA-PRS remained significantly associated with lifetime SA [aOR = 1.26, 95%CI:1.13–1.39, p < 0.001] per standardized unit SA-PRS]. In the second cohort, 204 (4.2 %) of 4900 soldiers reported lifetime SA, and 299 (6.1 %) reported lifetime NSSI. In a multivariable model that included parental history of MDD and parental history of SA, SA-PRS remained significantly associated with lifetime SA [aOR = 1.20, 95%CI:1.04–1.38, p = 0.014]. A combined analysis of both cohorts yielded similar results. In neither cohort or in the combined analysis was SA-PRS significantly associated with NSSI.

Conclusions
PRS for SA conveys information about likelihood of lifetime SA (but not NSSI, demonstrating specificity), independent of self-reported parental history of MDD and parental history of SA.

Limitations
At present, the magnitude of effects is small and would not be immediately useful for clinical decision-making or risk-stratified prevention initiatives, but this may be expected to improve with further iterations. Also critical will be the extension of these findings to more diverse populations.

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Alcohol motivations associated with frequency of alcohol use, binge drinking, and alcohol problems among active duty junior enlisted soldiers and non-commissioned officers.

Kearns, N. T., Trachik, B., Fawver, B., Osgood, J., & Dretsch, M. N.

Highlights

- Generally, coping and enhancement motives were most strongly linked to alcohol misuse.
- Enhancement motives impacted junior enlisted alcohol use more than coping motives.
- Only coping motives were associated with alcohol problems among NCOs.
- Alcohol outcomes of NCOs were more impacted by motives than junior enlisted ADSM.

Abstract
Problematic alcohol use is a serious threat to the behavioral health of active-duty Service Members (ADSM), resulting in numerous calls from governmental agencies to better understand mechanistic factors contributing to alcohol misuse within the military. Alcohol use motives are reliable predictors of alcohol-related behaviors and are considered malleable targets for prevention and intervention efforts. However, empirical research indicates that drinking motives vary across contextually distinct populations. Although some research has been conducted among veteran and reservist populations, limited work has been specifically focused on ADSM and no research has evaluated motives and alcohol metrics among ADSM based on military rank. Participants for the current study included 682 ADSM recruited from a large military installation in the U.S. Structural equation modeling evaluated associations between four drinking motives (i.e., enhancement, social, conformity, coping) and three alcohol misuse metrics (i.e., alcohol frequency, binge frequency, alcohol problems). Three models were evaluated: one full (combined) model and two separate models based on military rank – junior enlisted (i.e., E1–E4) and non-commissioned officers (NCOs) (i.e., E5–E9). Results for junior enlisted ADSM indicated that coping and enhancement motives were most strongly

associated with all alcohol misuse metrics. However, among NCOs, results indicated that alcohol problems were only associated with coping motives. Notably, results also indicated that alcohol use motives accounted for substantively more variance across all alcohol-related metrics among NCOs. Findings generally support extant military-related literature indicating use of alcohol for coping (e.g., with anxiety) as the motivation most consistently associated with increased alcohol misuse. However, novel findings highlight enhancement motives – using alcohol to attain some positive internal reward – as another, often stronger, motivation impacting alcohol use outcomes. Further, findings highlight notable distinctions between alcohol use motives (i.e., coping vs. enhancement) and the impact of alcohol use motives (i.e., effect size) on alcohol metrics between junior enlisted and NCOs.

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The Psychological Consequences of Combat Injury Among U.S. Navy Health Care Personnel.

MacGregor, A. J., Zouris, J. M., Dougherty, A. L., & Dye, J. L.

Introduction
Military health care personnel face numerous risks to mental health, including those associated with combat injury, although no study has described combat injuries within this subgroup or assessed their impact on mental health outcomes.

Materials and Methods
Male U.S. Navy-enlisted health care personnel, or corpsmen, with combat injury were identified from clinical records. Noninjured corpsmen were matched to injured corpsmen with a 4:1 ratio on year of deployment end or injury and location (Iraq or Afghanistan). The final study population included 2,025 corpsmen (405 injured and 1,620 noninjured). Mental health disorders assessed included posttraumatic stress disorder (PTSD), anxiety, adjustment, mood, and substance abuse disorders. Stratified Cox models were used for analysis while controlling for additional covariates, and injury severity was evaluated as a predictor.

Results
Injuries primarily involved the head/neck (73.8%) and extremities (45.7%), and overall injury severity was mostly mild-to-moderate (85.9%). Injured relative to noninjured corpsmen had greater risk of PTSD (risk ratio [RR] 2.45, 95% confidence interval [CI] 2.05 to 2.94), anxiety disorder (RR 1.61, 95% CI 1.32 to 1.96), adjustment disorder (RR 1.88, 95% CI 1.55 to 2.27), mood disorder (RR 1.44, 95% CI 1.16 to 1.79), and substance abuse (RR 1.48, 95% CI 1.14 to 1.91). More severe injuries yielded stronger associations with PTSD (RR 3.57, 95% CI 2.48 to 5.14), anxiety disorder (RR 2.53, 95% CI 1.74 to 3.69), and adjustment disorder (RR 2.17, 95% CI 1.44 to 3.27).

Conclusions
U.S. Navy corpsmen are at risk of combat injury and associated mental health disorders. Injured corpsmen should be screened for mental health problems in the acute phase postinjury, during their remaining time in theater, and after returning home. Future research should address how combat injury compares with other stressors that health care personnel experience and whether the psychological consequences of these injuries (e.g., PTSD) negatively impact work performance and increase risk of burnout.

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Embitterment in Vietnam War Veterans Predicted by Symptoms of Posttraumatic Stress Disorder.

Lee, S. H., Han, C., Kim, J., Jeong, H. G., Lee, M. S., Choi, J. H., & Choi, H.

Objective Research on the association between posttraumatic embitterment disorder (PTED) and other psychopathologies in veterans and adults aged ≥65 years is lacking. This study aimed to assess embitterment among elderly war veterans and its association with major psychopathological factors.

Methods
Participants included Vietnam War veterans who visited a psychiatric clinic. Based on the Posttraumatic Embitterment Disorder Self-Rating Scale (PTEDS) score, the participants were divided into the embitterment (PTED(+), mean score of PTEDS items

[mPTEDS] ≥1.6) and non-embitterment (PTED(-), mPTEDS <1.6) groups. Demographic characteristics, combat exposure severity, depression, anxiety, sleep, and alcohol use disorder symptom scores of the participants were collected and compared between the PTED(+) and PTED(-) groups. A correlation analysis between symptom measure scores and the mPTEDS was conducted. The influence of psychopathology on embitterment was investigated using stepwise multiple linear regression analysis.

Results
In total, 60 participants (28 in PTED(+) and 32 in PTED(-)) were included. Among those in PTED(+), 21 (35.0%) showed mild embitterment symptoms (1.6≤ mPTEDS <2.5) and 7 (11.7%) reported moderate or severe embitterment symptoms (mPTEDS ≥2.5). The mean scores of posttraumatic stress disorder (PTSD), depression, and anxiety were significantly higher in the PTED(+) than in the PTED(-) group. The mPTEDS were significantly correlated with PTSD, depression, anxiety, and sleep disorder scores. The PTSD symptoms significantly explained the higher mPTEDS score in a regression model.

Conclusion
Embitterment symptoms were associated with PTSD, depression, anxiety, and insomnia symptoms in elderly veterans, similar to the results of prior studies involving only the general population.

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The Psychological Impact of Exposure to Battle on Medics: A Cross-Sectional Study of Ex-Soldiers Who Sought Help From the IDF Combat Reaction Unit.

Shelef, L., Bechor, U., Ohayon, O., Tatsa-Laur, L., & Antonovsky, A.

Introduction:
The present study's central aim was to examine two questions: (1) Will there be differences in mental health outcomes between medics and non-medics who sought help at the Israeli Combat Reaction Unit (CRU)? (2) Will there be differences in mental health outcomes between combatants and non-combatants?

Materials and methods:
This cross-sectional study included files of 1,474 Israeli Defense Forces ex-service members (89% combatants, of whom 13% were medics; 11% non-combatants, of whom 6% were medics), who filled out questionnaires on admission for evaluation at the CRU.Dependent variables were mental health measures and included two PTSD measures (Clinician-Administered PTSD Scale and PTSD Checklist for DSM-5), Beck Depression Inventory, Dissociative Experience Scale, and Brief Symptom Inventory. Military profession (medics vs. non-medics) and status (combatant vs. non-combatant) were the independent variables. Background variables were also examined.

Results:
We found no substantial differences between medics and non-medics in the mental health measures. When looking at combat and non-combat separately, the non-combat medics (CMs), in general, were in better mental health conditions than the other three groups- CMs, non-medic combatants, and non-medic non-combatants-all of whom had similar scores in the mental health measures. However, compared to the rest, non-CMs took considerably longer years before approaching the CRU.

Conclusions:
The elapsed time to seek help for non-MCs was explained by their reluctance to seek help, not being combatants, and being medics who are portrayed as resilient. Recommendations for encouraging this subgroup to seek help were given.

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Opioid Prescription Clusters Associated With Early or Unplanned Military Separation.

Nghiem, V. T., Larson, M. J., Adams, R. S., Moresco, N., & Highland, K. B.

Introduction
Early/unplanned military separation in Active Component U.S. service members can result in reduced readiness during periods of high-tempo combat and increased demand for health care services within the Military Health System and Veterans Administration. Although current assessment tools leverage prescription data to

determine deployment-limiting medication receipt and the need for interventions or waivers, there is a lack of understanding regarding opioid prescription patterns and subsequent early/unplanned military separation after return from deployment. As such, understanding these relationships could support future tool development and strategic resourcing. Therefore, the goal of the present study was to identify unique 12-month opioid prescription patterns and evaluate their relationship with early/unplanned military separation in Active Component service members who returned from deployment.

Materials and Methods
This retrospective, IRB-approved cohort study included data from 137,654 Active Component Army service members who returned from deployment between 2007 and 2013, received a post-deployment (index) opioid prescription, and had at least 1 year of Active Component service post-opioid initiation. A k-means clustering analysis identified clusters using opioid prescription frequency, median dose, median days supply, and prescription breaks (≥30 days) over the 12-month post-initiation (monitoring) period. A generalized additive model examined whether cluster membership and additional covariates were associated with early/unplanned separation.

Results
In addition to the single opioid prescription (38%), the cluster analysis identified five clusters: brief/moderate dose (25%), recurrent breaks (16%), brief/high dose (11%), long/few prescriptions (8%), and high prescription frequency (2%). In the generalized additive model, the probability of early/unplanned military separation was higher for the high prescription frequency cluster (74%), followed by recurrent breaks (45%), long/few prescriptions (37%), brief/moderate dose (30%), and brief/high dose (29%) clusters, relative to the single prescription (21%) cluster. The probability of early/unplanned separation was significantly higher for service members with documented substance use disorders, mental health conditions, or traumatic brain injuries during the monitoring periods. Service members assigned male were more likely to have an early/unplanned separation relative to service members assigned female. Latinx service members and service members whose race was listed as Other were less likely to experience early/unplanned separation relative to white service members. Relative to Junior Officers, Junior Enlisted and Senior Enlisted service members were more likely to experience early/unplanned separation, but Senior Officers were less likely.

Conclusions
Further evaluation to support the integration of longitudinal opioid prescription patterns into existing tools (e.g., a screening tool for deployment-limiting prescriptions) may enable more timely intervention and support service delivery to mitigate the probability and impact of early/unplanned separation.

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The top-100 cited articles on post-traumatic stress disorder: a historical bibliometric analysis.

Mendlowicz, M. V., Gekker, M., Xavier Gomes de Araújo, A., de Oliveira, L., Pereira, M. G., Berger, W., Pires da Luz, M., Vilete, L. M. P., Marques-Portella, C., Figueira, I., & Reis da Silva Junior, T.

his is a bibliometric analysis of the most-cited articles on post-traumatic stress disorder (PTSD) with the objective of identifying citation patterns for researchers, journals, centers, periods, topics, and nations. A search was conducted in Thomson Reuters' WoS Core Collection employing the expression TI = (posttraumatic stress disorder OR post-traumatic stress disorder OR PTSD). The 100 most-cited articles were downloaded, and the relevant data were extracted and analyzed. These studies had a total of 69,649 citations, ranging from a minimum of 360 to a maximum of 6029 citations, with an average of 696.49, a standard deviation of 720.92, mode of 369, and a median of 512. Eighty-eight percent of the most-cited articles on PTSD originated from the USA, with just six cities accounting for 52% of the publications and the Boston area alone responsible for almost one-fifth of the total output. The universities of Yale and Harvard headed the ranking of institutions with larger numbers of highly-cited articles. Female researchers represented 42.3% of all authors, 51% of the first authors, and 48% of the corresponding authors. The proportion of M.D. authors decreased significantly between the 1980–1999 (42%) and the 2000–2019 (27.2%) periods while that of Ph.D. authors increased from 44% to 57.4%. The most studied population was military veterans (28%). Female victims of sexual or physical violence, traumatized children, and adult survivors of childhood abuse were assessed in only 6–7% of the most-cited publications. Ten clinical trials evaluated psychological interventions but only three investigated pharmacotherapy. We concluded that influential research on PTSD remains centralized in the USA. A balanced gender representation in publications was found. There was a heavy reliance on combat veterans as the study population. Few highly-cited studies on the pharmacotherapy for PTSD were identified. Focused efforts are needed to address these challenges.

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The Relationship Between Negative Coping Styles, Psychological Resilience, and Positive Coping Styles in Military Personnel: A Cross-Lagged Analysis.

Mingxuan Zou, Bin Liu, Jing Ji, Lei Ren, Xiuchao Wang & Fengzhan Li

Background
Military personnel experience prolonged exposure to high-stress environments. Positive coping styles can assist in maintaining their mental and behavioral well-being, whereas negative coping styles cannot. Health behavior change theory specifies that an individual can transition from a negative to a positive coping style. The psychological resilience concept may prove vital in this transition.

Methods
In a longitudinal study design, two questionnaires were administered to 233 military personnel twice, the first at T1 in April 2023 and the second at T2 in July 2023. The questionnaire measured individual negative coping style, positive coping style and psychological resilience.

Results
The data showed that the negative coping style at T1 negatively predicted the level of psychological resilience at T2 ($\gamma= -0.26$, $p < 0.001$) and the positive coping style at T2 ($\gamma= -0.16$, $p < 0.001$). The level of psychological resilience at T1 positively predicted the positive coping style at T2 ($\gamma= 0.22$, $p < 0.01$). Psychological resilience played a mediating role between negative coping style and positive coping style. In addition, there was an interaction between psychological resilience and positive coping style in military personnel at the two time points.

Conclusion
The negative coping styles that presently exist among military personnel have the potential to diminish their future positive coping styles by lowering their psychological resilience. This highlights the need to focus on the development and training of psychological resilience for military personnel, as it can effectively counteract negative coping styles and promote positive coping styles.

Links of Interest

Mental health outreach efforts need more focus on women vets: report
https://www.militarytimes.com/veterans/2024/02/27/mental-health-outreach-efforts-need-more-focus-on-women-vets-report/

Service Members and Vets Belonging to Racial Minority Groups Face Disproportionately High Suicide Rates
https://www.military.com/daily-news/2024/02/28/service-members-and-vets-belonging-racial-minority-groups-face-disproportionately-high-suicide-rates.html

VA sites need more rape kits, trained staff to aid sex assault victims
https://www.militarytimes.com/news/pentagon-congress/2024/03/01/va-sites-need-more-rape-kits-trained-staff-to-aid-sex-assault-victims/
- Greater Compliance with Policies Needed Related to the Management of Emergent Care for Patients Presenting with Acute Sexual Assault (VA OIG)

U.S. military is hiring thousands of psychologists to help reduce sexual assault
https://www.apa.org/monitor/2024/03/military-sexual-assault-prevention-efforts

More than half of adults with chronic pain experience anxiety and depression
https://www.apa.org/monitor/2024/03/chronic-pain-depression-anxiety

Meta-Analysis: Exercise as Effective as Therapy for Treating Depression
https://jamanetwork.com/journals/jama/fullarticle/2815858

Large Study Ties OCD to Greater Risk of Death From Any Cause
https://jamanetwork.com/journals/jama/fullarticle/2815050

'Proving your innocence': Veterans fight to clear their names for military crimes they did not commit
https://www.stripes.com/veterans/2024-03-04/military-criminal-records-veterans-troops-expunge-13203822.html

Problematic Anger and Posttraumatic Stress Disorder
https://health.mil/Military-Health-Topics/Centers-of-Excellence/Psychological-Health-Center-of-Excellence/Clinicians-Corner-Blog/Problematic-Anger-and-Posttraumatic-Stress-Disorder


Resource of the Week – Women Veterans: The Journey to Mental Wellness

New, from Disabled American Veterans:

DAV's third landmark report is one of the most comprehensive assessments of the unique factors contributing to the staggering rate of suicide among women veterans and how the system charged with their mental health care can and must do better.

- 24.1% suicide rate increase between 2020 and 2021 among women veterans
- 2X more likely than male veterans to attempt suicide
- more than 50% of deaths for women veterans is by self-inflicted firearm injury

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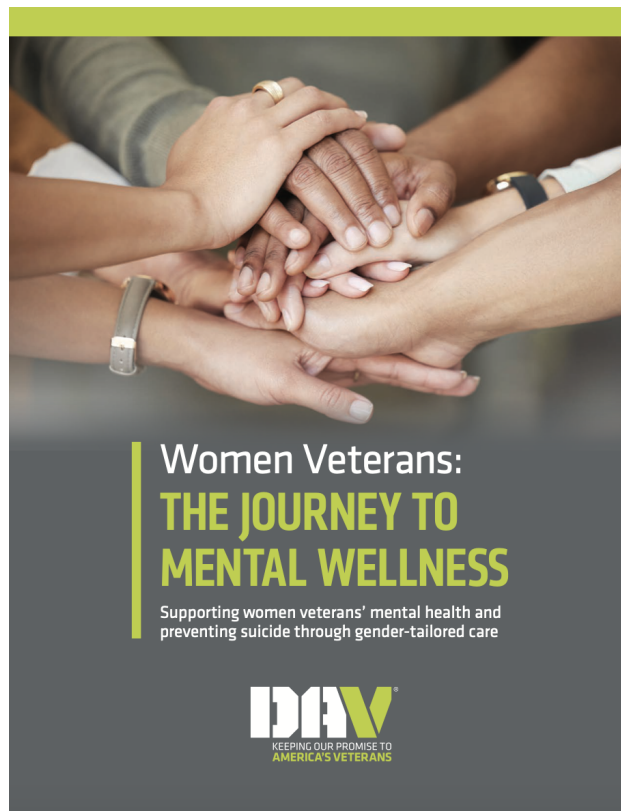
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Henry M. Jackson Foundation for the Advancement of Military Medicine