



Research Update -- April 21, 2022

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Being an anti-racist clinician.

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The Cognitive Behaviour Therapist

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Abstract

Racism is a pervasive problem in Western society, leading to mental and physical unwellness in people from racialized groups. Psychology began as a racist discipline and still is. As such, most clinical training and curricula do not operate from an anti-racist framework. Although most therapists have seen clients with stress and trauma due to racialization, very few were taught how to assess or treat it. Furthermore, clinicians and researchers can cause harm when they rely on White-dominant cultural norms that do not serve people of colour well. This paper discusses how clinicians can recognize and embrace an anti-racism approach in practice, research, and life in general. Included is a discussion of recent research on racial microaggressions, the difference between being a racial justice ally and racial justice saviour, and new research on what racial allyship entails. Ultimately, the anti-racist clinician will achieve a level of competency that promotes safety and prevents harm coming to those they desire to help, and they will be an active force in bringing change to those systems that propagate emotional harm in the form of racism.

Key learning aims

- (1) Knowledge of how racism manifests in therapy, psychology and society.
- (2) Understanding the difference between racial justice allyship versus saviourship.
- (3) Increased awareness of microaggressions in therapy.
- (4) Appreciation of the importance of combatting systemic racism.

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Recent advances in memory consolidation and information processing during sleep.

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Journal of Sleep Research

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Increasingly studied in a systematic manner since the 1970s, the cognitive processes of the brain taking place during sleeping periods remain an important object of scrutiny in the scientific community. In particular, sleep has been demonstrated to play a significant role for learning and memory consolidation processes, and sleep scientists have started unravelling its underlying neurophysiological mechanisms. However, sleep remains a multidimensional phenomenon, and many questions remain left open for future research. In this selective review article, we address recent advances in particular domains in which sleep research has further progressed in the past decade. We highlight the developmental trajectory of sleep-dependent learning and memory consolidation processes, from their development in childhood to their potential impairments in ageing, and the nature and extent of our capabilities for information processing, learning, and memory reinforcement during sleep.

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Treating sleep disorders following traumatic brain injury in adults: time for renewed effort?

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Sleep Medicine Reviews

Available online 14 April 2022, 101631

Traumatic brain injury (TBI) disrupts normal brain function and can lead to chronic symptoms of sleep disturbance, pain, irritability, and depression. Sleep disorders occur in 30-70% of individuals who have experienced TBI. Disturbed sleep impairs the recovery process and may exacerbate other issues that arise because of brain injury

(e.g., headaches, depression). Noticeable benefits have been reported when sleep problems due to TBI are addressed and treated; for instance, treating post-TBI insomnia reduces the expression of inflammatory genes, potentially reducing ongoing neurological damage. In this review, we discuss twenty-four randomised clinical trials (RCT) published to date (August 2021), exploring interventions for sleep disturbances resulting from TBI. Treatment effects were observed for insomnia, circadian rhythm disorders, hypersomnia, and general sleep disturbance. However, the evidence remains limited and significant methodological issues are discussed with a recommendation for further research.

<https://doi.org/10.1093/milmed/usab536>

Latent Class Patterns of Adverse Childhood Experiences and Their Relationship to Veteran Status and Sex in the National Epidemiologic Survey of Alcohol and Related Conditions Wave III.

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Military Medicine

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Introduction

Adverse childhood experiences (ACEs) are associated with poor psychosocial and health outcomes in adulthood. Veterans and females experience ACEs disproportionately. A greater understanding of this disparity may be achieved by examining the relationship between distinct ACE patterns and these demographic characteristics. Therefore, this study examined distinct ACE patterns and their association with Veteran status, sex, and other demographics in a nationally representative sample of U.S. adults to inform interventions tailored to ACE patterns experienced by specific groups.

Materials and Methods

Latent class analysis (LCA) was conducted with data from the National Epidemiologic Survey of Alcohol and Related Conditions-III, a nationally representative structured diagnostic interview conducted from 2012-2013. The target population was the noninstitutionalized adult population living in the USA. The analytic sample was 36,190

(mean age 46.5 years; 48.1% male). Of these participants, 3,111 were Veterans. Data were analyzed between September 2020 and January 2021.

Results

Latent class analysis revealed a four-class solution: (1) “Low adversity” (75.3%); (2) “Primarily household dysfunction” (9.0%); (3) “Primarily maltreatment” (10.7%); and (4) “Multiple adversity types” (5.1%). Compared to “Low adversity,” members in the other classes were more likely to be Veterans (odds ratio (OR)_{C2vC1} = 1.33, OR_{C3vC1} = 1.55, OR_{C4vC1} = 1.98) and female (OR_{C2vC1} = 1.58, OR_{C3vC1} = 1.22, OR_{C4vC1} = 1.65). While lower education and income were also related to higher adversity class membership, Veteran status and sex were the strongest predictors, even when controlling for education and income.

Conclusions

Distinct and meaningful patterns of ACEs identified in this study highlight the need for routine ACE screenings in Veterans and females. As in the current study, operationalizing and clustering ACEs can inform screening measures and trauma-informed interventions in line with personalized medicine. Future work can test if classes are differentially associated with health outcomes.

<https://doi.org/10.1093/milmed/usab419>

Military Pain Medicine: Sustaining the Fighting Force.

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Military Medicine

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Active duty military service members (ADSMs) suffer disproportionately from chronic pain. In the USA, military pain physicians serve an important role in the treatment of pain conditions in addition to the maintenance of the fighting force. Expanding roles for pain physicians, including novel therapies, consulting roles for opioid policy, and usefulness in a deployed setting create enormous value for military pain physicians. Ongoing force structure changes, including proposed reduction in the U.S. Military’s healthcare workforce may significantly impact pain care and the health of the fighting forces. Military pain physicians support a variety of different roles in the military

healthcare system. Ultimately, maintaining a robust faculty of pain physicians allows for both preservation of the fighting forces and a ready medical force.

<https://doi.org/10.1093/milmed/usab267>

Far Forward Behavioral Health Service Delivery in Future Combat Environments: A Qualitative Needs Assessment.

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Military Medicine

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Introduction

It is expected that future multi-domain operational (MDO) combat environments will be characterized by limited capabilities for immediate combat stress control support services for soldiers or immediate evacuation from theater. The operational requirements of the future battlefield make it unlikely that current models for behavioral health (BH) treatment could be implemented without significant adjustments. We conducted a qualitative study with Special Forces medics and operators and soldiers who had deployed to austere conditions in small groups in an effort to inform construction of a BH service delivery model for an MDO environment. The objectives of this study were (1) characterizing stressors and BH issues that were encountered and (2) describing mitigation strategies and resources that were useful or needed in these types of deployments.

Materials and Methods

Six focus groups were conducted at three army installations with 23 active duty soldiers, including three groups of medics using a semi-structured interview guide focused on stressors they encountered during deployments to austere conditions, and the impact of those stressors on mission and focus. Focus group recordings were transcribed, imported into NVivo software (version 12), and independently coded by two researchers. An analysis was then conducted to develop themes across participants. The study was reviewed by the Walter Reed Army Institute of Research Human Subjects Protection Board.

Results

Behavioral health concerns were commonly cited as a stressor in far forward environments. Other common stressors included ineffective or inexperienced leaders, as well as poor team dynamics (e.g., communication and cohesion). Four primary strategies were mentioned as mitigations for deployment stressors: leadership, morale, resilience training, and strength of the team. When asked about resources or training that would have helped with these types of deployments, participants frequently mentioned the availability of BH providers and development of new and realistic BH skills trainings for non-providers and leaders.

Conclusions

Current models for treating BH problems need to be adapted for the future MDO environments in which soldiers will be expected to deploy. Understanding what issues need to be addressed in these environments and how they can best be delivered is an important first step. This study is the first to use qualitative results from those who have already deployed to such environments to describe the stressors and BH issues that were most commonly encountered, the mitigation strategies used, and the resources that were useful or needed.

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Sociodemographic Factors in Combat Compensation Seekers for Delayed-Onset PTSD.

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Military Medicine

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Introduction

Sociodemographic factors can sometimes be more contributory in relation to war-related stress-induced disorder treatment and compensation-seeking than health-related factors. However, their impact is often overlooked. This study explores a relationship between sociodemographic factors and diagnoses of combat-related stress-induced disorders in combat compensation seekers for delayed-onset PTSD (DOPTSD).

Materials and Methods

Between June 2002 and August 2004, at the Regional Centre for Psychotrauma Zagreb, University Hospital Dubrava, the expert team evaluated subjects to diagnose DOPTSD and other comorbid illnesses. The study included 831 war veterans who experienced combat stress during the 1991-1995 Croatian war. They were subjects of psychiatric treatments before applying for compensation. The researchers derived results from data collected during the expert evaluation for compensation seeking, which included a structured diagnostic procedure. The diagnostic procedure included structured clinical interviews that also provided sociodemographic (age, sex, education, employment, marital status, number of children, and place of residence) and other data (heredity, medical history of physical and mental disorders, history of social functioning, combat-related and post-traumatic experiences, symptoms, their duration, intensity, and treatment). After the interview, the Clinical Global Impression Scale, the Clinician-Administered PTSD Scale, and the Mississippi Scale for Combat-Related PTSD were applied. Final diagnoses of a lifetime or current PTSD and stress-related disorders according to the ICD-10 were established after fulfilling psychiatric and psychometric criteria. Multiple logistic regression determined independent contributions of sociodemographic characteristics (e.g., age, gender, education, employment and marital status, and parental status), war (duty duration and physical disabilities from combat injuries), and post-war experiences (outpatient treatment duration and the number of hospitalizations) in predicting compensation eligibility.

Results

Better-educated combat compensation seekers were 2.23 times more likely to have eligible psychiatric diagnoses. Furthermore, married veterans were 2.22 times more likely to have eligible diagnoses than single compensation seekers. Likewise, hospitalization status was a risk factor concerning post-war experiences for eligible psychiatric diagnoses.

Conclusion

Marriage and higher education are accounted for longer DOPTSD in the group of combat compensation seekers with diagnoses eligible for compensation as a protective factor. A higher number of hospitalizations was also predictive because of more severe PTSD symptomatology as a risk factor. Higher education, marriage, and the higher number of the hospitalizations contributing to war-related DOPTSD diagnoses eligible for compensation.

Association of Potential for Deaths of Despair With Age and Military Service Era.

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Military Medicine

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Introduction

Predictors of deaths of despair, including substance use disorder, psychological distress, and suicidality, are known to be elevated among young adults and recent military veterans. Limited information is available to distinguish age effects from service-era effects. We assessed these effects on indicators of potential for deaths of despair in a large national sample of U.S. adults aged ≥ 19 years.

Materials and Methods

The study was a retrospective, cross-sectional analysis of publicly available data for 2015-2019 from 201,846 respondents to the National Survey on Drug Use and Health (NSDUH), which measures psychological symptoms and substance use behaviors using standardized scales and diagnostic definitions. Indicators of potential for a death of despair included liver cirrhosis, past-year serious suicidal ideation, serious psychological distress per the Kessler-6 scale, and active substance use disorder (e.g., binge drinking on ≥ 5 occasions in the past month, nonmedical use of prescribed controlled substances, and illicit drug use). Bivariate, age-stratified bivariate, and multivariate logistic regression analyses were performed using statistical software and tests appropriate for the NSDUH complex sampling design. Covariates included demographic characteristics, chronic conditions, and religious service attendance.

Results

Indicators were strongly and consistently age-associated, with ≥ 1 indicator experienced by 45.5% of respondents aged 19-25 years and 10.7% of those aged ≥ 65 years ($P < .01$). After age stratification, service-era effects were modest and occurred only among adults aged ≥ 35 years. The largest service-associated increase was among adults aged 35-49 years; service beginning or after 1975 was associated ($P < .01$), with increased prevalence of ≥ 1 indicator (30.2%-34.2% for veterans and 25.2% for nonveterans) or ≥ 2 indicators (6.4%-8.2% for veterans and 5.4% for nonveterans). Covariate-adjusted

results were similar, with adjusted probabilities of ≥ 1 indicator declining steadily with increasing age: among those 19-34 years, 39.9% of nonveterans and 42.2% of Persian Gulf/Afghanistan veterans; among those aged ≥ 65 years, 10.3% of nonveterans, 9.2% of World War II/Korea veterans, and 14.4% of Vietnam veterans.

Conclusions

After accounting for age, military service-era effects on potential for a death of despair were modest but discernible. Because underlying causes of deaths of despair may vary by service era (e.g., hostility to Vietnam service experienced by older adults versus environmental exposures in the Persian Gulf and Afghanistan), providers treating veterans of different ages should be sensitive to era-related effects. Findings suggest the importance of querying for symptoms of mental distress and actively engaging affected individuals, veteran or nonveteran, in appropriate treatment to prevent deaths of despair.

<https://doi.org/10.1093/milmed/usab242>

Association of Medication-Assisted Treatment and Age With Treatment Completion Among Veterans Seeking Non-VA Treatment for Opioid use Disorder at Non-Veterans Health Administration Facilities.

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Military Medicine

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Background

Medication-assisted treatment has been shown to be effective in treating opioid use disorder among both older adults and veterans of U.S. Armed Forces. However, limited evidence exists on MAT's differential effect on treatment completion across age groups. This study aims to ascertain the role of MAT and age in treatment completion among veterans seeking treatment in non-Department of Veterans Affairs healthcare facilities for opioid use disorder.

Methods

We used the Treatment Episode Data Set—Discharges (TEDS-D; 2006-2017) to

examine trends in treatment and MAT usage over time and TEDS-2017 to determine the role of age and MAT in treatment completion. We examined a subset of those who self-identified as veterans and who sought treatment for an opioid use disorder.

Results

Veterans presented in treatment more often as heroin users than prescription opioid users, and older veterans were more likely to get MAT than younger veterans. We found that before propensity score matching, MAT initially appeared to be associated with a lower likelihood of treatment completion in inpatient (β

= -1.47, 95% CI -1.56 to -1.39) and outpatient (β

= -1.40, 95% CI -2.21 to -0.58) settings, and age (50+ years) appeared to mediate the effect of MAT on treatment completion (β

= -0.54, 95% CI -0.87 to -0.21). After matching, older veterans were more likely to complete substance use disorder treatment (β

= 0.21, 95% CI 0.01-0.42), while age no longer mediated the effect of MAT, and MAT had a significant positive impact on treatment completion in detox settings (β

= 1.36, 95% CI 1.15-1.50) and inpatient settings (β

= 1.54, 95% CI 1.37 -1.71).

Conclusion

The results show that age plays an important role in outpatient treatment completion, while MAT plays an important role in inpatient treatment completion. Implications for veterans are discussed.

<https://doi.org/10.1093/milmed/usab041>

Estimating Repeat Traumatic Brain Injury in the U.S. Military, 2015-2017.

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Military Medicine

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Introduction

Traumatic brain injury (TBI) is a significant health issue among deployed and non-deployed U.S. military service members (SMs). Since 2000, an estimated 413,858 SMs have been diagnosed with at least one TBI. Due to the difficulty in distinguishing new

incident TBIs from follow-up TBI-related medical encounters in the Military Health System (MHS), the official TBI case definition also includes an incidence rule considering an individual an incident case only once per lifetime. We sought to examine patterns in medical records of SMs with at least one TBI encounter, in an effort to identify repeat TBIs in individual SMs and to estimate the incidence of repeat TBIs within the study cohort as a whole.

Materials and Methods

Using the official DoD TBI case definition, we obtained a list of SMs who sustained their first active duty TBI between October 1, 2015, and September 30, 2017. We identified the SM's diagnosing encounter (index TBI). Subsequently, we identified patterns associated with diagnosing medical encounters, as opposed to encounters associated with follow-up TBI care. We flagged external cause of injury records and the presence of TBI-related symptom codes at the diagnosing encounter. Traumatic brain injury–related symptoms included memory issues, alteration of cognition, hearing loss, vertigo, headache, anxiety, depression, emotional lability, weakness, insomnia, and vision disturbance. Data discovery results were shared with a group of clinicians at the Defense and Veterans Brain Injury Center, and the list of variables was further refined based on clinical expertise. Subsequently, we conducted stepwise logistic regression, and best fitting model was used to create a probability score to be applied to all TBI-related medical encounters. To validate the accuracy of the model-derived probability score, a stratified random sample of medical records was reviewed by trained clinician. At the 0.5 probability cutoff point, the model had an area under the curve of 0.69. We applied the final model portability scores to all identified TBI encounters to estimate the incidence of repeat TBI within the cohort.

Results

Between October 1, 2015, and September 30, 2017, we identified 36,440 SMs and their first lifetime TBI encounter. Study follow-up period was 2 years. Predictors of repeat TBI (rTBI) encounters included the presence of TBI diagnosis extender codes “A” (odds ratio [OR] = 4.67, 95% CI 2.15-10.12); W and V series codes (OR = 4.05, 95% CI 2.05-7.95 and OR = 2.86, 95% CI 1.40-5.83, respectively); patient's disposition at home/quarters; and admission or immediate referral (OR = 3.67, 95% CI 1.79-7.51). Number of diagnosis codes in patient's medical record was inversely associated with a repeat TBI encounter (OR = 0.84, 95% CI 0.76-0.96). Applying model-derived probability score onto identified medical records, we estimate that 804 unique SMs sustained an rTBI during the follow-up period, yielding a rate of 260 rTBIs per 10,000 person-years or approximately 2.32% of SMs annually.

Conclusion

Probability scores based on statistical modeling can provide reasonable estimates of repeat incidences of TBI using medical billing data when formerly only the first TBI was thought to be measurable. With 100% sensitivity and 69% specificity, application of these models can inform estimates of repeat TBI across the MHS. This effort shows initial success in estimating repeat TBI, and further modeling work is encouraged to increase the predictive characteristics of the models as these efforts show promise in estimating repeat TBI across the MHS.

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Associations Between Mental and Physical Health Conditions and Occupational Impairments in the U.S. Military.

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Military Medicine

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Introduction

Prior studies have identified associations between specific health conditions and occupational impairments in the U.S. military, but little is known about the relative magnitude of impairments associated with different mental and physical health conditions among military service members. The goal of this study is to comparatively assess occupational impairment associated with mental and physical conditions among active duty military service members.

Materials and Methods

Data on 11,055 U.S. active duty service members were from the Department of Defense 2015 Health Related Behaviors Survey, an anonymous online health survey. Items assessed common mental and physical health conditions. Absenteeism was assessed as number of lost work days and presenteeism was assessed as number of work days with impaired functioning in the past 30 days. This research was approved by the RAND Human Subjects Protections Committee.

Results

Back pain (23%) and anxiety (14%) were the most prevalent conditions in the sample.

Mental health conditions (anxiety, depression, and PTSD) were associated with more absentee and presentee days than physical conditions. Adjusting for physical health conditions, anxiety, depression, and PTSD showed robust associations with both absenteeism and presenteeism.

Conclusions

Common mental health conditions such as anxiety, depression, and PTSD showed robust associations with absenteeism and presenteeism among active duty U.S. military service members. Efforts to rigorously evaluate and improve existing military screening programs and reduce barriers to accessing and engaging in mental healthcare may help to reduce work absenteeism and presenteeism among active duty service members.

<https://doi.org/10.1093/milmed/usab014>

Bright Light Treatment of Combat-related PTSD: A Randomized Controlled Trial.

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Military Medicine

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Introduction

Post-traumatic stress disorder (PTSD) is a prevalent consequence of combat with significant associated morbidity. Available treatments for PTSD have had limitations, suggesting a need to explore alternative or adjuvant treatments. Numerous rationales for bright light treatment of PTSD include its benefits for common PTSD comorbidities of depression, anxiety, and circadian misalignment and its relative ease of use with few side effects. The primary aims of this research were to examine the effects of bright light treatment for combat-related PTSD and associated morbidity.

Materials and Methods

A randomized controlled trial was performed in N = 69 veterans with PTSD attributable to combat in Afghanistan and/or Iraq. Following a 1-week baseline, participants were randomized to 4 weeks of daily morning bright light treatment (10,000 lux for 30 min/day) or a control treatment (inactivated negative ion generator). At baseline and at the end of treatment, participants were rated blindly on the Clinician Assessed PTSD Scale

(CAPS), the Clinical Global Impressions Scale (CGI), and the Hamilton Depression Scale and rated themselves on the PTSD Checklist-Military (PCL-M). Following baseline and each treatment week, participants completed self-reported scales of state anxiety, depression, and sleep, and sleep and the circadian rhythm of wrist activity were also assessed with wrist actigraphy.

Results

Compared with the control treatment, bright light elicited significantly greater improvements in the CAPS and CGI-Improvement. The bright light also elicited a significantly greater rate of treatment response (reduction $\geq 33\%$) for the CAPS (44.1% vs. 8.6%) and PCL-M (33% vs. 6%), but no participant had remission from PTSD. Changes in depression, anxiety, and sleep did not differ between treatments. Improvement in CAPS was significantly correlated with a phase advance of the circadian rhythm of wrist activity.

Conclusions

The most comprehensive study on the topic to date indicated significant short-term efficacy of bright light treatment on the primary variables (CAPS and CGI) with clinical relevance (i.e., treatment response) in veterans with chronic PTSD who did not report extremely high habitual light exposure. No significant effects were found for anxiety, depression, or sleep disturbance. Further research is warranted, particularly exploration of circadian phase-shifting mechanisms of bright light for PTSD.

<https://doi.org/10.1093/sleep/zsac026>

Treating sleep and circadian problems to promote mental health: perspectives on comorbidity, implementation science and behavior change.

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Sleep

Volume 45, Issue 4, April 2022

Insufficient sleep and mistimed sleep are prominent, yet under-appreciated and understudied, contributors to poor mental health and to mental disorders. The evidence that improving sleep and circadian functioning is an important pathway to mental health continues to mount. The goal of this paper is to highlight three major challenges ahead.

Challenge 1 points to the possibility that comorbidity is the norm not the exception for the sleep and circadian disorders that are associated with mental disorders. Hence, the sleep and circadian problems experienced by people diagnosed with a mental disorder may not fit into the neat diagnostic categories of existing nosologies nor be adequately treated with single disorder approaches. The Sleep Health Framework and the Transdiagnostic Intervention for Sleep and Circadian Dysfunction (TranS-C) are discussed as alternative approaches. Challenge 2 points to the large time lag between the development of a treatment and the availability of that treatment in routine clinical practice. This is a key reason for the emergence of implementation science, which is a flourishing, well-developed, and quickly moving field. There is an urgent need for more applications of implementation science within sleep and circadian science. Challenge 3 describes one of the greatest puzzles of our time—the need to unlock the fundamental elements of behavior change. There is potential to harness the science of behavior change to encourage widespread engagement in sleep health behavior and thereby reduce the staggering burden of sleep and circadian problems and the associated mental health problems.

<https://doi.org/10.1002/cpp.2642>

Therapeutic alliance in psychological therapy for posttraumatic stress disorder: A systematic review and meta-analysis.

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Clinical Psychology & Psychotherapy
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Background

Therapeutic alliance is a key element of successful therapy. Despite being particularly relevant in people with posttraumatic stress disorder (PTSD), due to fear, mistrust and avoidance, there has not yet been a comprehensive systematic review of therapeutic alliance in this population. This review explored (a) variables which may predict alliance and (b) whether alliance predicts PTSD outcomes.

Method

Following the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines, the review identified 34 eligible studies. Studies were subjected to a quality assessment. Predictors of alliance were considered in a narrative synthesis.

Twelve studies were entered into a meta-analysis of the association between therapeutic alliance and PTSD outcomes.

Results

There was some evidence for individual variables including attachment, coping styles and psychophysiological variables predicting the alliance. Therapy variables did not predict alliance. The therapeutic alliance was found to significantly predict PTSD outcomes, with an aggregated effect size of $r = -.34$, across both in-person and remote therapies.

Limitations

Included studies were restricted to peer-reviewed, English language studies. Quality of included studies was mostly rated weak to moderate, primarily reflecting issues with selection bias in this area of research.

Conclusions

This is the first review to demonstrate that therapeutic alliance is a consistent predictor of PTSD outcomes, in both in-person and remote therapies, and the effect appears at least as strong as in other populations. This is of relevance to clinicians working with traumatized populations. The review identified a need for further research to determine variables predicting alliance in therapy for PTSD.

<https://doi.org/10.1002/jts.22832>

Posttraumatic stress disorder–related anhedonia as a predictor of psychosocial functional impairment among United States veterans.

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Journal of Traumatic Stress

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Prior research suggests that anhedonia symptoms related to posttraumatic stress disorder (PTSD; i.e., diminished interest, detachment from others, and difficulty experiencing positive emotions) are consistently associated with a higher degree of impairment in psychosocial functioning beyond that associated with other PTSD symptoms. Unfortunately, much of this research has used cross-sectional study

designs; relied upon outdated DSM diagnostic criteria; and failed to control for potentially confounding variables, such as the presence of co-occurring depression. This study used data from Waves 2 and 4 ($n = 1,649$) of the Veterans' After-Discharge Longitudinal Registry (Project VALOR), a longitudinal dataset of U.S. Army and Marine veterans. As measured using the Inventory of Psychosocial Functioning, Wave 4 psychosocial functioning was regressed on seven PTSD symptom factors at Wave 2 (i.e., intrusions, avoidance, negative affect, anhedonia, externalizing behaviors, anxious arousal, and dysphoric arousal) and potential Wave 2 confounds. The Anhedonia factor, $\beta = .123$, most strongly predicted later psychosocial functional impairment beyond the impact of other PTSD symptom factors, $\beta_s = -.076-.046$. Clinical implications of these findings are also discussed.

<https://doi.org/10.1080/08995605.2022.2052661>

Depression symptoms as a potential mediator of the association between disordered eating symptoms and sexual function in women service members and veterans.

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Military Psychology

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Sexual dysfunction is associated with disorders commonly diagnosed in service members/veterans (SM/Vs; e.g., depression, posttraumatic stress disorder) and increased risk for suicide in service women. Theory indicates depression may play an important role in predicting sexual dysfunction in the presence of certain mental health challenges, such as disordered eating symptoms. Given the risk for depression and incidence of eating disorders in women SM/Vs, the current study examined whether depressive symptoms mediated the association of disordered eating symptoms and sexual dysfunction in women SM/Vs. Participants ($n = 494$) were recruited via social media and completed measures of sexual function, disordered eating symptoms, depressive symptom severity, a demographic inventory, and measures of relationship satisfaction and trauma exposure (covariates). Based on self-report measures, probable sexual dysfunction, eating disorder, and depressive disorders were found among 58.70%, 38.5%, and 44.13% of participants, respectively. The relationship of higher

disordered eating symptoms and lower sexual function was indirect, through higher depressive symptoms (indirect effect: -0.57 , 95% confidence interval: -0.82 , -0.34). Findings underscore the importance of screening for sexual function, particularly when disordered eating behavior or depression is present. Integrating treatment for sexual function into existing treatments for women SM/Vs with disordered eating and depression symptoms may be valuable.

<https://doi.org/10.1001/jamapsychiatry.2022.0609>

Association Between Physical Activity and Risk of Depression: A Systematic Review and Meta-analysis.

Pearce, M., Garcia, L., Abbas, A., Strain, T., Schuch, F. B., Golubic, R., Kelly, P., Khan, S., Utukuri, M., Laird, Y., Mok, A., Smith, A., Tainio, M., Brage, S., & Woodcock, J.

JAMA Psychiatry
April 13, 2022

Importance:

Depression is the leading cause of mental health-related disease burden and may be reduced by physical activity, but the dose-response relationship between activity and depression is uncertain.

Objective:

To systematically review and meta-analyze the dose-response association between physical activity and incident depression from published prospective studies of adults.

Data sources:

PubMed, SCOPUS, Web of Science, PsycINFO, and the reference lists of systematic reviews retrieved by a systematic search up to December 11, 2020, with no language limits. The date of the search was November 12, 2020.

Study selection:

We included prospective cohort studies reporting physical activity at 3 or more exposure levels and risk estimates for depression with 3000 or more adults and 3 years or longer of follow-up.

Data extraction and synthesis:

Data extraction was completed independently by 2 extractors and cross-checked for errors. A 2-stage random-effects dose-response meta-analysis was used to synthesize data. Study-specific associations were estimated using generalized least-squares regression and the pooled association was estimated by combining the study-specific coefficients using restricted maximum likelihood.

Main outcomes and measures: The outcome of interest was depression, including (1) presence of major depressive disorder indicated by self-report of physician diagnosis, registry data, or diagnostic interviews and (2) elevated depressive symptoms established using validated cutoffs for a depressive screening instrument.

Results:

Fifteen studies comprising 191 130 participants and 2 110 588 person-years were included. An inverse curvilinear dose-response association between physical activity and depression was observed, with steeper association gradients at lower activity volumes; heterogeneity was large and significant ($I^2 = 74\%$; $P < .001$). Relative to adults not reporting any activity, those accumulating half the recommended volume of physical activity (4.4 marginal metabolic equivalent task hours per week [mMET-h/wk]) had 18% (95% CI, 13%-23%) lower risk of depression. Adults accumulating the recommended volume of 8.8 mMET hours per week had 25% (95% CI, 18%-32%) lower risk with diminishing potential benefits and higher uncertainty observed beyond that exposure level. There were diminishing additional potential benefits and greater uncertainty at higher volumes of physical activity. Based on an estimate of exposure prevalences among included cohorts, if less active adults had achieved the current physical activity recommendations, 11.5% (95% CI, 7.7%-15.4%) of depression cases could have been prevented.

Conclusions and relevance:

This systematic review and meta-analysis of associations between physical activity and depression suggests significant mental health benefits from being physically active, even at levels below the public health recommendations. Health practitioners should therefore encourage any increase in physical activity to improve mental health.

<https://doi.org/10.1080/08897077.2021.1941512>

Alcohol use disorder in active duty service members: Incidence rates over a 19-year period.

Judkins, J. L., Smith, K., Moore, B. A., & Morissette, S. B.

Substance Abuse

2022; 43(1): 294-300

Background:

Alcohol use is a concerning issue for the military given its potential negative impact on human performance. Limited data are available regarding the incidence of alcohol use disorder in the military, which is critical to understand to evaluate force readiness, as well as for preventative initiatives and treatment planning. The aim was to examine the alcohol use disorder incidence rates (overall and across demographics) among active duty service members from 2001 to 2018.

Methods:

Data on 208,870 active duty service members between 2001 and 2018 from the Defense Medical Epidemiology Database was examined. Incidence rates were analyzed to determine the diagnostic rates of AUD (including both alcohol abuse and dependence), which were then examined by sex, age, service branch, military pay grade, marital status, and race.

Results:

Incidence rates of AUD in active duty service members (per 1,000 service members) ranged from 6.45 to 10.50 for alcohol abuse and 5.21 to 7.11 for alcohol dependence. Initial diagnoses of new-onset AUD occurred most frequently within 20-24 year-old, white, male, and non-married U.S. Army service members in the enlisted pay grades of E-1 to E-4. Statistically significant differences ($p < .001$) were found between observed and expected counts across all examined demographic variables.

Conclusions:

To our knowledge, this is the first study to provide a comprehensive examination of AUD incidence rates in an active-duty military population over an extended 18-year period and during the last decade. Incidence rates were higher than expected for alcohol dependence and lower than expected for alcohol abuse. Given the untoward effects of AUD on overall health and force readiness, active-duty service members may benefit from more advanced preventative interventions to decrease incidence rates of AUD over time. Future research should use these data to develop targeted interventions for the demographics at greatest risk.

<https://doi.org/10.1093/pm/pnab326>

Use of Complementary and Integrative Health Therapies Before Intensive Functional Restoration in Active Duty Service Members with Chronic Pain.

Flynn, D. M., McQuinn, H., Burke, L., Steffen, A., Fairchok, A., Snow, T., & Doorenbos, A. Z.

Pain Medicine

2022 Apr 8; 23(4): 844-856

Objective: Psychosocial factors are known to predict chronic pain, and the use of complementary and integrative health (CIH) therapies to address pain is emerging among the military population. However, conflicting results on pain outcomes warrant additional research. This study aimed to 1) evaluate the benefit of adding a CIH pain management program to standard rehabilitative care (SRC), as compared with SRC alone, as a precursor to an intensive functional restoration (FR) program; 2) identify factors that predict improvement in pain outcomes after treatment; and 3) determine the proportion of participants who experience a clinically meaningful response.

Design: Pragmatic randomized controlled clinical trial. Participants were randomized to a 3-week course of either SRC alone or SRC+CIH (stage 1), followed by a 3- to 6-week course of FR (stage 2).

Subjects:
Active duty service members with chronic pain.

Methods:
Participants completed either SRC alone or SRC+CIH (stage 1), followed by a course of FR (stage 2). Patient-reported and provider-determined outcomes were collected at baseline, after stage 1, and after stage 2. A covariance pattern model with an unstructured residual covariance matrix was used to compare treatment arms while accounting for dependency due to repeated measurements.

Results:
A total of 210 service members participated. Most were in the Army (82%) and were male (84%). Participants randomized to the SRC+CIH intervention had greater improvement in the pain impact score than did those in the SRC-alone group. Predictors of outcomes were baseline impact score, anger, depression, and educational status.

Conclusions:

This study found that military service members with the highest pain impact benefit the most from interdisciplinary pain care.

<https://doi.org/10.1016/j.jpsychires.2022.02.028>

Dispositional gratitude predicts the development of psychopathology and suicidal behaviors: Results from a 7-year population-based study of U.S. military veterans.

McGuire, A. P., Fagan, J. G., Tsai, J., Merians, A. N., Nichter, B., Norman, S. B., Southwick, S. M., & Pietrzak, R. H.

Journal of Psychiatric Research
2022 May; 149: 168-176

Background:

Dispositional gratitude has been implicated as a psychological characteristic that may modulate risk for mental health outcomes. Using a population-based sample of U.S. military veterans, this study evaluated the association between dispositional gratitude and the development of psychopathology and suicidal behaviors over a 7-year period.

Methods:

A nationally representative sample of U.S. veterans was surveyed at four timepoints across seven years. Analyses were restricted to veterans without incident outcomes at baseline. Multivariable analyses were conducted to examine the relation between baseline levels of dispositional gratitude and risk of developing (a) major depressive disorder (MDD), generalized anxiety disorder (GAD), or posttraumatic stress disorder (PTSD); (b) suicidal ideation; and (c) suicide attempts.

Results:

A total 9.6% of veterans developed MDD, GAD, and/or PTSD, 9.5% developed suicidal ideation, and 2.8% reported having attempted suicide over the 7-year follow-up period. Among veterans with high levels of dispositional gratitude, incidence was lower for MDD/GAD/PTSD (8.0%), suicidal ideation (6.8%), and suicide attempts (1.5%). Conversely, veterans with low dispositional gratitude were at substantially higher risk of developing MDD/GAD/PTSD (27.7%), suicidal ideation (33.6%), and suicide attempts

(20.3%).

Conclusions:

High dispositional gratitude may help protect against the development of psychopathology and suicidal behaviors in U.S. military veterans, whereas low gratitude may increase risk of developing these outcomes. Collectively, these results support the potential utility of enhancing gratitude as part of primary prevention efforts for veterans, service members, and other populations at heightened risk for adverse mental health outcomes.

<https://doi.org/10.1016/j.jpsychires.2022.02.016>

Characteristics of suicide attempts associated with lethality and method: A latent class analysis of the Military Suicide Research Consortium.

Gromatsky, M., Edwards, E. R., Sullivan, S. R., van Lissa, C. J., Lane, R., Spears, A. P., Mitchell, E. L., Arney, M. F., Cáceda, R., & Goodman, M.

Journal of Psychiatric Research
2022 May; 149: 54-61

While suicide prevention is a national priority, particularly among service members and veterans (SMVs), understanding of suicide-related outcomes remains poor. Person-centered approaches (e.g., latent class analysis) have promise to identify unique risk profiles and subgroups in the larger population. The current study identified latent subgroups characterized by prior self-directed violence history and proximal risk factors for suicide among suicide attempt survivors, and compared subgroups on demographics and most-lethal attempt characteristics. Participants included civilians and SMVs reporting lifetime suicide attempt(s) (n = 2643) from the Military Suicide Research Consortium. Two classes emerged from Common Data Elements: suicide attempt and non-suicidal self-injury frequency, suicide attempt method, perceived likelihood of future suicide, suicide disclosure, suicide intent, and perceived and actual lethality of attempt. A Higher-Risk History class was characterized by greater intent to die, certainty about attempt fatality and method lethality, belief injury would be medically unfixable, and likelihood of prior non-suicidal self-injury. A Lower-Risk History class was characterized by greater ambivalence toward death and methods. Higher-Risk class members were more likely to be male, older, SMVs, have less formal education, use firearms as most-lethal attempt method, and require a higher degree of medical

attention. Lower-Risk class members were more likely to be female, civilian, use cutting as most-lethal attempt method, and require less medical attention for attempts. Findings have implications for risk assessments and highlight the importance of subjective perceptions about suicidal behavior. Further investigation of real-time individual-level is necessary, especially for SMVs who may be at greatest risk for potentially lethal suicidal behavior.

<https://doi.org/10.1080/07481187.2020.1740832>

Intensive outpatient treatment of PTSD and complicated grief in suicide-bereaved military widows.

Ohye, B., Moore, C., Charney, M., Laifer, L. M., Blackburn, A. M., Bui, E., & Simon, N. M.

Death Studies

2022; 46(2): 501-507

We report on a novel 2-week intensive outpatient treatment program (IOP) for 24 widows bereaved by the suicide death of their veteran spouse. We targeted symptoms of posttraumatic stress disorder (PTSD) and complicated grief (CG) concurrently in three separate cohorts. All patients either witnessed the death or discovered the body of their deceased partner, who was a veteran of the United States military. PTSD, CG, and depression symptom severity decreased significantly from pre- to post-treatment, with effect sizes of 0.85, 1.21, and 1.35, respectively. These outcomes provide preliminary support for an IOP to treat co-occurring PTSD and CG among widowed survivors of veteran suicide.

<https://pubmed.ncbi.nlm.nih.gov/35404559/>

COVID-19 and depressive symptoms among active component U.S. service members, January 2019-July 2021.

Christine Smetana, Deven Patel, Shauna Stahlman, Aparna Chauhan, Natalie Wells, Saixia Ying

MSMR

Jan 1; 29(1): 7-13

This study examined the rates of depressive symptoms in active component U.S. service members prior to and during the COVID-19 pandemic and evaluated whether SARS-CoV-2 test results (positive or negative) were associated with self-reported depressive symptoms. Depressive symptoms were measured by the Patient Health Questionnaire-2 (PHQ-2) screening instrument and were defined as positive if the total score was 3 or greater. From 1 January 2019 through 31 July 2021, 2,313,825 PHQ-2s were completed with an increase in the positive rate from 4.0% to 6.5% (absolute % difference, +2.5%; relative % change, +67.1%) from the beginning to the end of the period. While there was a gradual increase of 19.8% in the months prior to the pandemic (1.4%/month average), this increase grew to 40.4% during the pandemic (2.5%/month average). However, no association was found between a positive or negative SARS-CoV-2 test result and the PHQ-2 screening instrument result. These findings suggest that the accelerated increase in depressive symptoms is likely a function of the environment of the COVID-19 pandemic instead of the SARS-CoV-2 infection itself. Further research to better understand specific factors of the pandemic leading to depressive symptoms will improve efficient allocation of military medical resources and safeguard military medical readiness.

Links of Interest

Air Force offers help to LGBTQ personnel, families hurt by state laws

<https://www.washingtonpost.com/politics/2022/04/16/air-force-lgbtq-laws-help-families/>

CBT-I to Improve Functional Outcomes in Veterans with Psychosis

https://www.mirecc.va.gov/visn5/newsletter/Spring_2022/Article_3.asp

Enhancing Access to Insomnia Care in VA PCMH Clinics

https://www.mirecc.va.gov/visn5/newsletter/Spring_2022/Article_4.asp

Evaluation of Multifaceted and Multi-Systems Equity and Disparities in Low Back Pain Treatment and Outcomes in Women Veterans

https://www.mirecc.va.gov/visn5/newsletter/Spring_2022/Article_5.asp

SAFE Option Provides Care for Victims of Sexual Violence

<https://health.mil/News/Articles/2022/04/14/SAFE-Option-Provides-Care-for-Victims-of-Sexual-Violence>

Resource of the Week: [Gender Differences in Health Among U.S. Service Members: Unwanted Gender-Based Experiences as an Explanatory Factor](#)

New, from the RAND Corporation:

Women serving in the U.S. military are more likely to report mental health problems than men, including symptoms of depression and posttraumatic stress disorder (PTSD). Women also experience much higher rates of sexual harassment, gender discrimination, and sexual assault than men. This report examines how unwanted gender-based experiences among military service members relate to differences in health.

The authors find that, once experiences of gender discrimination, sexual harassment, and sexual assault are accounted for, gender differences in health are largely attenuated. That is, the vulnerability to physical and mental health problems among female service members appears to be highly correlated with these unwanted gender-based experiences. The results highlight the possible health benefits of improved prevention of gender discrimination, sexual harassment, and sexual assault, and they indicate the need to address the mental and physical health of service members exposed to these types of experiences.

Key Findings

- Female service members report unwanted gender-based experiences—sexual harassment, sexual assault, and gender discrimination—at rates three to six times higher than male service members.
- When demographic and workplace variables are controlled for, female service members are significantly more likely than their male counterparts to report worse physical health, more depressive symptoms, higher likelihood of lifetime trauma, and higher levels of PTSD symptoms.
- Exposure to unwanted gender-based experiences explains virtually all of the gender differences in depression and PTSD symptoms, as well as overall health ratings.

- Past-year sexual harassment had the greatest unique explanatory power for physical health, and past-year sexual harassment and gender discrimination explained the most variance for depressive symptoms; all three unwanted gender-based experiences explained a significant amount of the variance in PTSD symptoms and completely attenuated the gender effect for PTSD symptoms.
- If sexual harassment and gender discrimination are elevating symptoms of ill health among a large portion of the military workforce, this suggests a strong rationale for investing greater attention and resources into preventing sexual harassment and gender discrimination, and for providing care to those who have experienced them.



Research Report

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Gender Differences in Health Among U.S. Service Members

Unwanted Gender-Based Experiences as an Explanatory Factor

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