

Research Update -- June 30, 2022

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https://doi.org/10.1089/neu.2022.0103

Military Traumatic Brain Injury: The History, Impact, and Future.

Megan A. Lindberg, Elisabeth M. Moy Martin, and Donald W. Marion

Journal of Neurotrauma Published Online:3 Jun 2022

This review examines how lessons learned from United States military conflicts, beginning with the United States Civil War through the engagements in Iraq and Afghanistan, have shaped current traumatic brain injury (TBI) care in the United States military, influenced congressional mandates and directives, and led to best practices in caring for the warfighter. Prior to the most recent war, emphasis was placed on improving the surgical and medical care of service members (SM) with severe and especially penetrating brain injuries. However, during the Iraq and Afghanistan conflicts, also known as the Global War on Terrorism (GWOT), blast injury from improvised explosive devices most often caused mild TBI (mTBI), an injury that was not always recognized and was labelled the "signature wound" of the GWOT. This has led to extensive research on objective diagnostic technologies for mTBI, the association of mTBI with post-traumatic stress disorder (PTSD), and the long term consequences of mTBI. Here we summarize the key findings and most important advances from those efforts, and discuss the way forward regarding future military conflicts.

https://doi.org/10.1037/pro0000463

A review of the referral process for evidence-based psychotherapies for PTSD among veterans.

Ranney, R. M., Cordova, M. J., & Maguen, S.

Professional Psychology: Research and Practice 2022; 53(3), 276–285

This study reviews current literature regarding referral to evidence-based psychotherapies (EBPs) for posttraumatic stress disorder (PTSD) within U.S. Veterans

Affairs (VA). The referral process for EBPs for PTSD impacts care, but this process has not been the focus of much research. The current literature suggests that patient, provider, and structural factors all play a role in rates of referral to EBPs for PTSD. Patient factors include PTSD severity and comorbid diagnoses. Provider factors include provider role and provider beliefs about EBPs for PTSD. Structural factors include screening and diagnosis practices/procedures, availability of trained providers, use of care managers, and disparities in care. Notably, we found that summarizing the literature on the referral process is challenging because this process varies greatly across Veterans Affairs sites. We provide recommendations for future research and ways to address barriers to successful referrals to EBPs for PTSD, with a focus on education for referring providers, patient education, increasing availability of web-based and briefer EBPs, and procedural/administrative changes. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

https://doi.org/10.1093/milmed/usac105

Evaluation of Posttraumatic Stress Disorder and Acute Stress Disorder VA/DoD Clinical Practice Guidelines Training.

Shelby Edwards, DHSc, PA-C, Amanda Edwards-Stewart, PhD, ABPP, Christina Dean, PhD, Madhavi K Reddy, PhD

Military Medicine Published: 21 April 2022

Introduction

This study evaluated the use of an online learning platform [Joint Knowledge Online (JKO)] for dissemination of the Veterans Affairs and Department of Defense Clinical Practice Guidelines for Management of Posttraumatic Stress Disorder (PTSD) and Acute Stress Disorder (ASD). User satisfaction with the training program was assessed, users were asked to estimate their knowledge base about PTSD and ASD, and users provided comments about how they might use the course material in their clinical practice.

Materials and Methods

A total of 4,442 users took at least one of three courses offered via JKO related to the PTSD Clinical Practice Guidelines (CPG) between July 1, 2019 and June 25, 2020. A total of 1,663 users took the post-test after the JKO courses and 235 applied to a

second website (J7) which granted Continuing Education (CE) credits. Data were gathered from the JKO post-course survey, as well as the J7 course survey, which also asked for respondents' written comments.

Results

User satisfaction was analyzed using the JKO survey Likert scale data for each course, and results found most users rated the courses as "good" or "great." Users were also asked to evaluate their knowledge about PTSD management before and after the course. Results from all three courses showed a statistically significant change in prepost knowledge with a medium effect size. Thematic analysis was performed on the write-in comments from each course. Comments indicated participants found the assessment tools provided in the courses to be of particular value.

Conclusions

The VA/DoD's online learning platform (JKO) was a user-friendly, effective tool for training users on PTSD and ASD clinical practice guidelines. Users were satisfied with their experience of the trainings on JKO and improved their knowledge base about the CPG. This study did not evaluate patient data for CPG compliance, but the future study may benefit from these outcomes to demonstrate provider adherence to the guidelines.

https://doi.org/10.1007/s41347-021-00236-0

Connecting Older Veterans with Mental Health Mobile Apps: a Survey of Provider and Staff Use of Apps and Patient Education Materials.

Christine E. Gould, Priyanka S. Mehta, Chalise Carlson, Jason R. Anderson, Ana Jessica Alfaro & Erin Y. Sakai

Journal of Technology in Behavioral Science Published: 23 November 2021

Mental health apps provide patients with psychoeducation, self-assessment, and tools to manage mental health symptoms such as anxiety, depressive, and posttraumatic stress symptoms. The US Department of Veterans Affairs (VA) and Department of Defense have developed mental health apps (e.g., PTSD Coach, Mindfulness Coach) which do not collect or share identifiable data (Gould et al., 2019; Owen et al., 2018) and are freely available to the general public. However, successful implementation of

these mental health apps requires provider support and careful attention to patient-level barriers to technology use (Connolly et al., 2021).

Surveys of VA mental and behavioral health providers demonstrate favorable perceptions of apps and ongoing use of apps with patients. In one survey (Miller et al., 2019), 80% of providers reported using apps with patients, yet many identified several barriers to using apps including logistical challenges (e.g., finding time to help patients download apps) and patient-facing challenges (e.g., smartphone affordability, patient preference, comfort with apps). Reger et al. (2017) found that providers reported barriers to using apps as an adjunct to psychotherapy with patients who had low technology literacy and were less comfortable with their mobile device. These patient-facing challenges highlight the need to support providers in promoting digital literacy for their patients.

https://doi.org/10.1080/21635781.2022.2067922

Families of Origin: The Experience of Parents of Single Military Members.

Lisa Williams, Elena Goubanova & LCol Robert Morrow

Military Behavioral Health Published online: 23 Jun 2022

Enlisting in the military is a career choice that impacts the entire family unit. Many research studies have examined the effect of military life on spouses and children of military members; however little research to date has examined the experience of parents of adult children, especially for those of single Canadian Armed Forces (CAF) members. Given that many military members are often younger and not yet in stable romantic relationships, parents are often a primary source of emotional and instrumental support. Building on military family research, the current study was conducted to gain a greater understanding of parents' experiences upon the enlistment of their adult children and adjustment to their military career. Parents of single CAF members' experiences were examined through a series of semi-structured interviews and focus groups in seven major Canadian cities. The study group consisted of 55 participants with a mean age of 56 years. Thematic analysis was employed to identify common themes across interviews and focus groups. Results suggest that parents often experience fear and worry over their children's wellbeing, loss of control, and uncertainty. They strive to maintain connection to their adult children and provide emotional, instrumental, and

financial support. Over time, many parents are able to develop increased resilience and adjustment to their children's careers, in part due to the development of military connections, informal and formal support, and adaptive coping methods. The findings are discussed in relation to improving parental resilience and how the CAF may best support them.

https://doi.org/10.1037/tra0001095

The impact of military sexual trauma and warfare exposure on women veterans' perinatal outcomes.

Nillni, Y. I., Fox, A. B., Cox, K., Paul, E., Vogt, D., & Galovski, T. E.

Psychological Trauma : Theory, Research, Practice and Policy 2022 Jul; 14(5): 730-737

Objective:

In the general population, history of trauma is associated with a range of adverse perinatal outcomes, which have long-term negative consequences for both mother and child. Research examining the impact of trauma, particularly trauma occurring during military service, on perinatal outcomes among women veterans is still in its nascence. The current study examined if warfare exposure and military sexual trauma (MST) contributed unique variance to the prediction of a broad range of adverse perinatal outcomes (i.e., preterm birth, full-term birth, infant birth weight, postpartum depression and/or anxiety).

Method:

Women veterans living across the U.S. (oversampled for veterans living in high crime communities) completed a mail-based survey, and reported information about all pregnancies that occurred since enlistment in the military. They also reported on warfare exposure and MST using the Deployment Risk and Resilience Inventory.

Results:

A total of 911 women reported on 1,752 unique pregnancies. Results revealed that MST, but not warfare exposure, was associated with having a lower infant birth weight (B = -17.30, SE = 5.41), a slight decrease in the likelihood of having a full-term birth (OR = .97, 95% CI [.93, 1.00]), and an increased likelihood of experiencing postpartum depression and/or anxiety (OR = 1.09, 95% CI [1.10, 1.14]) above and beyond age at

pregnancy, racial/ethnic minority status, childhood violence exposure, and warfare exposure.

Conclusions:

Findings highlight the importance of screening for MST during pregnancy and traumainformed obstetric care. (PsycInfo Database Record (c) 2022 APA, all rights reserved).

https://doi.org/10.1037/tra0001102

The impact of deployment-related stressors on the development of PTSD and depression among sexual minority and heterosexual female veterans.

Gorman, K. R., Kearns, J. C., Pantalone, D. W., Bovin, M. J., Keane, T. M., & Marx, B. P.

Psychological Trauma : Theory, Research, Practice and Policy 2022 Jul; 14(5): 747-750

Objective:

Sexual minority female (SMF) veterans experience unique stressors apart from their service in the military. In this study, we compared SMF and heterosexual female (HF) veterans' rates of deployment-related stressors (i.e., military sexual assault, combat exposure, and harassment), posttraumatic stress disorder (PTSD), and major depressive disorder (MDD) and their association with one another.

Method:

Participants were 699 female veterans who provided self-report data on exposure to deployment-related stressors and were assessed for MDD and PTSD by trained diagnosticians.

Results:

SMF and HF veterans had similar rates of PTSD, MDD, and deployment-related stressors. However, deployment-related stressors were less likely to be associated with diagnosis or symptoms of either PTSD or MDD among SMF veterans.

Conclusion:

SMF veterans may have unique stressors driving their development of MDD and PTSD. Understanding how different military stressors may confer risk for SMF veterans versus HF veterans is necessary to provide informed and sensitive clinical care to SMF veterans. (PsycInfo Database Record (c) 2022 APA, all rights reserved).

https://doi.org/10.1007/s11920-022-01341-4

Guiding Army Commanders' Decision-making Process in Managing Their Suicide Prevention Programs.

Amin, R., & Donoho, C. J.

Current Psychiatry Reports 2022 Jul; 24(7): 337-344

Purpose of review:

This paper focuses on how mental health professionals working with Army commanders can help them make decisions based on valid population-based metrics. We first summarize the scope of the impact of suicides on the Army. We then describe the process by which decision-making can be optimized.

Recent findings:

The currently available tools in the US Army including BH Pulse, Unit Risk Inventory, The Azimuth Check, and the Army Readiness Assessment Program have a role in assisting mental health professionals. The specific advantages of BH Pulse over the other tools are highlighted. The US Army has been committed to enhancing its suicide prevention program through comprehensive policies, procedures, and provisions of resources. Commanders are expected to interact with the suicide prevention programs in their units and maximize the systems in place to prevent suicides and other negative mental health outcomes. Commanders are expected to receive cues and signals from a variety of data sources to assist their decision-making process. We discuss the specific advantages of BH Pulse and recommend its routine use for primary prevention and utilizing this tool after incidents to make data-driven, justifiable decisions. Finally, recommendations are provided on enhancing a unit's suicide prevention program.

https://doi.org/10.1001/jamaneurol.2022.1567

Cognitive Behavioral Therapy for Veterans With Comorbid Posttraumatic Headache and Posttraumatic Stress Disorder Symptoms: A Randomized Clinical Trial.

McGeary, D. D., Resick, P. A., Penzien, D. B., McGeary, C. A., Houle, T. T., Eapen, B. C., Jaramillo, C. A., Nabity, P. S., Reed, D. E., 2nd, Moring, J. C., Bira, L. M., Hansen, H. R., Young-McCaughan, S., Cobos, B. A., Mintz, J., Keane, T. M., & Peterson, A. L.

JAMA Neurology 2022 Jun 27

Importance:

Posttraumatic headache is the most disabling complication of mild traumatic brain injury. Posttraumatic stress disorder (PTSD) symptoms are often comorbid with posttraumatic headache, and there are no established treatments for this comorbidity.

Objective:

To compare cognitive behavioral therapies (CBTs) for headache and PTSD with treatment per usual (TPU) for posttraumatic headache attributable to mild traumatic brain injury.

Design, setting, and participants:

This was a single-site, 3-parallel group, randomized clinical trial with outcomes at posttreatment, 3-month follow-up, and 6-month follow-up. Participants were enrolled from May 1, 2015, through May 30, 2019; data collection ended on October 10, 2019. Post-9/11 US combat veterans from multiple trauma centers were included in the study. Veterans had comorbid posttraumatic headache and PTSD symptoms. Data were analyzed from January 20, 2020, to February 2, 2022.

Interventions:

Patients were randomly assigned to 8 sessions of CBT for headache, 12 sessions of cognitive processing therapy for PTSD, or treatment per usual for headache.

Main outcomes and measures:

Co-primary outcomes were headache-related disability on the 6-Item Headache Impact Test (HIT-6) and PTSD symptom severity on the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition) (PCL-5) assessed from treatment completion to 6 months posttreatment.

Results:

A total of 193 post-9/11 combat veterans (mean [SD] age, 39.7 [8.4] years; 167 male veterans [87%]) were included in the study and reported severe baseline headache-related disability (mean [SD] HIT-6 score, 65.8 [5.6] points) and severe PTSD symptoms (mean [SD] PCL-5 score, 48.4 [14.2] points). For the HIT-6, compared with usual care, patients receiving CBT for headache reported -3.4 (95% CI, -5.4 to -1.4; P < .01) points lower, and patients receiving cognitive processing therapy reported -1.4 (95% CI, -3.7 to 0.8; P = .21) points lower across aggregated posttreatment measurements. For the PCL-5, compared with usual care, patients receiving CBT for headache reported -6.5 (95% CI, -12.7 to -0.3; P = .04) points lower, and patients receiving cognitive processing therapy reported -8.9 (95% CI, -15.9 to -1.9; P = .01) points lower across aggregated posttreatment measurement measurements. Adverse events were minimal and similar across treatment groups.

Conclusions and relevance:

This randomized clinical trial demonstrated that CBT for headache was efficacious for disability associated with posttraumatic headache in veterans and provided clinically significant improvement in PTSD symptom severity. Cognitive processing therapy was efficacious for PTSD symptoms but not for headache disability.

Trial registration: ClinicalTrials.gov Identifier: <u>NCT02419131</u>.

https://doi.org/10.3389/fpsyt.2022.899084

Impact and Risk of Moral Injury Among Deployed Veterans: Implications for Veterans and Mental Health.

Boscarino, J. A., Adams, R. E., Wingate, T. J., Boscarino, J. J., Urosevich, T. G., Hoffman, S. N., Kirchner, H. L., Figley, C. R., & Nash, W. P.

Frontiers in Psychiatry 2022 Jun 6; 13: 899084

The impact of "moral injury" (MI) among deployed veterans, defined as actions in combat that violate a veteran's moral beliefs and result in psychological distress, has increasingly become a significant clinical concern separate from other trauma- and

stressor-related disorders. MI involves severe distress over violations of core beliefs often followed by feelings of guilt and conflict and is common among veterans with PTSD. While the psychological impact of PTSD is well-documented among veterans, this has been done less so with respect to MI. We studied MI among 1,032 deployed veterans who were outpatients in a large non-profit multi-hospital system in central Pennsylvania. The study included active duty and Guard/Reserve members, as well as veterans who were not Department of Veterans Affairs (VA) service users. Our hypothesis was that, controlling for other risk factors, veterans with high MI would have current mental disorders. Our secondary hypothesis was that MI would be associated with other psychopathologies, including chronic pain, sleep disorders, fear of death, anomie, and use of alcohol/drugs to cope post deployment. Most veterans studied were deployed to Vietnam (64.1%), while others were deployed to post-Vietnam conflicts in Iraq and Afghanistan and elsewhere. Altogether, 95.1% of the veterans were male and their mean age was 61.6 years (SD = 11.8). Among the veterans, 24.4% had high combat exposure, 10.9% had PTSD, 19.8% had major depressive disorder, and 11.7% had a history of suicidal thoughts. Based on the Moral Injury Events Scale (MIES), 25.8% had high MI post deployment, defined as a score above the 75th percentile. Results show that high MI among veterans was associated with current global mental health severity and recent mental health service use, but not suicidal thoughts. In addition, as hypothesized, MI was also associated with pain, sleep disorders, fear of death, anomie, use of alcohol/drugs to cope post-deployment, and poor unit support/ morale during deployment. Deployed veterans with MI are more likely to have current mental health disorders and other psychological problems years after deployment. Further research is advised related to the screening, assessment, treatment, and prevention of MI among veterans and others after trauma exposures.

https://doi.org/10.1515/jom-2021-0163

Review of medication-assisted treatment for opioid use disorder.

Ghanem, N., Dromgoole, D., Hussein, A., & Jermyn, R. T.

Journal of Osteopathic Medicine 2022 Mar 14; 122(7): 367-374

Context:

The American opioid epidemic has necessitated the search for safe and effective means of treatment for opioid use disorder (OUD). Medication-assisted treatment (MAT)

encompasses select medications that are proven effective treatments for OUD. Understanding the mechanisms of action, indications, and implementation of MAT is paramount to increasing its availability to all individuals struggling with opioid addiction.

Objectives:

This review is based on an educational series that aims to educate healthcare providers and ancillary healthcare members on the use of MAT for the treatment of OUD.

Methods:

The database PubMed was utilized to retrieve articles discussing the implementation of MAT. Boolean operators and Medical Subject Headings (MeSHs) were applied including: MAT and primary care, MAT and telehealth, methadone, buprenorphine, naltrexone, MAT and osteopathic, MAT and group therapy, and MAT and COVID-19.

Results:

Three medications have been approved for the treatment of OUD: methadone, naltrexone, and buprenorphine. Identifying ways to better treat and manage OUD and to combat stigmatization are paramount to dismantling barriers that have made treatment less accessible. Studies suggest that primary care providers are well positioned to provide MAT to their patients, particularly in rural settings. However, no study has compared outcomes of different MAT models of care, and more research is required to guide future efforts in expanding the role of MAT in primary care settings.

Conclusions:

The coronavirus disease 2019 (COVID-19) pandemic has led to changes in the way MAT care is managed. Patients require a novel point-of-care approach to obtain care. This review will define the components of MAT, consider the impact of MAT in the primary care setting, and identify barriers to effective MAT. Increasing the availability of MAT treatment will allow for greater access to comprehensive treatment and will set the standard for accessibility of novel OUD treatment in the future.

https://doi.org/10.1037/tra0000538

Childhood adversity and mental health in veterans seeking treatment for mental health difficulties: Comparisons with the general military population.

Murphy, D., & Turgoose, D.

Psychological Trauma : Theory, Research, Practice and Policy 2022 Jul; 14(5): 805-811

Objective:

The aims of the present study were to measure childhood adversity in veterans seeking treatment for mental health difficulties and to compare rates of childhood adversity with the general military population. Further, the study explored associations between childhood adversity and mental health difficulties and demographic variables.

Method:

Participants were recruited from a U.K. veterans mental health charity and completed surveys relating to childhood adversity, mental health, and demographic variables. Ratings of childhood adversity were compared with data previously collected from the wider U.K. military population. Logistic regression analyses were used to explore associations between childhood adversity, mental health, and demographic factors.

Results:

In total, 44% of veterans (N = 178/403) reported experiencing 6 or more adverse events in childhood, compared with 24% in the general military population. Many participants reported drug and alcohol misuse or domestic violence between parents. PTSD, anger, and brain injury were all related to high childhood adversity.

Conclusions:

Veterans who are seeking help for mental health difficulties report experiencing a high amount of adversity in childhood, suggesting they are more likely to present with complex mental health profiles. Clinicians working with veterans would benefit from assessment for childhood adversity in formulating mental health difficulties in this population. The Armed Forces and those involved in postdeployment health care have a duty to continue to provide and improve effective mental health assessments and interventions to ensure veterans have access to appropriate support and treatments. (PsycInfo Database Record (c) 2022 APA, all rights reserved).

https://doi.org/10.1037/tra0000512

Protective factors that mitigate the indirect risk of combat exposure upon meaning in life: A longitudinal study of student veterans.

Kinney, A. R., Schmid, A. A., Henry, K. L., Coatsworth, J. D., & Eakman, A. M.

Psychological Trauma : Theory, Research, Practice and Policy 2022 Jul; 14(5): 795-804

Objective:

Studies of combat emphasize its impact upon health-related outcomes (e.g., depression). Little is known regarding the risk that combat poses to positive outcomes, such as meaning in life, and factors that mitigate this risk. We sought to investigate whether combat poses an indirect risk to life meaning and protective factors that mitigate this risk.

Method:

Through an online survey at 2 time points, 153 combat-exposed veterans enrolled in college reported combat exposure, health status (posttraumatic stress disorder, depressive, somatic symptoms), meaning in life, and protective factors (social support, instructor autonomy support, coping ability, academic self-efficacy, social and community participation, and meaningful activity). We used path analysis to (a) explore whether baseline health status and life meaning mediated the relationship between combat and follow-up life meaning, and (b) test whether protective factors promoted life meaning despite combat and health status (combat-related risk).

Results:

The relationship between combat and follow-up life meaning was mediated by baseline health status and life meaning. Meaningful activity and coping ability were associated with greater life meaning independently of combat-related risk. The indirect effect of combat upon life meaning was weakened when social support, instructor autonomy support, coping ability, and academic self-efficacy were high.

Conclusions:

Combat is associated with worse health status, in turn limiting student veterans' life meaning. This supports an expanded conception of combat-related risk, in which the effect of combat upon positive outcomes is emphasized. Findings indicate that the proposed protective factors may mitigate combat-related risk. We discuss implications for research and practice. (PsycInfo Database Record (c) 2022 APA, all rights reserved).

https://doi.org/10.1016/j.beth.2022.06.004

A Metascientific Review of the Evidential Value of Acceptance and Commitment Therapy for Depression.

Alexander J. Williams, Yevgeny Botanov, Annaleis K. Giovanetti, Victoria L. Perko, ... John K. Sakaluk

Behavior Therapy Available online 26 June 2022

Highlights

- Considering the replication crisis, metascientific reviews of therapy are needed.
- We metascientifically reviewed Acceptance and Commitment Therapy for depression.
- ACT is credibly better than weak control groups in depression treatment.
- Some evidence comparing ACT with Cognitive Behavioral Therapy (CBT) was ambiguous.
- Other evidence comparing ACT with CBT credibly indicated CBT's superiority.

Abstract

In the past three-and-a-half decades, nearly 500 randomized controlled trials (RCTs) have examined Acceptance and Commitment Therapy (ACT) for a range of health problems, including depression. However, emerging concerns regarding the replicability of scientific findings across psychology and mental health treatment outcome research highlight a need to re-examine the strength of evidence for treatment efficacy. Therefore, we conducted a metascientific review of the evidential value of ACT in treating depression. Whereas reporting accuracy was generally high across all trials, we found important differences in evidential value metrics corresponding to the types of control conditions used. RCTs of ACT compared to weaker controls (e.g., no treatment, waitlist) were well-powered, with sample sizes appropriate for detecting plausible effect sizes. They typically yielded stronger Bayesian evidence for (and larger posterior estimates of) ACT efficacy, though there was some evidence of significance inflation among these effects. RCTs of ACT against stronger controls (e.g., other psychotherapies), meanwhile, were poorly powered, designed to detect implausibly large effect sizes, and yielded ambiguous-if not contradicting-Bayesian evidence and estimates of efficacy. Although our review supports a view of ACT as efficacious for treating depression compared to weaker controls, future RCTs must provide more transparent reporting with larger groups of participants to properly assess the difference between ACT and competitor treatments such as behavioral activation and other forms

of cognitive behavioral therapy. Clinicians and health organizations should reassess the use of ACT for depression if costs and resources are higher than for other efficacious treatments.

https://doi.org/10.1080/15402002.2022.2093880

Differences in Treatment Effects of Cognitive-behavioral Therapy for Insomnia Based on Sleep Reactivity: A Preliminary Study.

Kyunga Park, Goeun Kim, Jiyun Lee & Sooyeon Suh

Behavioral Sleep Medicine Published online: 27 Jun 2022

Introduction

Sleep reactivity is the trait-like degree to which stress disrupts sleep, resulting in difficulty falling and staying asleep. Although previous studies have suggested that individuals who have high sleep reactivity may be resistant to cognitive-behavioral therapy for insomnia (CBT-I) effects, there have been no studies that have investigated this empirically. This study explored differential treatment responses in CBT-I based on sleep reactivity levels.

Material and Method

Participants for this study were nineteen insomnia patients who met DSM-5 criteria for insomnia disorder. All participants received four weekly sessions of structured cognitivebehavioral therapy for insomnia (CBT-I). Individuals completed the Insomnia Severity Index (ISI), Korean version of Center for Epidemiologic Studies Depression Scale-Revised (K-CESD-R), Ford Insomnia Response to Stress Test (FIRST), Dysfunctional Beliefs and Attitudes about Sleep Scale-16 (DBAS-16), the Daily Inventory of Stressful Events (DISE) and a sleep diary. Participants were classified into two groups based on sleep reactivity level (high and low sleep reactivity).

Result

Following treatment, significant changes were found for ISI, K-CESD-R, DBAS-16 and FIRST scores, sleep onset latency, wake after sleep onset, sleep efficiency, number of awakenings, sleep quality and feeling refreshed upon awakening in both groups. Improvements in sleep efficiency was lower in the high sleep reactivity group compared to the low sleep reactivity group. No differences in ISI, K-CESD-R, DBAS-16 scores, and stress event frequency during the treatment duration were found between groups.

Conclusion

These findings suggest that sleep reactivity level may be an important factor that affects treatment outcome of CBT-I. Furthermore, the results may suggest that individual response to stress events are more important than the stressor itself.

https://doi.org/10.1016/j.jpsychires.2022.04.019

Subjective cognitive and psychiatric well-being in U.S. Military Veterans screened for deployment-related traumatic brain injury: A Million Veteran Program Study.

Shayna J. Fink, Delaney K. Davey, McKenna S. Sakamoto, Catherine Chanfreau-Coffinier, ... Victoria C. Merritt

Journal of Psychiatric Research Volume 151, July 2022, Pages 144-149

The purpose of this study was to examine subjective cognitive and psychiatric functioning in post-deployed military Veterans who underwent the Veterans Health Administration's Traumatic Brain Injury (TBI) Screening and Evaluation Program and enrolled in the VA's Million Veteran Program (MVP). Veterans (N = 7483) were classified into three groups based on outcomes from the TBI Screening and Evaluation Program: (1) negative TBI screen ('Screen-'), (2) positive TBI screen but no TBI diagnosis ('Screen+/TBI-'), or (3) positive TBI screen and TBI diagnosis ('Screen+/TBI+'). Chisquare analyses revealed significant group differences across all self-reported cognitive and psychiatric health conditions (e.g., memory loss, depression), and ANCOVAs similarly showed a significant association between group and subjective symptom reporting. Specifically, the relationship between TBI group and clinical outcome (i.e., health conditions and symptoms) was such that the Screen+/TBI+ group fared the worst, followed by the Screen+/TBI- group, and finally the Screen- group. However, evaluation of effect sizes suggested that Veterans in the two Screen+ groups (Screen+/ TBI+ and Screen+/TBI-) are faring similarly to one another on subjective cognitive and psychiatric functioning, but that both Screen+ groups are faring significantly worse than the Screen- group. Our results have meaningful clinical implications and suggest that Veterans who screen positive for TBI, regardless of ultimate TBI diagnosis, be eligible for similar clinical services so that both groups can benefit from valuable treatments and therapeutics. Finally, this research sets the stage for follow-up work to be conducted within MVP that will address the neurobiological underpinnings of cognitive and psychiatric distress in this population.

https://doi.org/10.1007/s40141-022-00351-w

Sleep Disturbances Following Traumatic Brain Injury.

Mathews, A., Halsey, S. & Bell, K.

Current Physical Medicine and Rehabilitation Reports Published: 22 April 2022

Purpose of Review

Sleep disorders are prevalent following TBI and evolve over time. This review will discuss physiologic underpinnings of sleep disturbances, review a structured assessment, and propose management strategies for treating sleep disorders after TBI.

Recent Findings

Sleep disorders after TBI may alter normal sleep regulators and systems such as the glymphatic system, resulting in long-term consequences. Additional means of evaluation of sleep such as wearables and home polysomnography may impact our understanding of prevalence and treatment of sleep after TBI.

Summary

Sleep disturbances are common after TBI and can have significant functional impacts. Although significant progress has been made in studying sleep in the brain-injured population, validated tools and guidelines for sleep management in this population are forthcoming. Accurate and timely identification of sleep disorders is important to optimize long-term outcomes and improve quality of life.

https://doi.org/10.1093/milmed/usac095

Is PTSD an Evolutionary Survival Adaptation Initiated by Unrestrained Cytokine Signaling and Maintained by Epigenetic Change?

Stephan Rudzki, MBBS PhD

Military Medicine Published: 21 April 2022

Introduction

Treatment outcomes for PTSD with current psychological therapies are poor, with very few patients achieving sustained symptom remission. A number of authors have identified physiological and immune disturbances in Post Traumatic Stress Disorder (PTSD) patients, but there is no unifying hypothesis that explains the myriad features of the disorder.

Materials and Methods

The medical literature was reviewed over a 6-year period primarily using the medical database PUBMED.

Results

The literature contains numerous papers that have identified a range of physiological and immune dysfunction in association with PTSD. This paper proposes that unrestrained cytokine signaling induces epigenetic changes that promote an evolutionary survival adaptation, which maintains a defensive PTSD phenotype. The brain can associate immune signaling with past threat and initiate a defensive behavioral response. The sympathetic nervous system is pro-inflammatory, while the parasympathetic nervous system is anti-inflammatory. Prolonged cholinergic withdrawal will promote a chronic inflammatory state. The innate immune cytokine IL-1β has pleiotropic properties and can regulate autonomic, glucocorticoid, and glutamate receptor functions, sleep, memory, and epigenetic enzymes. Changes in epigenetic enzyme activity can potentially alter phenotype and induce an adaptation. Levels of IL-1β correlate with severity and duration of PTSD and PTSD can be prevented by bolus administration of hydrocortisone in acute sepsis, consistent with unrestrained inflammation being a risk factor for PTSD. The nervous and immune systems engage in crosstalk, governed by common receptors. The benefits of currently used psychiatric medication may arise from immune, as well as synaptic, modulation. The psychedelic drugs (3,4-Methylenedioxymethamphetamine (MDMA), psilocybin, and ketamine) have potent immunosuppressive and anti-inflammatory effects on the adaptive immune system, which may contribute to their reported benefit in PTSD. There may be distinct PTSD phenotypes induced by innate and adaptive cytokine signaling.

Conclusion

In order for an organism to survive, it must adapt to its environment. Cytokines signal

danger to the brain and can induce epigenetic changes that result in a persistent defensive phenotype. PTSD may be the price individuals pay for the genomic flexibility that promotes adaptation and survival.

An update has been published: Military Medicine, usac094, <u>https://doi.org/</u> <u>10.1093/milmed/usac094</u>

https://doi.org/10.1016/j.beth.2022.04.007

Measurement Error-Corrected Estimation of Clinically Significant Change Trajectories for Interventions Targeting Comorbid PTSD and Substance Use Disorders in OEF/OIF Veterans.

Lissette M. Saavedra, Antonio A. Morgan-López, Sudie E. Back, Sheila V. Patel, ... Lesia M. Ruglass

Behavior Therapy Available online 20 April 2022

Highlights

- Rates of posttraumatic stress disorder and addiction are high among veterans.
- Examined clinically significant change for both disorders with integrated treatment.
- There were no differences between COPE and RP using a conventional approach.
- With this approach, a higher percentage of patients improved with COPE relative to RP.

Abstract

In randomized control trials (RCTs), a focus on average differences between treatment arms often limits our understanding of whether individuals show clinically significant improvement or deterioration. The present study examined differences in individual-level clinical significance trajectories between Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE) and Relapse Prevention (RP). Eighty-one treatment-seeking veterans with a comorbid PTSD/SUD diagnosis were randomized to COPE or RP; data from an additional n = 48 patients who did not meet criteria for both disorders was used to establish a normative threshold. A newly developed, modernized approach to the Jacobson and Truax (1991) clinically significant change framework, using (a) moderated nonlinear factor analysis (MNLFA) scale scoring and (b) measurement error-corrected multilevel modeling (MEC-MLM) was used; this approach was compared to other approaches using conventional total scores and/or assuming no measurement error. Using a conventional approach to estimating the Reliable Change Index (RCI) yielded no differences between COPE and RP in the percentage of patients achieving statistically significant improvement (SSI; 88.9% for both groups). However, under MNLFA/MEC-MLM, higher percentages of patients receiving COPE (75.0%) achieved SSI compared to RP (40.7%). Findings suggest that, even though COPE and RP appear to reduce the same number of PTSD symptoms, MNLFA scoring of outcome measures gives greater weight to interventions that target and reduce "hallmark" PTSD symptoms.

http://doi.org/10.21061/jvs.v8i1.314

Academic Performance of College Student Servicemembers and Veterans: The Influence of Emotion Regulation, Self-Efficacy, and PTSD Symptom Severity.

Shirley, D. M., Metz, A. J., Hinkson, Jr., K. D., Drake-Brooks, M. M., Taylor, J. M., Artman, S. E., ... Bryan, C. J.

Journal of Veterans Studies Published on 21 Apr 2022

Despite increases in fiscal and human resources dedicated to support college student service-members and veterans (CSSV), retention rates remain low with a little over half of this population completing a postsecondary degree. This low retention rate is often attributed to emotional and psychological difficulties associated with transitioning from the stress of military and combat-related environments to civilian life. The current study investigated potential factors related to the academic performance of 412 CSSV. Investigators examined structural models to test hypothesized relationships of independent variables consisting of emotion regulation strategies; college self-efficacy (CSE); regulatory emotional self-efficacy (RESE); and PTSD symptom severity as predictors for self-reported cumulative grade point average (GPA). Consistent with the study hypotheses, path analyses of three structural models demonstrated the influence emotion regulation strategies have on academic outcomes and PTSD symptom severity. Additional mediation models demonstrated cognitive reappraisal, college self-efficacy and regulatory emotional self-efficacy as having direct paths significantly predicting GPA and PTSD severity. Structural models did not produce significant mediation between

emotion regulation strategies and GPA. However, both college self-efficacy and regulatory emotional self-efficacy partially mediated cognitive reappraisal and PTSD symptom severity. Implications and specific recommendations for promoting and maximizing the academic success of CSSV are discussed.

https://doi.org/10.1037/ser0000656

Contrasting ecological contexts among treatment-seeking military sexual assault survivors: Consideration of relationships with sexual and gender minority identification.

Paulson, J. L., Florimbio, A. R., Rogers, T. A., Hartl Majcher, J., Bennett, D. C., & Sexton, M. B.

Psychological Services Advance online publication

Survivors of military sexual trauma (MST) seeking mental health services may present with concerns extending beyond symptom relief. Attention to social, economic, and coping resource contexts is salient for care consideration. Although those identifying as sexual and gender minorities (SGM) are overrepresented among service members exposed to assaultive MST, research contrasting ecological resource variability among treatment seekers is limited. The present study delineates modifiable risk and protective factors that might be used to inform MST-related health care for Veterans, broadly, and SGM-identifying Veterans, specifically. Veterans (N = 493, 12.8% identifying as SGM) presenting for treatment secondary to military sexual assault completed a semistructured clinical interview and intake survey including demographic characteristics, diversity-related factors, and access to psychosocial resources. SGM/ non-SGM-identifying groups were contrasted on individual-, interpersonal-, and community-level ecological characteristics. SGM-identifying Veterans were less likely to report access to sufficient financial resources and had double the prevalence rate of housing instability in contrast to non-SGM-identifying Veterans. No significant differences emerged in terms of past-year interpersonal violence exposure, endorsement of helpful spiritual beliefs, or availability of social support based on SGM identification. Findings underscore the importance of attending to the intersection of SGM identity and ecological factors that can influence Veterans' clinical presentation and treatment engagement. Recommendations for provision of MST services are made. (PsycInfo Database Record (c) 2022 APA, all rights reserved)

https://doi.org/10.3138/jmvfh-2021-0108

Adult attachment and spousal reports of conflict and quality of partner interactions during a post-deployment reunion.

Valerie M. Wood, Linna Tam-Seto, Tara K. MacDonald, Samantha Urban

The goal of this study was to understand whether spousal attachment is related to the quality of post-deployment interactions and issues of conflict reported by spouses of Canadian Armed Forces (CAF) members during a post-deployment reunion. A total of 104 spouses of CAF Regular Force personnel who had recently been reunited with their partners after a deployment were surveyed. Results showed that both attachment anxiety (fear of rejection and abandonment) and attachment avoidance (discomfort with emotional intimacy and closeness) were related to lower-quality post-deployment interactions and the reported frequency of particular conflict issues. Specifically, attachment anxiety was related to more reports of unmet emotional needs, difficulties re-establishing intimacy, finances, and being less likely to describe the conflict in positive terms. The relationship between attachment anxiety and the quality of post-deployment interactions was explained by feeling as though one's original expectations of the reunion were not met.

https://doi.org/10.1080/08995605.2022.2065177

Military-to-civilian transition strains and risky behavior among post-9/11 veterans.

Fred E. Markowitz, Sara Kintzle & Carl A. Castro

Military Psychology Published online: 20 Apr 2022

Many military veterans face significant challenges in civilian reintegration that can lead to troublesome behavior. Drawing on military transition theory (MTT) and using data from a survey of post-9/11 veterans in two metropolitan areas (n = 783), we investigate previously unexamined relationships between post-discharge strains, resentment, depression, and risky behavior, taking into account a set of control variables, including

combat exposure. Results indicated that unmet needs at time of discharge and perceived loss of military identity are associated with increased risky behavior. Much of the effects of unmet discharge needs and loss of military identity are mediated by depression and resentment toward civilians. The results of the study are consistent with insights from MTT, providing evidence of specific ways in which transitions can affect behavioral outcomes. Moreover, the findings highlight the importance of helping veterans meet their post-discharge needs and adapt to changing identity, in order to reduce the risk of emotional and behavioral problems.

https://doi.org/10.1177/08862605221090598

Psychosocial Outcomes Among Veteran and Non-Veteran Survivors of Sexual Assault.

Holder, N., Maguen, S., Holliday, R., Vogt, D., Bernhard, P. A., Hoffmire, C. A., Blosnich, J. R., & Schneiderman, A. I.

Journal of Interpersonal Violence First Published April 23, 2022

Although it is well-established that sexual assault results in variable and long-lasting negative impacts on emotional well-being, perceptions of physical health, and relationship functioning, these "psychosocial" outcomes may vary based on the type(s) of sexual trauma experienced. To identify the differential impact of sexual trauma type(s) on psychosocial outcomes among veterans and non-veterans, we conducted a secondary analysis of data from the Comparative Health Assessment Interview Research Study, a large, national survey study sponsored by the Department of Veterans Affairs. Participants included veterans (n = 3588) and non-veterans (n = 935) who endorsed experiencing childhood sexual assault (CSA), adult sexual assault (ASA, outside of military service for veteran participants), and/or military sexual assault (MSA). Eight measures were used to assess psychosocial outcomes: Well-Being Inventory (WBI) health satisfaction and physical health functioning items, Posttraumatic Stress Disorder Checklist, Patient Health Questionnaire (depression symptoms), Generalized Anxiety Disorder Questionnaire, WBI social satisfaction items, WBI social functioning items, and the Multidimensional Scale of Perceived Social Support (social). A profile analysis was used to determine how sexual trauma type(s) influenced the pattern of responding to the eight psychosocial outcome measures. Veteran sexual assault survivors reported poorer psychological outcomes compared to non-veteran sexual

assault survivors. Non-veteran sexual assault survivors reported poorer outcomes on the majority of social variables compared to veteran sexual assault survivors. Survivors of MSA-only reported poorer psychosocial outcomes compared to veteran and nonveteran survivors of CSA-only and ASA-only on most of the variables assessed. Survivors of ASA-only reported similar or modestly worse psychosocial outcomes when compared to survivors of CSA-only on the majority of variables assessed. Survivors of different types of sexual trauma reported distinct psychosocial outcomes, suggesting that assessment and treatment needs may differ by trauma type.

Links of Interest

Pentagon committee on women in the military is back in business <u>https://www.militarytimes.com/news/pentagon-congress/2022/06/22/pentagon-committee-on-women-in-the-military-is-back-in-business/</u>

Chlamydia is the Military's Most Common Sexually Transmitted Infection <u>https://health.mil/News/Articles/2022/06/21/Chlamydia-is-the-Militarys-Most-Common-Sexually-Transmitted-Infection</u>

LGBTQ+ Veterans Encourage Openness

https://www.maketheconnection.net/read-stories/lgbtq-veterans-encourage-openness/

Openly gay Air Force command chief at Ramstein lends voice of personal experience for Pride Month

https://www.stripes.com/branches/air_force/2022-06-23/ramstein-command-chief-shares-message-hope-6433019.html

Marine Corps, Army report disproportionate substance abuse, mental health issues <u>https://www.militarytimes.com/news/pentagon-congress/2022/06/24/marine-corps-army-have-disproportionate-amounts-of-substance-abuse-mental-health-issues/</u>

 Military service branch differences in alcohol use, tobacco use, prescription drug misuse, and mental health conditions

Army takes sweeping look at how new soldiers are welcomed across the force <u>https://www.armytimes.com/news/your-army/2022/06/27/army-takes-sweeping-look-at-how-new-soldiers-are-welcomed-across-the-force/</u>

Tactical Diaper Bags and Other Fathers' Day Tips from a Marine Officer <u>https://health.mil/News/Articles/2022/06/16/Tactical-Diaper-Bags-and-Other-Fathers-Day-Tips-from-a-Marine-Officer</u>

Resource of the Week – <u>Traumatic Brain Injury: A Guide for Caregivers of Service</u> <u>Members and Veterans</u>

From the Military Health System:

You have started one of the most important jobs in your life—becoming a family caregiver to a service member or veteran who has a TBI. The guide's purpose is to provide you, the caregiver, with the information you need to care and advocate for your injured loved one, and to care for yourself in the process. Just as no two individuals are alike, no two brain injuries are identical. It is impossible to determine the speed and extent of recovery in the immediate aftermath of a TBI. Throughout the recovery process, there are likely to be many steps forward and perhaps a few steps back. Time and treatment will lead to an optimal level of recovery. We hope this guide will sustain you along the way and allow you to identify and access the information and support you need and deserve.

Being a caregiver can be both challenging and rewarding. During the development of this guide, caregivers repeatedly shared that what helped them the most was taking each day one-at-a-time, learning to ask for and accept help, taking steps to reduce stress, and maintaining hope.



Shirl Kennedy, BS, MA Research Editor Henry M. Jackson Foundation employee collaborating with Center for Deployment Psychology Office: (727) 537-6160 Email: shirley.kennedy.ctr@usuhs.edu
