Research Update -- October 10, 2019

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https://academic.oup.com/milmed/advance-article/doi/10.1093/milmed/usz270/5574897

Communicating With Leadership: Behavioral Health and HIPAA in the Field.

LT Christopher G Shank, MC, USN, LCDR Miguel M Alampay, MC, USN

Military Medicine
Published: 27 September 2019
https://doi.org/10.1093/milmed/usz270

It can be challenging for a general medical officer to determine a patient's fitness for duty in the field. Communicating with commanding officers can be difficult given a general medical officer's loyalties as both a physician and medical officer. We present a case of a junior officer that highlights these issues.

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https://onlinelibrary.wiley.com/doi/abs/10.1111/acer.14191

Longitudinal Associations between Sleep, Intrusive Thoughts, and Alcohol Problems Among Veterans.

Miller, M. B., Metrik, J. , Borsari, B. and Jackson, K. M.

Alcoholism: Clinical and Experimental Research
First published: 27 September 2019
https://doi.org/10.1111/acer.14191

Background
Research suggests bidirectional associations between symptoms of posttraumatic stress disorder (PTSD) and sleep disturbance, both of which have been associated with alcohol problems. However, few studies have examined the interplay of these conditions in predicting alcohol problems over time. This study tested 2 competing models: (i) sleep disturbance as a mediator of the association between intrusive

thoughts about trauma and alcohol problems and (ii) intrusion symptoms as the mediator of the sleep/alcohol problem association.

Methods
Veterans (N = 325, 93% male, 81% White) completed assessments at baseline, 6 months, and 12 months as part of a larger observational study. Zero-inflated-negative binomial models were used to examine indirect effects of baseline predictors on (i) yes/no likelihood and (ii) number of 12-month alcohol problems through 6-month mediators. Models controlled for past-year cannabis use and drinks consumed per week at baseline.

Results
The only significant predictor of alcohol problem likelihood was baseline drinking quantity. Baseline PTSD intrusions had a direct effect on number of alcohol problems at 12 months, with no indirect (mediated) effect through 6-month sleep disturbance. In the competing model, baseline sleep disturbance had a marginally significant direct effect on 12-month alcohol problems, with a significant indirect effect through 6-month PTSD intrusions.

Conclusions
PTSD intrusions are associated with more alcohol problems and help explain the long-term association between sleep and alcohol problems among veterans. Because sleep disturbances are associated with more intrusive thoughts about trauma, we recommend that treatments targeting sleep in the context of PTSD and alcohol use include a cognitive component.

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https://academic.oup.com/sleep/advance-article-abstract/doi/10.1093/sleep/zsz207/5573662

An Attempt to Identify Reproducible High-Density EEG Markers of PTSD during Sleep.

Chao Wang, PhD, Sridhar Ramakrishnan, PhD, Srinivas Laxminarayan, PhD, Andrey Dovzhenok, PhD, J David Cashmere, BS, Anne Germain, PhD, Jaques Reifman, PhD

Study Objectives

We examined electroencephalogram (EEG) spectral power to study abnormalities in regional brain activity in post-traumatic stress disorder (PTSD) during sleep. We aimed to identify sleep EEG markers of PTSD that were reproducible across nights and subsamples of our study population.

Methods

Seventy-eight combat-exposed veteran men with (n = 31) and without (n = 47) PTSD completed two consecutive nights of high-density EEG recordings in a laboratory. We performed spectral-topographical EEG analyses on data from both nights. To assess reproducibility, we used the first 47 consecutive participants (18 with PTSD) for initial discovery and the remaining 31 participants (13 with PTSD) for replication.

Results

In the discovery analysis, compared to non-PTSD participants, PTSD participants exhibited 1) reduced delta power (1–4 Hz) in the centro-parietal regions during non-rapid-eye-movement (NREM) sleep and 2) elevated high-frequency power, most prominent in the gamma band (30–40 Hz), in the antero-frontal regions during both NREM and rapid-eye-movement (REM) sleep. These findings were consistent across the two study nights, with reproducible trends in the replication analysis. We found no significant group differences in theta power (4–8 Hz) during REM sleep and sigma power (12–15 Hz) during N2 sleep.

Conclusions

The reduced centro-parietal NREM delta power, indicating reduced sleep depth, and the elevated antero-frontal NREM and REM gamma powers, indicating heightened central arousal, are potential objective sleep markers of PTSD. If independently validated, these putative EEG markers may offer new targets for the development of sleep-specific PTSD diagnostics and interventions.

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https://academic.oup.com/sleep/advance-article-abstract/doi/10.1093/sleep/zsz201/5574411

Cortical hyperarousal in NREM sleep normalizes from pre- to post- REM periods in individuals with frequent nightmares.

Borbála Blaskovich, Richárd Reichardt, Ferenc Gombos, Victor I Spoormaker, Ph.D,
Péter Simor, Ph.D

Study Objectives
Frequent nightmares have a high prevalence and constitute a risk factor for psychiatric conditions, but their pathophysiology is poorly understood. Our aim was to examine sleep architecture and electroencephalographic markers – with a specific focus on state transitions – related to sleep regulation and hyperarousal in participants with frequent nightmares (NM participants) versus healthy controls.

Methods
Healthy controls and NM participants spent two consecutive nights in the sleep laboratory. Second night spectral power during NREM to REM (pre-REM) and REM to NREM (post-REM) transitions as well as during NREM and REM periods were evaluated for 22 NM participants compared to 22 healthy controls with a similar distribution of age, gender and dream recall frequency.

Results
We found significant differences between the groups in the pre-REM to post-REM changes in low and high frequency domains. NM participants experienced a lower amount of slow-wave sleep and showed increased beta and gamma power during NREM and pre-REM periods. No difference was present during REM and post-REM phases. Furthermore, while increased pre-REM high frequency power seems to be mainly driven by PTSD symptom intensity, decreased low frequency activity occurred regardless of PTSD symptom severity.

Conclusion
Our findings indicate that NM participants had increased high frequency spectral power during NREM and pre-REM periods, as well as relatively reduced slow frequency and increased fast frequency spectral power across pre-and post- REM periods. This combination of reduced sleep-protective activity and increased hyperarousal suggests an imbalance between sleep regulatory and wake promoting systems in NM participants.

A Longitudinal Investigation of Military Sexual Trauma and Perinatal Depression.

Georgina M. Gross, Aimee Kroll-Desrosiers, and Kristin Mattocks

Introduction:
Military sexual trauma (MST), which includes sexual harassment or assault while in the military, is prevalent among women Veterans and associated with depression and suicide. Little is known about women Veterans' perinatal mental health, including the potential role of MST. This is the first study to investigate the impact of MST on risk of depression and suicidal ideation (SI) during and after pregnancy.

Methods:
Bivariate statistical tests between MST harassment and assault, measured by the two standard Veterans Health Administration screening questions, and pre- and postnatal depression and SI, measured by the Edinburgh Postnatal Depression Scale, were examined using longitudinal data from the ongoing Center for Maternal and Infant Outcomes Research in Translation (COMFORT) study. COMFORT includes 620 Veterans interviewed during pregnancy; 452 have been reinterviewed after delivery. Hayes mediation models were employed to examine whether prenatal depression mediated the association between MST and postnatal depression.

Results:
MST was associated with higher pre- and postnatal symptoms of depression and SI. Further, prenatal depression mediated the association between MST and postnatal depression (indirect effect [standard error] of harassment on postnatal depression through prenatal depression: 1.11 [0.26], $p < 0.001$; indirect effect [standard error] of assault on postnatal depression through prenatal depression: 1.50 [0.35] $p < 0.001$), even after controlling for demographic variables and prenatal stress.

Conclusions:
Women Veterans who have experienced MST may be at higher risk of perinatal depression and SI. Findings highlight the importance of access to mental health care and trauma-informed obstetrical care for these Veterans.

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https://psycnet.apa.org/record/2019-57166-001

Risk for suicide attempts among United States Air Force active duty members with suicide ideation: An ecological perspective.

Langhinrichsen-Rohling, J., Snarr, J. D., Slep, A. M. S., & Heyman, R. E.

Objective:
Differentiating suicide attempters from suicide ideators has been named a critical suicidology frontier (Klonsky & May, 2013). Per Bronfenbrenner's (1977, 1994) ecological systems theory, risk/protective factors from four ecological levels (individual, family, workplace, and community) were used to predict last year suicide attempt status among active duty service members expressing suicide ideation.

Method:
Active duty U.S. Air Force members (N = 52,780, 79.3% male, 79.2% non-Hispanic White, M age = 31.8 years) anonymously completed an online community assessment administered biennially at 82 bases worldwide. Last year suicide ideation and attempts were concurrently measured, as were an array of co-occurring risk and protective factors.

Results:
Among the 1,927 (approximately 4%) service members self-reporting suicidal ideation, 152 also reported a last year suicide attempt (7.9% of the ideators, 8.7% of men vs. 6.1% of women). However, in multivariate models, military member sex was not a significant moderator. In bivariate models, numerous individual, family/spouse/parent, and community factors were associated with suicide attempt status. In the final multivariate model for the whole sample, risk for a last year attempt was associated with years in the military, social support, and alcohol use problems, but not depression. Among active duty military in relationships, attempt status risk was associated with years in the military, social support, and intimate partner violence victimization. However, the effect sizes for these models were small.

Conclusions:
Beyond a focus on depression, addressing alcohol misuse, facilitating resilient and nonviolent couple/family relationships, and increasing social support may enhance suicide attempt prevention efforts among military members. (PsycINFO Database Record (c) 2019 APA, all rights reserved)

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https://www.liebertpub.com/doi/abs/10.1089/neu.2019.6696

United States Military Service Members Demonstrate Substantial and Heterogeneous Long-Term Neuropsychological Dysfunction Following Moderate, Severe, and Penetrating Traumatic Brain Injury.

Dr. Sara M Lippa, Dr. Louis M. French, Dr. Randy S Bell, Tracey A Brickell, and Dr. Rael Lange

This study examines long-term neuropsychological outcome following Moderate, Severe, and Penetrating Traumatic Brain Injury (TBI) in U.S. military service members and veterans (SMVs). Eighty-five SMVs with a history of Moderate (n=18), Severe (n=17), or Penetrating (n=26) TBI, or an injury without TBI (i.e., Trauma Control [TC], n=24) were assessed five or more years (M=69.4 months; SD=35.6) post-injury. All passed performance validity tests. Participants completed a battery of neurocognitive tests and a personality inventory. Five cognitive domain composites, each comprised of four test scores, and an overall test battery mean (OTBM) were computed. The Penetrating TBI group performed worse than the TC group and/or Moderate TBI group on most cognitive domains and the OTBM. The Severe TBI group also performed worse than the TC group and Moderate TBI group on Processing Speed and the OTBM, and worse than the TC group on Attention/Working Memory. Just over half of participants with Severe (56%) or Penetrating (64%) TBI met criteria for mild neurocognitive disorder, with Processing Speed the most commonly impaired domain. Additionally, 80% of TBI participants had one or more clinically elevated scales on the MMPI-2-RF, with Somatic Complaints the most common elevation. There was substantial heterogeneity in cognitive and psychological functioning. In sum, there was significantly reduced cognitive and psychological functioning many years following Severe and Penetrating TBI in SMVs. However, cognitive and psychological dysfunction were highly

variable, with a substantial minority of SMVs having good outcome. Long-term individualized support is necessary for individuals following Moderate, Severe, and Penetrating TBI.

Combat and Trajectories of Physical Health Functioning in U.S. Service Members.

Ben Porter, George A. Bonanno, Paul D. Bliese, Christopher J. Phillips, ... Susan P. Proctor

Introduction
Previous research has demonstrated that different forms of mental health trajectories can be observed in service members, and that these trajectories are related to combat. However, limited research has examined this phenomenon in relation to physical health. This study aims to determine how combat exposure relates to trajectories of physical health functioning in U.S. service members.

Methods
This study included 11,950 Millennium Cohort Study participants who had an index deployment between 2001 and 2005. Self-reported physical health functioning was obtained 5 times between 2001 and 2016 (analyzed in 2017), and latent growth mixture modeling was used to identify longitudinal trajectories from these assessments. Differences in the shape and prevalence of physical health functioning trajectories were investigated in relation to participants' self-reported combat exposure over the index deployment.

Results
Five physical health functioning trajectories were identified (high-stable, delayed-declining, worsening, improving-worsening, and low-stable). Combat exposure did not influence the shape of trajectories (p=0.12) but did influence trajectory membership. Relative to personnel not exposed to combat, participants reporting combat exposure were more likely to be in the delayed-declining, worsening, and low-stable classes and less likely to be in the high-stable class. However, the high-stable class (i.e., the most

optimal class) was the most common trajectory class among not exposed (73.0%) and combat-exposed (64.5%) personnel.

Conclusions
Combat exposure during military deployment is associated with poorer physical health functioning trajectories spanning more than a decade of follow-up. However, even when exposed to combat, consistently high physical health functioning is the modal response.

Multi-omic biomarker identification and validation for diagnosing warzone-related post-traumatic stress disorder.

Kelsey R. Dean, Rasha Hammamieh, […]Charles Marmar

Post-traumatic stress disorder (PTSD) impacts many veterans and active duty soldiers, but diagnosis can be problematic due to biases in self-disclosure of symptoms, stigma within military populations, and limitations identifying those at risk. Prior studies suggest that PTSD may be a systemic illness, affecting not just the brain, but the entire body. Therefore, disease signals likely span multiple biological domains, including genes, proteins, cells, tissues, and organism-level physiological changes. Identification of these signals could aid in diagnostics, treatment decision-making, and risk evaluation. In the search for PTSD diagnostic biomarkers, we ascertained over one million molecular, cellular, physiological, and clinical features from three cohorts of male veterans. In a discovery cohort of 83 warzone-related PTSD cases and 82 warzone-exposed controls, we identified a set of 343 candidate biomarkers. These candidate biomarkers were selected from an integrated approach using (1) data-driven methods, including Support Vector Machine with Recursive Feature Elimination and other standard or published methodologies, and (2) hypothesis-driven approaches, using previous genetic studies for polygenic risk, or other PTSD-related literature. After reassessment of ~30% of these participants, we refined this set of markers from 343 to 28, based on their performance and ability to track changes in phenotype over time. The final diagnostic panel of 28 features was validated in an independent cohort (26 cases, 26 controls) with good performance (AUC = 0.80, 81% accuracy, 85% sensitivity, and 77% specificity). The

identification and validation of this diverse diagnostic panel represents a powerful and novel approach to improve accuracy and reduce bias in diagnosing combat-related PTSD.

See also: First Biomarker-Based Screening Tool for PTSD (JAMA)

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https://academic.oup.com/sw/advance-article/doi/10.1093/sw/swz026/5575099

Can Mindfulness Help to Predict Veterans' Mental Health Service Utilization?

Nicholas Barr, Sara Kintzle

Post–9/11 era military veterans are at high risk for posttraumatic stress disorder (PTSD) and depression, but less than half of veterans who screen positive for these disorders seek mental health treatment. Self-stigma of mental illness has emerged as a core barrier to mental health service use (MHSU) in this population. Mindfulness is associated with attention control, nonjudgment, and reduced self-stigma in civilians, but associations between PTSD and depression, mindfulness, self-stigma, and MHSU have never been investigated in military veterans. The present study used a logistic regression modeling strategy to investigate main and interaction effects for PTSD, depression, mindfulness, and self-stigma on MHSU. Study findings demonstrated a positive main effect for PTSD and negative main effects for mindfulness and self-stigma on MHSU, and a positive interaction effect for mindfulness and PTSD on MHSU. Findings suggest that more mindful individuals with PTSD symptoms are more likely to seek mental health services, whereas less mindful individuals with PTSD symptoms are less likely to seek treatment. More research into the potential for mindfulness to enhance MHSU outcomes for military veterans appears warranted.

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https://link.springer.com/article/10.1007/s00127-019-01754-2

Incidence of major depression diagnoses in the Canadian Armed Forces: longitudinal analysis of clinical and health administrative data.

François L. Thériault, R. A. Hawes, B. G. GarberF. Momoli, W. Gardner, M. A. Zamorski, I. Colman

Purpose
Major depression is a leading cause of morbidity in military populations. However, due to a lack of longitudinal data, little is known about the rate at which military personnel experience the onset of new episodes of major depression. We used a new source of clinical and administrative data to estimate the incidence of major depression diagnoses in Canadian Armed Forces (CAF) personnel, and to compare incidence rates between demographic and occupational factors.

Methods
We extracted all data recorded in the electronic medical records of CAF Regular Force personnel, at every primary care and mental health clinical encounter since 2016. Using a 12-month lookback period, we linked data over time, and identified all patients with incident diagnoses of major depression. We then linked clinical data to CAF administrative records, and estimated incidence rates. We used multivariate Poisson regression to compare adjusted incidence rates between demographic and occupational factors.

Results
From January to December 2017, CAF Regular Force personnel were diagnosed with major depression at a rate of 29.2 new cases per 1000 person-years at risk. Female sex, age 30 years and older, and non-officer ranks were associated with significantly higher incidence rates.

Conclusions
We completed the largest study to date on diagnoses of major depression in the Canadian military, and have provided the first estimates of incidence rates in CAF personnel. Our results can inform future mental health resource allocation, and ongoing major depression prevention efforts within the Canadian Armed Forces and other military organizations.

Patterns of Strengths in U.S. Military Couples.

Jacqueline C. Pflieger, Ben Porter, Carlos E. Carballo, Valerie A. Stander, Nida H. Corry for the Millennium Cohort Family Study Team

Objectives
The aim of the current study was to examine patterns of strengths among a large sample of military couples. Family resilience theory was utilized to operationalize strengths in couples, including individual beliefs represented by self-mastery, positive outlook, and spirituality; organizational patterns represented by social support; and family communication.

Method
We used data from the Millennium Cohort Family Study; the current study was composed of 9642 married military dyads representing all service branches and components.

Results
Using latent profile analysis, results supported five patterns of strengths in couples. Over half (58.4%) of the couples exhibited a pattern indicative of high strengths for both members of the couple, about a third (33.6%) of couples exhibited two patterns in which one member of the couple was higher on strengths than the other member, and a small proportion (5.1%) of couples exhibited a pattern of low strengths where both members of the couple were low on all indicators. The least common pattern (2.9%) was of moderately high beliefs and social support, yet very low family communication. Sociodemographic and military correlates that most consistently distinguished high strengths in couples from other patterns were higher spouse education level and service member officer rank. Service members and spouses with poorer mental health, marital quality, and overall military satisfaction were more likely to exhibit patterns indicative of low strengths.

Conclusions
Overall, most military couples exhibited high strengths early in the military career cycle.

Future longitudinal research is needed to examine how military experiences impact patterns of strengths and adjustment in couples over time.

Opponent Effects of Hyperarousal and Re-experiencing on Affective Habituation in Posttraumatic Stress Disorder.

Katherine L. McCurry, B. Christopher Frueh, Pearl H. Chiu, Brooks King-Casas

BACKGROUND
Aberrant emotion processing is a hallmark of posttraumatic stress disorder (PTSD), with neurobiological models suggesting both heightened neural reactivity and diminished habituation to aversive stimuli. However, empirical work suggests these response patterns may be specific to subsets of those with PTSD. This study investigates the unique contributions of PTSD symptom clusters (re-experiencing, avoidance/numbing, and hyperarousal) to neural reactivity and habituation to negative stimuli in combat-exposed veterans.

METHODS
95 combat-exposed veterans (46 with PTSD) and 53 community volunteers underwent functional magnetic resonance imaging while viewing emotional images. We examined the relationship between symptom cluster severity and hemodynamic responses to negative compared to neutral images (NEG>NEU).

RESULTS
Veterans exhibited comparable mean and habituation-related responses for NEG>NEU, relative to civilians. However, among veterans, habituation, but not mean response, was differentially related to PTSD symptom severity. Hyperarousal symptoms were related to decreased habituation for NEG>NEU in a network of regions, including superior and inferior frontal gyri, ventromedial prefrontal cortex, superior and middle temporal gyri, and anterior insula. In contrast, re-experiencing symptoms were associated with increased habituation in a similar network. Furthermore, re-experiencing severity was positively related to amygdalar functional connectivity with the left inferior frontal gyrus

and dorsal anterior cingulate cortex for NEG>NEU.

CONCLUSIONS
Our results indicate that hyperarousal symptoms in combat-related PTSD are associated with decreased neural habituation to aversive stimuli. These impairments are partially mitigated in the presence of re-experiencing symptoms, such that during exposure to negative stimuli, re-experiencing symptoms are positively associated with amygdalar connectivity to prefrontal regions implicated in affective suppression.

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https://jamanetwork.com/journals/jamapsychiatry/article-abstract/2737419

Leveraging Digital Health and Machine Learning Toward Reducing Suicide—From Panacea to Practical Tool.

Torous J, Walker R.

Because the rates of suicide attempts and deaths have recently increased to 50-year highs,1 new solutions are needed. The urgency to reverse this trend has brought attention to technology-based tools, such as text messaging, smartphone apps, smartphone sensors, electronic health records, and machine-learning algorithms, that can offer crucial data to improve the prognostication of suicide or immediate support for those at risk. This promise of real-time data from connected devices, large quantities of social-behavioral interactions from social media and internet, and longitudinal clinical trends from electronic health records, when paired with artificial intelligence to automatically identify risk, is often touted as a panacea. Yet, to date, this approach has found less clinical success than expected. The current, limited technological advances in suicide prevention do not reflect a failure of technology or big data but rather a need to realign research aims and clinical use with prevention research that addresses the upstream suicide risk that precedes suicide crisis. In a recent report,2 the National Action Alliance for Suicide Prevention outlined 3 gaps in health care that contribute to suicide death: failing to (1) proactively identify suicide risk, (2) act efficiently for safety, and (3) provide supportive contacts for people at risk of suicide. Focusing on these 3 specific gaps as examples by identifying risks (such as limited social connectedness, cognitive hopelessness, and poor problem solving) can have immediate effects. This

Viewpoint aims to explore how technology can augment solutions to these challenges while simultaneously addressing current gaps in translational research and clinical care.

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https://onlinelibrary.wiley.com/doi/abs/10.1111/sltb.12589

Caring E-mails for Military and Veteran Suicide Prevention: A Randomized Controlled Trial.

Luxton, D. D., Smolenski, D. J., Reger, M. A., Relova, R. M. and Skopp, N. A.

Objective
The purpose of this multisite study was to conduct a randomized controlled trial of an e-mail version of the caring letters (CL) suicide prevention intervention to determine whether the intervention is efficacious in preventing suicide behaviors among U.S. service members and veterans.

Method
Psychiatric inpatients (N = 1,318) were recruited from four military medical centers and two VA hospitals and randomized to receive either 13 caring e-mails over two years or usual care.

Results
There were 10 deaths from any cause in the CL group (three suicides) and 14 in the usual care group (seven suicides) during the individual two-year follow-up intervals. There was no statistically significant difference in the rate of all-cause hospital readmission between the study groups (RR = 1.13; 95% CI = 0.94, 1.36). There were no differences observed between groups on self-reported psychiatric hospital readmissions, self-reported suicide attempts, or other measures associated with risk for suicide.

Conclusions
No firm conclusions about the efficacy of the intervention can be made because the study was inadequately powered. There were no adverse events associated with the intervention, and implementation of the procedures was feasible in the military and

veteran hospital settings. These results provide important methodological considerations for caring contact trials in military populations.

Insomnia symptoms predict the development of post-traumatic stress symptoms following an experimental trauma.

Nicole A. Short Joseph W. Boffa Karl Wissemann Norman B. Schmidt

Insomnia symptoms prior to traumatic event exposure predict the development of post-traumatic stress symptoms. However, potential mechanisms underlying the association between insomnia and risk for post-traumatic stress disorder symptoms have not been prospectively tested. The current study used the trauma film paradigm to test whether insomnia symptoms prior to analogue trauma exposure predict subsequent analogue post-traumatic stress disorder symptoms, and potential mediators of this relationship, among an at-risk sample of 108 participants. Results indicated that, after covarying for negative affectivity, insomnia symptoms in the 2 weeks prior to analogue trauma exposure significantly predicted increased post-traumatic stress disorder symptoms 3 days and 1 week post-exposure. Moreover, distress immediately after exposure and post-traumatic avoidance mediated the association between insomnia symptoms and post-traumatic stress disorder symptoms 1 week after exposure. Effect sizes were small. The current study uses an analogue trauma and analogue post-traumatic stress disorder symptoms to model clinical symptoms, includes an additional intervention prior to analogue trauma, and lacks a control film. Findings suggest increased reactivity to trauma exposure and subsequent reminders, and attempts to suppress trauma memories may be mechanisms in the association between insomnia symptoms and risk for post-traumatic stress disorder symptoms.

Suicide prevention: Putting the person at the center. (Editorial)

Vikram Patel, Pattie Pramila Gonsalves

The focus of this year's World Mental Health Day on suicide prevention is very timely because although much is known about the epidemiology of suicide, its causes, and approaches to prevention, action and interventions are lacking across local, regional, and national levels for different population groups. In this Editorial, we discuss the key findings and recommendations arising from the relevant evidence but argue that the focus on preventing suicide must extend beyond prevention of suicide mortality to addressing the loss of hope that underlies each attempt to end a person's life.

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https://jamanetwork.com/journals/jamapsychiatry/article-abstract/2751925

The Need for Innovation in Health Care Systems to Improve Suicide Prevention.
(Special Communication)

Stanley B, Mann JJ.

Suicide rates have continued to rise in the United States. Speculations for this rise proliferate but the causes for the increase remain unknown. While research focuses on identifying causes, the health care system is an important site for identification of patients at risk. Forty percent of individuals who die by suicide were seen in primary care in the month prior to suicide. The Zero Suicide model describes a comprehensive approach for health care systems to aid in identification and intervention of suicidal patients. While this model promises to improve care of suicidal patients, the need for innovation in our approach to understanding and caring for suicidal patients is pressing. Use of technology to enhance moment-to-moment monitoring of at-risk individuals offers promise and the possibility of intervening close to escalation of acute suicidal states. Further, once identified, suicidal individuals are often difficult to engage in treatment. Novel approaches to engagement and treatment that are effective and

acceptable to suicidal patients ought to be developed. Specifically, males are much more likely than females to die by suicide. At the same time, males are less likely to seek and remain in the treatments we have to offer. Innovation should seek to identify strategies that are acceptable to males. Additionally, while about half of psychiatric inpatient admissions are suicide related, there is a paucity of suicide-specific psychosocial interventions available for inpatient settings. Innovation in monitoring and treatment offer promise in helping to reduce suicidal behavior in the United States.

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https://annals-general-psychiatry.biomedcentral.com/articles/10.1186/s12991-019-0248-0

All-cause mortality in patients with treatment-resistant depression: a cohort study in the US population.

Gang Li, Daniel Fife, Grace Wang, John J. Sheehan, Robert Bodén, Lena Brandt, Philip Brenner, Johan Reutfors & Allitia DiBernardo

Background
Treatment-resistant depression (TRD) may represent a substantial proportion of major depressive disorder (MDD); however, the risk of mortality in TRD is still incompletely assessed.

Methods
Data were obtained from Optum Clinformatics™ Extended, a US claims database. Date of the first antidepressant (AD) dispensing was designated as the index date for study entry and 6 months prior to that was considered the baseline period. Patients with MDD aged ≥ 18 years, index date between January 1, 2008 and September 30, 2015, no AD claims during baseline, and continuous enrollment in the database during baseline were included. Patients who started a third AD regimen after two regimens of appropriate duration were included in the TRD cohort. All-cause mortality was compared between patients with TRD and non-TRD MDD using a proportional hazards model and Kaplan–Meier estimate with TRD status being treated as a time-varying covariate. The model was adjusted for study year, age, gender, depression diagnosis, substance use disorder, psychiatric comorbidities, and Charlson comorbidity index.

Results

Out of 355,942 patients with MDD, 34,176 (9.6%) met the criterion for TRD. TRD was associated with a significantly higher mortality compared with non-TRD MDD (adjusted HR: 1.29; 95% CI 1.22–1.38; $p < 0.0001$). Survival time was significantly shorter in the TRD cohort compared with the non-TRD MDD cohort ($p < 0.0001$).

Conclusions

Patients with TRD had a higher all-cause mortality compared with non-TRD MDD patients.

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https://onlinelibrary.wiley.com/doi/abs/10.1111/sltb.12590

The Three-Step Theory of Suicide: An Independent Replication and Conceptual Extension.

Christopher R. Hagan PhD, Jennifer J. Muehlenkamp PhD

Objective

Well-tested and validated theories of suicide can help professionals understand, predict, and prevent suicide. This article presents two studies testing the suicidal ideation components of the Three-Step Theory (3ST) of suicide and comparing it to the Interpersonal Theory of Suicide (ITS). We tested the 3ST's prediction that high levels of pain and hopelessness lead to suicidal ideation, which strengthens when pain and hopelessness outweigh connection to life.

Method

Study 1 (n = 204, mean age = 35, 56% female, 83% White) provides an independent, direct replication of the original analyses. Study 2 (n = 295, mean age = 25, 75% female, 68% White) presents the first conceptual extension of the 3ST using diverse measures of pain, hopelessness, and connection. In both studies, participants completed self-report questionnaires assessing the relevant variables.

Results
Both studies largely supported the first two steps of the 3ST, although adding connection to the model did not account for greater variability of suicidal ideation. The ITS accounted for comparable or greater amounts of variance in suicidal ideation than the 3ST.

Conclusions
Both the 3ST and the ITS have utility to explain suicidal ideation. Limitations and future directions are discussed.

Higher Depression Severity Mediates the Association of Assault Military Sexual Trauma and Sexual Function in Partnered Female Service Members/Veterans.

Rebecca K. Blais, Whitney S. Livingston, Jamison D. Fargo

Highlights
- The association of military sexual trauma (MST) and sexual function is understudied.
- Depression mediated this association in partnered female service members/veterans.
- Interventions to improve sexual function should focus primarily on depression.

Abstract
Background:
Military sexual trauma (MST), and assault as opposed to harassment-only MST in particular, is associated with lower sexual function among female service members/veterans (SM/Vs). Recent research revealed that higher posttraumatic stress disorder (PTSD) symptom clusters of anhedonia and dysphoric arousal mediated the association of assault MST and sexual function. Such clusters represent the depressive symptoms of PTSD, and theories of sexual function suggest that depression worsens sexual function. The impact of depression on the association of MST and sexual function has yet to be tested.

Method:
Using path analysis, the study examined whether depression severity mediated the association of MST and sexual function after accounting for demographics and mediators of PTSD-related anhedonia and dysphoric arousal. Female SM/Vs (N=697) completed measures of MST (history, severity), depression, PTSD-related anhedonia and dysphoric arousal, sexual function, and a demographic inventory.

Results:
One hundred twenty-two (17.50%) indicated that they did not experience MST, 336 (48.21%) reported that they experienced harassment-only MST, and 239 (34.29%) reported assault MST. Fit indices evidenced strong model fit, χ2(12, N=697)=18.85, p=.09, CFI=1.00, TLI=.99, SRMR=.02, and RMSEA=.03. The indirect effect of depression severity was significant (p<.001). Limitations: Use of cross-sectional data in a convenience sample of female SM/Vs.

Conclusions:
Even after accounting for established covariates and mediators of assault MST and sexual function, depression accounted for a significant amount of variance in this association. Treatment of poor sexual function must address depressive symptoms. As medications for depression can exacerbate sexual issues, psychotherapy may be the most effective treatment strategy.

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https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6752814/

Multispecialty Opioid Risk Reduction Program Targeting Chronic Pain and Addiction Management in Veterans.

Ivana A. Vaughn, PhD, MPH, Rebecca Beyth, MD, MSc, Mary Lynn Ayers, MD, Joseph E. Thornton, MD, Rajiv Tandon, MD, Ted Gingrich, MD, and Stephen A. Mudra, MD

A primary care pain clinic and telehealth program manages veterans at high-risk for noncancer chronic pain and addiction, offering education and support to multidisciplinary health care providers to reduce dependence on high-level opioids.

An initial investigation of the association between distress intolerance and posttraumatic stress within military sexual trauma survivors.

McGrew SJ, Ennis CR, Vujanovic A, Franklin CL, Raines AM

OBJECTIVE:
Researchers have recently found several links between distress intolerance (DI), the perceived inability to withstand aversive emotional and somatic states, and posttraumatic stress disorder (PTSD) symptoms. Despite this well-established relationship, DI has yet to be examined among victims of military sexual trauma (MST), a population known to have increased rates of PTSD. Thus, the purpose of the current study was to examine overall rates of DI, as well as the relationship between DI and PTSD symptom and cluster severity using an outpatient sample of MST survivors.

METHOD:
The sample included 103 veterans presenting for psychological services to an MST specialty clinic at a large southeastern Veterans Affairs hospital. As part of their intake evaluation, veterans completed a brief battery of self-report questionnaires to assist with diagnostic clarification and treatment planning.

RESULTS:
Results revealed that DI was significantly associated with PTSD symptom severity above and beyond depression symptoms. Further, DI was significantly associated with the PTSD intrusion, negative alterations in cognitions and mood, and arousal and reactivity clusters.

DISCUSSION:
These findings provide initial evidence for a relationship between DI and PTSD symptoms within MST patients. Pending further research, investigators should determine the extent to which targeting this cognitive-behavioral construct reduces PTSD symptoms among MST samples. (PsycINFO Database Record (c) 2019 APA, all rights reserved).

Evidence-based practice within supervision during psychology practitioner training: A systematic review.

Jessica Barrett, Craig J. Gonsalvez, Alice Shires

Background
Supervision has long been recognised as a highly influential aspect of training within psychology. The scientist–practitioner model underpins postgraduate psychology training programs. During such programs, clinical supervision plays an important role in the development and acquisition of evidence-based practice and scientist–practitioner competence.

Objective
The primary objective of this study was to provide a comprehensive, current, and systematic review of the empirical research on supervisory interventions or practice that monitored and/or shaped the development of scientist–practitioner competence among psychology trainees. The secondary objective was to conduct a critical appraisal and assess the methodological rigour of included studies.

Methods
Four major electronic databases were systematically searched against a priori inclusion criteria. Eligible quantitative studies investigated were located and assessed to identify evidence-based practice and scientist–practitioner factors within supervision in the psychology training settings.

Results
A large pool of studies was retrieved but only four studies (N = 724 participants) met inclusion criteria indicating a major gap in the area. A narrative synthesis was conducted. Included studies were of good methodological quality, had small to medium sample sizes, and produced significant and valid results. Included studies used competency evaluation rating forms and compared supervision interventions.

Conclusions
Despite the large body of literature on supervision, this review highlights a lack of empirical investigations into evidence-based practice and scientist–practitioner competence within supervision during psychology training. Future research directions are provided, and recommendations and implications for training and supervision are discussed.

The buffer role of psychological flexibility against the impact of major life events on depression symptoms.

Fonseca, S, Trindade, IA, Mendes, AL, Ferreira, C.

Purpose
Major life events have been positively associated with depression symptoms. Although psychological flexibility has been associated with adaptive coping skills and negatively linked with depression symptoms, it remains unclear whether psychological flexibility may be a protective process against the pervasive impact of major life events. Thus, the present study aimed to explore the moderating effect of psychological flexibility on the association between the cumulative number of major life events and their negative appraisal with depression symptoms.

Methods
Four hundred and one participants (280 females and 121 males), aged between 18 and 65 years old, completed a set of self-report measures assessing the number of major life events that had occurred in the previous 12 months and their appraisal, as well as psychological flexibility, and depression symptoms.

Results
Correlation analyses showed a negative and strong association between psychological flexibility and depression symptoms. Path analyses revealed that psychological flexibility attenuated the effect of the cumulative number of major life events and their perceived negative impact on depression symptoms.

Conclusions
This study highlights the buffer role of psychological flexibility on the association of number of major life events and their negative appraisal, with depression symptoms. These findings suggest that being able to be in contact with the present moment with an accepting and non-judging attitude towards internal experiences, and to engage in valued-based action, may protect individuals against the negative impact of major life events with regards to depression symptoms.

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https://aps.onlinelibrary.wiley.com/doi/abs/10.1111/cp.12182

Communication strategies used by women to influence male partners to seek professional help for mental health problems: A qualitative study.

Lauren Rooney, Mary John, Linda Morison

Objective
Previous research suggests that female partners have a key role in encouraging men to seek help from a mental health professional. This study investigated the communication forms that female partners use to encourage their male partners to seek help for a mental health problem.

Methods
Fifteen women with experience of working with a partner to seek help, aged 28–71 years, participated in a semi-structured interview. The interviews were analysed using Thematic Analysis.

Results
The main themes indicated that the women initially undertook "Role Adaption/s" and changed their roles to reduce the stress on their male partners. They made "attempts to activate engagement" with their wellbeing through conversations about mental health and the benefits of help-seeking. Discussions began with "gentle" communications, such as hinting and sowing seeds, and escalated to more assertive communications which could be conceived of as "threats" and "emotional blackmail," if the women were

concerned their partners were not seeking help or were at risk of suicide. Finally, the couples entered "Attempted Resolution" where they had conversations around help-seeking, and/or their male partner considered suicide.

Conclusions
Female partners perceived themselves as having a key role in supporting men to seek help from a professional and in maintaining their partner's safety and they adapted their communication strategies to implement this. Access to high-quality information and some amendments to general practitioner confidentiality would facilitate them in their role.

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https://onlinelibrary.wiley.com/doi/abs/10.1111/jsr.12904

Another sleepless night: Does a leader's poor sleep lead to subordinate's poor sleep? A spillover/crossover perspective.

Tariq, H, Weng, Q(D), Garavan, TN, Obaid, A, Hassan, W.

Given the importance of sleep to an individual's health and well-being, relatively little research has been conducted in the management and organizational behaviour literature on the relationship between sleep and work behaviour. Using spillover/crossover theory, we extended the current literature by investigating the possible supervisor–subordinate sleep relationship and introduced a serial mediation mechanism to answer how a supervisor's poor night's sleep translates into his/her subordinate's poor night's sleep. We conducted an experience sampling study involving 101 supervisors and subordinates over five consecutive working days (N = 505 occasions). Results verified that the spillover effect of supervisors' poor sleep on their next-day abusive supervisory behaviour has a crossover effect on their subordinates' poor sleep. Finally, results indicated that subordinate's physical exercise has the capacity to mitigate the influence of abusive supervision on subordinate' poor sleep. Future research should continue to examine the supervisor–subordinate sleep relationship and identify interventions in both the work and non-work domains of supervisor and subordinates as avenues for improving sleep health.

Links of Interest

Are We Failing to Honor Psychological Injuries?
We need to reassess how we address the psychological wounds of war.
https://www.psychologytoday.com/ie/blog/the-debrief/201909/are-we-failing-honor-psychological-injuries

Are We Our Own Worst Enemy?
The impact of stratifying military service based on combat exposure.
https://www.psychologytoday.com/intl/blog/the-debrief/201909/are-we-our-own-worst-enemy

Games to Grunts program offers free video game downloads to active-duty troops, veterans
https://www.stripes.com/news/games-to-grunts-program-offers-free-video-game-downloads-to-active-duty-troops-veterans-1.602202

I owe my new life to my Marine husband's hideous death. I pay the price every day.
He lost his leg to a bomb in Iraq and his life to painkillers back home.
https://www.washingtonpost.com/outlook/2019/10/03/i-owe-my-new-life-my-marine-husbands-hideous-death-i-pay-price-every-day/

Active duty suicides are on the rise, as the Pentagon works on new messaging and strategy
https://www.militarytimes.com/news/your-military/2019/09/26/active-duty-suicides-are-on-the-rise-as-the-pentagon-works-on-new-messaging-and-strategy/

Tricare Moves Toward Chiropractic Coverage
https://www.military.com/daily-news/2019/09/26/tricare-moves-toward-chiropractic-coverage.html

The National Guard's suicide rate has surpassed the other military components
https://www.militarytimes.com/news/your-military/2019/09/26/the-national-guards-suicide-rate-has-surpassed-the-other-military-components/

Marines must 'be comfortable discussing life's struggles' commandant says to Corps' 10-year-high suicide rate
https://www.marinecorpstimes.com/news/marine-corps-times/2019/09/30/marines-must-be-comfortable-discussing-lifes-struggles-commandant-says-about-corps-10-year-high-suicide-rate/

How a Humorous Facebook Page Became a Suicide-Prevention Network
https://www.sevendaysvt.com/vermont/how-a-humorous-facebook-page-became-a-suicide-prevention-network/Content?oid=28613042

Research Shows Military Service Can Hurt Some Job Seekers' Prospects
https://www.fuqua.duke.edu/duke-fuqua-insights/how-military-service-can-hurt-some-job-seekers'-prospects

Diversity of 'races, religions, backgrounds and genders' essential to warfighting in the information age, 3-star says
https://www.marinecorpstimes.com/news/your-marine-corps/2019/09/30/diversity-of-races-religions-backgrounds-and-genders-essential-to-warfighting-in-the-information-age-3-star-says/

New research may shed light on combat concussion-dementia link
https://www.militarytimes.com/news/pentagon-congress/2019/10/01/new-research-may-shed-light-on-combat-concussion-dementia-link/

Nationwide smoking ban at VA facilities has some veterans fuming
https://www.militarytimes.com/veterans/2019/10/01/nationwide-smoking-ban-at-va-facilities-has-some-veterans-fuming/

Abandoning the Tribe: The Psychology Behind Why Veterans Struggle to Transition to Civilian Life
https://sofrep.com/112569/abandoning-the-tribe/

Filling the void: Maslow and transitioning out of the military
https://sofrep.com/112572/filling-the-void-maslow-and-transitioning-out-of-the-military/

Is this military spouse federal hiring authority working? Feds — and spouses — want to know
https://www.militarytimes.com/pay-benefits/2019/10/02/is-this-military-spouse-federal-hiring-authority-working-feds-and-spouses-want-to-know/

'I Am Fearless Again': New Veterans' Group Gives Women a Sense of Belonging
https://www.nytimes.com/2019/10/02/magazine/women-veterans-network.html

Memo outlining supposed changes to VA caregiver program creates confusion, anxiety among veterans
https://www.militarytimes.com/news/pentagon-congress/2019/10/03/memo-outlining-supposed-changes-to-va-caregiver-program-creates-confusion-anxiety-among-veterans/

Op-ed: Eradicate the stigma of mental health care
https://www.navytimes.com/news/your-navy/2019/10/03/op-ed-eradicate-the-stigma-of-mental-health-care/

DODIG: Not All USAFA Sexual Assault Cases Were Reported to Congress
http://www.airforcemag.com/Features/Pages/2019/October%202019/DODIG-Not-All-USAFA-Sexual-Assault-Cases-Were-Reported-to-Congress.aspx

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Resource of the Week: A Librarian's Guide to Suicide Prevention and Mental Health Awareness

From the information industry trade journal, Information Today:

> Suicide is the 10th leading cause of death in the U.S. Almost 45,000 people kill themselves each year. Another half-million are treated in emergency rooms for self-inflicted wounds. From 1999 to 2016, instances of suicide rose by 30%. According to the National Alliance on Mental Illness (NAMI), suicidal thoughts and behaviors represent a "psychiatric emergency." Suicide has been a concern for centuries—Aristotle, Plato, and Pythagoras all condemned it—and yet, we are no closer to making peace with it than those ancients. Simply put, we don't know how to talk about it. Sometimes, when a celebrity dies by suicide—Junior Seau in 2012, Robin Williams in 2014, Kate Spade and Anthony Bourdain in 2018—there is an uptick in talk, but it fades too soon. What we need is sustained discussion about suicide and about mental health in general.

This NewsBreak shares resources librarians can use to facilitate that discussion.

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A Librarian's Guide to Suicide Prevention and Mental Health Awareness
by Anthony Aycock
Posted On October 8, 2019

THIS NEWSBREAK CONTAINS DETAILED DISCUSSIONS OF SUICIDE. THE NATIONAL SUICIDE PREVENTION LIFELINE PROVIDES FREE, 24/7 SUPPORT AT 1-800-273-8255.

From the World Health Organization (WHO):

World Mental Health Day is observed on 10 October every year, with the overall objective of raising awareness of mental health issues around the world and mobilizing efforts in support of mental health.

The Day provides an opportunity for all stakeholders working on mental health issues to talk about their work, and what more needs to be done to make mental health care a reality for people worldwide.

Shirl Kennedy
Research Editor
Center for Deployment Psychology
www.deploymentpsych.org
skennedy@deploymentpsych.org
240-535-3901