

## Research Update -- April 9, 2020

## What's Here:

## April Is the Month of the Military Child

- Parental Wartime Deployment and Socioemotional Adjustment in Early Childhood: The Critical Role of Military Parents' Perceived Threat During Deployment.
- Coercive Parenting Mediates the Relationship between Military Fathers' Emotion Regulation and Children's Adjustment.

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- Parameters of Aggressive Behavior in a Treatment-Seeking Sample of Military Personnel: A Secondary Analysis of Three Randomized Controlled Trials of Evidence-Based PTSD Treatments.
- Fear Learning in Veterans with Combat-Related PTSD is Linked to Anxiety Sensitivity: Evidence from Self-Report and Pupillometry.
- Estimated intelligence moderates Cognitive Processing Therapy outcome for posttraumatic stress symptoms.
- Alcohol Use Disorder Among Adults Recovered From Substance Use Disorders.

- Association of suicidal behavior with exposure to suicide and suicide attempt: A systematic review and multilevel meta-analysis.
- Sleep disturbance mediates the association of adverse childhood experiences with mental health symptoms and functional impairment in US soldiers.
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- Sleep Problems in Active Duty Military Personnel Seeking Treatment for Posttraumatic Stress Disorder: Presence, Change, and Impact on Outcomes.
- Depression and alcohol use disorders as precursors to death by suicide.
- Increased Oscillatory Frequency of Sleep Spindles in Combat-Exposed Veteran
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- Experiences of Sexual Harassment, Stalking, and Sexual Assault During Military
   Service Among LGBT and Non-LGBT Service Members.
- Combat-Related Posttraumatic Stress Disorder and Comorbid Major Depression in U.S. Veterans: The Role of Deployment Cycle Adversity and Social Support.
- Examining Insomnia During Intensive Treatment for Veterans with Posttraumatic Stress Disorder: Does it Improve and Does it Predict Treatment Outcomes?
- Links of Interest
- Resource of the Week: Military Child Development Program: Background and Issues (Congressional Research Service)

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## April Is the Month of the Military Child

https://www.ncbi.nlm.nih.gov/pubmed/32233043

J Trauma Stress. 2020 Mar 31. doi: 10.1002/jts.22475 [Epub ahead of print]

Parental Wartime Deployment and Socioemotional Adjustment in Early Childhood: The Critical Role of Military Parents' Perceived Threat During Deployment.

Hajal NJ, Aralis HJ, Kiff CJ, Wasserman MM, Paley B, Milburn NG, Mogil C, Lester P

Infants, toddlers, and preschool-aged children have unique developmental needs that render them vulnerable to challenges associated with parental military service. We used a sample of military-connected families with 3-6-year-old children (N = 104) to examine associations among children's socioemotional development and fathers' trauma-related deployment experiences, including perceived threat during deployment and exposure to combat and the aftermath of battle. Of these potential stressors, only paternal perceived threat during deployment was significantly associated with measures of mother-reported child adjustment. Fathers' perceived threat during deployment was associated with child behavior problems even after accounting for demographic variables and current paternal symptoms of posttraumatic stress, depression, and anxiety,  $\beta$  = .36, p = .007. The association between fathers' perceived threat during deployment and child behavior problems was mediated by several family processes related to emotion socialization, including father-reported sensitive parenting, indirect effect (IE) B = 0.106, 95% CI [0.009, 0.236]; parent-child dysfunctional interaction, IE B = 0.119, 95% CI [0.014, 0.252]; and mother-reported family emotional responsiveness, IE B = 0.119, 95% CI [0.011, 0.258]. Implications for future research on the intergenerational transmission of traumatic stress as well as prevention and intervention efforts for military-connected families with young children are discussed.

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https://link.springer.com/article/10.1007/s10802-020-00625-8

Coercive Parenting Mediates the Relationship between Military Fathers' Emotion Regulation and Children's Adjustment.

Jingchen Zhang, Alyssa Palmer, Na Zhang & Abigail H. Gewirtz

Journal of Abnormal Child Psychology 11 February 2020 https://doi.org/10.1007/s10802-020-00625-8

Military parents' combat-related posttraumatic stress disorder (PTSD) symptoms have been linked to poor parenting and child maladjustment. Emotion regulation (ER) difficulties are thought to underlie PTSD symptoms, and research has begun to link parental ER to parenting behaviors. Little empirical evidence exists regarding whether fathers' ER is associated with child adjustment and what may be the underlying mechanism for this association. This study investigated whether deployed fathers' ER was associated with child emotional and behavioral problems, and whether the associations were mediated by coercive parenting behaviors. The sample consisted of 181 deployed fathers with non-deployed female partners and their 4- to 13-year-old children. Families were assessed at three time points over 2 years. ER was measured using a latent construct of fathers' self-reports of their experiential avoidance, trait mindfulness, and difficulties in emotion regulation. Coercive parenting was observed via a series of home-based family interaction tasks. Child behaviors were assessed through parent- and child-report. Structural equation modeling revealed that fathers with poorer ER at baseline exhibited higher coercive parenting at 1-year follow-up, which was associated with more emotional and behavioral problems in children at 2-year follow-up. The indirect effect of coercive parenting was statistically significant. These findings suggest that fathers' difficulties in ER may impede their effective parenting behaviors, and children's adjustment problems might be amplified as a result of coercive interactions. Implications for the role of paternal ER on parenting interventions are discussed.

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https://www.sciencedirect.com/science/article/abs/pii/S0005789420300496

Parameters of Aggressive Behavior in a Treatment-Seeking Sample of Military Personnel: A Secondary Analysis of Three Randomized Controlled Trials of Evidence-Based PTSD Treatments.

Danielle S. Berke, Jessica R. Carney, Luke Rusowicz-Orazem, Nora K. Kline, ... Brett T. Litz

Behavior Therapy
Available online 30 March 2020
https://doi.org/10.1016/j.beth.2020.03.007

## Highlights

- Aggression is reduced among service members who receive PTSD treatment.
- Reductions in aggression are greatest for those with higher PTSD symptom severity.
- Reductions in PTSD symptoms do not predict subsequent reductions in aggression.

#### Abstract

Aggressive behavior is prevalent among veterans of post-9/11 conflicts who have posttraumatic stress disorder (PTSD). However, little is known about whether PTSD treatments reduce aggression, or the direction of the association between changes in PTSD symptoms and aggression in the context of PTSD treatment. We combined data from three clinical trials of evidence-based PTSD treatment in service members (N = 592) to: (1) examine whether PTSD treatment reduces psychological (e.g., verbal behavior) and physical aggression, and; (2) explore temporal associations between aggressive behavior and PTSD. Both psychological (Estimate = -2.20, SE = 0.07) and physical aggression (Estimate = -0.36, SE = 0.05) were significantly reduced from baseline to posttreatment follow-up. Lagged PTSD symptom reduction was not associated with reduced reports of aggression; however, higher baseline PTSD scores were significantly associated with greater reductions in psychological aggression (exclusively;  $\beta = -0.67$ , 95% CI = -1.05, -0.30, SE = -3.49). Findings reveal that service members receiving PTSD treatment report substantial collateral changes in psychological aggression over time, particularly for participants with greater PTSD symptom severity. Clinicians should consider co-therapies or alternative ways of targeting physical aggression among service members with PTSD and alternative approaches to reduce psychological aggression among service members with relatively low PTSD symptom severity when considering evidence-based PTSD treatments.

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https://www.sciencedirect.com/science/article/abs/pii/S0005789420300484

Fear Learning in Veterans with Combat-Related PTSD is Linked to Anxiety Sensitivity: Evidence from Self-Report and Pupillometry.

Thomas Armstrong, Sara Federman, Kari Hampson, Owen Crabtree, Bunmi O. Olatunji

Behavior Therapy Available online 1 April 2020 https://doi.org/10.1016/j.beth.2020.03.006

## Highlights

- We examined relations between anxiety sensitivity and fear conditioning in PTSD
- Veterans with PTSD reported greater conditioned fear at acquisition and extinction
- Veterans with PTSD had greater pupil dilation to fear and safety cues at extinction
- Anxiety sensitivity predicted unique variance in nearly all these fear learning outcomes

#### Abstract

Several studies have observed heightened Pavlovian fear conditioning in PTSD. However, it is unclear how fear conditioning in PTSD is related to risk factors for the disorder, such as anxiety sensitivity. Fifty-one combat-exposed veterans (20 with PTSD, 31 without PTSD) completed a differential fear conditioning task in which one colored rectangle (CS+) predicted a loud scream (US), whereas a different colored rectangle (CS-) predicted no US. Veterans with PTSD were characterized by greater anxiety to the CS+ but not the CS- during acquisition and extinction, and greater US expectancy during the CS+ but not the CS- at extinction. Also, veterans with PTSD had greater pupil dilation to both CSs at extinction, but not at acquisition. Anxiety sensitivity was correlated with anxiety and US expectancy in response to the CS+, but not the CS-, at both acquisition and extinction, and also with pupil diameter to both the CS+ and CS- at extinction. Nearly all of these relations held when covarying for PTSD symptoms and trait anxiety. These findings suggest that increased fear conditioning in PTSD may be related to elevated anxiety sensitivity.

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https://www.sciencedirect.com/science/article/abs/pii/S0005789420300502

Estimated intelligence moderates Cognitive Processing Therapy outcome for posttraumatic stress symptoms.

Brian P. Marx, Johanna Thompson-Hollands, Daniel J. Lee, Patricia A. Resick, Denise M. Sloan

Behavior Therapy Available online 2 April 2020 https://doi.org/10.1016/j.beth.2020.03.008

## Highlights

- Larger treatment gains were observed for higher IQ in CPT
- The larger treatment gains for higher IQ in CPT were not sustained at long term follow up
- Treatment gains unimpacted by IQ in Written Exposure Therapy
- Cognitive resources may impact trauma exposure recovery in certain circumstances

#### Abstract

Although patient intelligence may be an important determinant of the degree to which individuals may comprehend, comply with, and ultimately benefit from trauma-focused treatment, no prior studies have examined the impact of patient intelligence on benefit from psychotherapies for PTSD. We investigated the degree to which educational achievement, often used as a proxy for intelligence, and estimated full scale intelligence quotient (FSIQ) scores themselves moderated treatment outcomes for two effective psychotherapies for PTSD: Cognitive Processing Therapy (CPT) and Written Exposure Therapy (WET). Participants, 126 treatment-seeking adults with PTSD (52% male; mean age = 43.9, SD = 14.6), were equally randomized to CPT and WET; PTSD symptom severity was measured at baseline and 6-, 12-, 24-, 36-, and 60-weeks following the first treatment session. Multilevel models revealed that participants with higher FSIQ scores experienced significantly greater PTSD symptom reduction through the 24-week assessment in CPT but not WET; this effect did not persist through the 60week assessment. Educational achievement did not moderate symptom change through either 24- or 60-weeks. Individuals with higher FSIQ who are treated with CPT may experience greater symptom improvement in the early stages of recovery.

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https://onlinelibrary.wiley.com/doi/abs/10.1111/ajad.13026

Alcohol Use Disorder Among Adults Recovered From Substance Use Disorders.

Taeho Greg Rhee PhD, MSW & Robert A. Rosenheck MD

The American Journal on Addictions

First published: 26 March 2020 https://doi.org/10.1111/ajad.13026

## Background and Objectives

Alcohol use is often overlooked and underestimated among patients recovered from substance dependence. The prevalence and correlates of alcohol use disorder (AUD) among adults recovered from substance use disorders (SUDs) are estimated in this study.

#### Methods

A nationally representative cross-sectional analysis of the National Epidemiological Survey on Alcohol and Related Conditions Wave-III was used in this study. Survey respondents, aged 18 or older, who recovered from SUDs, based on Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) criteria (n = 2061 unweighted), were included. A total of three comparison groups were identified using DSM-5 criteria (1) current AUD, (2) former AUD, and (3) never had AUD. The prevalence of these groups was estimated; medical and psychiatric comorbidities and health-related quality of life were compared; and factors associated with having a current AUD when compared with those with former AUD and those who never had AUD were examined, controlling for other covariates.

## Results

About 5.7% of US adults, nationally representative of 14.2 million, have been reported to have recovered from past SUDs. Of these, 28.9% met criteria for current AUD and 48.4% had former AUD. When compared with those who never had AUD, factors associated with having a current AUD included the following: living in urban areas (P = .019), having a bipolar 1 disorder (P < .001), and a history of lifetime incarceration (P = .004).

#### Discussion and Conclusion

Nearly one-third of adults recovered from SUDs had current AUD, and several behavioral factors were associated with having a current AUD when compared with those who never had AUD.

#### Scientific Significance

Our study highlights the substantial risk of AUD in adults who have successfully recovered from SUDs. (Am J Addict 2020;00:00–00)

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## https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1003074

Association of suicidal behavior with exposure to suicide and suicide attempt: A systematic review and multilevel meta-analysis.

Nicole T. M. Hill, Jo Robinson, Jane Pirkis, Karl Andriessen, Karolina Krysinska, Amber Payne, Alexandra Boland, Alison Clarke, Allison Milner, Katrina Witt, Stephan Krohn, Amit Lampi

**PLOS Medicine** 

Published: March 31, 2020

https://doi.org/10.1371/journal.pmed.1003074

#### Background

Exposure to suicidal behavior may be associated with increased risk of suicide, suicide attempt, and suicidal ideation and is a significant public health problem. However, evidence to date has not reliably distinguished between exposure to suicide versus suicide attempt, nor whether the risk differs across suicide-related outcomes, which have markedly different public health implications. Our aim therefore was to quantitatively assess the independent risk associated with exposure to suicide and suicide attempt on suicide, suicide attempt, and suicidal ideation outcomes and to identify moderators of this risk using multilevel meta-analysis.

#### Methods and findings

We systematically searched MEDLINE, Embase, PsycINFO, CINAHL, ASSIA, Sociological Abstracts, IBSS, and Social Services Abstracts from inception to 19 November 2019. Eligible studies included comparative data on prior exposure to suicide, suicide attempt, or suicidal behavior (composite measure—suicide or suicide attempt) and the outcomes of suicide, suicide attempt, and suicidal ideation in relatives, friends, and acquaintances. Dichotomous events or odds ratios (ORs) of suicide, suicide attempt, and suicidal ideation were analyzed using multilevel meta-analyses to accommodate the non-independence of effect sizes. We assessed study quality using the National Heart, Lung, and Blood Institute quality assessment tool for observational studies. Thirty-four independent studies that presented 71 effect sizes (exposure to suicide: k = 42, from 22 independent studies; exposure to suicide attempt: k = 19, from 13 independent studies; exposure to suicidal behavior (composite): k = 10, from 5 independent studies) encompassing 13,923,029 individuals were eligible. Exposure to suicide was associated with increased odds of suicide (11 studies, N = 13,464,582; OR = 3.23, 95% CI = 2.32 to 4.51, P < 0.001) and suicide attempt (10 studies, N = 121,836;

OR = 2.91, 95% CI = 2.01 to 4.23, P < 0.001). However, no evidence of an association was observed for suicidal ideation outcomes (2 studies, N = 43,354; OR = 1.85, 95% CI = 0.97 to 3.51, P = 0.06). Exposure to suicide attempt was associated with increased odds of suicide attempt (10 studies, N = 341,793; OR = 3.53, 95% CI = 2.63 to 4.73, P < 0.001), but not suicide death (3 studies, N = 723; OR = 1.64, 95% CI = 0.90 to 2.98, P = 0.11). By contrast, exposure to suicidal behavior (composite) was associated with increased odds of suicide (4 studies, N = 1,479; OR = 3.83, 95% CI = 2.38 to 6.17, P < 0.001) but not suicide attempt (1 study, N = 666; OR = 1.10, 95% CI = 0.69 to 1.76, P = 0.90), a finding that was inconsistent with the separate analyses of exposure to suicide and suicide attempt. Key limitations of this study include fair study quality and the possibility of unmeasured confounders influencing the findings. The review has been prospectively registered with PROSPERO (CRD42018104629).

#### Conclusions

The findings of this systematic review and meta-analysis indicate that prior exposure to suicide and prior exposure to suicide attempt in the general population are associated with increased odds of subsequent suicidal behavior, but these exposures do not incur uniform risk across the full range of suicide-related outcomes. Therefore, future studies should refrain from combining these exposures into single composite measures of exposure to suicidal behavior. Finally, future studies should consider designing interventions that target suicide-related outcomes in those exposed to suicide and that include efforts to mitigate the adverse effects of exposure to suicide attempt on subsequent suicide attempt outcomes.

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#### https://onlinelibrary.wiley.com/doi/abs/10.1111/jsr.13026

Sleep disturbance mediates the association of adverse childhood experiences with mental health symptoms and functional impairment in US soldiers.

Morgan A. Conway, Oscar A. Cabrera, Kristina Clarke-Walper, Michael N. Dretsch, Jayne B. Holzinger, Lyndon A. Riviere, Phillip J. Quartana

Journal of Sleep Research First published: 12 March 2020 https://doi.org/10.1111/jsr.13026

Adverse childhood experiences (ACEs) can have long-term impacts on a person's mental health, which extend into adulthood. There is a high prevalence of ACEs among

service members. Further, service members also report frequently experiencing disrupted sleep. We hypothesized that disrupted sleep may serve a mechanistic function connecting ACEs to functional impairment and poorer mental health. In a cross-sectional sample (n = 759), we found evidence for an indirect effect of ACEs on mental health outcomes through disrupted sleep. In a different sample using two time-points (n = 410), we found evidence for an indirect effect of ACEs on changes in mental health outcomes and functional impairment during a reset period, through changes in disrupted sleep during the same period. Implications, limitations and future research directions are discussed.

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## https://onlinelibrary.wiley.com/doi/full/10.1111/jsr.13017

Cognitive behavioural therapy for insomnia (CBTi): From randomized controlled trials to practice guidelines to implementation in clinical practice (editorial)

Charles M. Morin

Journal of Sleep Research First published: 12 March 2020 https://doi.org/10.1111/jsr.13017

Major advances have taken place in the field of insomnia therapeutics over the last few decades. Whereas pharmacotherapy has long been the only treatment option for the management of insomnia, along with some generic sleep hygiene education used as an adjunct, cognitive behavioural therapy for insomnia (CBTi) is now recognized and accepted as first-line treatment not only by psychological and sleep organizations, but also by the medical professional community (Qaseem, Kansagara, Forciea, Cooke, & Denberg, 2016; Riemann et al., 2017).

Despite such advances in the field, there is still a huge gap between evidence-based practice guidelines and current clinical practices. The reality is that very few patients with insomnia receive any treatment and, when they do, the predominant therapeutic approach is pharmacotherapy, and not always with drugs supported by evidence or even indicated for insomnia. Whether in Europe, North America or in other parts of the world, CBTi is rarely available and few patients have (the luxury of) access to this treatment modality. There is a huge imbalance between population needs and supply. One of the main reasons for this disparity is, although not exclusively, the lack of adequately trained clinicians to provide high-quality CBTi. An important challenge then

has to do with how to enhance access and implementation of CBTi in various healthcare settings. The paper by Baglioni and colleagues (Baglioni et al., 2020), in this issue of JSR, proposes a template whereby the European Academy for CBTi promotes training opportunities, oversees training standards and regulates certification of providers. This is a much needed and welcome initiative in order to foster CBTi dissemination and implementation in clinical settings.

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https://www.ncbi.nlm.nih.gov/pubmed/31557047

MSMR. 2019 Sep;26(9):13-24.

Incidence and temporal presentation of visual dysfunction following diagnosis of traumatic brain injury, active component, U.S. Armed Forces, 2006-2017.

Reynolds ME, Barker FM 2nd, Merezhinskaya N, Oh GT, Stahlman S.

This analysis describes the incidence of visual dysfunctions following a diagnosis of traumatic brain injury (TBI) among active component service members. The visual dysfunctions were divided into 9 major categories. A comparison group of service members with no history of TBI was used to determine relative incidence rates. The most commonly diagnosed visual dysfunctions were subjective visual disturbances, convergence insufficiency (CI), visual field loss, and accommodative dysfunction (AD). Service members with mild or moderate/severe TBI had significantly higher incidences of AD and CI compared to service members with no TBI. Results of survival analysis showed that service members with mild or moderate/severe TBI had lower probabilities of remaining without the visual dysfunction outcome at almost every week of follow-up in the first year after TBI diagnosis compared to those with no TBI. The findings of this report suggest opportunities to improve both documentation and access to care for service members with these conditions.

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https://academic.oup.com/sleep/advance-article-abstract/doi/10.1093/sleep/zsaa065/5815720

Sleep Problems in Active Duty Military Personnel Seeking Treatment for Posttraumatic Stress Disorder: Presence, Change, and Impact on Outcomes.

Daniel J Taylor, Kristi E Pruiksma, Willie Hale, Carmen P McLean, Laurie Zandberg, Lily Brown, Jim Mintz, Stacey Young-McCaughan, Alan L Peterson, Jeffrey S Yarvis, Katherine A Dondanville, Brett T Litz, John Roache, Edna B Foa on behalf of the STRONG STAR Consortium

## Sleep

Published: 04 April 2020

https://doi.org/10.1093/sleep/zsaa065

## Study Objective

To examine sleep disorder symptom reports at baseline and post-treatment in a sample of active duty U.S. Army Soldiers receiving treatment for posttraumatic stress disorder (PTSD). Explore sleep-related predictors of outcomes.

#### Methods

Sleep was evaluated in 128 participants in a parent randomized clinical trial comparing Spaced formats of Prolonged Exposure (PE) or Present Centered Therapy and a Massed format of PE. In the current study, Spaced formats were combined and evaluated separately from Massed.

#### Results

At baseline, the average sleep duration was < 5 hours per night on weekdays/workdays and < 6 hours per night on weekends/off days. The majority of participants reported clinically significant insomnia, clinically significant nightmares, and probable sleep apnea and approximately half reported excessive daytime sleepiness at baseline. Insomnia and nightmares improved significantly from baseline to posttreatment in all groups, but many patients reported clinically significant insomnia (> 70%) and nightmares (> 38%) posttreatment. Excessive daytime sleepiness significantly improved only in the Massed group, but 40% continued to report clinically significant levels at posttreatment. Short sleep (Spaced only), clinically significant insomnia and nightmares, excessive daytime sleepiness and probable sleep apnea (Massed only) at baseline predicted higher PTSD symptoms across treatment course. Short weekends/off days sleep predicted lower PTSD symptom improvement in the Spaced treatments.

#### Conclusions

Various sleep disorder symptoms were high at baseline, were largely unchanged with PTSD treatment, and were related to worse PTSD treatment outcomes. Studies are needed with objective sleep assessments and targeted sleep disorders treatments in PTSD patients.

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## https://www.tandfonline.com/doi/abs/10.1080/07481187.2020.1745954

## Depression and alcohol use disorders as precursors to death by suicide.

Jalessa Perez, Eleanor Beale, James Overholser, Alison Athey & Craig Stockmeier

**Death Studies** 

Published online: 02 Apr 2020

https://doi.org/10.1080/07481187.2020.1745954

The combined presence of depression with alcohol abuse can increase suicide risk. We used psychological autopsy to evaluate 101 individuals who died by suicide, to understand relationships between stressful life events, alcohol abuse, and depression. As compared to suicidal adults with depression only, individuals meeting criteria for both a depressive disorder and alcohol use disorder tended to be younger and experienced higher rates of stressful life events during the six months prior to death. Alcohol abuse likely influences interpersonal conflict, financial distress, and legal problems. Interventions focusing on managing life problems may help to reduce suicide risk.

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## https://academic.oup.com/sleep/advance-article/doi/10.1093/sleep/zsaa064/5814942

## Increased Oscillatory Frequency of Sleep Spindles in Combat-Exposed Veteran Men with Post-Traumatic Stress Disorder.

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

Sleep

Published: 02 April 2020

https://doi.org/10.1093/sleep/zsaa064

## Study Objectives

Sleep disturbances are core symptoms of post-traumatic stress disorder (PTSD), but reliable sleep markers of PTSD have yet to be identified. Sleep spindles are important brain waves associated with sleep protection and sleep-dependent memory consolidation. The present study tested whether sleep spindles are altered in individuals

with PTSD and whether the findings are reproducible across nights and subsamples of the study.

#### 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 identified slow (10–13 Hz) and fast (13–16 Hz) sleep spindles during N2 and N3 sleep stages and performed topographical analyses of spindle parameters (amplitude, duration, oscillatory frequency, and density) on 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 assessment.

#### Results

In the discovery analysis, compared to non-PTSD participants, PTSD participants exhibited 1) higher slow-spindle oscillatory frequency over the antero-frontal regions on both nights and 2) higher fast-spindle oscillatory frequency over the centro-parietal regions on the second night. The first finding was preserved in the replication analysis. We found no significant group differences in the amplitude, duration, or density of slow or fast spindles.

#### Conclusions

The elevated spindle oscillatory frequency in PTSD may indicate a deficient sensorygating mechanism responsible for preserving sleep continuity. Our findings, if independently validated, may assist in the development of sleep-focused PTSD diagnostics and interventions.

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## https://onlinelibrary.wiley.com/doi/10.1002/jts.22506

Experiences of Sexual Harassment, Stalking, and Sexual Assault During Military Service Among LGBT and Non-LGBT Service Members.

Schuyler, A.C., Klemmer, C., Mamey, M.R., Schrager, S.M., Goldbach, J.T., Holloway, I.W. and Castro, C.A.

Journal of Traumatic Stress First published: 26 March 2020 https://doi.org/10.1002/jts.22506 Sexual victimization, including sexual harassment and assault, remains a persistent problem in the U.S. military. Service members identifying as lesbian, gay, bisexual, or transgender (LGBT) may face enhanced risk, but existing research is limited. We examined experiences of sexual harassment, stalking, and sexual assault victimization during service in a sample of LGBT and non-LGBT active duty service members. Service members who identified as LGBT (n = 227 LGB, n = 56 transgender) or non-LGBT (n = 276) were recruited using respondent-driven sampling for an online survey. Logistic regression models examined the correlates of sexual and stalking victimization. Victimization was common among LGBT service members, including sexual harassment (80.7% LGB, 83.9% transgender), stalking (38.6% LGB, 30.4% transgender), and sexual assault (25.7% LGB, 30.4% transgender). In multivariable models, LGB identity remained a significant predictor of sexual harassment, OR = 4.14, 95% CI [2.21, 7.78]; stalking, OR = 1.98, 95% CI [1.27, 3.11]; and assault, OR = 2.07, 95% CI [1.25, 3.41]. A significant interaction between LGB identity and sex at birth, OR = 0.34, 95% CI [0.13, 0.88], suggests an elevated sexual harassment risk among male, but not female, LGB service members. Transgender identity predicted sexual harassment and assault at the bivariate level only. These findings suggest that LGBT service members remain at an elevated risk of sexual and/or stalking victimization. As the military works toward more integration and acceptance of LGBT service members, insight into victimization experiences can inform tailored research and intervention approaches aimed at prevention and care for victims.

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## https://onlinelibrary.wiley.com/doi/10.1002/jts.22496

Combat-Related Posttraumatic Stress Disorder and Comorbid Major Depression in U.S. Veterans: The Role of Deployment Cycle Adversity and Social Support.

Goetter, E.M., Hoeppner, S.S., Khan, A.J., Charney, M.E., Wieman, S., Venners, M.R., Avallone, K.M., Rauch, S.A.M. and Simon, N.M.

Journal of Traumatic Stress First published: 26 March 2020 https://doi.org/10.1002/jts.22496

Posttraumatic stress disorder (PTSD) and major depressive disorder (MDD) commonly co-occur in combat veterans, and this comorbidity has been associated with higher levels of distress and more social and economic costs compared to one disorder alone. In a secondary analysis of a multisite randomized controlled trial of a sample of

veterans with combat-related PTSD, we examined the associations among pre-, peri-, and postdeployment adversity, social support, and clinician-diagnosed comorbid MDD. Participants completed the Deployment Risk and Resilience Inventory and the Beck Depression Inventory–II as well as structured clinical interviews for diagnostic status. Among 223 U.S. veterans of the military operations in Iraq and Afghanistan (86.9% male) with primary combat-related PTSD, 69.5% had current comorbid MDD. After adjustment for sex, a linear regression model indicated that more concerns about family disruptions during deployment, f2 = 0.065; more harassment during deployment, f2 = 0.020; and lower ratings of postdeployment social support, f2 = 0.154, were associated with more severe self-reported depression symptoms. Interventions that enhance social support as well as societal efforts to foster successful postdeployment reintegration are critical for reducing the mental health burden associated with this highly prevalent comorbidity in veterans with combat-related PTSD.

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#### https://onlinelibrary.wiley.com/doi/abs/10.1002/jts.22505

Examining Insomnia During Intensive Treatment for Veterans with Posttraumatic Stress Disorder: Does it Improve and Does it Predict Treatment Outcomes?

Zalta, A.K., Pinkerton, L.M., Valdespino-Hayden, Z., Smith, D.L., Burgess, H.J., Held, P., Boley, R.A., Karnik, N.S. and Pollack, M.H.

Journal of Traumatic Stress First published: 26 March 2020 https://doi.org/10.1002/jts.22505

Previous research has demonstrated that sleep disturbances show little improvement with evidence-based psychotherapy for posttraumatic stress disorder (PTSD); however, sleep improvements are associated with PTSD treatment outcomes. The goal of the current study was to evaluate changes in self-reported insomnia symptoms and the association between insomnia symptoms and treatment outcome during a 3-week intensive treatment program (ITP) for veterans with PTSD that integrated cognitive processing therapy (CPT), mindfulness, yoga, and other ancillary services. As part of standard clinical procedures, veterans (N = 165) completed self-report assessments of insomnia symptoms at pre- and posttreatment as well as self-report assessments of PTSD and depression symptoms approximately every other day during treatment. Most veterans reported at least moderate difficulties with insomnia at both pretreatment (83.0%–95.1%) and posttreatment (69.1–71.3%). Statistically significant reductions in

self-reported insomnia severity occurred from pretreatment to posttreatment; however, the effect size was small, d = 0.33. Longitudinal mixed-effects models showed a significant interactive effect of Changes in Insomnia × Time in predicting PTSD and depression symptoms, indicating that patients with more improvements in insomnia had more positive treatment outcomes. These findings suggest that many veterans continued to struggle with sleep disruption after a 3-week ITP, and successful efforts to improve sleep could lead to better PTSD treatment outcomes. Further research is needed to establish how adjunctive sleep interventions can be used to maximize both sleep and PTSD outcomes.

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#### **Links of Interest**

Family separations, training "for nothing" and rock-bottom morale. How the travel ban is affecting troops

https://www.militarytimes.com/news/your-military/2020/04/02/family-separations-training-for-nothing-and-rock-bottom-morale-how-the-travel-ban-is-affecting-troops/

Five Ways to Cope with COVID-19, Brought to You by the U.S. Military <a href="https://pdhealth.mil/news/blog/five-ways-cope-covid-19-brought-you-us-military">https://pdhealth.mil/news/blog/five-ways-cope-covid-19-brought-you-us-military</a>

It's complicated: Our relationship with social media <a href="https://health.mil/News/Articles/2020/04/03/Its-Complicated-Our-relationship-with-social-media">https://health.mil/News/Articles/2020/04/03/Its-Complicated-Our-relationship-with-social-media</a>

Troops believe coronavirus is hurting military readiness, new Military Times Poll shows <a href="https://www.militarytimes.com/news/pentagon-congress/2020/04/07/troops-believe-coronavirus-is-hurting-military-readiness-new-military-times-poll-shows/">https://www.militarytimes.com/news/pentagon-congress/2020/04/07/troops-believe-coronavirus-is-hurting-military-readiness-new-military-times-poll-shows/</a>

Sexual Harassment and Sexual Assault: What is the Connection? <a href="https://www.pdhealth.mil/news/blog/sexual-harassment-and-sexual-assault-what-connection">https://www.pdhealth.mil/news/blog/sexual-harassment-and-sexual-assault-what-connection</a>

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# Resource of the Week: <u>Military Child Development Program: Background and Issues</u>

New, from the Congressional Research Service:

The Department of Defense (DOD) operates the largest employer-sponsored child care program in the United States, serving approximately 200,000 children of uniformed servicemembers and DOD civilians, and employing over 23,000 child care workers, at an annual cost of over \$1 billion. DOD's child development program (CDP) includes accredited, installation-based, government-run, full-time pre-school and school-aged care in its Child Development Centers (CDCs), and subsidized care in Family Care Centers (FCCs). DOD also subsidizes care in private child care centers outside of military installations through the Fee Assistance program.

Child care services are part of a broader set of quality of life benefits that make up the total compensation package for military personnel and certain DOD civilians. The Department has argued that these child care benefits help support its recruiting, retention, and readiness goals and that there is generally a high level of satisfaction among servicemembers who use DOD child care services. Military family advocacy groups have largely supported existing child care benefits and have also called for expanding awareness of, access to, operating hours for, and improvements or enhancements of other aspects of military child care services.

Military service members, surviving spouses, and DOD civilians are generally eligible for CDC services. DOD contractors, military retirees, and other federal agency personnel are eligible on a space-available basis. The services maintain a priority list with active duty single parents, dual military couples, and wounded servicemembers typically eligible in the highest priority category. Child care fees are subsidized and based on total family income with a progressive fee structure. Average fees for military CDCs tend to be lower than the average fees for civilian day care providers.

CDCs are funded by a combination of appropriated and non-appropriated funds (APF and NAF), Non-appropriated funds are generated from fees paid by military child care patrons and from other revenue-generating programs on military installations. Appropriated funds are directed to different accounts. Funds for the construction of care facilities come from military construction (MILCON) funds, while other program funds come from Operation and Maintenance (O&M) and

Morale, Welfare, and Recreation (MWR) accounts.

Issues of sustained concern for Congress are quality and accessibility of military child care and availability of adequately trained child care employees, While there has been broad support for DOD's CDP since its inception, the questions of what benefits should be provided to military servicemembers and their families, how these benefits should be structured, and what resources should be directed to these benefits are issues for Congress when considering the annual defense budget authorization and appropriation.

Figure 3. Number of Children in Active Duty Families Under 12 Years Old
October 2019

**Source:** Defense Manpower Data Center; Active Duty Family Number of Children Report.

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