

## CDP Research Update -- April 13, 2017

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- Economic evaluation of telephone-based concussion management for combatrelated mild traumatic brain injury.
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- The Double-Edged Sword: The Role of Empathy in Military Veterans' Partners Distress.
- Caring for military families: Understanding their unique stressors.
- Links of Interest

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 Resource of the Week - Management of Sleep Disturbances Following Concussion/Mild Traumatic Brain Injury (TBI): Guidance for Primary Care Management in Deployed and Non-Deployed Settings (Defense and Veterans Brain Injury Center)

### https://www.ptsd.va.gov/professional/newsletters/research-quarterly/V28N2.pdf

## PTSD Research Quarterly - Meditation-based Approaches in the Treatment of PTSD

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Moving beyond psychotherapies that focus primarily on behavior and cognitive change, the emergence of the Third Wave of Cognitive Behaviorism during the past decade, has led to the development of psychotherapies that have been influenced by Zen Buddhist teachings and mindfulness approaches that embrace acceptance of self, internal experiences, the environment and others.

This issue of the PTSD Research Quarterly provides a guide to recent clinical trials on meditation-based approaches for the treatment of PTSD.

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http://journals.sagepub.com/doi/abs/10.1177/1357633X17696586

## Economic evaluation of telephone-based concussion management for combatrelated mild traumatic brain injury.

John S Richardson, Gregory F Guzauskas, Jesse R Fann, Nancy R Temkin, Nigel E Bush, Kathleen R Bell, Gregory A Gahm, Derek J Smolenski, Jo Ann Brockway, Ryan N Hansen

Journal of Telemedicine and Telecare First Published April 3, 2017 DOI 10.1177/1357633X17696586

Introduction

Mild traumatic brain injury (mTBI) is an unfortunately common repercussion of military service in a combat zone. The CONTACT study tested an individualized telephone

support intervention employing problem solving therapy (PST) for mTBI in soldiers recently returned from deployment. We sought to determine the cost effectiveness of this intervention from a military healthcare system perspective.

### Methods

We conducted an intent-to-treat post-hoc analysis by building a decision analytic model that evaluated the choice between using PST or education only (EO). The model included cost-minimization and cost-effectiveness analyses. The incremental cost-effectiveness ratios (ICERs) were calculated as the differences in costs of PST versus EO relative to the differences in the outcomes of participants.

## Results

The PST intervention resulted in an annual per-enrolee cost of \$1027 (95% CI: \$836 to \$1248), while EO costs were \$32 (95% CI: \$25 to \$39), resulting in a net incremental cost of \$996 per enrolee (95% CI: \$806 to \$1,217). The ICERs were \$68,658/QALY based on EQ-5D (95% CI: -\$463,535 to \$596,661) and \$49,284/QALY based on SF-6D (95% CI: \$26,971 to \$159,309). Estimates of treatment costs in a real-world setting were accompanied by substantially lower ICERs that are within accepted thresholds for willingness-to-pay.

### Discussion

Although the intervention had short-term benefits sufficient to yield acceptable ICERs, there was no long-term effect of PST over EO observed in the study. Consequently, we suggest that future studies examine the use of low-cost approaches, such as booster relapse-prevention calls that may lead to sustained treatment benefit for this population.

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## http://onlinelibrary.wiley.com/doi/10.1002/da.22621/full

## Associations of childhood bullying victimization with lifetime suicidal behaviors among new U.S. Army soldiers.

Associations of childhood bullying victimization with lifetime suicidal behaviors among new U.S. Army soldiers.

Laura Campbell-Sills, Ronald C. Kessler, Robert J. Ursano, Anthony J. Rosellini, Tracie O. Afifi, Lisa J. Colpe, Steven G. Heeringa, Matthew K. Nock, Nancy A. Sampson, Jitender Sareen, Michael Schoenbaum, Xiaoying Sun, Sonia Jain, Murray B. Stein and the Army STARRS Collaborators

Depression and Anxiety First published: 3 April 2017 DOI: 10.1002/da.22621

#### Background

Prior studies have documented associations of childhood bullying victimization with suicidal behaviors. However, many failed to adjust for concomitant risk factors and none investigated this relationship in military personnel. This study aimed to estimate independent associations of childhood bullying victimization with suicidal behaviors among U.S. Army soldiers.

#### Methods

Soldiers reporting for basic training completed a cross-sectional survey assessing mental disorders, suicidal behaviors, and childhood adversities including two types of bullying victimization: (1) Physical Assault/Theft and (2) Bullying Comments/Behaviors. Associations of childhood bullying experiences with suicidal behaviors were estimated using discrete-time survival analysis of person–year data from 30,436 soldiers. Models adjusted for sociodemographic factors, childhood maltreatment by adults, and mental disorders.

#### Results

After comprehensive adjustment for other risk factors, more frequent Physical Assault/Theft by peers during childhood was associated with increased odds of lifetime suicidal ideation (adjusted odds ratio [AOR] = 1.18, 95% CI: 1.11-1.26, P < .001) and attempt (AOR = 1.30, 95% CI: 1.13-1.50, P < .001). More frequent Bullying Comments/Behaviors were associated with increased risk of ideation (AOR = 1.30, 95% CI: 1.26-1.35, P < .001), plan (AOR = 1.44, 95% CI: 1.35-1.54, P < .001), attempt (AOR = 1.24, 95% CI: 1.15-1.33, P < .001), and onset of plan among ideators (AOR = 1.09, 95% CI: 1.03-1.15, P = .002). Relative to no bullying victimization, exposure to the most persistent bullying was associated with two- to fourfold increase in risk for suicidal behaviors.

#### Conclusions

Childhood bullying victimization is associated with lifetime suicidal behaviors among new soldiers. Exposure to Bullying Comments/Behaviors during childhood is associated with progression from suicidal ideation to plan. Improved recognition of these relationships may inform risk mitigation interventions for soldiers.

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#### http://online.liebertpub.com/doi/abs/10.1089/neu.2016.4851

## Mild and mild to moderate traumatic brain injury (TBI)-induced significant progressive and enduring multiple comorbidities.

Dr. Jiamei Hou, Ms. Rachel Nelson, Mr. Zachary Wilkie, Dr. Golam Mustafa, Shigeharu Tsuda, Dr. Floyd J Thompson, and Dr. Prodip K Bose

Journal of Neurotrauma April 2017, ahead of print doi:10.1089/neu.2016.4851

Traumatic brain injury (TBI) can produce life-long disabilities including anxiety, cognitive, balance, and motor deficits. The experimental model of closed head TBI (cTBI) induced by weight drop / impact acceleration is known to produce hallmark TBI injuries. However, comprehensive long-term characterization of co-morbidities induced by graded mild to mild/moderate intensities using this experimental cTBI model has not been reported. The present study used two intensities of weight drop (1.0 m and 1.25 m/450 g) to produce cTBI in a rat model to investigate initial and long-term disability of four comorbidities: anxiety, cognitive, vestibulomotor, and spinal reflex that related to spasticity. The TBI and sham injuries were produced under general anesthesia. The time for righting recoveries following TBI, recorded to estimate the duration of unconsciousness, revealed that the TBI mild/moderate group required a mean of 1 minute 27 sec longer than the values observed for non-injured sham animals. Screening MRI images revealed no anatomical changes, mid-line shifts, or hemorrhagic volumes. However, compared with sham injuries, significant long-term anxiety, cognitive, balance, and physiological changes in motor reflex related to spasticity were observed post-TBI for both TBI intensities. The longitudinal trajectory of anxiety and balance disabilities tested at 2 wk, 4 wk, 8 wk, and 18 wk revealed progressively worsening disabilities. In general, disability magnitudes were proportional to injury intensity for three of the four measures. A natural hypothesis would pose that all disabilities would increase incrementally relative to injury severity. Surprisingly, anxiety disability progressed over time to be greater in the mildest injury. Collectively, translational implications of these observations suggest that patients with mild TBI should be evaluated longitudinally at multiple time points, and that anxiety disorder could potentially have a particularly low threshold for appearance and progressively worsen following injury.

### http://onlinelibrary.wiley.com/doi/10.1111/acps.12685/full

## Intergenerational transmission of post-traumatic stress disorder in Australian Vietnam veterans' families.

O'Toole BI, Burton MJ, Rothwell A, Outram S, Dadds M, Catts SV

Acta Psychiatrica Scandinavica First published: 28 December 2016 DOI: 10.1111/acps.12685

#### Objective

To assess the association between parental post-traumatic stress disorder (PTSD) and offspring PTSD and its specificity for other disorders in a non-clinical epidemiological cohort of Australian Vietnam veterans, their partners and their sons and daughters.

#### Method

Veterans were interviewed twice, in 1992–1994 and 2005–2006; partners were interviewed in 2006–2007, and their offspring in 2012–2014. A total of 125 sons and 168 daughters were interviewed from 197 families, 137 of which also included partners who were the mothers of the children. Statistical analysis used multi-level modelling to compute odds ratios and 95% confidence intervals while controlling for clustering effects within families. Parent PTSD diagnoses were examined for associations with offspring trauma exposure, PTSD and other psychiatric diagnoses.

## Results

Veteran PTSD increased the risk of PTSD and no other disorder in both sons and daughters; partner PTSD did not. Veteran depression was also a risk factor for sons' PTSD, and alcohol disorder was linked to alcohol dependence in sons and PTSD in daughters, but not when controlling for veteran PTSD.

#### Conclusion

We conclude that PTSD in a Vietnam veteran father increases the risk specifically for PTSD in his sons and daughters.

See also (editorial): <u>Is it 'good to share'? Intergenerational transmission of post-</u> traumatic stress disorder

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#### http://onlinelibrary.wiley.com/doi/10.1002/da.22619/full

## History of sexual trauma moderates psychotherapy outcome for posttraumatic stress disorder.

Markowitz JC, Neria Y, Lovell K, Van Meter PE, Petkova E

Depression and Anxiety First published: 4 April 2017 DOI: 10.1002/da.22619

#### Background

Moderators of differential psychotherapy outcome for posttraumatic stress disorder (PTSD) are rare, yet have crucial clinical importance. We tested the moderating effects of trauma type for three psychotherapies in 110 unmedicated patients with chronic DSM-IV PTSD.

## Methods

Patients were randomized to 14 weeks of prolonged exposure (PE, N = 38), interpersonal psychotherapy (IPT, N = 40), or relaxation therapy (RT, N = 32). The Clinician-Administered PTSD Scale (CAPS) was the primary outcome measure. Moderator candidates were trauma type: interpersonal, sexual, physical. We fit a regression model for week 14 CAPS as a function of treatment (a three-level factor), an indicator of trauma type presence/absence, and their interactions, controlling for baseline CAPS, and evaluated potential confounds.

## Results

Thirty-nine (35%) patients reported sexual, 68 (62%) physical, and 102 (93%) interpersonal trauma. Baseline CAPS scores did not differ by presence/absence of trauma types. Sexual trauma as PTSD criterion A significantly moderated treatment effect: whereas all therapies had similar efficacy among nonsexually-traumatized patients, IPT had greater efficacy among sexually traumatized patients (efficacy difference with and without sexual trauma: IPT vs. PE and IPT vs. RT P's < .05), specifically in PTSD symptom clusters B and D (P's < .05).

#### Conclusions

Few studies have assessed effects of varying trauma types on effects of differing psychotherapies. In this exploratory study, sexual trauma moderated PTSD outcomes of three therapies: IPT showed greater benefit for sexually traumatized patients than PE or

RT. The IPT focuses on affect to help patients determine trust in their current environments may particularly benefit patients who have suffered sexual assault.

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http://www.sciencedirect.com/science/article/pii/S0306460317301442

## Integrated, exposure-based treatment for PTSD and comorbid substance use disorders: Predictors of treatment dropout.

Derek D. Szafranski, Alexandra Snead, Nicholas P. Allan, Daniel F. Gros, Therese Killeen, Julianne Flanagan, Irene Pericot-Valverde, Sudie E. Back

Addictive Behaviors Available online 4 April 2017 http://doi.org/10.1016/j.addbeh.2017.04.005

High rates of comorbid posttraumatic stress disorder (PTSD) and substance use disorders (SUD) have been noted in veteran populations. Fortunately, there are a number of evidence-based psychotherapies designed to address comorbid PTSD and SUD. However, treatments targeting PTSD and SUD simultaneously often report high dropout rates. To date, only one study has examined predictors of dropout from PTSD/SUD treatment. To address this gap in the literature, this study aimed to 1) examine when in the course of treatment dropout occurred, and 2) identify predictors of dropout from a concurrent treatment for PTSD and SUD. Participants were 51 male and female veterans diagnosed with current PTSD and SUD. All participants completed at least one session of a cognitive-behavioral treatment (COPE) designed to simultaneously address PTSD and SUD symptoms. Of the 51 participants, 22 (43.1%) dropped out of treatment prior to completing the full 12 session COPE protocol. Results indicated that the majority of dropout (55%) occurred after session 6, with the largest amount of dropout occurring between sessions 9 and 10. Results also indicated a marginally significant relationship between greater baseline PTSD symptom severity and premature dropout. These findings highlight inconsistencies related to timing and predictors of dropout, as well as the dearth of information noted about treatment dropout within PTSD and SUD literature. Suggestions for procedural changes, such as implementing continual symptom assessments during treatment and increasing dialog between provider and patient about dropout were made with the hopes of increasing consistency of findings and eventually reducing treatment dropout.

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## https://www.ncbi.nlm.nih.gov/pubmed/28368154

Psychol Trauma. 2017 Apr 3. doi: 10.1037/tra0000265. [Epub ahead of print]

## The Double-Edged Sword: The Role of Empathy in Military Veterans' Partners Distress.

Dekel R, Siegel A, Fridkin S, Svetlitzky V

## **OBJECTIVE:**

The existing literature has shown that war veterans' posttraumatic stress symptoms (PTSS) are associated with high levels of distress in their female partners. According to the literature, spouses' empathy for their spouses can be a risk factor for their own mental health. However, this subject has not been examined among veteran couples. The current study therefore investigated both the direct and moderating contribution of females' cognitive and affective empathy to their own PTSS and depression symptoms, above and beyond the preexisting traumatic events of the women's own lives and the veterans' PTSS.

#### METHOD:

Participants were 300 Israeli men who had served in the 2006 Israel-Lebanon War and their female partners, all of whom completed survey questionnaires.

## **RESULTS**:

Results revealed that although cognitive empathy can play a positive role for the female in the aftermath of a traumatic event, affective empathy can potentially make a negative contribution to her distress. Women's education, in number of years, and their own previous traumatic life events, as well as veterans' levels of PTSS, were all found to make a direct contribution to females' PTSS and depression symptoms.

#### CONCLUSION:

Findings support the theory that although higher empathy can play a positive role in military couples in which the male partner displays symptoms of PTSS symptoms, it can also contribute negatively to her distress. (PsycINFO Database Record (c) 2017 APA, all rights reserved).

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http://journals.lww.com/tnpj/Abstract/publishahead/Caring for military families Under standing their.99772.aspx

### Caring for military families: Understanding their unique stressors.

Owen, Regina DNP, APRN, PMHNP-BC; Combs, Teresa PhD, APRN, BC

Nurse Practitioner Post Author Corrections: April 4, 2017 doi: 10.1097/01.NPR.0000515421.15414.fb

Military families are often faced with unique stressors that civilian families do not have to deal with, such as deployment, geographic separation, and frequent relocation. When an NP is providing care for a military family, it is important that these unique stressors are discussed and understood. NPs can employ the Causal Uncertainty Model to encourage effortful cognition and support family attributes to ameliorate the negative effects of the stressors these families may face.

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#### Links of Interest

Streamlined analysis could help people better manage their emotions https://www.sciencedaily.com/releases/2017/03/170322103558.htm

Self-harm linked to violence towards others https://www.sciencedaily.com/releases/2017/04/170405112016.htm

Sleep deprivation impairs ability to interpret facial expressions https://www.sciencedaily.com/releases/2017/03/170323132524.htm

Suicide risk is higher in first year after deliberate self-harm https://www.sciencedaily.com/releases/2017/03/170321092657.htm

Aligning depression treatment to patient need leads to efficient care <a href="https://www.sciencedaily.com/releases/2017/03/170320120346.htm">https://www.sciencedaily.com/releases/2017/03/170320120346.htm</a>

Tackling depression by changing the way you think https://www.sciencedaily.com/releases/2017/03/170313102414.htm Prolonged sleep disturbance can lead to lower bone formation https://www.sciencedaily.com/releases/2017/04/170402111317.htm

Study reverses thinking on genetic links to stress, depression https://www.sciencedaily.com/releases/2017/04/170404092316.htm Sleep Is the New Status Symbol https://www.nytimes.com/2017/04/08/fashion/sleep-tips-and-tools.html

Common antibiotic may help to prevent or treat PTSD https://www.sciencedaily.com/releases/2017/04/170404084426.htm

Russians may now control the trove of photos showing naked U.S. troops http://www.militarytimes.com/articles/marines-united-alphabay-russian-hack-militarynude-photo-scandal

Understanding Moral Injury http://nwvu.org/understanding-moral-injury/

Combat Addiction: Fact or Fiction? http://www.pdhealth.mil/news/blog/combat-addiction-fact-or-fiction

Victim Advocates: Critical Members of Sexual Assault, Prevention Response <u>https://www.defense.gov/News/Article/Article/1139876/victim-advocates-critical-</u>members-of-sexual-assault-prevention-response

Learn to Recognize, Control Post-Deployment Anger http://dcoe.mil/blog/17-04-10/learn-recognize-control-post-deployment-anger

Blood test unlocks new frontier in treating depression https://www.sciencedaily.com/releases/2017/03/170329145732.htm

Turning down the brain to erase fearful memories https://www.sciencedaily.com/releases/2017/04/170410095629.htm

10 Must-Read Books About Women In The Military http://taskandpurpose.com/10-must-read-books-women-military

CBS News investigation exposes drug abuse among Navy SEALs <a href="http://www.cbsnews.com/news/drug-use-growing-among-navy-seals-leadership-ignored-problem/">http://www.cbsnews.com/news/drug-use-growing-among-navy-seals-leadership-ignored-problem/</a>

Female Marines create a Facebook group to say 'Enough is enough' https://www.marinecorpstimes.com/articles/women-advocating-for-change-in-themarine-corps

Department of Veterans Affairs launches a new system to try to 'predict' veteran suicide <u>http://www.militarytimes.com/articles/department-of-veterans-affairs-launches-a-new-system-to-try-to-predict-veteran-suicide</u>

Patient Preference Key to PTSD Treatment Adherence http://www.medscape.com/viewarticle/878509

NSAB, Tenant Commands Dedicated to Eliminating Sexual Assault https://www.dvidshub.net/news/229496/nsab-tenant-commands-dedicated-eliminatingsexual-assault

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Resource of the Week - <u>Management of Sleep Disturbances Following</u> <u>Concussion/Mild Traumatic Brain Injury (TBI): Guidance for Primary Care</u> <u>Management in Deployed and Non-Deployed Settings</u> (Defense and Veterans Brain Injury Center)

The Management of Sleep Disturbances Following Concussion/Mild TBI product suite consists of a clinical recommendation and companion support tool, as well as a training guide and fact sheet. Service members and veterans who sustain a mild traumatic brain injury (TBI) – known as a concussion – often report difficulty sleeping. This product suite is designed to guide primary care managers in the assessment and management of common sleep disorders, including insomnia, circadian rhythm sleep-wake disorder and obstructive sleep apnea.

# Managing Sleep Disturbances Following Concussion:

Deployed and Non-Deployed Primary Care Settings



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