Empirical Support for the Definition of a Complex Trauma Event in Children and Adolescents

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The symptom presentations of complexly traumatized children were contrasted with those exposed to other, less severe trauma ecologies that met 1 or 2 features of the complex trauma definition. Included in this study were treatment-seeking children and adolescents who had experienced a traumatic event. Results indicated that child survivors of complex trauma presented with higher levels of generalized behavior problems and trauma-related symptoms than those who experienced (a) acute noninterpersonal trauma, (b) chronic interpersonal trauma that begins later in life, and (c) acute interpersonal trauma. Greater levels of behavioral problems were observed in children exposed to complex trauma as compared to those who experienced a traumatic event that begins early in life. These results provide support for the complex trauma event definition and suggest the need for a complex trauma diagnostic construct for children and adolescents.

Deployment Risk and Resilience Inventory-2 (DRRI-2): An Updated Tool for Assessing Psychosocial Risk and Resilience Factors Among Service Members and Veterans

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The Deployment Risk and Resilience Inventory (DRRI) is a widely used instrument for assessing deployment-related risk and resilience factors among war veterans. A revision of this instrument was recently undertaken to enhance the DRRI's applicability across a variety of deployment-related circumstances and military subgroups. The resulting suite of 17 distinct DRRI-2 scales is the product of a multiyear psychometric endeavor that involved (a) focus groups with Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) veterans to inform an assessment of the content validity of original DRRI measures, (b) examination of item and scale characteristics of revised scales in a national sample of OEF/OIF veterans, and (c) administration of refined scales to a second national sample of OEF/OIF veterans to confirm their psychometric quality. Both classical test theory and item response theory analytical strategies were applied to inform major revisions, which included updating the coverage of warfare-related stressors, expanding the assessment of family factors throughout the deployment cycle, and shortening scales. Finalized DRRI-2 scales demonstrated strong internal consistency reliability and criterion-related validity. The DRRI-2 can be applied to examine the role that psychosocial factors play in postdeployment health and inform interventions aimed at reducing risk and enhancing resilience among war veterans.

Cue-Centered Treatment for Youth Exposed to Interpersonal Violence: A Randomized Controlled Trial

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This study provides preliminary evidence of the feasibility and efficacy of the Stanford cue-centered treatment for reducing posttraumatic stress, depression, and anxiety in children chronically exposed to violence. Youth were recruited from schools. Participants were randomly assigned to cue-centered treatment or a waitlist control group. Assessments were conducted at 4 discrete time points. Hierarchical linear modeling analyses showed that compared to the waitlist group, the cue-centered treatment group had greater reductions in PTSD symptoms both by caregiver and child report, as well as caregiver anxiety. Cue-centered treatment, a hybrid trauma intervention merging diverse theoretical approaches, demonstrated feasibility, adherence, and efficacy in treating youth with a history of interpersonal violence.

The 5-HTTLPR Polymorphism and Posttraumatic Stress Disorder: A Meta-Analysis

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Environmental and genetic factors contribute to the development of PTSD. Variation in the 5-HTTLPR polymorphism of the serotonin transporter gene has been hypothesized to affect risk for PTSD. With the aim of investigating this association, we conducted a meta-analysis to shed light on prior controversial results and increase statistical power to detect smaller effect sizes. Taking into account all studies, no association was found between 5-HTTLPR and PTSD, with evidence of between-study heterogeneity, which could be partly explained by gender differences. In sensitivity analyses, we found an association between SS genotype and PTSD in high trauma-exposed participants. To be a carrier of the SS genotype seems to represent a risk factor for PTSD in high trauma exposure. Further studies focusing on Gene × Environment interactions are needed to better understand the role of this polymorphism in PTSD.

Thinking About Trauma: The Unique Contributions of Event Centrality and Posttraumatic Cognitions in Predicting PTSD and Posttraumatic Growth

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Researchers have been investigating possible pathways to negative (posttraumatic stress disorder [PTSD]) and positive (posttraumatic growth [PTG]) reactions to trauma in recent decades. Two cognitive constructs, event centrality and posttraumatic cognitions, have been implicated to uniquely predict PTSD symptoms in an undergraduate sample. The current pair of studies attempted to (a) replicate this finding in an undergraduate sample, (b) replicate this finding in a treatment-seeking sample, and (c) explore whether these 2 cognitive constructs uniquely predict PTG. Results indicated both posttraumatic cognitions and event centrality uniquely predicted PTSD in the undergraduate and treatment-seeking samples. These 2 cognitive constructs also predicted PTG in the undergraduate sample, but only posttraumatic cognitions predicted PTG in the treatment-seeking sample. The relationships between PTG varied, depending on whether PTG for high or low event-centrality events were assessed. The original model was supported within both populations for PTSD symptoms, and its extension to PTG was supported within the treatment-seeking sample. These results underscore cognitive and narrative factors in the progression of trauma.
Relationship of Trauma Symptoms to Amygdala-Based Functional Brain Changes in Adolescents

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In this pilot study, amygdala connectivity related to trauma symptoms was explored using resting-state functional magnetic resonance imaging (R-fMRI) in healthy adolescents with no psychiatric diagnoses. Adolescents completed a self-report trauma symptom checklist and a R-fMRI scan. We examined the relationship of trauma symptoms to resting-state functional connectivity of the amygdala. Increasing self-report of trauma symptoms by adolescents was associated with increasing functional connectivity with the right amygdala and a local limbic cluster and decreasing functional connectivity with the amygdala and a long-range frontoparietal cluster to the left amygdala, which can be a hallmark of immaturity. These pilot findings in adolescents provide preliminary evidence that even mild trauma symptoms can be linked to the configuration of brain networks associated with the amygdala.

Endorsed and Anticipated Stigma Inventory (EASI): A Tool for Assessing Beliefs About Mental Illness and Mental Health Treatment Among Military Personnel and Veterans

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Psychological Services

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This article describes the development and psychometric evaluation of the Endorsed and Anticipated Stigma Inventory (EASI), which was designed to assess different dimensions of stigma-related beliefs about mental health among military and veteran populations. Findings based on a national sample of U.S. veterans deployed in support of Operation Enduring Freedom (OEF) in Afghanistan or Operation Iraqi Freedom (OIF) in Iraq suggest that the EASI is a psychometrically sound instrument. Specifically, results revealed evidence for the internal consistency reliability, content validity, convergent and discriminant validity, and discriminative validity of EASI scales. In addition, confirmatory factor analysis results supported the proposed factor structure for this inventory of scales.

Plastic modulation of PTSD resting-state networks and subjective wellbeing by EEG neurofeedback


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In this study, we investigated whether a single session of neurofeedback training aimed at the voluntary reduction of alpha rhythm (8–12 Hz) amplitude would be related to differences in EEG network oscillations, functional MRI (fMRI) connectivity, and subjective measures of state anxiety and arousal in a group of individuals with PTSD. Individuals with PTSD related to childhood abuse underwent 30 min of EEG neurofeedback training preceded and followed by a resting-state fMRI scan. Alpha desynchronizing neurofeedback was associated with decreased alpha amplitude during training, followed by a significant increase (‘rebound’) in resting-state alpha synchronization. This rebound was linked to increased calmness, greater salience network connectivity with the right insula, and enhanced default mode network connectivity with bilateral posterior cingulate, right middle frontal gyrus, and left medial prefrontal cortex. Our study represents a first step in elucidating the potential neurobehavioural mechanisms mediating the effects of neurofeedback treatment on regulatory systems in PTSD. Moreover, it documents for the first time a spontaneous EEG ‘rebound’ after neurofeedback, pointing to homeostatic/compensatory mechanisms operating in the brain.

Intranasal Neuropeptide Y Reverses Anxiety and Depressive-like Behavior Impaired by Single Prolonged Stress PTSD Model


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Neuropeptide Y (NPY) is suggested to provide resilience to development of PTSD and co-morbid depression. Injections of NPY to the rodent brain are anxiolytic. Recently we showed that intranasal delivery of NPY to rats before or immediately after exposure to single prolonged stress (SPS) animal model of PTSD prevented development of many biochemical and behavioral symptoms of PTSD, indicating its prophylactic potential. Here, we investigated whether intranasal NPY might provide benefits once symptoms have already developed. One week after exposure to SPS stressors, animals were given intranasal NPY or vehicle and tested on elevated plus maze 1 h or 2 days later. The NPY treated rats had lower anxiety-like behavior than vehicle treated rats as indicated by more entries into open arms and fewer into closed arms, lower anxiety index, higher risk assessment and unprotected head dips and reduced grooming time. Their anxiety index was similar to that of unstressed controls. On most of these variables there was no effect of time interval and rats displayed similar overall changes 1 h or 2 days after the infusion. Moreover, intranasal NPY led to reduced depressive-like behavior, assessed by force swim test. Thus, intranasal NPY reversed several behavioral impairments triggered by the traumatic stress of SPS and has potential for non-invasive PTSD therapeutic intervention.

Using Compassionate Mind Training as a Resource in EMDR: A Case Study

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This case study examines the contribution of compassionate mind training (CMT) when used as a resource in the EMDR treatment of a 58-year-old man, who presented after a recent trauma with psychological distress and somatic symptoms—an inability to sign his name. EMDR with CMT facilitated recall of forgotten memories about his sister's traumatic death decades previously, with related emotions of shame and grief, creating insight into how these past events linked to his current signature-signing phobia. Eight sessions of therapy resulted in an elimination of the client's signature-signing phobia and a reduction in trauma-related symptoms, elevation in mood, and increase in self-compassion. Effects were maintained
at 9-month follow-up. The "Discussion" section highlights the value of working collaboratively with clients to best meet their individual needs.

**Associations between Lifetime Traumatic Events and Subsequent Chronic Physical Conditions: A Cross-National, Cross-Sectional Study**

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Associations between lifetime traumatic event (LTE) exposures and subsequent physical ill-health are well established but it has remained unclear whether these are explained by PTSD or other mental disorders. This study examined this question and investigated whether associations varied by type and number of LTEs, across physical condition outcomes, or across countries. Cross-sectional, face-to-face household surveys of adults (18+) were conducted in 14 countries. Survival analyses estimated associations between the number and type of LTEs with the subsequent onset of 11 physical conditions, with and without adjustment for mental disorders. A dose-response association was found between increasing number of LTEs and odds of any physical condition onset, independent of all mental disorders. Associations did not vary greatly by type of LTE (except for combat and other war experience), nor across countries. Traumatic events are associated with adverse downstream effects on physical health, independent of PTSD and other mental disorders. Although the associations are modest they have public health implications due to the high prevalence of traumatic events and the range of common physical conditions affected.

**Remote Anger Management Support using Mobile Technology - An Android Phone Application for persons with Post Traumatic Stress Disorder (PTSD)**

Sonja Schmer-Galunder, Peter Keller, Peggy Wu, Nina Sayer

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Continuous Anger Level Monitoring (CALM) is a prototype for Android smartphones addressing the needs of persons with PTSD or emotion/impulse control problems. The application combines physiological monitoring and evidence-based group psychotherapy. CALM allows the recording of highly emotional and stressful events and helps to identify malfunctioning behaviors and patterns by creating awareness around one's own behaviors, triggers and coping strategies. The application integrates with the Zephyr BioHarness BT belt to allow for continues physiological monitoring, biofeedback and Respiratory Sinus Arrhythmia (RSA) breathing exercises.

**Underlying Dimensions of DSM-5 Posttraumatic Stress Disorder and Major Depressive Disorder Symptoms**

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Psychological Injury and Law
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This study examined the relationship between the underlying latent factors of major depression symptoms and DSM-5 PTSD symptoms. A nonclinical sample with a trauma history participated in the study. Confirmatory factor analyses were conducted to evaluate the fit of the DSM-5 PTSD model and dysphoria model, as well as a depression model comprised of somatic and nonsomatic factors. The DSM-5 PTSD model demonstrated somewhat better fit over the dysphoria model. Wald tests indicated that PTSD’s negative alterations in cognitions and mood factor was more strongly related to depression’s nonsomatic factor than its somatic factor. This study furthers a nascent line of research examining the relationship between PTSD and depression factors in order to better understand the nature of the high comorbidity rates between the two disorders. Moreover, this study provides an initial analysis of the new DSM-5 diagnostic criteria for PTSD.

Life satisfaction in people with post-traumatic stress disorder

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We set out to investigate levels of life satisfaction and its demographic, trauma related and clinical predictors in a sample of people with PTSD. Our results indicated that people with moderately severe PTSD in the community are likely to experience lower levels of life satisfaction compared with those with other psychiatric conditions or those without any diagnoses. Multivariate analysis revealed that marital status and trauma symptoms were the only significant predictors of life satisfaction. The strong association between traumatic symptomatology and life satisfaction may indicate that routine assessment for life satisfaction or similar positive constructs in people with PTSD, referred for psychological therapies might be useful. Information on positive psychology constructs may facilitate capitalising on clients’ strengths and not just on pathology.

636,120 Ways to Have Posttraumatic Stress Disorder

Isaac R. Galatzer-Levy, Richard A. Bryant

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In an attempt to capture the variety of symptoms that emerge following traumatic stress, the revision of PTSD criteria in the DSM-5 has expanded to include additional symptom presentations. One consequence of this expansion is that it increases the amorphous nature of the classification. Using a binomial equation to elucidate possible symptom combinations, we demonstrate that the DSM–IV criteria listed for PTSD have a high level of symptom profile heterogeneity (79,794 combinations); the changes result in an eightfold expansion in the DSM–5, to 636,120 combinations. In this article, we use the example of PTSD to discuss the limitations of DSM-based diagnostic entities for classification in research by elucidating inherent flaws that are either specific artifacts from the history of the DSM or intrinsic to the underlying logic of the DSM’s method of classification. We discuss new directions in research that can provide better information regarding both clinical and nonclinical behavioral heterogeneity in response to potentially traumatic and common stressful life events. These
empirical alternatives to an a priori classification system hold promise for answering questions about why diversity occurs in response to stressors.

A systematic review of predictors of posttraumatic stress disorder (PTSD) for adult road traffic crash survivors

Michelle Heron-Delaney, Justin Kenardy, Erin Charlton, Yutaka Matsuoka

Injury
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Prevalence rates of PTSD following a road traffic crash (RTC) vary from 6% to 45%. Explanations for this wide variance are explored. A systematic review of published studies found 49 papers (44 unique studies) investigating predictors of later PTSD in RTC survivors. Consistent predictors of PTSD include rumination about the trauma, perceived threat to life, a lack of social support, higher Acute Stress Disorder symptom severity, persistent physical problems, previous emotional problems, previous anxiety disorder and involvement in litigation/compensation. Moderate predictors of PTSD are discussed, as well as factors, which consistently do not predict PTSD in RTC survivors. The results inform future models of post-RTC traumatic stress aetiology.

FGF2 blocks PTSD symptoms via an astrocyte-based mechanism

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In the present study, using the single prolonged stress (SPS) model, we investigated the effects of intraperitoneal FGF2 on SPS-induced PTSD behavior response as well as the astrocytic activation after FGF2 administration in SPS rats. Behavioral data showed that intraperitoneal FGF2 inhibited SPS-induced hyperarousal and anxiety behavior; however, immunohistochemistry showed that SPS-induced astrocytic inhibition was activated by intraperitoneal FGF2. Quantitative western blotting showed that intraperitoneal FGF2 up-regulated glial fibrillary acidic protein (GFAP), but not NeuN, expression in the hippocampus. We suggest that intraperitoneal FGF2 could block the SPS-induced fear response and anxiety behavior in PTSD via astrocyte-based but not neuron-based mechanisms.

Implementation of Cognitive Therapy for PTSD in routine clinical care: Effectiveness and moderators of outcome in a consecutive sample


Behaviour Research and Therapy
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This study investigated whether Cognitive Therapy for PTSD (CT-PTSD) can be effectively implemented into a UK National Health Service Outpatient Clinic serving a defined ethnically mixed urban catchment area. A consecutive sample of patients with PTSD following a wide range of traumas were treated by therapists, who received training and supervision in CT-PTSD. Pre and post treatment data (PTSD symptoms, anxiety, depression) were collected for all patients, including dropouts. CT-PTSD was well tolerated and led to very large improvement in PTSD symptoms, depression and anxiety. The majority of patients showed reliable improvement/clinically significant change. Dropouts and unreliable attenders had worse outcome. Statistically reliable symptom exacerbation with treatment was observed in only 1.2% of patients. Treatment gains were maintained during follow-up. Few of the selection criteria used in some RCTs, demographic, diagnostic and trauma characteristics moderated treatment outcome, and only social problems and needing treatment for multiple traumas showed unique moderation effects. There were no random effects of therapist on symptom improvement, but therapists who were inexperienced in CT-PTSD had more dropouts than those with greater experience. The results support the effectiveness of CT-PTSD and suggest that trauma-focused cognitive behavior therapy can be successfully implemented in routine clinical services treating patients with a wide range of traumas.

Prevention of chronic PTSD with early cognitive behavioral therapy. A meta-analysis using mixed-effects modeling

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We meta-analyzed randomized-controlled trials to examine the effectiveness of early trauma-focused cognitive-behavioral treatment (TFCBT) for preventing chronic PTSD. Using a mixed-effect approach, we calculated effect sizes (ES) for the PTSD diagnoses (main outcome) as well as PTSD and depressive symptoms (secondary outcomes), respectively. A moderate effect was found for the main outcome, whereas ES for secondary outcomes were predominantly small. The ES for the main outcome decreased to small from first follow-up to long-term follow-up assessment. The mean dropout rate was 16.7% pre- to post-treatment. There was evidence for the impact of moderators on different outcomes (e.g., the number of sessions on PTSD symptoms). Future studies should include survivors of other trauma types (e.g., burn injuries) rather than predominantly survivors of accidents and physical assault, and should compare early TFCBT with other interventions that previously demonstrated effectiveness.