ISTSS

International Society
for Traumatic Stress Studies

33rd Annual Meeting

# Trauma and Complexity: From Self to Cells

## Session Abstract Book

November 9-11, 2017
Pre-Meeting Institutes, November 8

Palmer House Hotel
Chicago, Illinois, USA

www.istss.org

# ISTSS 33rd Annual Meeting
# Session Abstracts

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# Guides to Information in Schedule

## Keyword Type Descriptions

### Primary Keywords

- Assessment/Diagnosis (Assess Dx)
- Biological/Medical (Bio Med)
- Clinical/Intervention Research (Clin Res)
- Clinical Practice (Practice)
- Community-Based Programs (Commun)
- Culture/Diversity (Cul Div)
- Ethics (Ethics)
- Global Issues (Global)
- Journalism and Trauma (Journalism)
- Multi-Media (Media)
- Prevention/Early Intervention (Prevent)
- Public Health (Pub Health)
- Research Methodology (Res Meth)
- Social Issues – Public Policy (Social)
- Technology (Tech)
- Training/Education/Dissemination (Train/Ed/Dis)
- Vicarious Traumatization and Therapist Self-Care (Self-Care)

### Secondary Keywords

- Accident/Injury (Acc/Inj)
- Acute/Single Trauma (Acute)
- Affective Processes/Interventions (Affect/Int)
- Aggression/Aggressive Behavior (Aggress)
- Aging/Lifecourse (Aging)
- Anxiety (Anx)
- Assessment/Diagnosis (Assess Dx)
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- Child Physical Abuse/Maltreatment (CPA)
- Child Sexual Abuse (CSA)
- Chronic/Repeated Trauma (Chronic)
- Clinical/Intervention Research (Clin Res)
- Clinical Practice (Practice)
- Cognitive Processes/Interventions (Cog/Int)
- Community-based Programs (Commun)
- Community/Social Processes/ Interventions (Comm/Int)
- Community Violence (Comm/Vio)
- Complex Trauma (Complex)
- Culture/Diversity (Cul Div)
- Death/Bereavement (Death)
- Depression (Depr)
- Developmental Processes/Interventions (Dev/Int)
- Domestic Violence (DV)
- (Epi)Genetic Processes/Interventions (Gen/Int)
- Ethics (Ethics)
- Ethnicity (Ethnic)
- Family Relationship Processes/ Interventions (Fam/Int)
- Gender and Trauma (Gender)
- Genetics/Epigenetics (Genetic)
- Global Issues (Global)
- Health Impact of Trauma (Health)
- Human Rights (Rights)
- Illness/Medical Conditions (Illness)
- Intergenerational Trauma (Intergen)
- Journalism and Trauma (Journalism)
- Multi-Media (Media)
- Natural Disaster (Nat/Dis)
- Neglect (Neglect)
- (Neuro)Biological Processes/ Interventions (Bio/Int)
- Neuro Imaging (Neuro)
- Prevention/Early Intervention (Prevent)
- Primary Care (Care)
- Psychodynamic Research (Psych)
- Public Health (Pub Health)
- Quality of Life (QoL)
- Rape/Sexual Assault (Rape)
- Refugee/Displacement Experiences (Refugee)
- Research Methodology (Res Meth)
- Sexual Orientation and Trauma (Orient)
- Sleep (Sleep)
- Social Issues – Public Policy (Social)
- Substance Use/Abuse (Sub/Abuse)
- Survivors/Descendants of Historical Trauma (Surv/Hist)
- Technical Disaster (Tech/Dis)
- Technology (Tech)
- Terrorism (Terror)
- Theory (Theory)
- Torture (Torture)
- Training/Education/Dissemination (Train/Ed/Dis)
- Traumatic Grief (Grief )
- Vicarious Traumatization and Therapist Self-Care (Self-Care)
- War – Civilians in War (Civil/War)
- War – Military/Peacekeepers/ Veterans (Mil/Vets)

## Guides to Information in Schedule

### Regions

- Central and Eastern Europe and the Commonwealth of Independent States (C & E Europe & Indep)
- Eastern and Southern Africa (E & S Africa)
- East Asia and the Pacific (E Asia & Pac)
- Industrialized Countries (Industrialized)
- Latin America and the Caribbean (Latin Amer & Carib)
- Middle East and North Africa (M East & N Africa)
- South Asia (S Asia)
- West and Central Africa (W & C Africa)

### Population Types

- Child/Adolescent (Child/Adol)
- Adult (Adult)
- Older People/Aging (Older)
- Both Adult and Child/Adolescent (Lifespan)
- Mental-Health Professionals (Prof)
- Other Professionals (Other)

### Presentation Level

All presentations designate the knowledge/skill level required of the participant as either: Introductory (I), Intermediate (M) or Advanced (A). These are used as a general guide only since attendees have very diverse educational and professional backgrounds.

**Introductory (I):** Presentations that all participants (including undergraduate students) with any appropriate background will be able to fully comprehend and/or appreciate. Presentations will discuss concepts that are considered basic skills/knowledge for those working in the field.

**Intermediate (M):** Presentations that participants may more fully comprehend/appreciate if they have at least some work experience in the topic to be discussed.

**Advanced (A):** Presentations consisting of concepts requiring a high-level of previous educational background, or work experience, in the particular area/topic to be discussed as well as being most geared for specialists and those in advanced stages of their career.

### Guide to understanding presentation listings:

Presenters' names are in **bold.**

Discussants' names are underlined.

Moderators' names are in **bold and underlined.**

Guides to keyword abbreviations located on pages 6 & 7.

(Primary Keyword, Secondary Keywords, Population Type, Presentation Level, Region)

## Presentation Type Descriptions*

**• Media Presentation**
Session involving presentation of a segment of film, video, music, drama, literature, artwork or other form of media relevant to traumatic stress, along with discussion.

**• Oral Paper Presentation as "Flash Talks"**
An exciting new series of talks, presenters will be required to describe their study goals, methods, and results succinctly, somewhat similar to the format of "TED talks", keeping to a 5-minute time length and a 10-slide maximum.

**• Panel Presentation**
Sessions that include three to four participants discussing a common theme, issue or question. Panels may include short statements during which panelists outline diverse or similar approaches to the same question. Panels are typically more interactive than symposia, involving active discussion among the panelists.

**• Poster Presentation**
Individual presentation in a poster format on a topic related to traumatic stress, typically including the presentation of research data.

**• Pre-Meeting Institute (PMI)**
Institutes are full- or half-day sessions that provide an opportunity for intensive training on topics integral to the conference program, presented by leaders in the field.

**• Symposium**
Session that includes a group of four sequential presentations, each related to the overall theme of the symposium.

**• Workshop Presentation**
Instructional session that helps increase participants' understanding and skill in a particular area of interest. Such sessions may include active involvement of the audience.

** Presentation types are color-coded throughout the schedule.*

## Topical Tracks

The Program Chairs have grouped presentations on similar themes together into tracks so it is easier for you to find the programs in your area. However, please note that not everything would fit into the tracks so there are more presentations outside the tracks that may be related or of interest and you should check your schedule.

Look for these throughout the meeting schedule in the left column

**Assessment and Diagnosis Track**
Presentations on assessing trauma

**Biological/Medical Track**
Presentations on biological and physical aspects of trauma

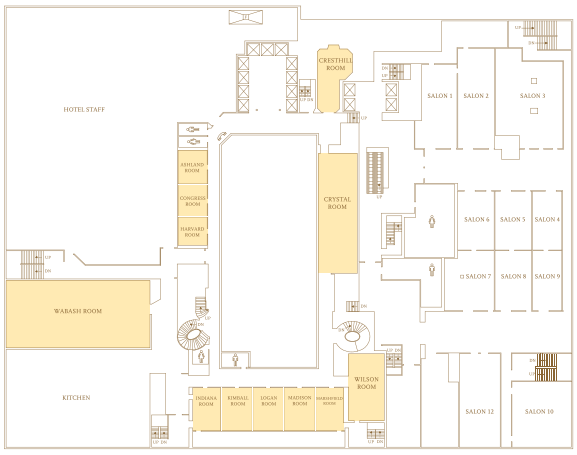
**Child Trauma Track**
Presentations on various aspects of trauma in children and adolescents

**Military Track**
Presentations on trauma in military populations

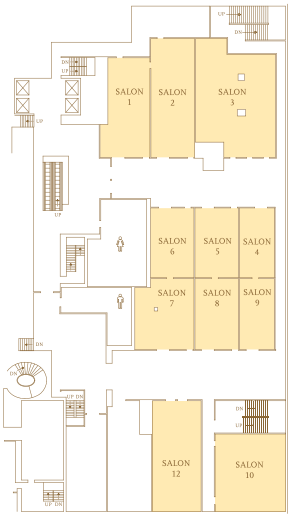
**Refugee Track**
Presentations on trauma in refugee populations

**Treatment Track**
Presentations on the treatment of trauma

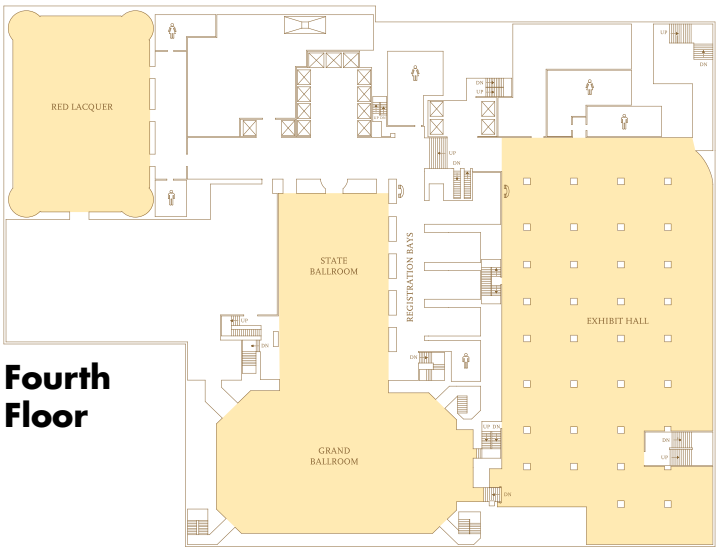
# Palmer House Floor Plans



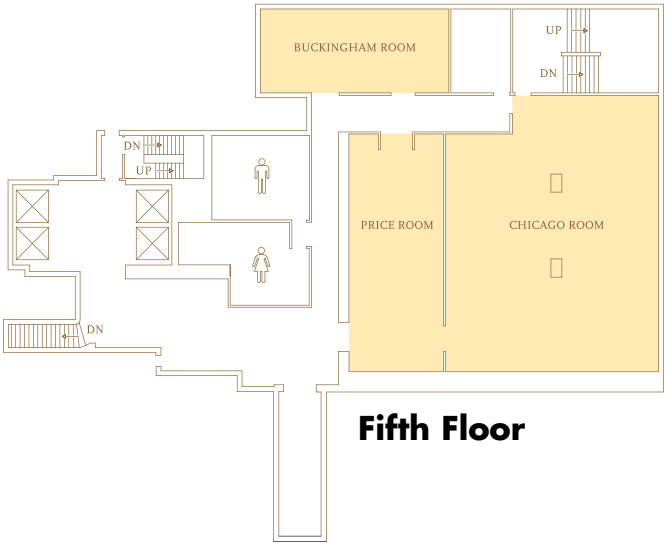

**Third Floor**



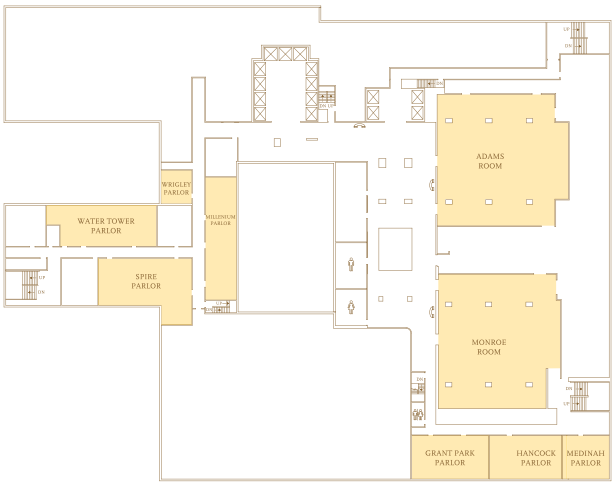

**Third Floor Salons**




**Fourth Floor**




**Fifth Floor**




**Sixth Floor**

# Wednesday, November 8

# Full Day PMI

## Pre-Meeting Institute (PMI)
## 8:30 AM to 5:00 PM
## Adams Room

## PMI #1 Child-Adult Relationship Enhancement (CARE): Building Skills to Strengthen Trauma Recovery in Children and Youth

(Practice, Comm/Int-Fam/Int-Prevent-Train/Ed/Dis, Lifespan, M, N/A)

**Gurwitch, Robin, PhD**[1]; **Messer, Erica, PsyD**[2]; **Berkowitz, Steven, MD**[3]; **Warner-Metzger, Christina, PhD**[4]
[1]*Duke University Medical Center, Durham, North Carolina, USA*
[2]*Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA*
[3]*University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania, USA*
[4]*DePaul University, Chicago, Illinois, USA*

Understanding trauma's complex impact on children is one step in the continuum of care providing trauma-informed services. As trauma affects the social relationships of the individual, particularly for children and important adults in their lives, creating positive relationships with these adults can significantly aid the healing process. Relationships are critical in prevention and acute and long-term interventions. Strong relationship skills are key principles of evidence-based parenting programs: Parent-Child Interaction Therapy (PCIT), Incredible Years (IY), Helping the Non-compliant Child, Parent-Management Training—Oregon Model (PMTO), and Positive Parenting Program (Triple P). However, these programs require intensive training and treatment. As a result, access to programs designed to improve relationships is lacking. Child-Adult Relationship Enhancement (CARE) was developed to help address this deficiency. Based on the evidenced based parenting programs, CARE is a set of skills created to enhance relationships and reduce mild/moderate behavior challenges often present after trauma. CARE is for use by any adult interacting with a child/youth. Thus far, CARE has been disseminated to several thousand adults with evidence, forthcoming. An RCT comparing CARE in primary care settings to traditional anticipatory guidance found significant improvements in behavior problems, empathy toward children's needs, attitudes toward corporal punishment, and attitudes towards children's independence for those receiving CARE. Current studies of children in foster care are promising and evaluations of CARE in school systems are underway. CARE has been taught to staff in child protection services, family and drug courts, substance abuse treatment centers, home visiting programs, and domestic violence shelters and to families in these systems. Medical, mental health, and allied health professionals have received CARE training to complement their services, especially to children experiencing trauma. CARE has been adapted for use with military families and crisis counselors following disasters. The CARE workshop will teach participants skills they can immediately implement with families they serve. Handouts for use when working with families will be provided. The workshop will include didactic information, videos, activities, and live practice with feedback for the greatest learning potential. Implementation, dissemination efforts, and research will be discussed helping participants determine how CARE can be useful in their settings, thus improving their efforts addressing trauma.

## Pre-Meeting Institute (PMI)
## 8:30 AM to 5:00 PM
## Monroe Room

## PMI #2 Beyond Reliving in PTSD Treatment: Advanced Skills for Overcoming Common Obstacles when Working with Memories in Trauma-focused CBT

(Practice, Chronic-Cog/Int-Complex, Adult, A, N/A)

**El-Leithy, Sharif, Clinical Psychologist**[1]; **Murray, Hannah, Clinical Psychologist**[2]
[1]*South West London and St George's NHS Trust, London, United Kingdom*
[2]*Oxford University, Oxford , Oxfordshire, United Kingdom*

Good evidence exists for PTSD treatments in which memory-focused techniques such as imaginal reliving and prolonged exposure play a significant role (Bisson et al., 2013). However, the evidence base is sparse for complex presentations of PTSD including dissociative subtypes. For example, where trauma has been experienced in early life, is prolonged and repeated, or includes themes of perpetration or permanent injury. There are gaps in our understanding of how to adapt existing protocols to apply these treatments effectively with complex cases in routine clinical settings. Revisiting the principles and theories underlying treatment can help us generate novel techniques, and adapt existing ones to overcome these difficulties. The workshop will bring together cognitive models of PTSD and memory (Ehlers & Clarke, 2000; Brewin et al., 2010; Arntz, 2012) , core CBT principles, and advanced therapeutic techniques to solve commonly encountered obstacles in PTSD treatment, such as overwhelming affect, difficulties connecting with feelings and memories, head-heart lag and problems identifying target memories in multiple trauma presentations. This institute will address (1) common obstacles in working with trauma memories (2) how to apply principles from existing cognitive models of PTSD to formulate these problems (3) how diverse memory techniques can be conceptualised using these models and (4) how to implement these techniques creatively and effectively while maintaining fidelity to cognitive models. The workshop will be facilitated by two leading experts in trauma-focused cognitive therapy, who between them have over 25 years of clinical experience working with complex cases. The workshop will be structured around Kolb's learning cycle using case material to present clinical examples of commonly encountered problems in PTSD treatment, theoretical frameworks to conceptualise these problems, generate solutions using a broad range of memory and experiential techniques, and give opportunities for participants to practice and reflect on using these techniques in their own work. Key problem areas and recurring themes in PTSD will be explored. For each area, a range of clinical examples will be presented, and generated from participants' experiences. Fundamental principles will be applied to understand these difficulties; and how techniques from a range of models can be adapted to address the conceptual obstacles. There will be extensive use of audio-visual materials, including video clips of therapy. Practical examples and tips on how to implement these techniques will be given, and participants will be invited to reflect on and role-play how they will apply similar strategies to their own cases.

# Half Day Morning PMI

## Pre-Meeting Institute (PMI)
## 8:30 AM to 12:00 PM
## Salon 1

## PMI #3 Addressing Self/Moral Injury in PTSD Treatment: How to Use an Interdisciplinary, Developmental Approach in your Clinical Practice

(Clin Res, Clinical Practice, Adult, M, Global)

**Davis, Louanne, PsyD**; **Starnino, Vincent, PhD**; **Angel, Clyde, Doctor of Ministry**
*Roudebush VA Medical Center, Indianapolis, Indiana, USA*

Although there are effective evidence-based treatments for PTSD, many do not fully benefit. One of the reasons may be that, for some, current evidence-based PTSD treatments may not adequately address the deep wounding that occurs when trauma shatters the core of a person's self identity. This wounding, typically referred to as moral injury, has become an area of growing interest to clinicians who treat trauma. This workshop, presented by a multidisciplinary team (clinical psychologist, clinical social worker and clinical chaplain), focuses on the relationship between PTSD, self/moral injury, and the skills/resources that are needed to facilitate healing of self/moral injury. An overview of the PTSD literature is presented to identify key terminology and theoretical concepts related to self/moral injury, including models of self/moral injury and healing that are derived from integrating the presenters' recent qualitative and quantitative research with what is known from the current literature. A curriculum is described that addresses self/moral injury (called "Search for Meaning") which is collaboratively facilitated in a Veterans Administration Medical Center setting by a clinical chaplain and mental health clinician, both experienced in trauma treatment. Select elements of the curriculum are explored, such as levels of self/moral development and wounding, how belief systems are compromised by traumatic experiences, anger resolution, grieving losses, and forgiveness. The audience is invited to participate in identifying ways they can use the information gained during the workshop to: (1) inform their own clinical work with self/moral injury; (2) develop referral sources and collaborations within the pastoral care community and their treatment settings; (3) consider ways to address self/moral injury in the treatment of diverse populations, e.g. those who are incarcerated, in substance use treatment and (4) discuss future directions for research.

## Pre-Meeting Institute (PMI)
## 8:30 AM to 12:00 PM
## Salon 4/9

## PMI #6 Online Toolkits to Support Providers and Responders Working With Traumatized Individuals and Communities

(Train/Ed/Dis, Comm/Int-Nat/Dis-Prevent-Self-Care, Adult, M, Global)

**Watson, Patricia, PhD**[1]; Walser, Robyn, PhD[2]; **Juhasz, Katherine, MS**[3]; **Matteo, Rebecca, PhD**[4]; **McCaslin, Shannon, PhD**[5]; **Ermold, Jenna, PhD**[6]; **Holloway, Kevin, PhD**[6]
[1]*National Center for PTSD, Executive Division, White River Junction, Vermont, USA*
[2]*National Center for PTSD, Dissemination and Training Division University of California, Berkeley, Menlo Park, California, USA*
[3]*National Center for PTSD, VA Palo Alto Health Care System, Menlo Park, California, USA*
[4]*National Center for PTSD/White River Junction VA, White River Junction, Vermont, USA*
[5]*National Center for PTSD – Dissemination and Training Division, VA Palo Alto Health Care System, Menlo Park, California, USA*
[6]*Center for Deployment Psychology, Rockville, Maryland, USA*

Educating providers and responders who come into contact with Veterans and other trauma survivors is a priority of VA's National Center for PTSD (NCPTSD). To that end, NCPTSD integrates clinical and scientific knowledge into materials that facilitate PTSD recognition, support evidence-based treatment engagement and foster improved interactions with those with PTSD. Because of the diversity of responder and provider groups, as well as the complexity of the needs of those with PTSD, NCPTSD has developed toolkits which are aimed at

different provider or responder groups. The toolkits include succinct, focused material that helps these providers/responders ensure that those with PTSD remain functional, and allows different communities and cultures to create valuable, accessible resources for those in need. In this workshop presentation we describe these toolkits for Community Providers who work with Service Members and Veterans, Clergy, Police, and Disaster Mental Health Providers, as well as a toolkit aimed at self-care for mental health providers. The presenters will describe the conceptualization, development, and dissemination of these diverse products. The session will conclude with recommendations for use of the products in practice.

## Pre-Meeting Institute (PMI)
## 8:30 AM to 12:00 PM
## Salon 5/8

## PMI #7 Understanding, Assessing, and Treating Traumatic Dissociative Reactions, Part One: Assessment

(Practice, Assess Dx-Clinical Practice-Complex-Neuro, Adult, M, Global)

**Brand, Bethany, PhD**[1]; **Lanius, Ruth, MD, PhD**[2]
[1]*Towson University, Towson, Maryland, USA*
[2]*University of Western Ontario, London, Ontario, Canada*

Severe dissociative symptoms are common among individuals who experienced complex, developmental trauma. These are among the most challenging patients to treat due to the severity of their symptoms. Furthermore, few clinicians have been trained in the assessment and treatment of high dissociation. It is common for clinicians to feel de-skilled and overwhelmed when working with these individuals. Their poor affect regulation skills make them prone to self-destructive and suicidal behavior if treatment is not carefully planned and paced, guided by ongoing assessment of their symptoms and skills. The goal of this institute is to teach participants about the assessment and treatment of severe dissociative reactions. We will present an overview of the neurobiological research about dissociation and the rationale for adapting trauma treatment that is informed by these neurobiological patterns. We will review the early results of the Treatment of Patients with Dissociative Disorders (TOP DD) Network program – the first online, psychoeducational program aimed at helping dissociative patients and their therapists stabilize patients' safety, emotion regulation, and quality of life. The TOP DD Network program is associated with increased self-compassion, decreased symptoms, and improved affect regulation and quality of life. We will provide step-by-step guidance on how to implement some of the TOP DD Network interventions in clinical practice. We will achieve these goals by presenting research and case examples, showing patients' art work and journaling, and teaching interventions to further develop clinicians' skill with highly dissociative patients.

## Pre-Meeting Institute (PMI)
## 8:30 AM to 12:00 PM
## Salon 6/7

## PMI #8 The Evolution of Cognitive Processing Therapy

(Practice, Clinical Practice-Cog/Int, Adult, A, Industrialized)

**Resick, Patricia, PhD, ABPP**[1]; **Monson, Candice, PhD, Cpsych**[2]; **Chard, Kathleen, PhD**[3]
[1]*Duke University Medical Center, Durham, North Carolina, USA*
[2]*Ryerson University, Toronto, Ontario, Canada*
[3]*Cincinnati VA Medical Center, Cincinnati, Ohio, USA*

This PMI will introduce participants to the changes in cognitive processing therapy (CPT) over time to the current protocol. The first book published in 1993 was a bare bones manual that outlined CPT, much as it is today, but didn't include the importance of Socratic Dialogue nor did it include how to conceptualize PTSD treatment from a cognitive perspective. When we began dissemination in the VA, we rewrote the manual with more examples included, pared down some worksheets, added others, and tried to do a bit more with conceptualization and especially so in workshops. Following research (Resick et al. 2008; 2012) that there is no added value in doing the written accounts except in cases with very high dissociation, and the drop out rate is 15% higher with accounts, most studies conducted since then have implemented CPT without accounts. Our recent approach is to provide CPT (without accounts) as the primary therapy and CPT+A (with written accounts) as a secondary form of the protocol. Following feedback from trainers and providers, we have again modified the handouts and included

adaptations for specific situations like post-concussive symptoms and dementia. This workshop will assist therapists in making the adaptation from always using written accounts to implementing a hierarchy of cognitive questions and implementing variable length CPT.

# Half Day Afternoon PMI

## Pre-Meeting Institute (PMI)
## 1:30 PM to 5:00 PM
## Salon 1

## PMI #9 Yoga for PTSD: What We Know, What We Don't Know, and What You Need to Know to Incorporate Yoga into Your Clinical Practice

(Clin Res, Clinical Practice-Bio/Int, N/A, I, Global)

**Kelly, Ursula, PhD, RN**[1]; **Davis, Louanne, PsyD**[2]; **Catiis, Alissa, LCSW**[3]
[1]*Atlanta VAMC/Emory University, Decatur, Georgia, USA*
[2]*Roudebush VA Medical Center, Indianapolis, Indiana, USA*
[3]*Womencare Counseling Center, Evanston, Illinois, USA*

Yoga is increasingly used as a Complementary and Integrative Health modality in the treatment of PTSD. This workshop includes podium presentations that describe yoga interventions used in research, the body of evidence for yoga for PTSD, as well as an experiential Trauma Center-Trauma Sensitive Yoga (TC-TSY) skills-development session for participants. Yoga, defined here as a combination of physical forms, focused breathing, and mindfulness, is a promising complement or alternative to evidence-based psychotherapy. TC-TSY in particular aims to cultivate awareness of the mind-body connection and to build self-regulation skills to address the way that trauma is held in the body in a way that psychotherapy does not. A trio of presenters (nurse scientist, clinical psychologist, and yoga teacher) describe the state of the science of yoga for PTSD and teach participants techniques to integrate yoga in clinical work. Presentations include a 1) review of yoga interventions used in PTSD research, 2) description of the current evidence for yoga as an intervention for PTSD, 3) systematic review of objective research outcome measures (biological markers and psychophysiological data) of the effectiveness of yoga for PTSD, and 4) an interactive session for participants to learn how to incorporate TC-TSY into clinical practice.

## Pre-Meeting Institute (PMI)
## Wednesday, November 8
## 1:30 PM to 5:00 PM
## Salon 2

## PMI #10 Developing and Delivering a Train the Trainer Programme to Implement Evidence Based Practice in Low and Middle Income Countries

(Train/Ed/Dis, Clinical Practice-Complex-Refugee, Adult, M, C & E Europe & Indep)

Bisson, Jonathan, MD[1]; **Makhashvili, Nino, MD**[2]; **Javakhishvili, Jana, BA (Hons)**[3]; **Cloitre, Marylene, PhD**[4]
[1]*Cardiff University School of Medicine, Cardiff, Wales, United Kingdom*
[2]*Oakland University, Tbilisi, Georgia, Georgia*
[3]*Global Initiative on Psychiatry, Tbilisi, Georgia*
[4]*National Center for PTSD-Dissemination and Training Division, Menlo Park, California, USA*

**Objective:** To disseminate and sustainably implement evidence-based trauma focused psychological therapy in low and middle income countries. **Methods:** An evidence-based trauma-focused cognitive behavioural therapy treatment for PTSD, developed at Cardiff University, was collaboratively adapted with colleagues from Ilia State University to make it culturally relevant and feasible for delivery in Georgia. In parallel, a train the trainer programme was designed for its dissemination and implementation. Mental health professionals undertaking a Masters in Mental Health

(Psychotraumatology) at Ilia State University underwent an initial two-day training in February 2015 and then provided supervised treatment to PTSD sufferers with local supervision provided by two of the presenters (NM and JJ) and Skype supervision from the third (JB). A further two-day training event was held in June 2015. Initial results were promising with a mean reduction of almost 50% on the PCL-5. Given the nature of the difficulties experienced by the PTSD sufferers presenting to the local services, further evaluation suggested a need for more work around emotional regulation and interpersonal relationships. This resulted in the incorporation of elements of Skills Training for Affective and Interpersonal Regulation (STAIR). In January 2017, three trained trainers from Georgia delivered the training programme to a second cohort of Masters students at Ilia State University; their training and evaluation of its outcome is ongoing. The training programme will be initiated in Ukraine in spring 2017. During the workshop, the presenters will interactively work with the audience to explore the Train the Trainer Programme, the lessons learnt and how the approach could be adapted for use in other settings.

## Pre-Meeting Institute (PMI)
## 1:30 PM to 5:00 PM
## Salon 3
## PMI #11 A Family-Based Preventive Intervention for Active Duty Military Personnel and Veterans: Supporting Military and Veteran Families through Transition

(Prevent, Clin Res-Commun-Fam/Int-Mil/Vets, Lifespan, A, Industrialized)

**DeVoe, Ellen, PhD MSW**[1]; **Blankenship, Abby, PhD**[2]; **Jacoby, Vanessa, PhD**[3]; **Williams, Amy, PhD**[4]
[1]*Boston University School of Social Work, Boston, Massachusetts, USA*
[2]*University of Texas Health Science Center at San Antonio, San Antonio, Texas, USA*
[3]*University of Texas Health Science Center at San Antonio, Ft Hood, Texas, USA*
[4]*Cohen Military Family Clinic; UT Southwestern, Dallas, Texas, USA*

Since September 11, 2001, almost 3 million U.S. military service members have been deployed in support of the conflicts in Iraq and Afghanistan. Almost half of soldiers who have deployed are parents of dependent children, and more than 2 million children have been separated from their service member parent due to a military deployment (DoD, 2015).A multidisciplinary, multi-institutional team of clinicians and researchers will discuss a program designed to support military and veteran families with children and adolescents in the post-9/11 era: Strong Families Strong Forces (SFSF). SFSF was originally developed and tested as a home-based reintegration program for National Guard and Reserve families with young children. The model has since been expanded to support Active Duty military families across the deployment cycle, and Veteran families transitioning from military-to-civilian life. Engagement strategies, program core principles, and clinical case material will highlight the experiences of the diverse post-9/11 military and veteran families who have participated in our program. We will provide an outline of the model including content and implementation of each session, and lessons learned using vignettes and video and audiotaped excerpts (recorded and presented with participant consent) in order to illustrate in-session dynamics and family processes.

## Pre-Meeting Institute (PMI)
## 1:30 PM to 5:00 PM
## Salon 4/9

## PMI #12 Affect Regulation Psychotherapy for PTSD and Complex PTSD

(Practice, Affect/Int-Clin Res-Clinical Practice-Self-Care, Lifespan, M, Industrialized)

**Ford, Julian, PhD**
*University of Connecticut Health Center, Farmington, Connecticut, USA*

Using the chapter from the newly published *Handbook of Trauma Psychology* on "Emotion regulation and skills-based interventions," the presenter will provide an overview of the rationale, intervention models, and evidence-base for affect regulation-focused psychotherapy for PTSD and complex PTSD. Case examples with adolescents and adults will be discussed to illustrate the potential benefits and cautions involved in affect regulation psychotherapy with traumatized clients. Experiential exercises will provide attendees with the opportunity to learn and practice core therapeutic skills for

applying an affect regulation framework to PTSD and complex PTSD treatment, and to the prevention or mitigation of therapist impairment due to secondary traumatic stress reactions.

## Pre-Meeting Institute (PMI)
## 1:30 PM to 5:00 PM
## Salon 5/8
## PMI #13 Understanding, Assessing, and Treating Traumatic Dissociative Reactions, Part Two: Treatment

(Practice, Assess Dx-Clinical Practice-Complex-Neuro, Adult, M, Global)

**Brand, Bethany, PhD**[1]; **Lanius, Ruth, MD, PhD**[2]
[1]*Towson University, Towson, Maryland, USA*
[2]*University of Western Ontario, London, Ontario, Canada*

Severe dissociative symptoms are common among individuals who experienced complex, developmental trauma. These are among the most challenging patients to treat due to the severity of their symptoms. Furthermore, few clinicians have been trained in the assessment and treatment of high dissociation. It is common for clinicians to feel de-skilled and overwhelmed when working with these individuals. Their poor affect regulation skills make them prone to self-destructive and suicidal behavior if treatment is not carefully planned and paced, guided by ongoing assessment of their symptoms and skills. The goal of this institute is to teach participants about the assessment and treatment of severe dissociative reactions. We will present an overview of the neurobiological research about dissociation and the rationale for adapting trauma treatment that is informed by these neurobiological patterns. We will review the early results of the Treatment of Patients with Dissociative Disorders (TOP DD) Network program – the first online, psychoeducational program aimed at helping dissociative patients and their therapists stabilize patients' safety, emotion regulation, and quality of life. The TOP DD Network program is associated with increased self-compassion, decreased symptoms, and improved affect regulation and quality of life. We will provide step-by-step guidance on how to implement some of the TOP DD Network interventions in clinical practice. We will achieve these goals by presenting research and case examples, showing patients' art work and journaling, and teaching interventions to further develop clinicians' skill with highly dissociative patients.

## Pre-Meeting Institute (PMI)
## 1:30 PM to 5:00 PM
## Salon 6/7

## PMI #14 Emerging Research on Memory Reconsolidation Neuromodulation Paradigms and the Potential to Enhance Psychotherapy and Pharmacotherapy Efficacy: A Game Changer?

(Clin Res, Clinical Practice-Cog/Int-Theory, Adult, I, Industrialized)

**Hoge, Charles, MD**[1]; **Chard, Kathleen, PhD**[2]
[1]*Walter Reed Army Institute of Research/US Army, Bethesda, Maryland, USA*
[2]*Cincinnati VA Medical Center, Cincinnati, Ohio, USA*

The theoretical foundation of current evidence-based PTSD psychotherapy rests largely on cognitive-behavioral and extinction-learning models. Mainstay treatments, including prolonged exposure (PE), cognitive processing therapy (CPT), and eye-movement desensitization and reprocessing (EMDR) involve some combination of underlying core components encompassing exposure, cognitive restructuring, and/or modulation of physiological arousal. All produce roughly comparable efficacy on intent-to-treat analyses (e.g., averaging 40% ITT recovery, similar change scores, and wide-ranging drop-out rates). Recent emerging scientific knowledge of memory reconsolidation paradigms suggests the potential for validation of novel approaches that may offer more rapid and lasting efficacy. These approaches attempt to take advantage of memory re-consolidation mechanisms that become available for a brief window when memories are activated physiologically and paired with novel stimuli. This workshop will discuss strong emerging evidence for these interventions, including single session pharmacological approaches and psychotherapy approaches pairing imaginal exposure with rescripting techniques. One of the most promising, Accelerated Resolution Therapy (ART), will be described in detail along with preliminary pilot data from a large head-to-head randomized controlled trial versus CPT and clinical data from a community based clinic.

**Keynote Panel**
**Wednesday, November 8**
**6:30 PM to 8:00 PM**
**Grand/State Ballroom**

## Acts of Creation, Performance, and Empowerment: Non-traditional Approaches to Support Resilience and Recovery in the Midst of Chicago's Ongoing Violence Epidemic

(Commun, Commun-Comm/Int-Comm/Vio-Surv/Hist, Child/Adol, I, Industrialized)

**Stolbach, Bradley, PhD**[1]; **Palidofsky, Meade, BA**[2]; **Dick, Pearl, BA**[3]; **Buhr, Grant, MSW**[4]
[1]*University of Chicago, Chicago, Illinois, USA*
[2]*Storycatchers Theatre, Chicago, Illinois, USA*
[3]*ArtReach Chicago/Firehouse Glass Studio, Chicago, Illinois, USA*
[4]*YMCA Chicago, Chicago, Illinois, USA*

In recent years, gun violence in Chicago has reached levels not seen since the 1990s, with unprecedented numbers of Black and Brown children and teens among the injured. Although many young people coping with the ongoing threat of violence in their neighborhoods exhibit symptoms of Posttraumatic Stress Disorder consistent with those seen in traumatized combat veterans, few have access to or interest in traditional office-based trauma-focused psychotherapy. This panel will include developers of and participants in three innovative approaches to reach youth and provide them with opportunities to make sense and meaning of their experiences in a city plagued by community violence. The programs include Changing Voices, a program of Storycatchers Theatre; Story Squad, a Youth Safety & Violence Prevention program of YMCA Chicago; and Project FIRE, a program of ArtReach Chicago in partnership with Healing Hurt People - Chicago. Changing Voices is a supported employment program that engages groups of recently released young people to develop and perform a musical addressing the challenges they face upon reentry. Storycatchers Theatre coordinates Changing Voices with the Illinois aftercare system as part of an effort to increase likelihood of successful reentry for court-involved youth. Story Squad is a 16-week, curriculum-based program which serves young people in neighborhoods with some of Chicago's highest rates of violence. The program focuses on developing self-reflection, critical thinking, self efficacy, and audio production and storytelling skills. Story Squad uses trauma-informed group processes that draw on foundational principles in media literacy, restorative justice and cognitive behavioral therapy in order to promote positive youth development. Through this process, youth can develop the social and emotional skills necessary to process their own experiences with violence and reexamine dominant narratives through the lens of context, place and policy, allowing them to place personal experiences within broader structural inequalities. Project FIRE (Fearless Initiative for Recovery and Empowerment) is an artist development employment program that offers healing through glassblowing, combining glass arts education, mentoring, and trauma psychoeducation to support trauma recovery and create jobs for youth injured by violence. Program developers will provide brief overviews of their respective programs, including how the programs evolved and their results over time. Following each program description, program participants will demonstrate their work through live musical and spoken word performances and video. Finally, program developers and participants will engage attendees in Q & A.

# Thursday, November 9

## Keynote Address
## 8:50 AM to 9:50 AM
## Grand/State Ballroom

### A Journey into Global Mental Health: Accessibility, Cultural Validity and the Prevention of War
(Global, Global-Prevent, N/A, M, Global)

**de Jong, Joop, MD, PhD**
*Vrije Universiteit, Amsterdam, Netherlands*

This lecture contrasts prior efforts in public mental health in humanitarian settings with more recent efforts to reduce the mental health treatment gap around the globe under the banner of global mental health. It questions whether these strategies have been successful, both in high- (HIC) and low- and middle-income countries (LMIC). It argues that unequal access to services and an imbalance between prevention and treatment is a global phenomenon. Speaking of distress requires a yardstick to differentiate normal from abnormal across cultures. Rethinking our diagnostic systems may help the global mental health movement and trauma researchers to develop a classification system that is cross-culturally valid. Therefore, another theme of this lecture is the modernization of our classification system in what one may describe as the post-DSM era. After having worked for decades in over 30 countries I realize that prevention is paramount for global mental health. And that prevention of mass traumatic stress can only be achieved by preventing armed conflict and political violence, the last theme of my talk. But apart from the battlefield, our professions may provide a tremendous contribution in the prevention of other types of violence. I will conclude with some challenges for the future.

# Concurrent Session One

## Master Clinician
## Thursday, November 9
## 10:15 AM to 11:30 AM
## Grand/State Ballroom

### Treating Traumatic Dissociative Reactions: A Pragmatic Approach
(Practice, CPA-CSA-Clinical Practice-Complex, Adult, M, Global)

**Brand, Bethany, PhD**
*Towson University, Towson, Maryland, USA*

Severe dissociative symptoms are common among individuals who experienced complex trauma, particularly developmental trauma. Yet few clinicians have been trained to treat severe dissociation. Many highly dissociative patients also struggle with myriad co-morbid symptoms including self-destructive and suicidal behavior. This lack of training and the severity of symptoms can leave clinicians feeling anxious and de-skilled. This master clinician is the primary investigator of the first online, psychoeducational program aimed at helping dissociative patients and their therapists stabilize patients' safety, emotion regulation, and quality of life - the Treatment of Patients with Dissociative Disorders (TOP DD) Network program. Dr. Brand will present step-by-step guidance developed for the TOP DD program on how to manage severe dissociation in clinical practice. Using case examples and role plays, she will teach attendees pragmatic interventions to help highly dissociative patients stay better grounded in present reality and gradually learn to tolerate their emotions.

## Symposium
## Thursday, November 9
## 10:15 AM to 11:30 AM
## Salon 3
## Assessment and Diagnosis Track

### From Correlation to Causality: Network Analyses of Stress Exposure and Posttraumatic Stress Symptoms
(Res Meth, Assess Dx, Adult, I, N/A)

**Galatzer-Levy, Isaac, PhD**
*New York University Langone Medical Center, New York, New York, USA*

Researchers present original work utilizing network analyses of trauma exposed samples from a multisite clinical trial. Consistency of network structures and symptom centrality within and between samples are evaluated, relationships between stress exposure and inhibitory control are examined in attentional networks from novel experimental paradigms, and network dynamics in the context of treatment are used to examine potential mechanisms of recovery. Results indicate the network approach can be applied broadly, and despite some limitations, may provide insight to the causal structure of PTSD and other stress-related phenomena.

### Uncovering PTSD Symptom Network Dynamics during Treatment
(Res Meth, Clin Res, Adult, I, Industrialized)

**Papini, Santiago, MA**[1]; Hien, Denise, PhD, ABPP[2]
[1]*University of Texas at Austin, Austin, Texas, USA*
[2]*Adelphi University, Derner Institute, Garden City, New York, USA*

The network approach to examining PTSD symptoms has typically been applied to cross-sectional data in which strong correlations among symptoms provides initial evidence of potential causal relationships (e.g., McNally et al., 2015; Sullivan et al., 2016). Recently, Bryant and colleagues (2016) applied network analyses to examine PTSD symptoms in a large sample of trauma injury patients (*N*=1138) during their hospital stay and one year later. A comparison of network structures suggested that there was an

overall strengthening of network connectivity at 12 months. Importantly, re-experiencing symptoms were central in the acute phase, and fear and dysphoric symptoms formed subnetworks in the chronic phase, giving insight into PTSD *emergence* after severe injury. Here we applied network analyses to longitudinal data to examine *recovery* from PTSD. Within treatment self-reported symptom data from the largest multisite randomized clinical trial for women with co-occurring PTSD and substance use disorder (N=346) were analyzed using multilevel vector autoregression (Epskamp et al., 2016). Two network structures were computed. Contemporaneous networks, representing cross-sectional partial correlations among symptoms across treatment, showed that avoidance, re-experiencing, hyperarousal, and mood-related symptoms clustered together. Temporal networks, which uncovered how symptom levels were related between sessions, suggested complex relationships among symptoms from different clusters. Importantly, changes in avoidance of traumatic memories were positively associated with changes in symptoms across all clusters including reactivity to trauma cues, emotional numbing, startle, and the sense of foreshortened future. These analyses provide initial evidence of the central symptoms driving treatment response in the recovery from PTSD.

## Beyond Network Analysis Basics: Utilizing Graph Theory and Atypical Analyses in a Network Analysis following Mass Violence

(Res Meth, Acute-Res Meth-Tech/Dis, Adult, I, Industrialized)

**Sullivan, Connor, MS**; Jones, Russell, PhD
*Virginia Polytechnic Institute and State University, Blacksburg, Virginia, USA*

Network analysis allows for visualization and analysis of the connectivity among symptoms and clusters of symptoms and additionally provides knowledge about the strength and quantity of relationships. Recent network analyses in PTSD (e.g., Bryant et al., 2017; Epskamp, Borsboom, & Fried, 2016; McNally et al., 2015; Sullivan, Smith, Lewis, & Jones, 2016) have included correlational-, partial correlational-, adaptive LASSO-, and relative importance-based networks. Each network has highlighted distinct symptoms as the strongest or most connected, with some commonalities (e.g., re-experiencing symptoms have been consistently strong and/or well-connected). The present study, continuing the work of Sullivan et al. (2016), seeks to build upon these studies by highlighting the utility of graph-theory techniques (i.e., Dijkstra's algorithm; 1959) and other metrics currently atypical of network analyses which include regression-based networks (utilizing standardized slopes, R2, effect sizes) comparing networks, as well as identifying meaningful clusters (clustering coefficients). Utilizing a modified Dijkstra's algorithm, we found that anger had the strongest path and was the most well connected to the remaining symptoms. Regression network analyses revealed that intrusive thoughts had the strongest influence on other symptoms and problems sleeping were the most affected by other symptoms. Additional analyses and implications will be discussed.

## Comparison of PTSD Symptom Centrality in Two College Student Samples

(Res Meth, Assess Dx-Clin Res, Adult, I, Industrialized)

**Eddinger, Jasmine, MS**[1]; McDevitt-Murphy, Meghan, PhD[2]; Williams, Joah, PhD[1]; Jobe-Shields, Lisa, PhD[3]
[1]*University of Missouri - Kansas City, Kansas City, Missouri, USA*
[2]*The University of Memphis, Memphis, Tennessee, USA*
[3]*University of Richmond, Richmond, Virginia, USA*

In posttraumatic stress research, it is common practice to combine similar samples, such as college students, to improve analytic power and run more complex statistical analyses. However, such pooled analyses may be inappropriate in light of meaningful sociocultural differences among students across campuses. Using network analysis, we examine different symptom centralities and influential symptoms in two college student samples from large, public research universities with a history of at least one prior traumatic event. The first sample contains 737 participants from a university in the Southeastern U.S. and the second is a sample of 378 students from a university in the Midwest. In both samples, PTSD symptoms were assessed using the PCL-5 (Weathers et al., 2013). The two most related symptoms in both samples are those in the avoidance cluster, C1 and C2. In the Midwest sample, the most central and connected symptom is D4 (persistent negative state), unlike the Southeastern sample where D6 (feeling cutoff from other people) is most central and E2

(reckless/self-destructive behavior) is most connected to other symptoms. These key differences may suggest different mechanisms maintaining PTSD symptoms even across similar samples. We will discuss the broader implications of these findings for PTSD research.

## The Relationship between Experienced Life Stress and Inhibitory Control: A Network Analysis

(Clin Res, Affect/Int-Cog/Int, Adult, I, Industrialized)

**Rubin, Mikael, MA**; Telch, Michael, PhD
*University of Texas at Austin, Austin, Texas, USA*

Experience of life stressors has been shown to be one of the greatest and most consistent predictors of future development of Post-Traumatic Stress Disorder (PTSD) after the experience of a traumatic event (Brewin, Andrews, & Valentine, 2000). While PTSD is primarily associated with deficits in a specific aspect of executive function, namely inhibitory control (DeGutis et al., 2015), it is unclear whether these deficits represent an additional risk factor or a consequence of developing PTSD. Recently, Bernstein, Heeren, and McNally (2017) found a relationship between preservative thinking and executive function using network analysis. In the current project we used network analysis to examine the relationship between experience of life stressors and facets of inhibitory control. As part of a larger study, participants (N=62) completed a self-report measure of experienced life stress (the Life Stressor Checklist – Revised), then completed an inhibitory control task. The task was a modified affective flanker task with three conditions: cognitive load (low-compatible/high-incompatible), emotion (neutral/angry faces), and stimulus onset asynchrony (low-0ms/high-400ms). We used regularized partial correlation network analyses to compute the strength of the connection between the number of life stressors experienced and conditions of the affective flanker task related to cognitive, emotional, and asynchronous processing. With high stimulus onset asynchrony (higher stimulus onset asynchrony is associated with increased preparatory processing), we found that a greater number of life stressors was associated with slower reaction times in the context of neutral emotion (neutral faces) trials, whereas it was associated with faster reaction times in the context of negative emotion (angry faces), regardless of cognitive load. With low stimulus onset asynchrony, we found that having experienced a greater number of life stressors was primarily associated with slower reaction times in the context of neutral emotion, compatible (low cognitive load) trials, whereas it was associated with faster reaction times in the context of negative emotion, compatible trials. The difference in processing of neutral as compared with angry faces suggests that with a greater number of life stressors comes an increase in attentiveness for threatening information, particularly when there is low cognitive load or greater preparatory processing. These findings implicate life stressors as a possible contributory factor in the pathogenesis of biased cognitive processing of emotional material.

# Symposium
# Thursday, November 9
# 10:15 AM to 11:30 AM
# Salon 4/9
# Military Track

## Collaborative Group Models between VA Mental Health Care and Chaplaincy to Address Moral Injury among Combat Veterans

(Practice, Clinical Practice-Mil/Vets, Adult, I, Industrialized)

**Yeomans, Peter, PhD**[1]; Nieuwsma, Jason, PhD[2]
[1]*Department of Veteran Affairs Medical Center, Philadelphia, Pennsylvania, USA*
[2]*Durham VA Medical Center/VISN 6 MIRECC, Durham, North Carolina, USA*

Moral injury is increasingly recognized as an important construct for conceptualizing the nature of the distress of many combat Veterans. Treatment models for moral injury are in their infancy, yet there is a growing literature to suggest that standard mental health care models may be insufficient to address the more holistic and non-pathologizing emphasis that the construct of moral injury invokes. Dr. Jonathan Shay argues that, to successfully address moral injury, "Peers are the key to recovery. Credentialed mental health professionals like me have no place in center stage." The VA/DoD's Integrated Mental Health Strategy (IMHS) calls for collaborative efforts between Mental Health Care and the Chaplain Services. Clinical psychologists and chaplains, from four different VA's, will present group therapy

models that illustrate such interdisciplinary collaboration in the service of aiming to address moral injury among combat Veterans. At least one of the presentations will include outcomes from an RCT. Group therapy components typically include education on moral injury, as well as different behavioral and spiritual methods to address guilt, shame, isolation, and other dimensions of distress. The role and responsibility of the larger community is also considered. Such collaboration in the care of moral injury provides intervention at the intersection of mental health and spiritual concerns. Presenters will discuss potential strengths, challenges, and pitfalls of such collaborations.

## Randomized Clinical Trials of "Building Spiritual Strength"

(Clin Res, Commun-Mil/Vets, Adult, I, Industrialized)

**Harris, J. Irene, PhD**[1]; Usset, Timothy, MDIv[2]
[1]*Minneapolis VA Health Care System and University of Minnesota Medical School, Minneapolis, Minnesota, USA*
[2]*Minneapolis VA Health Care System, Minneapolis, Minnesota, USA*

For combat trauma survivors, issues of moral injury often affect cultural roles in families and communities as individuals question social structures. “Building Spiritual Strength” is an 8-session, group counseling protocol. The intervention is ideally implemented by both mental health providers and clergy, but can be implemented by either. Groups are generally held in community locations, rather than mental health settings, to reduce stigma. Interventions include a) establishing group rapport, b) addressing concerns with a Higher Power, c) developing a personal theodicy, d) effective use of spiritual coping, e) forgiveness concerns and f) integration with community spiritual support. We have completed 2 RCT’s comparing Building Spiritual Strength to either wait-list or active (Present Centered Group Therapy) control groups. Trials included assessment of treatment manual fidelity and blinded, interview assessment of PTSD using the Clinician Administered PTSD Scale. Results demonstrate efficacy in reducing symptoms of PTSD and spiritual distress. These findings are especially important given the emerging body of research connecting spiritual distress with suicidal ideation and attempts. Further research in Building Spiritual Strength as a means of assisting combat survivors in reintegrating spiritual and moral aspects of their experience into their social functioning.

## Program Development and Specific Components of a Veteran-focused Moral Injury Group

(Practice, Clin Res-Clinical Practice-Grief-Mil/Vets, Adult, I, Industrialized)

**Miller, Brian, Doctor of Ministry**[1]; **Pickering, Natalie, PhD**[1]; **Page, Adam, MDIv**[1]; Bumgarner, David, PhD[1]; Ertl, Michelle, PsyD[2]; McKinney, Jessica, Doctoral Student[1]
[1]*Mountain Home VA Healthcare System, Mountain Home, Tennessee, USA*
[2]*VA Salt Lake City Healthcare System, Salt Lake City, Utah, USA*

Nascent literature suggests treatments solely addressing PTSD are not sufficient for a large subgroup of combat Veterans. In their clinical work, chaplains and mental health providers at the Mountain Home Healthcare System have identified themes of moral injury impacting Veterans across war eras. Efforts by these clinicians have since ensued to address these prevalent existential issues. Chaplaincy conducted phenomenological research, and a Moral Injury Workgroup met weekly for four months to review the existing literature and examine existing theories and protocols. The workgroup developed and implemented a 12-week group protocol focused on intrapersonal and interpersonal implications of moral injury with emphasis on group cohesion to support healing in a community context. Five iterations have been completed. The protocol includes three phases: 1) Acknowledging 2) Healing through Sharing, and 3) Moving Forward. Phases consist of psychoeducation, discussion, and experiential activities exploring themes of identity, guilt and shame, grief, forgiveness, acceptance, reintegration in community and posttraumatic growth. With a finalized protocol in place, the workgroup is seeking IRB approval for efficacy trials. Preliminary findings suggest reductions in depression and guilt, and increases in forgiveness and post-traumatic growth. The presentation will discuss factors contributing to positive outcomes in this model’s efficacy.

## Faith-Based Chaplain-led Group Intervention for Moral Injury

(Practice, Rape-Civil/War-Mil/Vets, Adult, I, Industrialized)

**Haynes, Kerry, Doctor of Ministry**
*Veterans Affairs Medical Center, San Antonio, Texas, USA*

Moral injury is a searing wound of the conscience. Recent efforts to help Veterans find healing from combat-related moral injury have been spear-headed by mental health providers. Yet, some feel unprepared to engage in the spiritual or religious frameworks that Veterans are referencing. With mental health chaplains embedded in the interdisciplinary team, mental health providers refer Veterans to this program. Chaplains as faith leaders specialize in morally injurious emotions such as anger, rage, guilt, shame, and forgiveness. Chaplains represent the Divine to Veterans who at times feel condemned by their friends, family, themselves, and by their God. Our moral repair work helps Veterans appropriate divine forgiveness toward the forgiveness of self and others. Our group structure consists of six ninety-minute sessions, three of which focus on Jewish and Christian scriptural case studies of people who have failed in epic proportions but who have received divine forgiveness and restoration. The fourth session introduces the Worthington REACH model, an evidence-based model for forgiving self and others. Group activities also incorporate other psycho-educational tools such as letter writing, making amends, and participation in a final ritual/ceremony. In the last two sessions, group members voluntarily share their own stories and receive affirmations of forgiveness and restoration from group members as proxies for the larger public. Outcome data shows significant improvements in self-forgiveness according to the State Self-forgiveness Scale (Wohl, DeShea, & Wahkinney, 2008).

## Patient to Prophet: Reframing Veteran Identity using the Context of a Moral Injury Group and Chaplain - Psychologist Collaboration

(Practice, Ethics-Pub Health-Civil/War-Mil/Vets, Adult, I, Industrialized)

**Antal, Chris, DMin (awarded May 2017)**; **East, Rotunda, MDIv**
*Corporal Michael J Crescenz Veterans Affairs Medical Center, Philadelphia, Pennsylvania, USA*

In addition to the need for PTSD symptom reduction, some veterans suffer moral injuries, and seek relief within a psycho-spiritual framework. Drawing on the work of Edward Tick, William Mahedy and others, chaplains and psychologists at the Philadelphia VA have developed a process-oriented and experiential group model that meets 90 minutes weekly for 12 weeks and culminates in a public ceremony. The group addresses religious, spiritual and moral struggles from military service, engages moral emotions, and explores spiritual disciplines that nurture the practice of compassion for self and others. The primary objective is increased self-forgiveness, moral engagement, compassion, social support, and the reduction of PTSD symptoms. The group model proposes a reframing of veteran identity from "patient to prophet." This conceptualization of veteran identity seeks to empower them in their role as moral witnesses to the painful realities of war. Veteran public testimony within the culminating ceremony has the potential to reduce cultural denial of the devastating psycho-spiritual cost of war. Initial outcomes show increased life satisfaction, self-compassion, and post traumatic growth. Qualitative data from audience members of the healing ceremony will also be discussed.

**Symposium**
**Thursday, November 9**
**10:15 AM to 11:30 AM**
**Salon 5/8**
**Biological/Medical Track**

## Biomarkers in Children and Adolescents with Posttraumatic Stress Disorder

(Bio Med, Clin Res, Child/Adol, M, Industrialized)

**Lindauer, Ramón, MA, MD, PhD**
*Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands*

This symposium consists of four presentations investigating biological markers in traumatized children and adolescents with Posttraumatic stress disorder (PTSD). The first and second presentation focus on fMRI network analysis. In the first presentation differences between children with and without PTSD are presented. The second is about differences between treatment responders and non-responders. The third and last presentations focus on the influence of DNA methylation as a possible mechanism of influence on the development of PTSD in youth.

## Large Scale Network Connectivity in Children and Adolescents with Posttraumatic Stress Disorder

(Bio Med, CPA-CSA-Dev/Int-Neuro, Child/Adol, M, Industrialized)

**op den Kelder, Rosanne, PhD Student**[1]; Zantvoord, Jasper, MD[2]; Ensink, Judith, PhD Candidate[2]; Lindauer, Ramón, MA, MD, PhD[3]
[1]*University of Amsterdam, Amsterdam, Netherlands*
[2]*Academic Medical Center, Amsterdam, Netherlands*
[3]*Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands*

Several resting-state functional magnetic resonance imaging (rs-fMRI) studies in adults with posttraumatic stress disorder (PTSD) have identified abnormalities in large scale network connectivity, such as the default mode network and salience network. However, a limited number of studies have specifically examined large scale network connectivity in children and adolescents with PTSD, which may differ from adult findings due to neurodevelopmental factors. Furthermore, studies in children have so far focused on differences between children with PTSD and healthy non-traumatized controls and have not examined traumatized healthy controls. Against this background, we asked if resting state functional connectivity differed between children aged 8-17 with PTSD and their traumatized peers without PTSD. A total of 50 children with PTSD and 25 aged and sex matched traumatized children without PTSD were included. The Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA) was conducted to assess DSM-IV PTSD diagnosis and rs-fMRI was performed in all participants. Independent component analysis (ICA) was used to identify large scale resting state networks and determine within- and between-network connectivity. We hypothesized that children with PTSD would show heightened within default mode network (DMN) and salience network (SN) connectivity and greater anticorrelation between the DMN and central executive network (CEN). In this presentation, we will present the outcomes of ICA analysis and discuss our findings in a neurodevelopmental framework.

## Combining Resting State Functional Connectivity and Machine Learning to Predict Treatment Response in Children and Adolescents with PTSD

(Bio Med, CPA-CSA-Clin Res-Neuro, Child/Adol, M, Industrialized)

**Zantvoord, Jasper, MD**[1]; Ensink, Judith, PhD Candidate[1]; op den Kelder, Rosanne, PhD Student[2]; Lindauer, Ramón, MA, MD, PhD[3]
[1]*Academic Medical Center, Amsterdam, Netherlands*
[2]*University of Amsterdam, Amsterdam, Netherlands*
[3]*Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands*

Half of the children with PTSD do not show a clinically meaningful response despite standardized first line treatment. Optimizing treatment allocation can improve treatment response. However, reliable markers to guide individual treatment allocation are not available. Previous studies in PTSD used univariate data analysis methods to identify variables which are predictive on a group level but do not provide information on individual patients which is essential for clinical application. Combining machine learning and neuroimaging has shown to be promising to overcome this limitation. Against this

background, we asked whether brain connectomics combined with machine learning could be used to predict response to treatment in children with PTSD. We included forty children aged 8-17 with PTSD and collected fMRI scans before the course of either EMDR or TF-CBT. We extracted resting-state networks and used multivariate pattern analysis to discover networks that predicted treatment response. Cross-validation revealed a resting-state network with significant classification accuracy after correction for multiple comparisons. A network centered in the dorsolateral prefrontal cortex and parietal cortex showed a sensitivity of 72% and a specificity of 70%. In this presentation, we will discuss potential future directions to further increase classification accuracy and develop treatment specific markers to guide treatment allocation.

## Genome-wide DNA Methylation Differences between Traumatized Youth with and without PTSD

(Bio Med, CPA-Neglect-Genetic, Child/Adol, M, Global)

**Ensink, Judith, PhD Candidate**[1]; Henneman, Peter, PhD[1]; Zantvoord, Jasper, MD[1]; op den Kelder, Rosanne, PhD Student[2]; Lindauer, Ramón, MA, MD, PhD[3]; Mannens, Marcel, Prof. Dr.[1]
*[1]Academic Medical Center, Amsterdam, Netherlands*
*[2]University of Amsterdam, Amsterdam, Netherlands*
*[3]Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands*

Exposure to adverse childhood experiences may influence biological mechanisms throughout life. Epigenetic modifications, such as DNA methylation may provide a mechanism by which the environment can moderate the expression of our genes. Recent studies suggest that epigenetic DNA methylation changes are related to exposure to childhood trauma and the development of posttraumatic stress disorder (PTSD). However, research is still very limited. Especially studies in clinical samples and children. Therefore, we explored genome wide methylation profiles of children and adolescents with PTSD (N=80, age 8-18 years). We compared the methylation profiles of these children with two gender and age matched control groups; 1) traumatized youth without PTSD (n=80) and 2) a healthy non-traumatized control group (n=80). In all children and adolescents we obtained saliva and measured their genome-wide methylation patterns using the Illumina Infinium Methylation BeadChip, determining the methylation state of over 850 K CpG sites. We will argue these findings and the role of methylation as a potential mechanism of change, regarding the biological basis of PTSD. We will end with a discussion about the clinical relevance and the possible influence on prevention or treatment of PTSD in children and adolescents.

## Epigenetic Abnormalities Associated with Altered Frontolimbic Circuitry in Pediatric PTSD

(Bio Med, CPA-CSA-Genetic-Neuro, Child/Adol, M, Industrialized)

Keding, Taylor, BS; Papale, Ligia, PhD; Alisch, Reid, PhD; **Herringa, Ryan, MD PhD**
*University of Wisconsin-Madison, Madison, Wisconsin, USA*

**Objective**: Epigenetic changes represent candidate mechanisms contributing to PTSD in youth. Studies of adult PTSD suggest differential DNA methylation in neuroendocrine genes including the glucocorticoid receptor NR3C1 and its regulator FKBP5. However, no reported studies have examined epigenetic abnormalities in pediatric PTSD, nor their relationship to fronto-limbic circuits supporting emotion processing. **Method**: Saliva from youth with PTSD (n=22, 8-18 years) and age/sex-matched healthy youth (n=22) was collected in the context of a neuroimaging study of emotion processing. Genome-wide 5-methylcytosine was profiled using the HumanMethylation450 BeadChip. Differentially methylated regions (DMRs) were examined using a mixed effect model, adjusting for age and sex, with methylome-wide (MW) correction. Gene-of-interest (GOI) analyses were conducted on genes previously identified in adult PTSD. Partial correlation analyses related DMRs to trauma and symptom severity, and previously reported brain structural and functional abnormalities. **Results**: At the MW level, youth with PTSD showed hypermethylation on GSTT1 (glutathione S-transferase) and TNXB (Tenascin XB), related to antioxidant recruitment and extracellular matrix integrity respectively. Furthermore, GSTT1 methylation positively predicted amygdala-ventromedial prefrontal cortex functional connectivity during emotion processing ($r=.59$, $pFDR<.001$), while TNXB methylation negatively predicted hippocampal volume across all youth ($r=-.52$, $pFDR<.001$). At the GOI level, youth with PTSD showed DMRs in neuroendocrine (FKBP5, NR3C1) and dopamine transport (SLC6A3) genes implicated in adult PTSD. These genes were also related to brain structure and function across all

youth. **Conclusion**: Together, these findings link peripheral DNA methylation to neural endophenotypes in pediatric PTSD. Several genes associated with adult PTSD appear to be differentially methylated in pediatric PTSD, suggesting common mechanisms contributing to PTSD across the lifespan. Conversely, novel DMRs identified may point to unique pathways contributing to altered emotion circuitry in pediatric PTSD. These epigenetic markers offer potentially modifiable substrates that could be targeted in the prevention or treatment of pediatric PTSD.

## Symposium
## Thursday, November 9
## 10:15 AM to 11:30 AM
## Salon 6/7
## Biological/Medical Track

## Neural Circuits of Affect Regulation in PTSD: Symptom and Subtype Differentiation and Longitudinal Prediction of Risk

(Bio Med, Affect/Int-Bio/Int-Neuro, Adult, M, Industrialized)

**Larson, Christine, PhD**
*University of Wisconsin - Milwaukee, Milwaukee, Wisconsin, USA*

Substantial progress has been made in understanding the neural underpinnings of posttraumatic stress disorder. However, to date this work has largely examined individuals with chronic PTSD and PTSD as a broad diagnostic category, rather than a constellation of disparate symptoms (e.g., hyperarousal, avoidance, intrusions, dissociation). Thus, little is known about how acute post-trauma neural functioning predicts risk for chronic PTSD or how circuits may differ depending on the nature of symptoms an individual experiences. Together these four talks will address these two understudied aspects of neural function and structure in PTSD. This work can inform a more precise understanding of neural mechanisms underlying PTSD and point to early post-exposure markers of risk for developing chronic trauma-related distress. Ultimately, such findings can be used to identify acute trauma survivors at greatest risk and to optimize interventions both for ameliorating chronic PTSD and preventing its onset.

## Early Brain, Symptom, and Social Factors Associated with PTSD Development after Motor Vehicle Collision

(Prevent, Acute-Neuro, Adult, M, Global)

**Wang, Xin, MD, PhD**
*University of Toledo, Toledo, Ohio, USA*

Increasing evidence suggests early post-trauma factors may contribute to subsequent PTSD development. Recognition of these factors may help identify trauma survivors at high risk for PTSD and guide early interventions to prevent or reduce PTSD. With these goals in mind, we studied early post-trauma factors in survivors of motor vehicle collision (MVC) recruited from emergency departments (EDs). We examined associations between acute physical injury, acute stress, social support in the ED, brain structure, emotion-related activation, mild traumatic brain injury (mTBI) and PTSD at 3 months after MVC. We found that factors apparent within 2 weeks after MVC may predict PTSD at 3 months later. These factors include: (a) smaller left hippocampal and rostral anterior cingulate cortex volumes, (b) reduced left superior parietal activation with fearful visual processing after mTBI, (c) greater medial prefrontal cortex emotion appraisal activation and (d) higher levels of acute stress and pain in the ED. In addition, family visitation in the ED was associated with low PTSD symptoms at 3 months. These results provide insight into PTSD development after acute trauma and raise the possibility of predicting PTSD from early symptoms, brain properties, and social relationships.

## Resting State Functional Connectivity as a Longitudinal Predictor of PTSD Symptomology

(Bio Med, Acc/Inj-Neuro, Adult, M, N/A)

**Belleau, Emily, PhD**[1]; deRoon-Cassini, Terri, PhD[2]; Taubitz, Lauren, PhD[3]; Larson, Christine, PhD[3]
[1]*McLean Hospital, Harvard Medical School, Boston, Massachusetts, USA*
[2]*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*
[3]*University of Wisconsin - Milwaukee, Milwaukee, Wisconsin, USA*

Posttraumatic stress symptoms have been linked to disruptions in amygdala based neural circuitry. In particular, studies have linked PTSD symptoms to

altered resting state connectivity (RSFC) between amygdala-default mode network, amygdala-salience-network, and amygdala-executive networks. Of the very limited studies looking at neural prognostic indicators of PTSD symptoms, there is some evidence suggesting that amygdala-posterior cingulate/precuneus connectivity may be a predictor of PTSD sequalae. While most studies of PTSD have focused on examining the whole amygdala, research has demonstrated that amygdala subregions have unique functional connections. Brown and colleagues (2014) found that BLA RSFC, but not CMA RSFC was compromised in individuals with PTSD. Given the limited longitudinal work examining neural predictors of PTSD symptoms and assessment of PTSD symptom-related amygdala subregion RSFC, this study examined BLA and CMA RSFC in a sample of traumatized individuals (N= 46) within two-weeks post-trauma could predict PTSD symptoms six months later. Results suggest that increased BLA-precuneus RSFC predicts PTSD symptoms six-month post-trauma. Additionally, BLA RSFC with salience and executive network structures emerged with different PTSD symptom clusters. This suggests networks linked to cognitive-affective processes may be a risk factor for PTSD symptoms.

## Neural Markers of Emotion Dysregulation in Acute Trauma Survivors Predict Chronic PTSD

(Bio Med, Acc/Inj-Acute-Affect/Int-Neuro, Adult, M, Industrialized)

**Larson, Christine, PhD**[1]; deRoon-Cassini, Terri, PhD[2]; Belleau, Emily, PhD[3]; Taubitz, Lauren, PhD[1]
[1]*University of Wisconsin - Milwaukee, Milwaukee, Wisconsin, USA*
[2]*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*
[3]*McLean Hospital, Harvard Medical School, Boston, Massachusetts, USA*

Trauma exposure is common and increases risk for a host of negative health outcomes, most notably posttraumatic stress disorder (PTSD). Unfortunately, despite some progress, determining which acutely traumatized individuals are at risk for chronic PTSD remains difficult. Furthermore, the neural mechanisms predicting longitudinal risk for PTSD are almost completely unexplored. To advance prediction of risk for chronic PTSD, we measured recruitment of the neural circuitry instantiating emotion regulation within two weeks of trauma exposure and the extent to which these neural markers predicted PTSD symptoms six months post-trauma. Dysregulation in the amygdala, ventromedial prefrontal, anterior cingulate cortex and other well-established emotion regulation regions during both imagery of the traumatic event and resting state strongly predicted PTSD symptoms at six-month follow-up. Of note, a markedly different pattern of activation was predictive of avoidance and hyperarousal compared to intrusive symptoms. This highlights the need to consider the symptom clusters separately, rather than in aggregate as is the norm in the imaging literature on chronic PTSD. More broadly, these results point to mechanisms underlying acute post-trauma emotion dysregulation that can be targeted to better identify trauma survivors at risk for PTSD, and potentially to optimize early interventions.

## Dynamic Causal Modelling in PTSD and its Dissociative Subtype: Bottom-Up versus Top-Down Processing within Fear and Emotion Regulation Circuitry

(Clin Res, Affect/Int-Complex, Adult, M, N/A)

Nicholson, Andrew, BSc[1]; Friston, Karl, MD PhD[1]; Zeidman, Peter, PhD[1]; Harricharan, Sherain, BSc[1]; McKinnon, Margaret, PhD[2]; Densmore, Maria, BSc[1]; Neufeld, Richard W.J., PhD[1]; Theberge, Jean, PhD[3]; Corrigan, Frank, MD[1]; Jetly, Rakesh, MD, FRCPC[4]; Spiegel, David, MD[5]; **Lanius, Ruth, MD, PhD**[6]
[1]*University of Western Ontario, Depts of Psychiatry and Psychology, London, Ontario, Canada*
[2]*McMaster University, Hamilton, Ontario, Canada*
[3]*Lawson Health Research Institute, London, Ontario, Canada*
[4]*Canadian Forces Health Services Group Headquarters, Ottawa, Ontario, Canada*
[5]*Stanford University School of Medicine, Stanford, California, USA*
[6]*University of Western Ontario, London, Ontario, Canada*

**Objective:** Posttraumatic stress disorder (PTSD) is associated with decreased top-down emotion modulation from mPFC regions, a pathophysiology accompanied by hyperarousal and hyperactivation of the amygdala. By contrast, dissociative subtype PTSD patients (PTSD+DS) often exhibit increased mPFC top-down modulation and decreased amygdala activation associated with emotional detachment and hypoarousal. Critically, PTSD and PTSD+DS display distinct functional connectivity within the PFC,

amygdala complexes, and the periaqueductal gray (PAG) – a region related to defensive response/emotional coping. **Methods:** To examine directed (effective) connectivity among these nodes, as well as group differences, we conducted resting-state spectral dynamic causal modelling (spDCM) analyses of coupling between the vmPFC, the bilateral basolateral (BLA) and centromedial (CMA) amygdala complexes, and the PAG, in 155 participants [PTSD (n=62); PTSD+DS (n=41); age-matched healthy trauma-unexposed controls (n=52)]. **Results:** PTSD was characterized by a pattern of predominant bottom-up connectivity from the amygdala to the vmPFC and from the PAG to the vmPFC and amygdala. Conversely, PTSD+DS exhibited predominant top-down connectivity between all node pairs (from the vmPFC to the amygdala and PAG, and from the amygdala to the PAG). **Conclusions:** These results suggest the contrasting symptom profiles of PTSD and its dissociative subtype (hyper- vs. hypo-emotionality, respectively) may be driven by complementary changes in directed connectivity corresponding to bottom-up defensive fear processing vs. enhanced top-down regulation.

## Panel Presentation
## Thursday, November 9
## 10:15 AM to 11:30 AM
## Crystal Room
## Military Track

## Addressing Trauma within the Framework of Family and Parenting

(Clin Res, Clin Res-Fam/Int-Prevent, Lifespan, M, Industrialized)

**Williams, Amy, PhD**[1]; **Blankenship, Abby, PhD**[2]; **DeVoe, Ellen, PhD MSW**[3]
[1]*Cohen Military Family Clinic, Dallas, Texas, USA*
[2]*University of Texas Health Science Center at San Antonio, San Antonio, Texas, USA*
[3]*Boston University School of Social Work, Boston, Massachusetts, USA*

In this panel, we will discuss the development and implementation of an evidence-based post-deployment reintegration program and its application to active duty and veteran families. Strong Families Strong Forces (DeVoe & Ross, 2012) was developed with OIF/OEF families utilizing a community-based participatory research model. Findings with National Guard/Reserve families indicated greater reductions in parenting stress and mental health distress relative to those in the waitlist condition (Devoe et al, 2016). Currently, efforts are underway to implement the intervention with active duty soldiers and families pre- and post-deployment. An adaptation, Strong Families Moving Forward, is also being piloted for veterans and families who experienced separation and are transitioning to civilian life. Addressing posttraumatic stress within a family and parenting intervention will be discussed via case presentations and pre- and post-outcome assessment measures. Challenges and successes in treating the trauma-exposed service member, veteran and/or family impacted by separation and transition will be discussed by each panelist given three unique populations: National Guard/Reservist families, active duty service member famiiles, and veteran families.

**Panel Presentation**
**Thursday, November 9**
**10:15 AM to 11:30 AM**
**Adams Room**
**Treatment Track**

## Clinical Practice Guidelines: Are They Still Clinical?

(Practice, Clin Res-Res Meth-Train/Ed/Dis-Psych, Lifespan, M, Global)

Kudler, Harold, MD[1]; **Schnurr, Paula, PhD**[2]; **Courtois, Christine, PhD**[3]; **Bisson, Jonathan, MD**[4]; Forbes, David, PhD[5]
[1]*USA Department of Veterans Affairs, Washington, District of Columbia, USA*
[2]*National Center for PTSD, Executive Division, White River Junction, Vermont, USA*
[3]*Christine A. Courtois, PhD, PLLC, Washington , District of Columbia, USA*
[4]*Cardiff University School of Medicine, Cardiff, Wales, United Kingdom*
[5]*Phoenix Australia: Centre for Posttraumatic Mental Health: The University of Melbourne, Melbourne, Victoria, Australia*

The first clinical practice guidelines (CPGs) for the treatment of posttraumatic stress disorder (PTSD) expanded the range of treatment options for many clinicians by offering a broad compendium of approaches, each accompanied by recommendations, pro and con. Many of these recommendations were based on expert opinion and the expectation that clinical judgement and individual patient needs would determine the choices made. In recent years, however, CPGs are increasingly constrained to recommendations for which there is a well-established research base. While no one can argue against the value of scientific evidence, science and clinical practice are not perfectly congruent domains. At what point might the rules for CPG construction become a limiting factor in clinical practice? This panel, endorsed by the Special Interest Group on Psychodynamic Research and Practice, brings together Paula Schnurr, Christine Courtois and Jonathan Bisson, an international group of researchers and clinicians, each of whom have lead the development of CPGs for PTSD. Following discussion by David Forbes, first author of the seminal *Journal of Traumatic Stress* article, "A Guide to Guidelines for the Treatment of PTSD and Related Conditions" (2010), the panel will engage the audience in a lively discussion of the history and future of CPGs.

**Featured Panel Presentation**
**Thursday, November 9**
**10:15 a.m. – 11:30 a.m.**
**Monroe**
**Refugee Track**

## Effectively Applying Traumatic Stress Knowledge to Inform Global Challenges

(Global, Global-Pub Health-Refugee, N/A, M, Global)

**Diane Elmore Borbon, PhD[1]; Debra Kaysen, PhD, ABPP[2]; Kathryn Magruder, PhD, MPH[3]; Angela Nickerson, PhD[4]**
[1]*UCLA/Duke University National Center for Child Traumatic Stress, Washington, District of Columbia, USA*
[2]*University of Washington, Seattle, Washington, USA*
[3]*Medical University of South Carolina and the Ralph H. Johnson VA Medical Center, Charleston, South Carolina, USA*
[4]*University of New South Wales, Sydney, NSW, Australia*

The traumatic stress field is increasingly relevant to discussions and debates on a variety of global challenges. As a global leader in the field, ISTSS is working to identify opportunities to share relevant research and clinical knowledge with our membership, the public, and policymakers on timely public health and policy issues of importance to our mission. This session will provide an overview of newly established ISTSS criteria for engaging on key public health and policy issues and share some examples of recent ISTSS efforts to enhance our global impact. Specifically, presenters will discuss ISTSS supported initiatives including participation in the 2017 March for Science, the ISTSS Trauma and Public Health Task Force report, the ISTSS statement on the U.S. travel restriction policy, and a recent ISTSS briefing paper on trauma in refugees and displaced persons.

## Workshop Presentation
## Thursday, November 9
## 10:15 AM to 11:30 AM
## Salon 2
## Treatment Track

## The DBT-Prolonged Exposure Protocol: New Approach for the Treatment of PTSD and Complex Comorbidities

(Practice, Acute-Chronic-Rape-Sub/Abuse, Adult, M, N/A)

**Stone, Andrea, PsyD**[1]; **Schuster Effland, Lara, LCSW**[1]; **Schaefer, Jenni, BS**[2]
[1]*Insight Behavioral Health Centers, Chicago, Illinois, USA*
[2]*Eating Recovery Center, Denver, Colorado, USA*

Posttraumatic stress disorder commonly co-occurs with other psychiatric disorders. In fact, 66% of individuals with PTSD have two or more comorbid disorders, including substance use and personality disorders, and up to 30% attempt suicide. Due to the commonly held belief that these patients are incapable of learning the behavior control skills necessary to maintain safety during PTSD treatment, this complex group is often excluded from receiving targeted help like Prolonged Exposure Therapy (PE), which is the most empirically supported treatment for PTSD. Moreover, treatments designed specifically for these multi-diagnostic individuals such as Dialectical Behavioral Therapy typically only indirectly address PTSD by focusing on minimizing the disabling symptoms. Fortunately, the new DBT PE protocol allows clinicians to directly treat both PTSD as well as complex comorbidities in this high-risk population. This workshop will present the DBT PE protocol of providing DBT skills along with in vivo and imaginal exposures to process trauma. Research indicates that the DBT PE protocol is not only effective in reducing PTSD as well as suicidal behavior but is also safe to administer, practical to deliver, and acceptable to patients as well as therapists. Further, there is no evidence that the protocol leads to exacerbations of intentional self-injury urges or behaviors nor treatment dropout. The DBT PE protocol is also associated with improvements in dissociation, trauma-related guilt cognitions, depression, anxiety, shame and social adjustment. Within this workshop, the three stages of the DBT PE protocol will be explained, including helping patients to achieve behavioral control over life-threatening behaviors, process trauma and associated emotions, and build a life worth living. The importance of maintaining an exposure-based lifestyle will be recommended as a way to maintain recovery gains and reduce vulnerability to relapse. Special attention will be given to addressing treatment interference issues, including emotional dsyregulation and intolerance. Further, potential anxiety experienced by the therapist will be discussed. Uniquely, this workshop will combine clinical and research perspectives with a recovered patient's experience.

## Multi-Media Presentation
## Thursday, November 9
## 10:15 AM to 11:30 AM
## Salon 1
## Child Trauma Track

## Working with Fire and Glass: Art as Intervention for Youth Injured by Gun Violence

(Multi-Media, Commun-Comm/Int-Comm/Vio, Child/Adol, I, Industrialized)

**Schmidt, Andréa, BA (Hons)**[1]; **Dick, Pearl, BA**[2]; **Stolbach, Bradley, PhD**[3]
[1]*What Escapes Production, Toronto, Ontario, Canada*
[2]*ArtReach Chicago/Firehouse Glass Studio, Chicago, Illinois, USA*
[3]*University of Chicago, Chicago, Illinois, USA*

Documentarians Patrick Reed and Andréa Schmidt were researching "PTSD: Beyond Trauma," a film about the different symptoms, histories, and trauma types that are encompassed by the PTSD diagnosis, when they found Project FIRE. A partnership of a community-based arts program, an academic medical center, and a hospital-based violence intervention program, the glassblowing workshop was founded by trauma psychologist Brad Stolbach and glass artist Pearl Dick, and designed for youth injured by gun violence. The teens learn glass sculpture—while getting job training and trauma psychoeducation using The Sanctuary Model's S.E.L.F. Group Curriculum. In this session, presenters will be joined by a Project FIRE mentor instructor and peer facilitator. Two video screenings (6 min. excerpt of "Beyond Trauma" focusing on Project FIRE; 4 min.

music video collaboration with facilitators) will set-up discussions: How does glassblowing address traumatic stress symptoms? From researchers', facilitators', and filmmakers' points of view, what impact does the Firehouse space have on individuals in a context where threats to safety are many and loss is a frequent part of early life? How can key S.E.L.F. Curriculum topics (Safety, Loss, Emotion, Future) be explored in the process of making art, whether glass sculpture, music, or video?

# Concurrent Session Two

**Master Methodologist**
**Thursday, November 9**
**1:30 PM to 2:45 PM**
**Grand/State Ballroom**

## What is it Like to Undergo a Traumatic Experience – the Phenomenological Approach in the Study of Trauma

(Res Meth, Chronic-Res Meth-Terror-Torture, Adult, M, Industrialized)

**Ataria, Yochai, PhD**
*Tel-Hai College, Tel-Hai, Upper Galilee, Israel*

In this talk I will argue that the phenomenological approach, as a method that focuses on the bodily level of experience and in particular on the body as it is experienced from within, enables us to penetrate the traumatic experience. It appears that by embracing the phenomenological approach, on both the philosophical and methodological levels, we can redefine the very concept of trauma. I argue that by applying the phenomenological approach, we can improve our understanding of the traumatic experience and its long-term implications.

**Symposium**
**Thursday, November 9**
**1:30 PM to 2:45 PM**
**Salon 1**
**Refugee Track**

## Methodological Innovations in the Investigation of Refugee Mental Health

(Global, Refugee-Torture-Civil/War, Adult, M, Global)

**Nickerson, Angela, PhD**[1]; Turner, Stuart, MD MA FRCP FRCPsych[2]
[1]*University of New South Wales, Sydney, NSW, Australia*
[2]*Trauma Clinic, London, United Kingdom*

There are currently over 65 million people who are forcibly displaced worldwide. Rates of psychological disorders are elevated amongst refugees, with refugees reporting high rates of posttraumatic stress disorder (PTSD) and depression. To best support refugees to adapt well to their host environment, there is a need to understand the range of factors that influence refugee mental health. This symposium is comprised of four clinical studies that use innovative methodologies to investigate refugee mental health. The first study examined habituation, sensory and sensorimotor gating in refugees with and without PTSD by means of electroencephalographic event-related potential. The second study used network analysis to investigate the network structure of DSM-5 PTSD symptoms in refugees resettled in Switzerland. The third study investigated the impact of cognitive reappraisal instructions on subsequent distress and intrusive memories in refugees resettled in Australia. The fourth study examined whether a brief self-efficacy intervention affected treatment-seeking refugees' emotional responses to subsequent trauma reminders, as well as distress tolerance. Findings will be considered in the context of current models of refugee mental health, and clinical implications will be discussed.

## Impact of Cognitive Reappraisal on Negative Affect, Heart Rate, and Intrusive Memories in Traumatized Refugees

(CulDiv, Refugee-Torture-Civil/War, Adult, M, Industrialized)

**Nickerson, Angela, PhD**[1]; Liddell, Belinda, PhD[1]; Hofmann, Stefan, PhD[2]; Asnaani, Anu, PhD[3]; Bryant, Richard, PhD[1]; Garber, Ben, MA[1]; Ahmed, Ola, PhD[1]; Cheung, Jessica, PhD, Cpsych[1]; Huynh, Ly, PhD[1]; Pajak, Rosanna, DPsych(Clin)[1]; Litz, Brett, PhD[4]
[1]*University of New South Wales, Sydney, NSW, Australia*
[2]*Boston University, Boston, Massachusetts, USA*
[3]*University of Pennsylvania, Philadelphia, Pennsylvania, USA*
[4]*VA Boston Healthcare System & Boston University School of Medicine, Boston, Massachusetts, USA*

**Background:** Refugees report high rates of posttraumatic stress disorder (PTSD), however lack of understanding of basic processes underpinning PTSD in these groups has hampered the development of tailored intervention for refugees. This study investigated the efficacy of cognitive reappraisal in reducing negative affect, physiological arousal and intrusive memories in refugees. **Methods:** Participants were 76 refugees with varying levels of PTSD who received instructions in cognitive reappraisal or emotion suppression before viewing emotional images depicting trauma-related scenes. **Results:** Findings indicated that cognitive reappraisal led to fewer subsequent intrusive memories relating to the emotional images in refugees high in PTSD symptoms. Trait suppression moderated the efficacy of cognitive reappraisal such that participants high in PTSD who had low levels of trait suppression reported significantly lower levels of negative affect when using cognitive reappraisal compared to emotional suppression. **Conclusions:** These findings highlight the potential utility of cognitive reappraisal when treating the psychological effects of the refugee experience. Clinical implications of these findings will be discussed.

## The Impact of Enhancing Perceived Self-Efficacy in Torture Survivors

(Clin Res, Refugee-Torture-Civil/War, Prof, M, Industrialized)

**Morina, Naser, MA**[1]; Bryant, Richard, PhD[2]; Doolan, Emma, PhD Student[2]; Martin-Soelch, Chantal, PhD[3]; Plichta, Michael, PhD[1]; Pfaltz, Monique, PhD[1]; Schnyder, Ulrich, MD[1]; Schick, Matthis, MD[1]; Nickerson, Angela, PhD[2]
[1]*Zurich University, Zurich, Switzerland*
[2]*University of New South Wales, Sydney, NSW, Australia*
[3]*University of Fribourg, Fribourg , Switzerland*

**Background:** Perceived self-efficacy is an important factor underlying psychological well-being and diminished self-efficacy is associated with a range of psychopathological states. This study tested the impact of enhancing perceived self-efficacy on coping with trauma-related stimuli and distress tolerance in tortured refugees. **Methods:** Torture survivors (N=40) were administered a self-efficacy induction in which they retrieved mastery-related autobiographical memories, or a neutral induction which involved retrieving benign autobiographical memories, and then viewed 30 trauma-related images. Participants then completed a frustration-inducing mirror-tracing task. **Results:** Participants who had received the self-efficacy induction reported less distress and negative affect, and improved coping in relation to viewing the trauma-related images than those in the control condition. The self-efficacy induction also led to greater persistence with the mirror-tracing task than the control induction. **Conclusions:** These findings provide initial evidence that promoting self-efficacy in tortured refugees can increase distress tolerance, which may suggest possibilities for enhancing treatment response in distressed refugees.

## Startle Habituation, Sensory and Sensorimotor Gating in Trauma-affected Refugees with Posttraumatic Stress Disorder

(Bio Med, Complex-Bio/Int-Refugee-Torture, Adult, M, Industrialized)

**Meteran, Hanieh, BSc**[1]; Carlsson, Jessica, MD PhD[2]; Vindbjerg, Erik, MS[2]; Uldall, Sigurd, PhD Student[1]; Glenthøj, Birte, Professor[3]; Oranje, Bob, Associate Professor[3]
[1]*University of Copenhagen, Copenhagen, Denmark*
[2]*Competence Center for Transcultural Psychiatry, Ballerup, Denmark*
[3]*Center for Neuropsychiatric Schizophrenia Research (CNSR), Glostrup, Denmark*

**Background:** Evidence of abnormalities in early information processing in post-traumatic stress disorder (PTSD) has been accumulating over the years, but is far from being well characterized. In this study we assessed deficits in sensory gating and plasticity of the startle response, including prepulse inhibition (PPI) and habituation in trauma-affected refugees with PTSD. Furthermore, we investigated a possible relation between psychophysiological and clinical measures. **Methods:** A total of 25 trauma-affected refugees with PTSD (13 men, 12 women) and 20 healthy refugee controls (11 men, 9 women) matched on age, gender and country of origin completed the study. In two distinct auditory paradigms sensory gating, indexed as P50 suppression, and sensorimotor gating, indexed as PPI of the startle response, and habituation/sensitization of the response were examined. Diagnosis and symptom severity were assessed using the Clinician Administered PTSD Scale (CAPS), ), a validated 'golden standard' structured interview, and Harvard Trauma Questionnaire (HTQ), a 16-item self-report rating scale. **Results:** Our preliminary results indicate that PTSD patients exhibit larger startle response and deficient habituation when compared with healthy controls, while the two groups do not differ in PPI and P50 suppression. **Conclusion:** The study capitalizes on technological advancements of research on electroencephalographic event-related potential (ERP) and applies it to a novel psychiatric population. The study will provide a better understanding of the psychophysiological characteristics of trauma-affected refugees with PTSD.

## Explorative Network Analysis of a Posttraumatic Stress Disorder Symptom Network in a Sample of Severely Traumatized Refugees

(Bio Med, Illness-Refugee-Res Meth, Adult, M, Industrialized)

**Spiller, Tobias, MA Student**[1]; Schick, Matthis, MD[1]; Schnyder, Ulrich, MD[1]; Nickerson, Angela, PhD[2]; Bryant, Richard, PhD[2]; Morina, Naser, MA[1]
[1]*Zurich University, Zurich, Switzerland*
[2]*University of New South Wales, Sydney, NSW, Australia*

*Background:* Network analysis is an emerging, graph theory based methodology for investigating psychopathological symptoms. The current refugee crisis and the increased prevalence of mental disorders such as posttraumatic stress disorder (PTSD) in this population emphasize the need for a better understanding of psychopathology in traumatized refugees, to which new methodologies could be beneficial. *Methods:* We estimated the structure of a PTSD symptom network and its centrality indices in a cross-sectional clinical sample of 151 traumatized refugees with and without a formal PTSD diagnosis using the R-package qgraph. Moreover, we used the R-package bootnet to perform robustness and significance analyses for the edges weights and the order of centrality. *Results:* We found three pairs of symptoms showing significantly stronger connections than at least half of all other connections: Irritability or outbursts of anger and self-destructive or reckless behavior, intrusion and difficulties falling asleep, and hypervigilance and exaggerated startle response. The highest centrality was found for emotional cue reactivity and the lowest for trauma-related amnesia. *Conclusion:* Emotional cue reactivity showed the highest centrality, emphasizing the importance of emotional trauma reminders in a clinical sample of severely traumatized refugees. However, due to the limited robustness of our results, findings should be interpreted carefully.

## Symposium
## Thursday, November 9
## 1:30 PM to 2:45 PM
## Salon 3
## Treatment Track

## Trauma and Complexity: Predictors of Treatment Outcome

(Clin Res, Clin Res-Cog/Int-Comm/Int-Bio/Int, Adult, M, Industrialized)

**Resick, Patricia, PhD, ABPP**
*Duke University Medical Center, Durham, North Carolina, USA*

No matter what therapy is offered, not everyone benefits equally. As we move to personalized treatment it is important to know whether there are significant predictors of treatment outcome. Such predictors may lead to adjustments to current treatments or the development of new treatments for different populations. This symposium will focus on treatment predictors with a range of factors. Richard Bryant will present on neural predictors of response to prolonged exposure (PE). Mark Burton will present how life stressors may impact outcomes in a study of PE and sertraline. Patricia Resick will present on pretreatment symptom levels, demographics and military predictors of active military on response to individual or group cognitive processing therapy. Laurie Zanberg will present on the effects of outcome expectance on response to prolonged exposure.

## Predicting Response to Prolonged Exposure Using Reappraisal-Related Neural Signals

(Clin Res, Bio Med-Clin Res, Adult, M, Industrialized)

**Bryant, Richard, PhD**
*University of New South Wales, Sydney, NSW, Australia*

Approximately one-third of PTSD patients do not respond to trauma-focused cognitive behavior therapy (TF-CBT), and so there is a need to identify markers of treatment response. Reappraisal is a cornerstone of most TF-CBT because patients need to reframe issues related to trauma memories. This study aimed to index neural signals of reappraisal prior to treatment to determine the extent to which these can predict treatment response to TF-CBT. Civilians with PTSD (N = 32) underwent an fMRI procedure in which they reappraised traumatic images. They then received an 11 week course of TF CBT, after which they were independently asssessed for PTSD symptoms. Symptom reduction was predicted by increased activation in the dorsolaterial prefrontal cortex, and diminished activation in the amygdala. Poor treatment response was also associated with reduced connectivity of the left hippocampus and amygdala. These findings accord with models that suggest that engagement with emotions and recruitment of regulatory functions is optimal for TF-CBT to be successful.

## Understanding the Role of Life Stress in Treatment Outcome for PTSD: The Mediating Effects of Depression and Adherence

(Clin Res, Clinical Practice-Depr-QoL, Adult, M, N/A)

**Burton, Mark, BA**[1]; Marks, Elizabeth, MS[2]; Bedard-Gilligan, Michele, PhD[2]; Feeny, Norah, PhD[1]; Zoellner, Lori, PhD[2]
[1]*Case Western Reserve University, Cleveland, Ohio, USA*
[2]*University of Washington, Seattle, Washington, USA*

High rates of co-occurrence between PTSD and depression (Rytwinski et al., 2013) and the relation of both disorders to chronic stress (Bonanno et al., 2007; Hammen, 2005, Marin et al., 2011), suggest stress may be a transdiagnostic marker of comorbidity, with biological (McEwen et al., 2016) and psychological (Michl et al., 2013) correlates that may impact treatment response. In a sample of 169 men and women with PTSD, we examined the relationship between perceived life stress and treatment outcome, comparing prolonged exposure (PE) and sertraline. Perceived negative impact of cumulative life stress occurring in the previous year was three times greater for this sample compared to normative samples (LES; Sarason et al., 1978) and was associated with more severe baseline symptoms of PTSD (r =.39) and depression (r =.41). An indirect effect of life stress on PTSD outcome through baseline and post-treatment depression scores β =0.05, p = .003 suggested that the influence of life stress on depression leads to less reduction in PTSD severity across treatment. Life stress was not related to measures of treatment adherence or rumination.

Increased severity of depression symptoms in PTSD (Post et al., 2011) may be compounded by life stress, impacting PTSD treatment response.

## Higher Hopes, Faster Gains: The Effect of Outcome Expectancy on Prolonged Exposure Treatment Response

(Clin Res, Cog/Int, Adult, M, Industrialized)

**Zandberg, Laurie, PsyD**[1]; Brown, Lily, PhD[2]; Peterson, Juliana, BA[2]; Foa, Edna, PhD[1]
*[1]University of Pennsylvania, Philadelphia, Pennsylvania, USA*
*[2]University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania, USA*

Background: Outcome expectancy, defined as the patient's prognostic beliefs about the likely success of treatment, is widely considered an important cognitive variable that influences treatment engagement and response. However, few studies have investigated the OE-outcome relationship for patients with PTSD. Objective: The current study examines the impact of OE on the rate of symptom change during Prolonged Exposure Therapy (PE) for posttraumatic stress disorder (PTSD). Method: Participants (n=63) were adult smokers with PTSD (63.9% male; Mage= 42.8 years) who received PE in the context of a randomized controlled trial evaluating smoking cessation and PTSD treatment integration. All participants received varenicline, PE, and smoking cessation counseling over 12 weeks. Multilevel models examined the effects of OE on session-by-session PTSD and depression outcomes, with observations nested with participants. Results: Higher OE was significantly associated with both faster decline in PTSD symptoms and lower PTSD severity throughout the course of PE, but effects were more pronounced at post-treatment than at 15 week follow-up. In contrast, OE was not predictive of reduction in depression. Conclusions: Patient beliefs about the likely success of treatment appear to significantly impact the trajectory of symptom change, but only on the principal disorder being targeted in treatment. Low OE predicts slower response during treatment, but not necessarily poorer long-term PE outcomes.

## Predicting Outcomes from a Trial of Individual versus Group Cognitive Processing

(Clin Res, Clin Res-Dev/Int-Mil/Vets, Adult, M, Industrialized)

**Resick, Patricia, PhD, ABPP**[1]; Wachen, Jennifer, PhD[2]; Dillon, Kirsten, PhD[1]; Nason, Erica, PhD[3]; Yarvis, Jeffrey, PhD[4]; Peterson, Alan, PhD[5]; Mintz, Jim, PhD[5]
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In the parent RCT (Resick et al, 2017) we found that individually-administered CPT was more efficacious than group-administered format. We have now examined a number of demographic, symptom, and military-related variables to determine factors predicting response to treatment. Among variables examined were number of deployments, date since index (worst) trauma, gender, age, years of service, days since last deployment, education, rank, BDI, the Insomnia Severity Index (ISI) and the STAXI subscales (an anger measure). Although there were some significant correlations and relationships (to be presented), age emerged after accounting for the other variables. Age is related to treatment outcome in the Individual condition, in that younger age (20s) is associated with lower PTSD symptom scores posttreatment for those receiving individual therapy, greater RCI (reliable change index, and with loss of PTSD diagnosis (72%) in the Individual condition. Age was not significantly related to treatment outcome in the Group condition. There were no differences in format for older age groups (30s, 40+).

**Symposium**
**Thursday, November 9**
**1:30 PM to 2:45 PM**
**Salon 4/9**
**Military Track**

## Suicide and Self-injurious Behavior among Veterans: Toward Increased Understanding and Mitigation of Risk

(Clin Res, Clinical Practice-Prevent-Mil/Vets, Adult, I, Industrialized)

**Lee, Daniel, MS**[1]; Gradus, Jaimie, ScD[2]
[1]*Auburn University, Auburn, Alabama, USA*
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The rate of suicide among veteran populations has increased since the onset of the wars in Iraq and Afghanistan and has remained elevated since (Kang et al., 2015; VA, 2016). Recent population level data indicate the risk for suicide is considerably higher among veterans compared to the rest of the U.S. population (Kang et al., 2015). Accordingly, research efforts to better understand and mitigate suicide risk among veterans is critical. The aim of the current symposium is to report on several studies focused on examining factors contributing to risk for suicidal ideation (SI), non-suicidal self-injury (NSSI), and suicide attempts among veterans. First, Dr. Green will present a longitudinal study of prospective predictors of NSSI in a national sample of returning veterans enrolled in VA care. Second, Jaclyn Kearns will present a study examining the temporal sequence of SI, NSSI, suicide planning, and suicide attempts among a treatment seeking veteran sample. Third, Dr. DeBeer will present a study examining the role of social rejection, as measured through an objective rating system, in the association between PTSD symptoms and SI among veterans diagnosed with PTSD. Finally, Daniel Lee will present a study of prospective predictors of suicide attempts in a national sample of returning veterans enrolled in VA care. Dr. Gradus will serve as the discussant.

## Longitudinal Prediction of Non-Suicidal Self-Injury among Operation Enduring Freedom and Operation Iraqi Freedom Veterans

(Practice, Mil/Vets, Adult, I, Industrialized)

**Green, Jonathan, PhD**[1]; Lee, Daniel, MS[2]; Rosen, Raymond, PhD[3]; Keane, Terence, PhD[4]; Marx, Brian, PhD[5]
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The frequency with which Non-Suicidal Self-Injury (NSSI) occurs among veterans (12.3%–14.0%, Bryan & Bryan, 2014; Bryan, et al., 2015) is of significant concern, particularly as NSSI is one of the strongest predictors of suicide (Klonsky et al., 2013). Unfortunately, no prior study has examined prospective risk factors for NSSI among veterans. This study examined prospective predictors of NSSI in a national sample of returning veterans enrolled in VA care (N=1,354). Participants were assessed at two time points approximately two years apart. NSSI data were gathered from self-report and VA medical records. A total of 37 (2.7%) of participants engaged in NSSI between time points. History of NSSI was the strongest predictor of future NSSI (OR=55.93). Additionally, PTSD diagnosis predicted NSSI even after covarying for NSSI history (AOR=2.92). Results highlight the incredibly strong association between past and future NSSI. Accordingly, NSSI history is an important risk factor for clinicians to consider, and those with both NSSI history and PTSD appear to be at highest risk. Differences between those with NSSI histories who did not engage in NSSI, as well as those who engaged in NSSI for the first time during the study period, will be discussed.

## Temporal Sequences of Nonsuicidal and Suicidal Thoughts and Behaviors in Treatment-Seeking Military Veterans

(Clin Res, Prevent-Mil/Vets, Adult, I, N/A)

**Kearns, Jaclyn, BA**[1]; Gorman, Kaitlyn, MA[2]; Green, Jonathan, PhD[3]; Lee, Daniel, MS[4]; Nock, Matthew, PhD[5]; Keane, Terence, PhD[6]; Marx, Brian, PhD[7]
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Suicide is a leading cause of death in military veterans (VA, 2016). Limited research (e.g., Bryan et al., 2014) exists on the temporal sequence of nonsuicidal and suicidal thoughts and behaviors (NSTBs) in veterans. This study examined the temporal sequence of NSTBs in a clinical sample of military veterans seeking inpatient and outpatient psychiatric treatment (N=157) in the Department of Veterans Affairs (VA). Lifetime prevalence of suicide ideation (SI), nonsuicidal self-injury (NSSI), and suicide attempt (SA) were 47.4%, 20.9%, and 34.2%, respectively. Median length of time from first onset of SI, subsequent suicide plan (median= 0, M=2.60, SD=6.53) and subsequent SA (median= 0, M=2.04, SD=5.73) were both less than one year. For those who endorsed NSSI prior to SA, the transition from SI to SA was significantly longer (median= 4.0 years, SD=6.24; $t[98] = 3.67$, $p < .01$). Associations between frequencies of NSTBs and SA medical lethality ratings will also be presented. Results suggest that the year following onset of SI represents a critical period for suicide prevention efforts among veterans in VA care and highlight the importance of regular suicide risk assessment in routine care.

## Understanding Suicide Risk in Veterans Diagnosed with PTSD: The Role of Civilian Social Rejection

(Assess Dx, Mil/Vets, Adult, I, Industrialized)

**DeBeer, Bryann, PhD**[1]; Kimbrel, Nathan, PhD[2]; Meyer, Eric, PhD[1]; Horan, William, PhD[3]; Kittel, Julie, MA[4]; Morissette, Sandra, PhD[5]
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[2]*Department of Veterans Affairs Medical Center, Veterans Integrated Service Network (VISN) 6 Mental Illness Research, Education and Clinical Center (MIRECC), Durham, North Carolina, USA*
[3]*University of California, Los Angeles Department of Psychiatry and Biobehavioral Sciences, Los Angeles, California, USA*
[4]*University of Rochester, Rochester, New York, USA*
[5]*The University of Texas at San Antonio, San Antonio, Texas, USA*

Veterans with PTSD who are at risk for suicide often describe difficulty reintegrating into civilian life. In its most extreme form, civilians may socially reject Veterans, which is concerning given the known buffering effects of social support in relation to suicidal ideation (DeBeer et al., 2014). However, there is no objective evidence regarding civilian rejection of veterans with PTSD, or whether rejection increases Veteran suicidal ideation. This research examined social rejection as a mediator of the association between PTSD symptoms and suicidal ideation. Veterans (n = 100) diagnosed with PTSD completed clinical interviews and self-report measures of PTSD and suicide. Five civilian study team members watched 30-second video clips of veterans (i.e., a “thin slice method”) and rated them using the Willingness to Interact Scale (Coyne, 1976). Analyses from a bootstrapped mediation test indicated that social rejection mediated the association between PTSD symptoms and suicidal ideation. Increased PTSD symptoms resulted in more rejection from civilians, which in turn resulted in increased suicidal ideation. Future research should seek to examine whether behaviors associated with PTSD (e.g., hypervigilance, avoidance, numbing, etc.) result in social rejection, as these behaviors may be modifiable through treatment.

## Independent and Cumulative Associations between Risk Factors and Subsequent Suicide Attempts among Operation Enduring Freedom and Operation Iraqi Freedom Veterans

(Clin Res, Clinical Practice-Prevent-Mil/Vets, Adult, I, Industrialized)

**Lee, Daniel, MS**[1]; Kearns, Jaclyn, BA[2]; Wisco, Blair, PhD[3]; Green, Jonathan, PhD[4]; Gradus, Jaimie, ScD[5]; Sloan, Denise, PhD[6]; Nock, Matthew, PhD[7]; Rosen, Raymond, PhD[8]; Keane, Terence, PhD[9]; Marx, Brian, PhD[10]
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The suicide rate among veterans has increased since the onset of the wars in Afghanistan and Iraq (e.g., LeardMann et al., 2013). Few studies have specified factors with the greatest contribution to suicide risk or examined the prospective utility of co-occurring risk factors among returning veterans. This study examined predictors of suicide attempts among a nationwide sample of recently returned veterans enrolled in Department of Veterans Affairs (VA) services (N = 1,354). Participants were assessed at two time points roughly two years apart. Suicide attempts were identified using both self-report and VA medical records. Among all participants, 74 (5.46%) attempted suicide. After controlling for covariates (e.g., trauma exposure and PTSD), alcohol abuse, suicide intent, attempt history, and Hispanic ethnicity prospectively predicted suicide attempts. Veterans with multiple co-occurring risk factors were at markedly greater risk for a suicide attempt; among veterans with 0, ≥1, ≥2, or ≥3 risk factors, 1.35%, 11.60%, 25.00%, and 61.54% attempted suicide, respectively. This study identified strong predictors of future suicide attempts among returning veterans, several of which represent potential treatment targets. The observed association between co-occurring risk factors and risk for suicide attempts indicates that returning veterans with multiple risk factors are particularly vulnerable.

# Symposium
# Thursday, November 9
# 1:30 PM to 2:45 PM
# Salon 5/8
# Biological/Medical Track

## Advancing Diagnostic Biological Markers for PTSD: Findings from DOD Systems Biology

(Bio Med, Assess Dx-Health-Mil/Vets-Genetic, Adult, M, Industrialized)

**Marmar, Charles, MD**[1]; **Jett-Tilton, Marti, PhD**[2]
[1]*New York University School of Medicine, New York, New York, USA*
[2]*US Army CEHR, Fort Detrick, Maryland, USA*

Posttraumatic Stress Disorder (PTSD) accounts for about half the mental health burden in OIF/OEF veterans. Management of PTSD is complicated by the overlapping symptoms of its comorbidities, the diagnostic reliance on self-report and time consuming psychological evaluation process. The purpose of this research is to facilitate an objective method of diagnosis, and advance development of experimental therapeutics. This symposium will present updated findings from DOD funded case-control studies of biological markers of PTSD. Study participants included male and female veterans deployed to Iraq or Afghanistan post-9/11 with and without PTSD, based on the Clinician Administered PTSD Scale for DSM-IV. Study procedures included a fasting blood draw (pre and post-dexamethasone), 24-hour urine collection, and self-report questionnaires. We compared 83 PTSD positive male cases (based on the Clinician Administered PTSD Scale for DSM-IV) with 83 PTSD negative male controls matched by age and ethnicity. We also included a validation cohort with 29 PTSD positive male cases and 40 male

controls. Findings include genetic and epigenomic mechanisms relevant to PTSD, integrating multi-omic signals of PTSD and neuroendocrine and molecular markers.

## Blood Epigenomic Assessment of PTSD: A Cohort Study of OIF/OEF Veterans

(Bio Med, Health-Mil/Vets-Genetic, Adult, M, N/A)

**Hammamieh, Rasha, PhD**[1]; Gautam, Aarti, PhD[2]; Chakraborty, Nabarun, MBA[3]; Marmar, Charles, MD[4]; Yehuda, Rachel, PhD[5]; Flory, Janine, PhD[6]; Abu-Amara, Duna, MPH[4]; Jett-Tilton, Marti, PhD[2]
[1]*US Army Medical Research and Materiel Command, Ft. Detrick, Maryland, USA*
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[3]*U.S. Army, Frederick, Maryland, USA*
[4]*New York University School of Medicine, New York, New York, USA*
[5]*J. J. Peters Veterans Affairs Medical Center; Mount Sinai School of Medicine, Bronx, New York, USA*
[6]*Mount Sinai School of Medicine/J.J. Peters VA Medical Center, New York, New York, USA*

Management of post-traumatic stress disorder (PTSD) is complicated by the overlapping symptoms of its comorbidities and the reliance on self-report. A comprehensive understanding of molecular pathophysiology of PTSD could facilitate an unbiased biomarker-driven next-generation intervention strategy. Hypermethylated genes were investigated as to the implications for behavior, immune response, nervous system development, and relevant PTSD co-morbidities. 52 PTSD-positive male veterans were matched to 52 controls by age and ethnicity. Status of DNA extracted from whole blood was assayed. We identified DNA probes that were statistically differentially methylated, representing 3,600 unique genes. Genes involved in memory consolidation, emotion/aggressive behavior, and perturbed circadian rhythm were preferentially hypermethylated. The biological validation study used an independent test set comprised of 31 PTSD+ /31 PTSD- veterans screened using the same protocol. PTSD epigenetically perturbed both the cellular and humoral immune system. Genes involved in several PTSD comorbidities, such as cardiomyopathy and poor insulin management, were also hypermethylated. Integration of the epigenomic observations with other omics outcomes is underway, as well as validation of these findings in an independent cohort.

## Genomic Biomarker Approaches to Understanding PTSD

(Bio Med, Mil/Vets-Genetic, Adult, M, N/A)

Ressler, Kerry, MD, PhD[1]; **Marmar, Charles, MD**[2]; Yehuda, Rachel, PhD[3]; Hammamieh, Rasha, PhD[4]; Guffanti, Guia, PhD[1]
[1]*Harvard Medical School, Belmont, Massachusetts, USA*
[2]*New York University School of Medicine, New York, New York, USA*
[3]*J. J. Peters Veterans Affairs Medical Center; Mount Sinai School of Medicine, Bronx, New York, USA*
[4]*US Army Medical Research and Materiel Command, Ft. Detrick, Maryland, USA*

We will review a number of approaches to understanding mechanisms by which genetic heritability increases risk for Posttraumatic Stress Disorder (PTSD) following trauma exposure. We review the status of genome-wide association study (GWAS) approaches to PTSD, and then present specific findings from the Systems Biology Biomarker cohort. In this study with an extreme phenotype design, we found a genome-wide significant SNP to associate with the Clinician Administered PTSD Scale. We conducted replication and follow-up studies in an external sample, a larger urban community cohort, to determine the robustness and putative functionality of this risk variant, associated with differential epigenetic regulation and differential cortical responses to fear. We will also review other recent findings on the role of noncoding RNAs in regulating protein-coding genes involved in stress regulation. Finally, we will review recent progress in genetic pathway analyses and gene x environment interactions as additional approaches to identify mechanisms of heritability for stress-related disorders. Together, these findings provide new insight into understanding genetic and epigenetic regulation of PTSD and its intermediate phenotypes.

## Integrating Multi-Omic Signals of PTSD

(Bio Med, Assess Dx-Res Meth, Adult, M, Industrialized)

**Dean, Kelsey, PhD Candidate**; Misganaw, Burook, PhD; Rajaram, Pramod, PhD; Doyle III, Francis, PhD
*Harvard University, Cambridge, Massachusetts, USA*

Biological signals of PTSD may emerge across multiple biological length scales, from molecular-

level changes in DNA, RNA, and proteins, to cellular and tissue changes, and even whole-organism physiology. Using a male cohort of 83 OEF/OIF veterans with PTSD and 83 age and ethnicity-matched controls, we developed integration strategies to identify robust signals of PTSD across multiple molecular and higher order data types. These strategies combined multiple levels of biological regulation, including DNA methylation, miRNAs, proteins, and metabolites, to determine robust and consistent features which discriminated PTSD from controls. We compared these integrated signal strengths to each individual data type, noting that small improvements can be seen by combining multiple levels of molecular data. Additionally, we observed negative correlations between prediction errors and CAPS (CAPS Total current and lifetime), suggesting that the identified signals show increasing signal strength for subjects with higher CAPS. These molecular signals of PTSD will be evaluated for stability and accuracy in a second cohort.

## Neuroendocrine and Molecular Markers of PTSD in US Veterans

(Bio Med, Mil/Vets, Adult, M, Industrialized)

**Flory, Janine, PhD**; Yehuda, Rachel, PhD
*James J Peters VAMC/Mount Sinai School of Medicine, Bronx, New York, USA*

We compared neuroendocrine markers in male and female OEF/OIF/OND veterans with PTSD (PTSD+) and matched combat-exposed controls without PTSD (PTSD-). The PTSD+ group showed greater evidence of glucocorticoid receptor (GR) sensitivity in PBMCs as reflected by the lysozyme stimulation test, compared to the PTSD- group, controlling for the ratio of lymphocytes to monocytes. Evidence of greater GR sensitivity was also reflected in the results of the dexamethasone suppression test (DST) in male veterans with PTSD who showed a greater decline in cortisol in response to 0.50 mg DEX. Results of 24-hr urinary cortisol excretion showed that the PTSD+ veterans in the total sample tended to have lower urinary cortisol excretion. Additionally, we examined cytosine methylation of the 1F promoter of the GR gene, a molecular epigenetic marker. Results showed that a significantly lower percentage of methylated clones was observed in the NR3C1-1F promoter across the 39 CpG sites in the PTSD+ compared to the PTSD- group. There were few sex differences, as male and female combat veterans with PTSD showed similar patterns for measures of GR sensitivity and methylation. Neuroendocrine outcomes are sensitive to body weight and body composition (e.g., BMI and waist circumference). Results will be discussed in consideration of these influences. In conclusion, there is a neuroendocrine signature associated with combat-PTSD that is fairly reliable in discriminating groups of persons with and without PTSD.

# Symposium
# Thursday, November 9
# 1:30 PM to 2:45 PM
# Salon 6/7

## Experimental Methodologies to Evaluate the Role of Emotion Regulation in PTSD and Substance Use Disorder Comorbidity

(Res Meth, Affect/Int-Sub/Abuse, Adult, M, Industrialized)

**Berenz, Erin, PhD**[1]; **Vujanovic, Anka, PhD**[2]; Beckham, Jean, PhD[3]
[1]*University of Virginia, Charlottesville, Virginia, USA*
[2]*University of Houston, Houston, Texas, USA*
[3]*Durham VA/HSR&D, Mid-Atlantic MIRECC, Duke University, Durham , North Carolina, USA*

The comorbidity of posttraumatic stress disorder (PTSD) and substance use disorders (SUD) is highly prevalent, complex, difficult-to-treat, and marked by a more costly and chronic clinical course, when compared to either disorder alone. Better understanding this comorbidity is essential to informing more effective treatment programs. This symposium will focus upon the utility of experimental methodologies in better understanding emotion regulation processes in PTSD/SUD comorbidity. First, Berenz et al. will report upon trauma and alcohol cue reactivity in young adults with a history of interpersonal trauma. Second, Vujanovic et al. will discuss associations between distress tolerance, indexed multimodally, and trauma- and drug-related cue reactivity in inner-city adults with PTSD/SUD. Third, Amstadter et al. will report on results relevant to testing the self-medication model in combat veterans with and without PTSD using the Trier Social Stress Test to investigate stress-induced drinking. Finally, Rodriguez and Read will report results of parallel process models of emotional reactivity and urge to drink following

repeated trauma cue exposure in a young adult sample. Using experimental methods to evolve our understanding of processing underlying PTSD/SUD comorbidity has great potential to inform the development and refinement of PTSD/SUD interventions. Clinical implications and future directions will be discussed.

## Trauma and Alcohol Cue Reactivity among Young Adult Survivors of Interpersonal Trauma

(Res Meth, Affect/Int-Rape-Sub/Abuse, Adult, M, Industrialized)

**Berenz, Erin, PhD**[1]; Kevorkian, Salpi, BA[2]; Coffey, Scott, PhD[3]
[1]*University of Virginia, Charlottesville, Virginia, USA*
[2]*Virginia Institute for Psychiatric and Behavioral Genetics, VCU, Richmond, Virginia, USA*
[3]*University of Mississippi Medical Center, Jackson, Mississippi, USA*

Individuals with comorbid PTSD-AUD exhibit craving and salivation in the laboratory in response to trauma cues, even in the absence of alcohol, consistent with a conditioned craving response to trauma memories. However, trauma and alcohol cue reactivity is understudied in non-clinical samples of trauma-exposed drinkers. The aim of the current study was to evaluate patterns of trauma and alcohol cue reactivity in young adults with a history of sexual or physical assault. Participants (N=86; 48.2% with current PTSD) completed a laboratory assessment of craving and salivation in response to pairings of narrative (i.e., personalized trauma script, neutral script) and beverage (i.e., preferred alcoholic beverage, water) cues. Results of repeated measures ANOVAs revealed that patterns of cue reactivity were largely comparable to those observed in clinical samples (i.e., trauma-alcohol > trauma-water and neutral-alcohol > neutral-water). Participants with and without current PTSD exhibited similar patterns of self-reported craving across the four cue combinations. Patterns of salivation differed as a function of PTSD, such that only individuals with PTSD exhibited salivation to the trauma-water condition, indicative of a physiological craving response to trauma memories. Moderators of the PTSD-cue reactivity association will be presented, and implications for PTSD-AUD theory and treatment will be discussed.

## Distress Tolerance and Cue Reactivity in Adults with Co-Occurring Posttraumatic Stress and Substance Use Disorders

(Clin Res, Affect/Int-Res Meth-Sub/Abuse, Adult, M, Industrialized)

**Vujanovic, Anka, PhD**[1]; Smith, Lia, BA[1]; Bakhshaie, Jafar, MD[1]; Wardle, Margaret, PhD[2]
[1]*University of Houston, Houston, Texas, USA*
[2]*University of Texas Medical School at Houston, Houston, Texas, USA*

Posttraumatic stress disorder (PTSD) and substance use disorders (SUD) represent a prevalent and difficult-to-treat comorbidity. Distress tolerance, defined as the perceived or actual capacity to withstand negative emotional states or uncomfortable physical sensations, is malleable via intervention and relevant to both PTSD and SUD. The present investigation investigated the role of distress tolerance in terms of trauma- and drug-cue reactivity among adults with moderate-severe SUD and at least four symptoms of PTSD. Sixty participants (Mage = 47.4; 75% African American) completed the study protocol, including the Distress Tolerance Scale (DTS), Mirror-Tracing Persistence Task (MTPT), and Paced Auditory Serial-Addition Task-Computerized Version. Cue reactivity was indexed in the context of an experimental laboratory paradigm. Participants were asked to compose one-minute trauma, drug, and neutral script cues and rate their levels of adaptive (e.g., safety, control) and maladaptive (e.g., anxiety, fear, drug craving) coping, using a 100-point Likert-style scale. Covariates included gender, craving, and PTSD severity. MTPT was significantly negatively associated with maladaptive trauma cue reactivity, and DTS was significantly positively associated with adaptive drug cue reactivity (p's < .05). Clinical implications and future directions will be discussed.

## Emotional Reactivity and Alcohol Urge: Related Trajectories Influenced by PTSD Symptom Severity and Emotion Dysregulation

(Clin Res, Affect/Int-Sub/Abuse, Adult, M, Industrialized)

**Rodriguez, Lauren, BA/BS**; Read, Jennifer, PhD
*SUNY Buffalo, Buffalo, New York, USA*

The present study examined whether trajectories of emotional reactivity (ER) and alcohol urge co-occur across repeated trauma cue exposures, and whether Posttraumatic Stress Disorder (PTSD) symptom severity and deficits in emotion regulation influence these trajectories. Young adults (N = 300; 50.7% female) completed a structured clinical interview assessing trauma exposure and PTSD symptom severity. Baseline ratings of emotional valence and arousal (an index of ER) and alcohol urge were reported. Participants then listened to an audio-recorded script of their worst traumatic experience (trauma cue). Immediately after, post-cue valence, arousal, and urge were rated. This procedure was repeated three more times. A parallel process model using latent growth curve modeling showed (1) the slopes for valence and urge were associated over time, (2) difficulties with emotion regulation predicted baseline urge controlling for PTSD symptom severity and levels of neuroticism, (3) PTSD symptom severity predicted change in urge over time controlling for emotion regulation and neuroticism, and (4) difficulties with emotion regulation predicted the slope for valence over time controlling for PTSD symptom severity and neuroticism. Model fit suggested the arousal model was not interpretable. Results suggest that ER may increase drinking risk in the context of acute activation of negative emotion.

## Effects of Combat Exposure and PTSD on Acute Stress Reactivity and Stress-related Drinking

(Bio Med, Mil/Vets, Adult, M, Industrialized)

**Amstadter, Ananda, PhD**[1]; Brown, Ruth, PhD[1]; Hawn, Sage, BS[1]; Brown, Emily, MSW[2]; Berenz, Erin, PhD[3]; Pickett, Treven, PsyD[4]; McDonald, Scott, PhD[4]; Thomas, Suzanne, PhD[5]; Danielson, Carla, PhD[5]
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[4]*Hunter Holmes McGuire VA Medical Center, Richmond, Virginia, USA*
[5]*Medical University of South Carolina, Charleston, South Carolina, USA*

Military personnel exposed to combat, particularly those who develop posttraumatic stress disorder (PTSD), have a higher incidence of problematic drinking. Although the self-medication model relating these constructs is appealing, few laboratory studies have empirically tested this model. We used a three-group design of Veterans with no trauma exposure, combat trauma exposure without PTSD, and combat trauma exposure with PTSD; n=205, Mage=30.4. Half of participants received the Trier Social Stress Test (TSST) to investigate the role of a history of exposure to combat trauma on reactivity to the TSST and on stress-induced voluntary drinking. There was a significant effect of the TSST on subjective and cortisol indices of stress (Fs(15.79, 7.14), ps<.001, respectively, a significant effect of group (Fs(3.34, 4.56), ps<.01), and a group by condition interaction for both indices in that PTSD group had a higher subjective stress response to the TSST but a blunted cortisol response. However, preliminary analyses suggest that those who received the TSST consumed less alcohol than those in the control condition, and there is some evidence that this effect may vary across PTSD group. This study will advance our understanding of the relationship between a history of combat-related traumatic events, stress, and drinking.

# Symposium
# Thursday, November 9
# 1:30 PM to 2:45 PM
# Monroe Room
# Child Trauma Track

## How Does Victimization Influence Maternal Parenting? Using Brain Activity, Early Adversity, and Infant Factors to Understand a Complex Link

(Clin Res, DV-Fam/Int-Bio/Int-Neuro, Lifespan, M, Industrialized)

**Martinez-Torteya, Cecilia, PhD**[1]; Howell, Kathryn, PhD LP[2]
[1]*DePaul University, Chicago, Illinois, USA*
[2]*University of Memphis, Memphis, Tennessee, USA*

Theory and empirical findings suggest that victimization can have broad negative impacts on women's caregiving (e.g., Cohen, Hien, &

Batchelder, 2008), but studies have yielded mixed findings in regards to this relationship, suggesting many women maintain resilience in at least some domains of parenting (Martinez-Torteya et al., 2016). To better understand the impact of interpersonal trauma on maternal caregiving, and its implications for offspring outcomes, future research needs novel strategies to assess biological, relational, and ecological factors. Unpacking how multiple levels of analyses shape individual differences in specific parenting dimensions is essential to understand and address the intergenerational cycle of violence and victimization. In this panel, presenters will explore a variety of pathways that can help explain parenting difficulties and offspring biobehavioral adaptation in the context of maternal victimization, ranging from brain activity alterations, early adversity, infant temperament, and child stress response system activity. The presentations illustrate specific aspects of a transactional model that integrates victimization as a key influence on biopsychosocial maternal and child functioning.

## Disorganized Parenting is Related to Greater Salience of Infant Cues and Helplessness among Trauma-exposed Mothers Using Functional Magnetic Resonance Imaging (fMRI)

(Bio Med, Clin Res-Complex-Fam/Int-Neuro, Adult, M, Industrialized)

**Huth-Bocks, Alissa, PhD**[1]; Ahlfs-Dunn, Sarah, PhD[1]; Guyon-Harris, Katherine, MS, PhD Student[1]; Ho, S. Shaun, PhD[2]; Riggs, Jessica, MS, PhD Student[1]; Pitzen, Jerrica, MS[1]; Swain, James, MD, PhD[2]
[1]*Eastern Michigan University, Ypsilanti, Michigan, USA*
[2]*Stony Brook University, Stony Brook, New York, USA*

Mothers who have experienced traumatic events such as childhood maltreatment and intimate partner violence have significant difficulties with parenting (Muzik et al., 2017). Despite increased interest in brain-behavior relationships, only a few existing studies have examined brain activity among high-risk caregivers, noting atypical brain responses (Moser et al., 2013; Schechter et al., 2012). In the present study, 14 low-income, trauma-exposed mothers, participating in an ongoing longitudinal study, completed an additional follow-up lab visit that included a neuroimaging task (fMRI); they were exposed to several parenting stimuli such as listening to an unknown baby's cry and imagining that the baby was their own versus someone else's baby. The threshold for interpretable results was set at $p$=0.005 (uncorrected, >50 voxels in a cluster). Participants with greater disorganized parenting (based on coded interviews) showed greater Own Baby-Cry vs Other's Baby-Cry differential responses in the ventromedial prefrontal cortex, prefrontal cortex, middle cingulate cortex, striatum, and thalamus. These areas are typically involved in salience and tonic alertness. The same association was found in the habenula, which is related to learned helplessness and stress. Results suggest that disorganized parenting may potentiate the salience of children's distress, which may lead to greater helplessness in the caregiving role.

## Maternal Traumatic Stress Predicts Child Cortisol Levels: Observed Maternal Parenting as a Potential Mediator

(Clin Res, Chronic-Fam/Int-Bio/Int, Lifespan, M, Industrialized)

**Martinez-Torteya, Cecilia, PhD**[1]; Kosson, David, PhD[2]; Figge, Caleb, MS, PhD Student[1]; Mall, Alyssa, BA[1]
[1]*DePaul University, Chicago, Illinois, USA*
[2]*Rosalind Franklin University of Medicine and Science, Chicago, Illinois, USA*

Links between victimization and multiple parenting outcomes have been repeatedly documented. However, the domains of parenting that account for negative offspring outcomes among trauma-exposed women remain unclear. Although self-reported parenting and observed parenting behaviors show small to non-significant associations (Bailey et al., 2012), both exert significant influences on young children stress regulation (Martinez-Torteya et al., 2016; Pendry & Adam, 2007), a key marker of physical and emotional health. We evaluated the effects of lifetime cumulative trauma exposure on multiple self-reported and observed parenting outcomes, and the effects of parenting on children's cortisol levels. Participants were 79 mother-child dyads recruited from Head Start Preschools, primarily Latino and low income. Results showed that trauma exposure was associated with significantly less self-reported Parent-Child Attachment, Involvement, and Parenting Confidence ($r$ = -.24, -.22, and -.23, respectively). On the other hand, maternal trauma was not significantly

associated with less Positive Parenting in an observed free play interaction, but with more use of Ineffective Commands ($r$ = .33). Observed parenting predicted higher levels of cortisol secretion among children (*Std. B* = .37, $p$ < .05) and partially explained the link between maternal trauma and child neuroendocrine activity. Results highlight the processes that may translate maternal victimization experiences into offspring physiological dysregulation.

## Childhood Exposure to Intimate Partner Violence (IPV) as a Moderator of Current IPV and Negative Parenting Practices

(Social, CPA-DV-Fam/Int-Intergen, Adult, M, Industrialized)

**Hasselle, Amanda, BA/BS**; Howell, Kathryn, PhD; Thurston, Idia, PhD; Kamody, Rebecca, MS, PhD Student; Crossnine, Candice, Undergraduate
*University of Memphis, Memphis, Tennessee, USA*

Research has yielded mixed findings regarding the relationship between mothers' intimate partner violence (IPV) and their engagement in negative parenting practices (NPP). This study examined the interactive effect of mothers' childhood exposure to caregiver IPV and their current IPV severity on NPP. Mothers (n=119; MAge=32.78, SD=6.78) were recruited from community sites serving individuals experiencing IPV in the U.S. Midsouth. Participants were primarily Black (67%) and living below the poverty line (70%). Women completed questionnaires measuring their own childhood exposure to different types of caregiver IPV (i.e., physical, sexual, psychological), IPV severity within their current relationship (past 6 months), and NPP (i.e., poor monitoring, inconsistent discipline, corporal punishment). Greater IPV exposure during childhood strengthened the association between current IPV severity and NPP (β=.01, t=2.65, p<.01). With respect to each type of violence witnessed during childhood, mothers who witnessed sexual (β=.02, t=2.16, p<.05) and psychological (β=.03, t=2.79, p<.01) violence had a stronger association between their current IPV and NPP. Findings were not significant for physical violence. Results highlight the compounding effect of trauma exposure across time and the cyclical nature of IPV, as well as the importance of addressing intergenerational violence in public policy and interventions.

## Exploration of the Interaction of Maternal Experience of Trauma and Infant Temperament on Parenting

(Clin Res, Chronic-Fam/Int, Lifespan, M, Industrialized)

**D'Amico, Julie, PhD Candidate**; Gilchrist, Michelle, BA; Martinez-Torteya, Cecilia, PhD
*DePaul University, Chicago, Illinois, USA*

Among women over age 18, 1-in-3 have experienced intimate partner violence, including physical aggression and stalking, and 1-in - have experienced sexual violence during childhood, adolescence, or adulthood (Black et al., 2011). Given the high rates of maternal experience trauma in women of childbearing age, especially in low-income populations (Gillepsie et al, 2009), it is critical to examine the effect these experiences have on parenting, especially during sensitive periods, such as infancy (Bornstein, 2002). Previous research has demonstrated experiencing trauma can affect maternal caregiving, however, findings vary depending on both type of trauma and other methodological differences/factors. The purpose of the current study is to obtain a better understanding of how infant variables, e.g. temperament, combines with maternal experience of trauma to contribute to parenting. Self-reports on the Infant Behavior Questionnaire, the Childhood Trauma Questionnaire, and the Conflict Tactics scale were obtained from 102 female participants, predominately from low-income, urban communities. Preliminary outcomes with 20 mothers demonstrate a significant relationship between maternal experience of trauma, negative infant temperament, and maternal sensitivity ($F(3,19) = 5.32$, $p = .01$, $R2 = .50$). Obtaining information about how infant temperament and maternal experiences of trauma contribute to differences in parenting is beneficial for informing potential parenting interventions postpartum.

**Panel Presentation**
**Thursday, November 9**
**1:30 PM to 2:45 PM**
**Crystal Room**
**Treatment Track**

## Innovative Strategies to Improve Access to Evidence-based PTSD Treatment for Rural Veterans

(Practice, Assess Dx-Clin Res-Commun-Tech, Adult, M, N/A)

McCarthy, Elissa, PhD[1]; **Birks, Anna, PsyD**[2]; **Montano, Macgregor, PharmD**[3]; **Morland, Leslie, PsyD**[4]
[1]*National Center for PTSD, Executive Division, West Haven, Connecticut, USA*
[2]*Ralph H. Johnson VA Medical Center, Charleston, South Carolina, USA*
[3]*VA National Center for PTSD/White River Junction VA Medical Center, White River Junction, Vermont, USA*
[4]*National Center for PTSD, San Diego, California, USA*

This panel will review innovative applications across different settings to increase access to evidence-based treatment for Posttraumatic Stress Disorder (PTSD) to veterans living in rural areas. Rural veterans are less likely to receive psychotherapy services and when available, they receive fewer number of sessions compared to urban veterans (Mott et al., 2015). Despite the existence of effective and cost-reducing treatments to address PTSD, only 25% actually receive these services (Hoge et al., 2006). For veterans living in rural areas, a range of barriers exist which influence low treatment utilization. These barriers include shame and stigma, distrust of Government agencies, chronic shortages of rural mental health services and providers, and logistical barriers such as travel time and expense, time off work, and childcare demands. There is a growing need to find innovative and clinically effective ways to provide access to the highest standard of PTSD treatment for veterans regardless of location (Wallace et al., 2006). This panel will present novel strategies (e.g., homebased telehealth, academic detailing, and collaboration with rural community providers) that address relevant barriers to care for veterans in order to optimize opportunities for broad dissemination of evidence-based treatments. Discussion will include recommendations for future research and practice.

**Panel Presentation**
**Thursday, November 9**
**1:30 PM to 2:45 PM**
**Adams Room**

## Cultural Considerations in Work with Survivors of Human Trafficking: Lessons from Four Disparate Groups

(CulDiv, Clinical Practice-Comm/Int-Complex-Self-Care, Lifespan, A, Global)

**Malebranche, Dominique, PhD**[1]; **Bryant-Davis, Thema, PhD**[2]; **Rajan, Indhushree, PhD**[3]; **Sidun, Nancy, PsyD**[4]; Hopper, Elizabeth, PhD[5]
[1]*The Trauma Center at Justice Resource Institute, Brookline, Massachusetts, USA*
[2]*Pepperdine University, Encino, CA 91436, California, USA*
[3]*Project Satori, Los Angeles, California, USA*
[4]*Tripler Army Medical Center, Honolulu, Hawaii, USA*
[5]*Trauma Center at Justice Resource Institute, Brookline, Massachusetts, USA*

This panel presents qualitative research findings based on in-depth interviews with trafficking survivors from four culturally disparate populations. In the first group, composed of 15 survivors of sex and labor trafficking from Latin American countries, cultural belief systems increased vulnerability to trafficking, were used as coercive factors by traffickers, and impacted intervention. Clinical interviews with 10 transgender Latina survivors of international sex trafficking highlighted the extensive trauma exposure within this population, along with multiple barriers to accessing help. Qualitative interviews with 10 African American survivors revealed the effects of intersectional oppression, the value of wrap around interventions, and the benefits of culturally congruent ways of coping such as social support and spirituality. A phenomenological study of 7 adolescent and young adult sex trafficking survivors in Kolkata, India, highlighted the impact of the social and caste systems on vulnerability to trafficking and on the recovery process. We share challenges and lessons learned and discuss implications for the adaptation of our service systems to become more culturally sensitive. We make recommendations for culturally adapted intervention for trafficking survivors, including the theory of womanist psychology as a framework for therapy with African American survivors. We also consider the impact of this work on anti-trafficking professionals, including their identities and worldviews.

**Workshop Presentation**
**Thursday, November 9**
**1:30 PM to 2:45 PM**
**Salon 2**
**Treatment Track**

## Treating Adolescent Trauma with Mindfulness

(Practice, Anx, Child/Adol, M, Industrialized)

Briere, John, PhD[1]; **Semple, Randye, PhD**[2]
[1]*University of Southern California, Los Angeles, California, USA*
[2]*University of Southern California Keck School of Medicine, Los Angeles, California, USA*

Substantial research supports the effectiveness of mindfulness-based interventions (MBIs) in treating mood and anxiety disorders. Mindful awareness practices may parallel many of the components known to be effective in treating traumatized adolescents. These include identification of maladaptive trauma-related cognitions, affect regulation skills, decentering from thoughts, and therapeutic exposure to traumatic memories. Mindfulness training can allow adolescents to modulate traumatic cognitive and emotional experiences and better manage behavioral reactivity, thereby allowing greater access to situational, cognitive, and emotional information that might then be applied toward creative problem-solving post-trauma. During this seminar, Dr. Semple and Dr. Briere will describe mindfulness as conceptualized in Integrative Treatment of Complex Trauma for Adolescents (ITCT-A); explore therapeutic modifications needed when working with traumatized adolescents; and discuss some clinical issues and potential contraindications to consider before implementing MBIs with traumatized teens. Mindfulness is best learned experientially, so participants will engage in several mindfulness activities. Each activity will be followed by dialogue and guided inquiry. When used with care, MBIs can be helpful in treating posttraumatic stress symptoms. Working with traumatized adolescents can often be emotionally demanding for the therapist, so we will discuss ways in which the cultivation of mindfulness may offer personal benefit to trauma-informed therapists.

# Concurrent Session Three

**Symposium**
**Thursday, November 9**
**3:00 PM to 4:15 PM**
**Salon 1**

## Understanding Affect and Impulsivity: Informing Models of Shared Risk and Maintenance in Trauma, PTSD, and Substance Abuse

(Clin Res, Affect/Int-Sub/Abuse, Adult, M, Industrialized)

**Badour, Christal, PhD**[1]; Hien, Denise, PhD, ABPP[2]
[1]*University of Kentucky, Lexington, Kentucky, USA*
[2]*Adelphi University, Derner Institute, Garden City, New York, USA*

In the wake of psychological trauma, posttraumatic stress disorder (PTSD) and substance use disorders (SUD) frequently co-occur. This highly prevalent comorbidity is linked to a host of negative outcomes including increased distress, functional impairment, and poorer response to treatment. There is significant concern that the presence of PTSD may interfere with SUD treatment response, and many clinicians are reluctant to treat PTSD and other trauma-related concerns among individuals with SUD. Despite growing recognition of the importance of interventions that target PTSD and SUD simultaneously using models that focus on the functional overlap between these symptom domains, additional work is needed to better understand the unique and shared vulnerabilities that account for the significant co-occurrence and maintenance of PTSD and SUD following trauma exposure. This series of studies takes a closer examination of three domains of risk/maintenance factors that have been implicated in this comorbidity: 1) affective experience (i.e., intensity and lability of positive and negative affect), 2) emotion regulation (i.e., ability to recognize and respond to experienced emotion in a planned, goal-oriented manner), and 3) impulsivity (i.e., tendency to act prematurely without foresight). First, Nicole Weiss examines the mediating role of positive and negative affective lability assessed via daily diary methodology in predicting alcohol and drug use among trauma-exposed young adults. Next, Kaitlin Bountress explores attentional and motor impulsivity as risk factors for PTSD, hazardous alcohol use, and PTSD plus hazardous alcohol use among a sample of trauma-exposed young adults. Next, Christal Badour presents data regarding how facets of emotion regulation difficulties and impulsivity moderate the relation between PTSD symptom severity and urges to drink elicited by a trauma-related script-driven imagery procedure in the laboratory among adults with comorbid PTSD and alcohol use disorder. Finally, Alex Brake offers preliminary findings from a single-session intervention targeting impulsivity and emotion regulation difficulties as malleable maintenance factors among adults with PTSD and co-occurring SUD. Our discussant, Denise Hien, then reviews the overall implications of these findings, particularly in light of what this means for improved treatment of these conditions when they co-occur. In addition, she provides her perspective on the role of these vulnerability factors in effective treatment of co-occurring PTSD/SUD, and whether these factors are adequately addressed by our existing evidence-based interventions.

## Trauma Exposure and Alcohol and Drug Use: Identifying the Roles of Negative and Positive Affect Lability in a Daily Diary Study

(Clin Res, Affect/Int-Sub/Abuse, Adult, M, Industrialized)

**Weiss, Nicole, PhD**[1]; Bold, Krysten, PhD[1]; Contractor, Ateka, PhD[2]; Sullivan, Tami, PhD[1]; Armeli, Stephen, PhD[3]; Tennen, Howard, PhD[4]
[1]*Yale University School of Medicine, New Haven, Connecticut, USA*
[2]*University of North Texas, Denton, Texas, USA*
[3]*Fairleigh Dickinson University, Teaneck, New Jersey, USA*
[4]*University of Connecticut, Farmington, Connecticut, USA*

Trauma-exposed individuals exhibit heightened physiological arousal to emotion-evoking stimuli (Litz et al., 2000), indicating that they may be prone to affect lability. These higher levels of affect lability may motivate substance use. For example, substance use may function to reduce arousal – or related distress (Roemer et al., 2001) – from emotions (Conger, 1956). Yet, research hasn't explored the

influence of daily affect lability in the trauma exposure-substance use association. Moreover, studies examining the relations between affect lability and both trauma exposure and substance use have focused almost exclusively on negative emotional experiences. Addressing these limitations, this study examined the mediating roles of negative and positive affect lability in the relation between trauma exposure and substance use. Participants were 1,640 college students who provided daily diary data for 30 days via online surveys. Results provided support for higher levels of negative and positive affect lability among trauma-exposed individuals. Negative, but not positive, affect lability was associated with days of heavy drinking, days of drug use, and total drugs used, and mediated the associations between trauma exposure and alcohol and drug use outcomes. The findings of this study suggest that treatments targeting negative affect lability may reduce substance use in this population.

## Predictors of Comorbid Posttraumatic Stress Disorder (PTSD) and Alcohol Misuse: Examining Personality-related Factors

(Clin Res, Bio Med-Comm/Vio-Dev/Int-Gender, Adult, M, Industrialized)

**Bountress, Kaitlin, PhD**[1]; Adams, Zachary, PhD[1]; Amstadter, Ananda, PhD[2]; Thomas, Suzanne, PhD[1]; Danielson, Carla, PhD[1]
[1]*Medical University of South Carolina, Charleston, South Carolina, USA*
[2]*Virginia Institute for Psychiatric and Behavioral Genetics, VCU, Richmond, Virginia, USA*

National epidemiology data suggest that lifetime rates of both PTSD (7.8%) and substance use disorders (SUDs; 26.6%) are high, with comorbidity between the two being particularly common. One theory explaining this PTSD-SUD comorbidity is the shared/common vulnerability model. This model posits that general risk factors underlie propensity for both PTSD and SUD, with recent work suggesting that impulsivity may explain some of this shared risk. However, no study to date has examined which facet(s) of impulsivity confer unique risk for this PTSD-SUD comorbidity. The current study examines this question using a trauma-exposed sample of young adults (age 21-30; n=137) meeting criteria for PTSD, hazardous alcohol use, or both. Results indicate that over and above the effects of age, gender, race, and trauma-related characteristics (e.g., number of traumatic events, type of traumatic events), attentional impulsivity, or the ability to control thought processes and stay focused on one idea, conferred unique risk for comorbid PTSD-hazardous alcohol use. However, motor impulsivity (i.e., acting on the spur-of-the-moment without thinking) and non-planning impulsivity (i.e., difficulty with self-control related to future events) were not associated with increased risk for this comorbidity. Implications of findings for the prevention of comorbid PTSD-alcohol misuse will be discussed.

## Using Trauma Imagery to Examine whether Emotion Regulation and Impulsivity Moderate the Association between PTSD and Urges to Drink among Individuals with Co-Occurring PTSD and Alcohol Use Disorder

(Clin Res, Affect/Int-Sub/Abuse, Adult, M, Industrialized)

**Badour, Christal, PhD**; Brake, Charles, MA PhD Student; McGar, Ashley, Undergraduate; Ellis, Haley, Undergraduate; Rupe, Gabriel, BA
*University of Kentucky, Lexington, Kentucky, USA*

Co-occurring posttraumatic stress disorder (PTSD) and substance use disorders (SUD) result in greater impairment and poorer treatment outcomes than either disorder alone. Difficulties with emotion regulation and impulsivity are two factors that have been linked to both PTSD and SUD. Recent work suggests these factors may be shared mechanisms in the maintenance of PTSD-SUD comorbidity. Much of this work has been limited to examining correlations among questionnaire-based measures. The current study sought to expand this work by examining whether emotion dysregulation and facets of impulsivity moderated the association between PTSD symptom severity and urges to drink alcohol in response to individualized trauma imagery in the laboratory. Participants included 14 adults (Mage =34.21, SD = 14.52; 64.3% female) with PTSD or subclinical PTSD and an alcohol use disorder. Measures included the PTSD Checklist-5, the UPPS-P Impulsive Behavior Scale, and the Difficulties with Emotion Regulation Scale. After controlling for urges to drink in response to individualized neutral imagery, PTSD symptom severity was positively associated with urges to drink in response to traumatic imagery among individuals high in negative urgency as well as among those high in

emotion regulation difficulties. These factors should be examined as potential targets for intervention in future studies.

## Posttraumatic Stress Disorder and Co-Occurring Drug Abuse: Targeting Shared Maintenance Factors via Brief Interventions

(Clin Res, Clin Res-Sub/Abuse, Adult, M, Industrialized)

**Brake, Charles, MA, PhD Student**; McGar, Ashley, Undergraduate; Ellis, Haley, Undergraduate; Rupe, Gabriel, BA; Badour, Christal, PhD
*University of Kentucky, Lexington, Kentucky, USA*

Posttraumatic stress disorder (PTSD) and substance use disorders (SUD) often co-occur and lead to worsened impairment, treatment interference, and prognosis compared to either disorder alone. Although recent work has shown the efficacy of interventions targeting PTSD and SUD symptoms together, treatment research examining impact on shared putative risk factors is lacking. Thus, the present study aimed to examine whether emotion dysregulation and impulsivity, two factors previously implicated in PTSD-SUD maintenance, may be effectively targeted via brief intervention in the laboratory. Participants included 18 individuals with clinical or subclinical PTSD and a co-occurring SUD ($M_{age}$ = 33.5, *SD* = 13.42), randomized to single-session interventions targeting emotion dysregulation (ED), impulsivity (IM), or healthy living (HL; control). Participants completed self-report measures of emotion dysregulation and impulsivity facets at baseline and one-month follow-up. The ED group showed a large effect of change (Cohen's *d*) in emotion dysregulation from baseline to follow-up, compared to other groups. Additionally, the IM group showed a large effect of change in the impulsivity facet of negative urgency, compared to other groups. Results suggest emotion dysregulation and negative urgency may be effectively targeted in comorbid PTSD-SUD via brief intervention with gains maintained over time.

# Symposium
# Thursday, November 9
# 3:00 PM to 4:15 PM
# Salon 3
# Assessment and Diagnosis Track

## The Relationship Between PTSD and Anger: Theory, Assessment, and Maintaining Factors

(Assess Dx, Affect/Int-Aggress-Mil/Vets-Theory, Adult, M, Industrialized)

**Forbes, David, PhD**
*Phoenix Australia: Centre for Posttraumatic Mental Health: The University of Melbourne, Melbourne, Victoria, Australia*

Studies have consistently found a moderate to strong relationship between posttraumatic stress disorder (PTSD) and anger (Olatunji et al., 2010; Orth & Wieland, 2006), and removing the anger-related symptom from PTSD does not significantly reduce this correlation (Novaco & Chemtob, 2002). This robust relationship is supposed among various trauma types, different populations (e.g., civilian and military), and sex. However, little is understood about risk factors for problematic anger, assessment considerations related to PTSD-anger severity, and maintaining features that could exacerbate anger. Using Veteran, college, and community trauma-exposed participants, this symposium proposes to examine the relationship between PTSD and anger. First, risk and protective factors for anger and violent behavior were examined in a Veteran sample. This representative cohort of service members found anger was common whereas violent behavior was not. Based on theoretical relationships between PTSD and anger, a new PTSD-specific anger measure was proposed and initial reliability and validity were examined. Preliminary results found this trauma-related anger scale predicted PTSD severity above and beyond existing measures of anger. Among community adults, a person-centered approach was utilized to evaluate latent classes of PTSD and dissociative symptoms. Anger was differentially related to these classes, which could have diagnostic and treatment implications for the dissociative subtype of PTSD. Finally, emotion regulation was found to moderate the relationship between PTSD (as well as its symptom clusters) and anger. Emotion regulation strategies could be related to the maintenance of PTSD symptoms as well as

contributing to problematic anger reactions. In sum, these four projects will contribute to a better understanding of the relationship between PTSD and anger as it relates to prediction, assessment, diagnosis, and treatment.

## Risk and Protective Factors for Anger and Violent Behavior in U.S. Military Service Members

(Pub Health, Aggress-Mil/Vets, Adult, M, N/A)

**Worthen, Miranda, PhD**
*San José State University, San José, California, USA*

In clinical samples of U.S. Veteran populations, anger and violent behavior have been shown to be barriers to treatment for posttraumatic stress disorder and to independently hinder successful separation from military service. Less is known about anger and violent behavior among current service members. We interviewed a representative cohort of U.S. Reserve and National Guard personnel (n = 1,293) to assess anger, self-reported problems controlling violent behavior, deployment traumas, PTSD, alcohol abuse and social support. We used Poisson regression models to estimate the associations of anger and violent behavior with risk and protective factors. Anger was common among male (53.0%) and female (51.3%) service members while violent behavior was uncommon (3.3% of males and 1.7% of females). Adjusted prevalence ratios (aPR) showed associations between anger and violent behavior and deployment traumas (anger: aPR = 1.13, 95% CI: 1.09, 1.17; violent behavior: aPR = 1.67, 95% CI: 1.34, 2.08), PTSD (anger: aPR = 1.86, 95% CI: 1.07, 2.04; violent behavior: aPR = 9.95, 95% CI: 5.09, 19.48), and PTSD symptom severity (anger: aPR for each additional PTSD symptom = 1·02, 95% CI: 1·02, 1·02; violent behavior: aPR for each additional PTSD symptom = 1·07, 95% CI: 1·06, 1·09). Anger was associated with alcohol abuse (aPR = 1.40, 95% CI: 1.22, 1.59) but the association between violent behavior and alcohol abuse was of borderline statistical significance (aPR = 1·94, 95% CI: 0·92, 4·09). Social support was associated with lower prevalence of anger (aPR = 0.84, 95% CI: 0.80, 0.88) and violent behavior (aPR = 0.62, 95% CI: 0.52, 0.76). The Results were consistent when the population was restricted to personnel who had deployed to a war zone. Anger was common but problems controlling violent behavior were less common in this cohort than has been documented in other studies. Associations of anger and violent behavior with risk and protective factors are consistent with research on U.S. veteran populations.

## The Trauma-related Anger Scale: Development and Utility

(Assess Dx, Aggress-Res Meth, Adult, M, Industrialized)

**Sullivan, Connor, MS**; Jones, Russell, PhD
*Virginia Polytechnic Institute and State University, Blacksburg, Virginia, USA*

Anger has been shown to have moderate to strong relationships between anger and PTSD (Olantunji, Ciesielski, & Tolin, 2010 [r = .48]; Orth & Wieland, 2006 [d = 1.07]), critically differentiates PTSD from anxiety disorders (Olatunji et al., 2010), maintains and predicts PTSD (Kulkarni, Porter, & Rauch, 2012; Meffert et al., 2008; Resick & Miller, 2009), and may play a key role in PTSD-associated violent behavior (Novaco & Chemtob, 2015; Sullivan & Elbogen, 2014). This study included the development of a more highly specified, theory-guided (Chemtob et al., 1988; Chemtob et al., 1997; Riggs et al., 1992) measure of trauma-related anger and subsequent analyses of the scale's predictive validity of PTSD symptoms compared to existing measures (e.g., NAS-PI; STAXI-II). Utilizing a sample of 435 undergraduate students, hierarchical exploratory factor analyses (EFA) revealed a four-factor solution for the developed scale. The scale also exhibited excellent internal consistency (a = .96, ω = 0.97) as well as evidence for convergent and divergent validity. Predictive validity analyses revealed that the trauma-related anger scale predicted PTSD severity above and beyond existing anger measures (NAS-PI, DAR, STAXI-II), on average accounting for approximately 10% more variance. The utility and implications for the scale will be discussed.

## A Latent Profile Analysis Examining PTSD, Dissociation, and Anger

(Assess Dx, Res Meth, Adult, M, N/A)

**Durham, Tory, PhD**[1]; Byllesby, Brianna, PhD Student[2]; Elhai, Jon, PhD[1]
[1]*University of Toledo, Toledo, Ohio, USA*
[2]*University of Toledo, Department of Psychology, Toledo, Ohio, USA*

Dissociative posttraumatic stress disorder (PTSD) has been examined within the context of demographic vulnerability factors (e.g., Armour, Karstoft,

Richardson, 2014; Wolf et al., 2012) but little research has examined what psychological factors are related to dissociative PTSD. The present study utilized a community sample (N = 360) of adults that were recruited via Amazon's Mechanical Turk. Latent profile analysis (LPA) was used based on PTSD symptom clusters and dissociation to identify divergent classes. After the latent profile model was identified, a one-way analysis of variance (ANOVA) was conducted to examine the differences in self-reported anger between classes. The following groups were identified: 1) low PTSD and low dissociation, 2) high PTSD and high dissociation, and 3) moderate PTSD and low dissociation. Additionally, the results of the ANOVA indicated differences in reported anger between the three groups, $F(2, 357) = 90.713$, $p < .001$. These results have several implications. First, these results shed light on the high co-occurrence between anger and PTSD that is above and beyond anger being symptomatic of PTSD. Furthermore, dissociation is a rule-out for engaging in trauma-focused treatments, and thus gaining a better understanding of additional effects of dissociative PTSD could aid clinicians conceptualization and treatment planning of dissociative PTSD.

## Emotion Regulation as a Moderator for the Relationship between PTSD and Anger

(Assess Dx, Affect/Int-Theory, Adult, M, Industrialized)

**Byllesby, Brianna, PhD Student**[1]; Elhai, Jon, PhD[2]
[1]*University of Toledo, Department of Psychology, Toledo, Ohio, USA*
[2]*University of Toledo, Toledo, Ohio, USA*

Anger is a commonly reported emotional experience for many individuals with PTSD, both civilian and military. More research is needed to understand the underlying mechanisms of their relationship in order to create targeted strategies for anger in PTSD. Participants were 360 trauma-exposed community adults who completed self-report measures of PTSD (PTSD Checklist for *DSM-5*), emotion regulation (Emotion Regulation Questionnaire), and anger (Dimensions of Anger Reaction) using Amazon's Mechanical Turk marketplace. Two main moderation analyses were conducted using hierarchical linear regression to examine the relationship between PTSD predicting anger with emotion regulation strategies (cognitive reappraisal and expressive suppression) as moderator variables. Cognitive reappraisal significantly moderated the relationship between PTSD and anger (Beta = .97, $t = 4.85$, $p < .01$), and expressive suppression also significantly moderated the relationship between PTSD and anger (Beta = 0.57, $t = 2.77$, $p < .01$). Interactions were probed and effects were broken down by PTSD symptom cluster. Results suggest that the magnitude of the relationship between PTSD and anger is influenced by the degree of emotion regulation strategy use. Implications for PTSD treatment are discussed.

# Symposium
# Thursday, November 9
# 3:00 PM to 4:15 PM
# Salon 4/9
# Assessment and Diagnosis Track

## Embracing Complexity: How PTSD Can Shape and Be Shaped by Families

(Clin Res, CPA-Clinical Practice-Fam/Int-Mil/Vets, Adult, M, Industrialized)

**Meis, Laura, PhD**[1]; Monson, Candice, PhD, Cpsych[2]
[1]*Minneapolis VA Health Care System, Minneapolis, Minnesota, USA*
[2]*Ryerson University, Toronto, Ontario, Canada*

Trauma and its mental health sequelae are family matters. Research consistently demonstrates robust associations between PTSD and family problems, including family violence. Yet, conventional treatments for PTSD focus on one-on-one interactions between a therapist and his/her patient. Innovation is needed to consider and embrace individuals with PTSD within the context and complexity of their families. We will present four complementary research studies, each investigating individuals within the complexity of their home environment. Dr. Fredman explores, in a dyadic model, how PTSD symptoms can increase the potential for child abuse through perceptions of relationship conflict, among couples transitioning to parenthood. Dr. Meis examines how family support for treatment and discouragement of avoidance predicts retention in Prolonged Exposure and Cognitive Processing Therapy. In a randomized controlled trial, Dr. Schumm compares the efficacy of behavioral couple therapy for substance use versus individual therapy in reducing PTSD symptom severity among women. Lastly, Dr. Sautter reports findings from a randomized clinical trial comparing

changes in emotional processing among individuals randomized to an innovative couple therapy for PTSD, called Structured Approach Therapy, and a couple-based education intervention, called PTSD Family Education. Our symposium is closely aligned with the goals of this year's conference. We investigate the effects of trauma on social relationships and how these social relationships can be leveraged to heal PTSD. We examine these associations in multiple methods with high clinical significance, from treatment outcome research (Sautter, Schumm) to observational, dyadic, and longitudinal designs (Meis, Fredman). We will evaluate treatment innovations and identify avenues ripe for new innovation that consider complexity by embracing the messy dynamics of families and couples. These innovations include couple therapy for PTSD, behavioral couple therapy for substance use as a method of treating PTSD, couple-based parenting interventions, and family-based interventions to reduce dropout from existing trauma-focused treatments for PTSD. We also consider the complexity within these individuals' families, including the role of gender and relationship strain, and the implications of these differences for tailoring treatments. This broad body of work will be synthesized through discussion by Dr. Monson, a leading international expert in this field.

## Parent PTSD Symptoms and Child Abuse Potential during the Transition to Parenthood: Direct Association and Mediation via Relationship Conflict

(Clin Res, CPA-Fam/Int-Prevent, Adult, M, Industrialized)

**Fredman, Steffany, PhD**[1]; Le, Yunying, MS[1]; Garcia Hernandez, Walter, BS[2]; Feinberg, Mark, PhD[1]; Ammerman, Robert, PhD[2]
*[1]Penn State University, University Park, Pennsylvania, USA*
*[2]Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA*

Posttraumatic stress disorder (PTSD) symptoms are associated with intimate partner aggression, but little is known about the relation between parental PTSD symptoms and child abuse potential. Understanding how PTSD symptoms may increase the risk for perpetration of child abuse and putative pathways through which this might occur offers the hope of decreasing adverse outcomes for children of parents with trauma-related psychopathology. The current study examined the direct association of mother and father PTSD symptoms and child abuse potential, and the indirect associations through couple relationship adjustment (love and conflict), during the transition to parenthood in a high risk sample of 151 first time parents participating in a couple-based transition to parenthood program at baseline. The model fit the data well ($c2(6) = 9.06$, $p = .17$; RMSEA = .06; SRMR = .054; CFI = .99; TLI = .95). For both mothers and fathers, there were direct associations between one's PTSD symptom severity and one's child abuse potential. In addition, one's own and one's partner's PTSD symptoms were each indirectly associated with one's child abuse potential through one's perception of relationship conflict. Implications for couple-based prevention and early intervention efforts to enhance parenting quality of trauma survivors will be discussed.

## Sticking It Out in Trauma-Focused Treatment: How Family Factors May Reduce or Increase Treatment Drop Out

(Clin Res, Fam/Int-Mil/Vets, Adult, M, Industrialized)

**Meis, Laura, PhD LP**[1]; Spoont, Michele, PhD[2]; Erbes, Christopher, PhD LP[3]; Noorbaloochi, Siamak, PhD[4]; Hagel Campbell, Emily, MS[5]; Eftekhari, Afsoon, PhD[6]; Rosen, Craig, PhD[7]; Tuerk, Peter, PhD[8]; Kattar, Karen, PsyD[9]; Polusny, Melissa, PhD[3]
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Despite success in disseminating evidence based psychotherapies (EBPs) within VA, dropout rates are high. Little is known about how to best utilize families, a potentially important resource, in enhancing treatment retention for Veterans. We surveyed Veterans (N = 505) seeking Prolonged Exposure or Cognitive Processing Therapy for PTSD at four VA hospitals as they were beginning treatment, to determine 1) if family or social environment influences Veterans' likelihood of treatment drop out and 2) if the influence of family-member attitudes and behaviors on treatment dropout varies with relationship characteristics (i.e., relationship distress, relationship type). Veterans and a nominated close friend, family member, or significant other completed surveys upon initiating an EBP for PTSD (n = 223 dyads). Logistic regression analyses were used to predict Veteran drop out. Analyses were stratified on level of individual risk for drop out using propensity scores derived from PTSD symptom severity, age, perceived behavioral control over treatment adherence, treatment credibility/expectancies, therapeutic alliance, and practical treatment barriers. Results indicated that, even after accounting for Veteran-level predictors of dropout, several significant interactions indicated complex relationships between family factors and treatment dropout. When Veterans received family encouragement to approach trauma reminders, this encouragement was most protective against treatment drop out when Veterans were closest to an intimate partner and when these important relationships were well-adjusted. Family attitudes supporting avoidance were less problematic when Veterans were closest to someone other than an intimate partner. Lastly, in distressed relationships, family accommodation for symptoms of PTSD was actually associated with lower rates of dropout. Taken together, findings indicate that family factors that may encourage treatment engagement are most relevant, and helpful, in intimate partner relationships that show a high degree of satisfaction, but these associations can be unimportant or reverse direction in alternative family circumstances. Results suggest a need for flexible incorporation of family into PTSD treatment, with different approaches based on intimate partners versus other families and varying levels of relationship functioning and satisfaction.

## Efficacy of Behavioral Couples Therapy versus Individual Recovery Counseling for Addressing PTSD among Women with Drug Use Disorders

(Clin Res, Clin Res-Fam/Int-Sub/Abuse-Gender, Adult, M, Industrialized)

**Schumm, Jeremiah, PhD**[1]; Timothy, O'Farrell, PhD, ABPP[2]; Murphy, Marie, PhD[3]; Muchowski, Patrice, ScD[4]
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Behavioral couples therapy for substance use disorder (BCT-SUD) shares broadly similar intervention strategies with empirically-supported couples therapies for PTSD. Like couple-based PTSD therapies, BCT-SUD includes interventions that may help to improve PTSD, such as eliciting partner social support, increasing positive couple behavioral exchanges, and improving couples' communication. Studies have yet to examine whether BCT-SUD, which has demonstrated efficacy for treating SUD, is efficacious for improving PTSD. We conducted as a secondary analysis of a randomized clinical trial comparing BCT-SUD to individual drug counseling (IRC) for women with drug use disorders (O'Farrell et al., 2017). Women in both conditions received 26 sessions over 13 weeks. Most (57 out of 61) women reported experiencing traumatic events on the PTSD Diagnostic Scale (PDS). Women completed the PDS at pre-treatment, post-treatment, and quarterly during the 1-year follow-up. Generalized estimating equation (GEE) results showed significant reductions in women's PDS during the follow-up period, and PDS scores were significantly decreased during the follow-up versus pre-treatment. Women who received BCT-SUD reported lower PDS scores during follow-up versus those who received IRC (p= .04). This is the first study to show that BCT-SUD is efficacious for reducing PTSD among women with drug use disorders.

## Effect of Structured Approach Therapy (SAT) and PTSD Family Education on the Trajectory of PTSD, Avoidance, and Negative Emotion During Treatment

(Clin Res, Fam/Int, Adult, M, N/A)

**Sautter, Frederic, PhD**[1]; Becker-Cretu, Julia, PsyD[1]; Glynn, Shirley, PhD[2]; Senturk, Damla, PhD[3]
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[3]*UCLA, Los Angeles, California, USA*

The investigators previously compared 12-sessions of manualized couples-based PTSD treatment, (Structured Approach Therapy; SAT) to 12 sessions of illness education (PTSD Family Education; PFE) in OEF/OIF veterans and their partners. The initial randomized clinical trial revealed that veterans in both groups showed significant reductions in PTSD through the three-month follow-up; however, SAT participants improved more. This current study explores the rate and type of symptom reduction in the two groups, using general linear mixed modeling (GLMMs), with main effects of treatment (SAT, PFE) and time (baseline, 3,6,9, 12 weeks), to examine changes in PTSD (PCL), experiential avoidance (AAQ-II), and negative emotional states (PANAS). Veterans receiving SAT showed significant improvements in PCL and AAQ-II scores from baseline through the 3rd, 6th and final treatment sessions; PANAS reductions were not evidenced until end of treatment. PFE was associated with significant reductions in PCL and AAQ-II scores from baseline through sessions 3 and 6, which then leveled off. PFE was not associated with PANAS reductions. These findings suggest that participation in early sessions of either SAT or PFE reduce PTSD and avoidance. However, participation in the later sessions of SAT were related to reductions in negative emotions and continuing PTSD improvements.

## Symposium
## Thursday, November 9
## 3:00 PM to 4:15 PM
## Salon 5/8
## Biological/Medical Track

## Advancing Neural Models of Posttraumatic Stress Disorder

(Bio Med, Cog/Int-Bio/Int-Refugee-Neuro, Adult, M, Industrialized)

**Liddell, Belinda, PhD**; Bryant, Richard, PhD
*University of New South Wales, Sydney, NSW, Australia*

Elucidating the neural mechanisms underpinning human traumatic stress reactions is critical to understanding PTSD psychopathology and processes of recovery. This symposium will present four papers by clinical researchers in the field, each employing innovations in functional magnetic resonance imaging (fMRI) and cognitive neuroscience to investigate the neural processes altered by trauma and PTSD. The first paper presents empirical evidence that the vestibular system reflecting interoceptive functioning may be particularly disrupted in patients with the dissociative subtype of PTSD. The second study focuses on the impact of torture exposure on connectivity within threat and reward neural systems as correlated with degree of trauma exposure and current stress in a cohort of traumatized refugees. The third study addresses disruptions to attention functioning in PTSD using the attention network task and contrasting with resting state connectivity. Finally, the fourth study examines the neural changes associated with modulating self-efficacy in combat veterans. These different studies highlight the potential of neuroimaging studies to shed light into the brain mechanisms governing traumatic stress, and will address how such advances can contribute towards developing new treatment approaches.

## Neuroimaging the Vestibular System in PTSD and its Dissociative Subtype

(Clin Res, Affect/Int-Complex, Adult, M, N/A)

Harricharan, Sherain, BSc[1]; Densmore, Maria, BSc[1]; Theberge, Jean, PhD[2]; Neufeld, Richard W.J., PhD[1]; McKinnon, Margaret, PhD[3]; **Lanius, Ruth, MD, PhD**[4]

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[3]*McMaster University, Hamilton, Ontario, Canada*
[4]*University of Western Ontario, London, Ontario, Canada*

**Background:** Post-traumatic stress disorder (PTSD) typically involves alterations in interoceptive awareness. The vestibular system is critical for interoceptive awareness in that it helps to maintain both physiological and physical equilibrium. Altered interoceptive processing may compromise multisensory integration between the brainstem (vestibular nuclei) and key vestibular cortical regions (posterior insula, supramarginal gyrus). The present study therefore examined vestibular nuclei functional and effective connectivity differences PTSD (n=60), its dissociative subtype (PTSD+DS; n=41) and healthy controls (n=40). **Methods:** A seed-based approach and spectral dynamic causal modelling was employed to examine fMRI functional and effective connectivity during resting-state using PickAtlas and SPM12. **Results:** Increased vestibular nuclei functional connectivity with the supramarginal gyrus, the posterior insula, and the dorsolateral prefrontal cortex was observed in PTSD and healthy controls as compared to PTSD+DS. Healthy controls showed top-down supramarginal gyrus and posterior insula to vestibular nuclei effective connectivity whereas PTSD and PTSD+DS showed mixed patterns of connectivity. **Discussion:** Altered vestibular nuclei functional and effective connectivity with key cortical vestibular regions in PTSD and its dissociative subtype suggests dysregulation of vestibular multisensory integration, which parallel the unique symptom profiles of the PTSD subgroups. These results may have implications for treatment targeting interoceptive awareness and multisensory integration in PTSD.

## Torture Exposure Affects Functional Connectivity in the Brain during Threat and Reward Processing amongst Traumatized Refugees

(Bio Med, Chronic-Refugee-Torture-Neuro, Adult, M, Global)

**Liddell, Belinda, PhD**[1]; Felmingham, Kim, PhD[2]; Malhi, Gin, PhD[3]; Das, Pritha, PhD[4]; Outhred, Tim, PhD[3]; Cheung, Jessica, PhD, Cpsych[1]; Den, Miriam, PhD, MRCPsych[1]; Nickerson, Angela, PhD[1]; Askovic, Mirjana, BSc Hons Psychology[5]; Coello, Mariano, BBSc, MPsych[5]; Aroche, Jorge, BBSc, MPsych[5]; Bryant, Richard, PhD[1]

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Torture is characterized by being severe, prolonged, uncontrollable and significantly interpersonal, with significant repercussions on psychological and physiological functioning. Studies have shown that war and torture exposure affects emotional processes, but the specific impact of torture on the emotional brain is unclear. In this functional MRI study, 35 refugees with a trauma history including torture, and 50 non-tortured refugees, viewed a series of threat (fear faces), positive (happy faces) and neutral faces. First, we found that PTSD symptom severity did not distinguish torture and non-torture survivors. Instead, it was overall quantity of trauma exposure (i.e. trauma load) and level of post-migration living difficulties that impacted how torture affected neural responses to fear and happy faces. Specifically, we found that trauma load was associated with increased activity in bilateral precuneus and right hippocampus in response to fear faces, as well as reduced left amygdala activity in torture survivors (compared to non-torture survivors). Post-migration living difficulties was associated with reduced dorsomedial prefrontal cortical engagement in torture survivors. Psychophysiological interaction (PPI) analyses revealed that connectivity between the amygdala and medial prefrontal cortical areas were diminished in torture survivors during both fear and happy processing. The findings have implications for understanding the long-term impact of torture on threat-related and positive social processing

networks, and highlight potential mechanisms for targeting in treatment and rehabilitation efforts.

## Neural Mechanims Underlying Attention Deficits in PTSD

(Bio Med, Bio/Int-Neuro, Adult, M, N/A)

**Block, Stefanie, BS, MS**[1]; King, Anthony, PhD[2]; Duval, Liz, PhD[2]; Liberzon, Israel, MD[3]
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[3]*University of Michigan, Ann Arbor, Michigan, USA*

Posttraumatic stress disorder (PTSD) is associated with altered attention in multiple domains, including attentional biases toward threat, deficits on neuropsychological tests, and a high comorbidity with attention deficit/hyperactivity disorder. However, reports are conflicting regarding the specific types of attention that are affected in PTSD, and the underlying neural mechanisms of these deficits have not been identified. In this study, we examined attentional performance across three groups: PTSD (N= 21), trauma-exposed controls (N=20), and non-trauma-exposed controls (N=20). The groups were of mixed gender and trauma type. Subjects underwent functional magnetic resonance imaging (fMRI), during which they completed the Attention Network Test (ANT), a task which measures three components of attention: vigilance, spatial orienting, and conflict monitoring. Reaction time data showed that the PTSD group was less likely to utilize spatial information compared to the non-trauma-exposed group. However, during task performance, utilization of spatial information was associated with increased task-positive neural activity in the PTSD group compared to both control groups. These findings implicate altered attention functioning in PTSD outside of trauma-related stimuli. These findings may improve our understanding of the neural mechanisms underlying PTSD.

## Enhancing Self-Efficacy Modulates the Emotion Regulation Circuitry in PTSD

(Bio Med, Bio Med-Cog/Int-Bio/Int-Mil/Vets, Adult, M, Industrialized)

**Brown, Adam, PhD**[1]; Titcombe, Roseann, MD, PhD[1]; Chen, Jingyun, PhD[1]; Rahman, Nadia, BA[2]; Kouri, Nicole, BA[1]; Bryant, Richard, PhD[3]; Marmar, Charles, MD[1]
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[3]*University of New South Wales, Sydney, NSW, Australia*

PTSD is associated with maladaptive changes in self-identity such as low perceived self-efficacy. Low levels of self-efficacy are linked to PTSD onset and poor treatment outcome. This talk will present findings from research examining cognitive and neural changes associated with increasing perceptions of self-efficacy among combat veterans with and without PTSD. Specifically, perceptions of self-efficacy are enhanced through a novel induction in which veterans recall personal memories in which they demonstrated self-efficacy. The results show that following the recall of self-efficacy autobiographical memories, combat veterans with and without PTSD were more effective on problem-solving tests. In addition functional neuroimaging data from two studies showed that increasing perceptions of self-efficacy in combat veterans led to changes in regions associated with the top-down regulation of emotion. Specifically, combat veterans assigned to the high perceived self-efficacy condition exhibited less neural efficiency in the prefrontal cortex compared individuals with the PTSD that did not receive the self-efficacy induction. Moreover, combat veterans with and without PTSD in the perceived high self-efficacy condition showed greater recruitment in the ventromedial prefrontal cortex on an instrumental fear task. Increasing perceptions of self-efficacy through autobiographical memory may aid in the engagement of cognitive processes and neural structures that are relevant to recovery from trauma.

**Symposium**
**Thursday, November 9**
**3:00 PM to 4:15 PM**
**Salon 6/7**

## ARC3 Survey for College Sexual Assault: Testing and Use across Three U.S. Universities

(Social, Aggress-Comm/Vio-Rape-Gender, Lifespan, M, Industrialized)

**Flack, William, PhD**
*Bucknell University, Lewisburg, Pennsylvania, USA*

Decades of research demonstrate that sexual assault and other forms of gender-based violence among university students are serious public health issues in the U.S. and elsewhere. In response to the White House Task Force to Protect Students From Sexual Assault (The White House, 2014), the Administrator-Researcher Campus Climate Consortium (ARC3; http://campusclimate.gsu.edu/) compiled, tested, and made available (at no cost) an online survey of harassment, dating violence, and sexual assault victimization and perpetration, along with predictors and outcomes. Development, use, and results of the survey and their implications across three U.S. university systems will be described in this symposium.

## Pilot Testing and Refining the ARC3 Campus Climate Survey

(Pub Health, Aggress-Assess Dx-Gender, Child/Adol, M, Industrialized)

**Swartout, Kevin, PhD**; Cook, Sarah, PhD
*Georgia State University, Atlanta, Georgia, USA*

Background: In response to The White House Task Force to Protect Students from Sexual Assault's recommendations, the Administrator-Researcher Campus Climate Consortium (ARC3) has curated an empirically-sound, no-cost campus climate assessment measure for U.S. institutions of higher education. The ARC3 survey contains 19 modules that assess a range of Title IX violations, including harassment, dating violence, and sexual misconduct victimization and perpetration; sexual misconduct prevention efforts, resources, and responses; and key predictors and outcomes of sexual misconduct. The objective of this presentation is to describe the survey and results of an initial pilot test conducted across three U.S. universities. Method: A total of 909 students attending one of three U.S. universities responded to the survey; 85% of students who began the survey completed it. The ARC3 survey took students slightly less than 30 minutes to complete, on average. Results: We assessed survey performance by calculating descriptive statistics, internal reliability estimates, and correlations among modules and subscales. A majority of the included scales produced evidence for at least acceptable internal consistency levels (α>.70), with only two short item sets having marginal reliability (α=.70-.65). Correlations among the constructs matched expectations set by the research literature. Students generally did not find the survey distressing; in fact, a majority of students reported the climate assessment was important and personally meaningful. Conclusions: Our overall findings support the ARC3 survey as a valid and internally consistent measure of sexual misconduct. U.S. colleges and universities can use the survey to assess local sexual misconduct rates and campus climate attributes; repeated implementation of the survey will assist universities in tracking these trends across time, to assess effectiveness of campus sexual misconduct prevention efforts.

## Process, Implementation, and Use of the ARC3 Tool at The University of Texas System

(Res Meth, DV-Rape-Res Meth-Gender, Adult, M, Industrialized)

**Wood, Leila, PhD MSW**
*University of Texas at Austin, Austin, Texas, USA*

Background: The ARC3 was used by The Institute on Domestic Violence and Sexual Assault (IDVSA) at The University of Texas at Austin for the 8 University of Texas System academic campuses to measure sexual harassment, dating violence, stalking, and sexual assault. The ARC3 tool has strong reliability and validity with diverse populations, and is highly adaptable, making it a good fit for the diverse University of Texas system. The IDVSA research team collaborated with campus institutional stakeholder groups to adapt the tool, promote the survey, and recruit students at eight campuses to participate in a modified version of the ARC3. The survey was conducted to assess campus climate, improve program planning, and conduct research to contribute to understanding of violence on campus. Methods: The comprehensive ARC3 survey measures victimization, perpetration, and attitudes about types of violence covered under Title IX. IDVSA added enhanced bystander intervention measures and an economic impact module. The survey was distributed

to students across the UT System, depending on campus size, in a random or census sampling approach, using three different survey versions. Institutional stakeholder groups revised the survey to be grounded to the culture of their campus. The survey was implemented in the Qualtrics platform. Results: Over 26,000 students participated, representing 14.1% response rate. Results for victimization prevalence, impact, and disclosure will be discussed, as well as dissemination of results for research and program planning will be discussed. After the survey was completed, institutional stakeholder groups worked with the research team to help to plan campus level reports and distribution of results, which resulted in an action plan for each campus. Conclusions: Strong collaboration, clear communication, leadership, and adaptability are critical elements to implementing a campus climate tool across a highly diverse university system. Interdisciplinary dialogue and coordination are essential to an action plan. Different analytical methods can be used with the ARC3 tool, depending on the data use for research or administration. Improvement of sampling, promotion, and recruitment of participants when using ARC3 will be discussed. ARC3 represents the best available tool to assist in institutional and research exploration of Title IX related violence.

## Adapting Interpersonal Violence Campus Climate Surveys to be Useful for Prevention and Response

(Social, Comm/Vio-Rape-Res Meth, Adult, M, N/A)

**Schewe, Paul, PhD**[1]; Mazar, Laurel, MSW[1]; **Relyea, Mark, PhD**[2]
[1]*University of Illinois Chicago, Chicago, Illinois, USA*
[2]*RTI, Research Triangle Park, North Carolina, USA*

Schools administering interpersonal violence climate surveys must balance the benefits of surveys against the cons of asking students about potentially traumatic experiences. In this talk, we use a case study to show how a university used guiding questions and an explicit statement of values to decide how to adapt the ARC3 survey to fit local needs that could help with prevention and response to interpersonal violence. We then provide research findings and lessons learned from this process. Methods: After agreeing on guiding questions and values, a team of experts in interpersonal violence reviewed multiple campus climate surveys, including the ARC3 survey, consulted with violence experts at local universities and members of the university ethics committee, cultural centers, and sexual misconduct task force. Results: The process resulted in many adaptations including removing items that would not be actionable by the university, focusing on past year rates of interpersonal violence, expanding demographics, randomly assigning the order of violence questions, and tailoring questions to survivors and non-survivors, all of which provided significant and useful findings. Conclusion: Using an explicit statement guiding framework for choosing questions can help universities tailor the length and content of surveys to fit local needs and provide actionable information.

## Use of the ARC3 Survey as a Research Tool for Campus Sexual Assault

(Social, Rape-Res Meth-Gender, Adult, M, Industrialized)

**Flack, William, PhD**
*Bucknell University, Lewisburg, Pennsylvania, USA*

**Background:** Although designed primarily for use by higher education administrators, the ARC3 survey is also available to researchers. In this presentation, we report the results of using a modified version of the survey for research purposes at a small, mid-Atlantic university. **Method:** Survey invitations were sent by email to a randomly chosen half of the undergraduate student population on campus during spring 2016, and responses were obtained from 357 women (response rate = 43%) and 226 men (response rate = 27%). Other than over-sampling women relative to men, sample demographics reflected closely those of the population. The reference period was time spent on campus, and thus ranged from 1+ (1st-year students) to 7+ (seniors) semesters. **Results:** Prevalence rates for all types of victimization were significantly higher among women as compared to those among men: sexual harassment (55% vs. 43%), stalking (27% vs. 18%), dating violence (13% vs. 4%), contact sexual assault (37% vs. 12%), sexual coercion (15% vs. 6%), attempted rape or rape (27% vs. 8%), and overall sexual assault victimization (41% vs. 15%). The results for contact, coercion, and attempted rape or rape were consistent with results of previous surveys conducted by this research team. **Conclusions:** The ARC3 survey provides a comprehensive assessment of campus sexual assault, and can be used by researchers both for scholarly purposes and to provide locally useful information on those campuses that may not be able or willing to assess or report their victimization prevalence rates.

**Symposium**
**Thursday, November 9**
**3:00 PM to 4:15 PM**
**Monroe Room**
**Treatment Track**

## The Aftermath of PTSD Treatment: Characteristics Associated with either Residual Symptoms or Long-Term Improvement

(Clin Res, Clin Res-Clinical Practice-Depr-Res Meth, Adult, M, Global)

**Larsen, Sadie, PhD**[1]; Pacella, Maria, PhD[2]
[1]*Clement J. Zablocki VA Medical Center, Milwaukee, Wisconsin, USA*
[2]*University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA*

To date, researchers have amassed substantial evidence for the efficacy of empirically supported psychotherapy treatments for PTSD. Yet, treatment is not universally effective, and little is known about the type and patterns of residual symptoms still present following treatment. Further, the long-term efficacy of treatment remains unclear. This symposium extends the literature by addressing these two understudied areas. The first two presentations examine residual symptoms following randomized controlled trials (RCT) of Prolonged Exposure and Cognitive Processing Therapy. The third presentation systematically reviews the available literature regarding residual symptoms following high-quality RCTs. The fourth presentation is a meta-analysis of long-term outcomes (≥6-months post-treatment) following RCTs, with a focus on the methodological and individual factors affecting outcomes. This symposium examines the complexity inherent in treatment outcome research by going beyond the question of whether PTSD symptoms improve or a PTSD diagnosis is lost following treatment. Instead, we focus on the maintenance of treatment gains, and the types of symptoms and associated comorbidities (depression, anxiety, physiological markers, and quality of life) that still remain at a clinical level post-treatment. Finally, we will examine factors that may impact residual symptoms and long-term efficacy (e.g., population, trauma and treatment type, and methodology).

## Residual Symptoms after Evidence-Based Treatment for Posttraumatic Stress Disorder

(Clin Res, Clin Res-Rape, Adult, M, Industrialized)

**Fleming, CJ, PhD**[1]; Larsen, Sadie, PhD[2]; Resick, Patricia, PhD, ABPP[3]
[1]*Elon University, Elon, North Carolina, USA*
[2]*Clement J. Zablocki VA Medical Center, Milwaukee, Wisconsin, USA*
[3]*Duke University Medical Center, Durham, North Carolina, USA*

Treatments for PTSD, such as Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE), are both available and effective; however, rates of nonresponse to treatment remain high, and thus it is important to better understand and address which symptoms do not respond to treatment. The current study examined residual symptoms at pre-treatment, post-treatment, and 3-month follow-up in a sample of 171 female rape victims in a controlled trial of CPT and PE (average age 32, 71% white). Specifically, we examined which symptoms remained at a clinically significant level, including individual PTSD symptoms, depression symptoms, traumatic guilt, and social adjustment. Distress related to trauma reminders and insomnia were the PTSD symptoms most likely to remain at clinical levels after treatment (~25% endorsement). Self-blame, concerns about body image, and fatigue remained as the most problematic depression symptoms (~50% endorsement). Overall guilt dropped below 10% endorsement after treatment, while feelings that the event was not justified remained high (~40%). Rates of positive social adjustment jumped from 17% to 60% after treatment. These results suggest that many symptoms of PTSD and related disorders respond well to treatment, but confirm that we need to continue to revise treatments to better serve diverse populations and symptom presentations.

## Residual Symptoms following Prolonged Exposure and Present-Centered Therapy for PTSD in Female Veterans and Soldiers

(Clin Res, Mil/Vets-Gender, Adult, M, Industrialized)

**Schnurr, Paula, PhD**; Lunney, Carole, MA
*National Center for PTSD, Executive Division, White River Junction, Vermont, USA*

There is a small literature showing that the effect of treatment on specific symptoms of PTSD varies across treatments. Emerging evidence suggests that some symptoms, such as sleep disturbance, can be difficult to treat regardless of the type of treatment. In order to promote optimal recovery, it is important to understand which symptoms respond to which treatment. Therefore, we examined residual PTSD symptoms following treatment in 235 female veterans and soldiers who were randomized to receive 10 weeks of either Prolonged Exposure (PE) or Present-Centered Therapy (PCT). PTSD symptoms were assessed using the Clinician-Administered PTSD Scale. Symptom presence was defined using the "1/2" rule (frequency >= 1 and intensity >= 2). Before treatment, the percentage of participants with each symptom ranged from 40% (foreshortened future) to 94% (detachment/estrangement). Overall, both treatments resulted in reductions in PTSD symptoms, although improvements were greater in PE than PCT. After treatment, the percentage of participants with each symptom ranged from 29% (foreshortened future) to 77% (difficulty falling asleep). Among participants who had a given symptom before treatment, the likelihood of retaining that symptom after treatment was highest for difficulty falling asleep (81%) and lowest for diminished interest in activities (48%). Participants receiving PE had a lower likelihood of retaining intrusive memories, avoidance of people/places, detachment/estrangement, and restricted range of affect relative to those receiving PCT. Among participants who no longer met diagnostic criteria—who, by definition, had to experience remission for at least some symptoms—irritability/anger and difficulty falling asleep were the most likely to still be present after treatment. These results are consistent with previous findings that even after successful treatment for PTSD, residual symptoms may require additional targeted intervention.

## Long-Term Efficacy of Psychotherapy for Posttraumatic Stress Disorder: A Meta-Analysis of Randomized Controlled Trials

(Clin Res, Clin Res, Adult, M, Global)

**Kline, Alexander, MA**[1]; Cooper, Andrew, PhD[2]; Pugliese, Vincent, BS[1]; Rytwinski, Nina, PhD[3]; Feeny, Norah, PhD[1]
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[2]*University of Toronto Scarborough, Toronto, Ontario, Canada*
[3]*Walsh University, North Canton, Ohio, USA*

Psychotherapies are well established as efficacious acute interventions for posttraumatic stress disorder (PTSD; Cusack et al., 2016). However, their long-term efficacy and the durability of treatment effects are less understood. A meta-analysis was conducted to evaluate long-term follow-up (LTFU) outcomes and maintenance of effects of PTSD psychotherapies, minimum 6 months posttreatment. Analyses included 72 total conditions from 32 randomized controlled trials (RCTs) for PTSD ($N$ = 2935). Effect sizes were significantly larger for active psychotherapy conditions (exposure, CBT, CPT, EMDR, CT) relative to control conditions for the pretreatment to LTFU period, $p < .001$. Psychotherapy effects were maintained posttreatment ($d$ = 0.17). Among active interventions, pretreatment to LTFU effect sizes did not significantly differ among treatment types, but exposure therapies demonstrated largest effects in the posttreatment to LTFU period ($d$ = 0.27), $p$ = .005. Pretreatment to LTFU effect sizes among active conditions were significantly smaller when analyses included all randomized patients ($d$ = 1.95) versus a subset of the sample, often treatment completers ($d$ = 2.51), $p$ = .03. Findings are supportive of the long-term efficacy of PTSD interventions and the durability of psychotherapy gains, but must be interpreted in parallel with methodological considerations and study characteristics of RCTs.

## A Systematic Review of Residual Symptoms after Empirically Supported Trauma-Focused Psychological Treatment

(Clin Res, Assess Dx, N/A, M, N/A)

Larsen, Sadie, PhD[1]; **Bellmore, Aimee, PhD**[2]; **Gobin, Robyn, PhD**[3]; Holens, Pamela, PhD, Cpsych[4]; Lawrence, Karen, PhD MSW[5]; Pacella, Maria, PhD[6]

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[6]*University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA*

Even among individuals who complete empirically supported PTSD treatments, some continue to experience clinically significant residual symptoms. Yet, little is known about the characteristics of these symptoms. We conducted a systematic review of 51 randomized clinical trials (RCT) of psychosocial interventions (with 68 total treatment arms) to determine the types of symptoms that remain after psychotherapy. Outcomes included: 1) PTSD symptoms; 2) conditions commonly comorbid with PTSD: depression, anxiety, impairment, dissociation, and physiological indicators. Only treatments with strong evidence of efficacy were included (Cusack et al., 2016). Our results revealed that a substantial portion of participants who completed PTSD treatment continued to report residual PTSD symptoms (32% reported clinical symptom levels and 54% subthreshold levels at posttreatment, particularly re-experiencing and avoidance), depression (18% clinical), anxiety (39% clinical), impaired functioning/quality of life (36% clinical), and physiological symptoms (71% clinical). Conversely, post-treatment dissociative symptoms were minimal in 100% of study arms that provided data (n=6), despite initial clinical levels. We found few differences across treatment types, but did find some differences in sample/trauma types. We review implications for clinical practice and for reporting of clinical trials.

## Panel Presentation
## Thursday, November 9
## 3:00 PM to 4:15 PM
## Crystal Room
## Military Track

## No Wrong Door: Models for Delivering Evidenced Based Treatment for Veterans with PTSD and SUD Comorbidities

(Practice, Clin Res-Complex-Sub/Abuse-Mil/Vets, Adult, M, Industrialized)

**Yamokoski, Cynthia, PhD**[1]; **Davis, Brittany, PhD**[2]; **Flores, Heather, PsyD**[3]; **Lamoureux, Brittain, PhD**[1]

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In this panel, we will address both the current state of the science for integrated PTSD and substance use disorder treatment and demonstrate how these findings translate into real-world treatment approaches that embody the guiding principle that there is "no wrong door" to trauma-focused treatment. First, we will review significant theory on PTSD/SUD treatment, relevant treatment outcome research, and the current best practices recommendations for PTSD/SUD treatment advanced by expert groups. Next, we will present information on four distinct treatment programs which provide a variety of "doors" to trauma-focused treatment: 1) a contingency management PTSD/SUD group reinforcing attendance designed specifically for historically difficult to engage clients, 2) an outpatient PTSD program geographically located at an epicenter of the opioid epidemic, 3) an integrated PTSD/SUD residential program within a PTSD program, and 4) an SUD residential program offering evidenced based treatment for PTSD. Each of these programs strives to deliver evidence-based care, and advocates that trauma-focused care is safe and feasible in individuals with co-occurring PTSD and SUD. We will speak to the strengths, limitations, and effectiveness of each of these approaches. Finally, we will discuss recommendations for future directions in both the research and practice of PTSD/SUD treatment.

## Featured Panel Presentation
## Thursday, November 9
## 3:00 PM to 4:15 PM
## Adams Room

## Global Collaboration on Matters that Matter Around the World

(Global, CPA-CSA-Cul Div-Neglect, Adult, I, Global)

**Olff, Miranda, PhD**[1]; Schnyder, Ulrich, MD[2]; **Frewen, Paul, PhD**[3]; **Dyb, Grete, MD, PhD**[4]; **Lueger-Schuster, Brigitte, PhD**[5]; **Oe, Misari, MD, PhD**[6]; **Ajdukovic, Dean, PhD**[7]; **Schaefer, Ingo, MD, MPH**[8]
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[7]*Society for Psychological Assistance, Zagreb, Croatia*
[8]*University Medical Center Hamburg, Hamburg, Germany*

In this panel we present the ISTSS Global Collaboration, which was formed as part of the ISTSS Global Initiative. It consists of an affiliation between societies for traumatic stress studies around the world and it includes representatives from different regions including Japan, Africa, Europe, North and South America, Hong Kong, and Australia. The aim is to stimulate collaboration around the world without creating a new global structure, but by focusing on topics that matter globally (Schnyder & Olff, 2013). The panel will introduce the Global Collaboration, the selection of the topics and the process of working together (Olff/Schnyder). Some of the products will be presented, e.g. the "Internet information on Childhood Abuse and Neglect" (iCAN) (Lueger-Schuester) or the study on a "Computerized Childhood Attachment and Relational Trauma Scale" (CARTS) (Frewen) around the world. Language barriers, challenges in attaining an ethical approval, and benefits will be discussed (all) and we will address the question whether this form of working together is helpful in the discussions around our global mission (all). The panel will include Ulrich Schnyder, pioneer of the global initiative of the ISTSS, Grete Dyb, past president ISTSS, Ingo Schäfer, president of ESTSS, Misari Oe representing JSTSS, Dean Ajdukovic, president of the Croation STSS, Paul Frewen for the Canadian STSS, Brigitte Lueger-Schuster for ESTSS, and Miranda Olff, chair of the global collaboration.

## Workshop Presentation
## Thursday, November 9
## 3:00 PM to 4:15 PM
## Salon 2
## Child Trauma Track

## Complex Trauma and Diagnostic Patterns: Understanding the Potential for Misdiagnosis or Over-diagnosis in Vulnerable Youth

(Assess Dx, Clin Res-Clinical Practice-Complex-Train/Ed/Dis, Child/Adol, M, Global)

**Fehrenbach, Tracy, PhD**; **Kisiel, Cassandra, PhD**; **Sax, Rachel, MA**; McClelland, Gary, PhD
*Northwestern University Feinberg School of Medicine, Chicago, Illinois, USA*

Research supports a relationship between specific traumatic characteristics and individual outcomes for traumatized youth (Ford, Chapman, Connor & Cruise, 2012; Kisiel, Fehrenbach, Small, Lyons, 2009). Findings suggest that greater exposure to trauma (both in severity and number of experiences) is strongly associated with poorer youth outcomes across a wide range of developmental domains and areas of functioning. It is therefore logical to expect that children, adolescents and young adults with extensive trauma histories may also carry multiple and varied mental health diagnoses. Unfortunately, the empirical literature regarding trauma and diagnosis is severely limited. This workshop will synthesize findings from two recent large-scale studies of highly traumatized and particularly vulnerable youth in Illinois: those in child welfare and the juvenile justice system. We will highlight findings that have concrete and important implications for working with system-involved, traumatized youth. These include the relationship between trauma history (e.g., simple versus complex

exposure) and patterns of mental health diagnoses (e.g., type and frequency) as well as the intersection of specific youth demographic characteristics (e.g., age and race) and diagnostic patterns. An overarching goal of this workshop will be to actively engage participants in dialogue about how to identify and overcome factors that contribute to overlooking the impact of trauma in service provision for system-involved youth and families. We will also introduce participants to free, downloadable resources aimed at reducing the likelihood of unintentional misdiagnosis of traumatized youth.

# Concurrent Session Four

**Symposium**
**Thursday, November 9**
**4:30 PM to 5:45 PM**
**Salon 1**
**Assessment and Diagnosis Track**

## Application of Network Analysis to the Etiology and Sequelae of Traumatic Stress

(Res Meth, Complex-Res Meth, Child/Adol, M, N/A)

**Hodgdon, Hilary, PhD**[1]; Layne, Christopher, PhD[2]
[1]*Trauma Center at Justice Resource Institute, Brookline, Massachusetts, USA*
[2]*UCLA - National Center for Child Traumatic Stress, Los Angeles, California, USA*

This symposium presents four papers utilizing network analysis to examine the etiology and sequelae of traumatic stress in adolescent and adult populations. Awareness of the utility of using network analyses in clinical science has been increasing (e.g.,Hofmann, Curtiss, & McNally, 2016; McNally et al., 2015). Use of network analysis in trauma research has focused on examination of associations between symptoms of posttraumatic stress (McNally et al., 2004) and complex relationships between child stressors, physiological function, developmental milestones, injuries / medical intervention and child and parent mental health symptoms (Saxe et al., 2016). Network analysis is not bound by the limiting assumptions of the latent variable measurement model and can provide information that cannot be provided by factor analysis. Identifying network communities can be used, similar to factor analysis, to identify clusters of trauma types and symptoms. Network analysis also provides information such as eigenvector centrality (a measure of the influence of a node in a network) and the causal nature of the relationship among nodes (temporal relations). Network analysis, therefore, represents an innovative and nuanced approach to examining the complex relationships between trauma exposures and resulting traumatic sequelae. The first paper (Hodgdon et al) in this symposium utilizes network analysis to examine the associations between 20 types of trauma exposure and the timing of exposure in a clinical sample of children and adolescents. The second paper by Leibman et al uses a complex trauma framework to examine a network of mental health symptoms among a sample of trauma-impacted youth 11 to 18 years of age. The third paper by Suvak et al examines a network of posttraumatic stress symptoms among adult women with and without exposure to intimate partner violence. The fourth paper by Saxe describes a computational method that integrates advanced non-experimental causal discovery algorithms within a Network Science framework to identify the variables and pathways that most strongly contribute to a Complex Adaptive System in which PTSD emerges and persists.

## Network Analysis of Developmental Trauma Disorder: Identifying Symptom Profiles and Treatment Targets in Treatment-seeking Youth across a Continuum of Care

(Assess Dx, Assess Dx-Chronic-Complex-Res Meth, Child/Adol, M, Industrialized)

**Liebman, Rachel, PhD**[1]; Suvak, Michael, PhD[2]; Zinoviev, Dmitry, PhD[2]; Spinazzola, Joseph, PhD[3]; Hodgdon, Hilary, PhD[3]
[1]*Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA*
[2]*Suffolk University, Boston, Massachusetts, USA*
[3]*Trauma Center at Justice Resource Institute, Brookline, Massachusetts, USA*

Developmental trauma disorder (DTD) has been proposed as an integrative, developmentally-adapted syndrome to characterize the symptoms associated with exposure to interpersonal and early attachment-based traumas (D'Andrea et al., 2012; van der Kolk, 2005). The diagnostic criteria for DTD includes four primary criteria: lifetime exposure to developmental trauma; emotional or somatic dysregulation; attentional or behavioral dysregulation; and relational or self-dysregulation (Ford et al, 2014). Research on the DTD diagnosis is still developing and novel statistical techniques can advance research on this disorder. Network analysis represent an attractive alternative to traditional measurement models because of less restrictive assumptions regarding the presence of an underlying latent construct. This study builds on the network analysis described by Hodgdon et al earlier in this symposium. The goal of this study was to confirm the primary DTD symptom domains

after incorporating the trauma exposure clusters described by Hodgdon et al into a comprehensive model of DTD. 1269 treatment-seeking youth age 14-18 from a large system of care (outpatient, community-based, residential, juvenile justice) were included in analyses. The DTD network was developed from a battery of self-, parent-, and teacher-reports that captured symptoms reflective of the DTD diagnosis. The generalized similarity model (GSM, Kovacs, 2010) was used to construct a network of DTD to visualize their relationships and detect cohesive groups. Results confirmed the trauma exposure clusters identified by Hodgdon et al. along with three primary symptom clusters that partially conformed to the domains described by Ford et al, (2014): attentional and behavioral dysregulation; emotional, somatic, and interpersonal dysfunction; and PTSD (hyperarousal, avoidance, intrusions, and dissociative symptoms). Cognitive dysregulation, emotional problems, and physiological hyperarousal exhibited the most connections to other symptoms in the network. Results also yielded unique relationships between trauma exposures and symptom domains: overt trauma (psychological, physical, sexual abuse) was most strongly associated with the PTSD symptom cluster while covert trauma (neglect, impaired caregiving) was most strongly associated with the attentional and behavioral dysregulation cluster. The results demonstrate the potential utility of network analysis to conceptualize DTD, and point to several valuable treatment targets (e.g., cognitive, emotional and physiological dysregulation symptoms) - overall, and specific to different trauma exposures - that, if targeted early, could streamline intervention practices and speed recovery.

## Network Analysis of PTSD Symptoms in a Sample of Female Veterans with and without a History of Intimate Partner Violence

(Assess Dx, Assess Dx-DV-Res Meth, Adult, M, Industrialized)

**Suvak, Michael, PhD**[1]; Zinoviev, Dmitry, PhD[1]; Gutner, Cassidy, PhD[2]; Iverson, Katherine, PhD[3]
[1]*Suffolk University, Boston, Massachusetts, USA*
[2]*National Center for PTSD, Boston VA Medical Center and Boston University School of Medicine, Boston, Massachusetts, USA*
[3]*National Center for PTSD, Women's Health Sciences Division, VA Boston Healthcare System and Boston University School of Medicine, Jamaica Plain, Massachusetts, USA*

Posttraumatic Stress Disorder (PTSD) is comprised of a constellation of symptoms that can arise after exposure to a traumatic event. Exploratory and confirmatory factor analytic studies have identified a pair of 4-factor models that best account for the associations among PTSD symptoms. While these analyses have increased our understanding of the PTSD construct, several assumptions of the latent variable measurement model underlying factor analytic techniques limit their ability to evaluate relationships among symptoms. The local independence assumption specifies that the association among indicators of a latent variable, or symptoms of mental disorders, are fully accounted for by the latent variable, not allowing for causal/directional relationships among symptoms. It is possible that lack of sleep can cause concentration problems, both Cluster E symptoms; however, this possibility is not examined in latent variable models because of the local independence assumption. Network analysis offers an alternative method to examine associations among symptoms. Network models conceptualize mental disorders such as PTSD as causal systems embodied in networks of functionally interconnected nodes (symptoms) specifying the relation between symptoms and disorder as mereological— or part to whole (Borsboom & Cramer, 2014). We applied network analysis to self-reported DSM-5 PTSD symptoms (Posttraumatic Stress Disorder Checklist) from a sample of 408 (20-85 years old, M = 51.93) female Veterans, 207 (50.4%) who endorsed a history of intimate partner violence. We constructed a network of PTSD symptoms based on their generalized similarity to visualize their relationships and detect cohesive groups of symptoms (i.e., network communities). 5 network communities/clusters emerged. The largest consisted of a mixture of Criteria D (Alterations in Mood or Cognition: diminished interest, anhedonia, feeling cut off from others) and Criteria E items (Hyperarousal: irritability, difficulty concentrating, sleep problems). The 2nd largest consisted of three re-experiencing items (upset upon reminders, physiological response to reminders, and flashbacks) and the two strategic avoidance items, with the remaining reexperiencing items (memories, nightmares) forming a separate cluster linked to the larger re-experiencing/avoidance cluster. Three negative belief and feeling symptoms formed a fourth cluster, and startle and hypervigilance formed the fifth cluster. Eigenvalue centrality estimates indicated that symptoms of the largest cluster were the most important to the integrity of the network. The proposed presentation will fully articulate the results of the network analysis

and discuss implications regarding the conceptualization and assessment of PTSD.

## A Network/Complex Systems Approach to Causal Discovery for PTSD

(Res Meth, Comm/Int-Dev/Int-Bio/Int-Prevent, Lifespan, M, N/A)

**Saxe, Glenn, MD**
*New York University Langone Medical Center, New York, New York, USA*

Objective: To introduce a unique computational method that integrates non-experimental causal discovery algorithms within a Network Science/Complex Systems Science framework for research on traumatic stress. Background: Conventional research methodologies and data analytic approaches are unable to reliably infer causal relations without experimental designs, or to make inferences about the functional properties of the complex systems in which psychiatric/psychological disorders are embedded. This presentation describes a series of studies to validate and replicate a novel computational approach – the Complex Systems-Causal Network (CS-CN) Method – designed to integrate causal discovery within a complex systems framework for research on psychopathology, including traumatic stress. Methods: The CS-CN Method performs four computational operations on any data set with information on risk/protective factors for psychopathology: 1. It examines the relation between each pair of variables within the data set and, using state-of-the-art non-experimental causal discovery algorithms from the Generalized Local Learning (GLL) and Local to Global Learning (LGL) families, excludes any bivariate relationship that cannot be causal, 2. It examines the resulting network of bivariate causal relations for properties consistent with Complex Adaptive Systems, 3. It searches for the variables that disproportionally contributes to the adaptive, complex systems properties and models the impact of their removal (i.e. intervention) on the observed adaptive properties, 4. It searches for key causal pathways to identified outcomes of interest (e.g. PTSD). We describe the initial validation studies of the CS-CN Method using a data set from a longitudinal study of risk for PTSD in injured children, and from a gold-standard biomedical causal discovery data set (to determine the accuracy of the CS-CN Method for discovering true causes of disease, when the true causes are previously known). We also report the results of two large replication studies using the CS-CN Method: 1. A large national data set of psychiatric outcomes in traumatized children, and 2. A data set from a longitudinal study of risk factors for PTSD in police recruits. Results: The application of the CS-CN Method reliably identified sets of variables that form complex systems in which traumatic stress responses emerge and persist. Moreover, this method detected specific causal variables and pathways that most strongly contributed to the observed traumatic stress outcomes. Conclusions: The CS-CN Method represents a promising computational approach for complex systems-oriented research on traumatic stress.

## Network Analysis of Exposure to Trauma and Maltreatment in a Clinical Sample of Children and Adolescents

(Assess Dx, Chronic-Complex-Res Meth, Child/Adol, M, Industrialized)

**Hodgdon, Hilary, PhD**[1]; Suvak, Michael, PhD[2]; Zinoviev, Dmitry, PhD[2]; Liebman, Rachel, PhD[3]; Briggs, Ernestine, PhD[4]; Spinazzola, Joseph, PhD[1]
*[1]Trauma Center at Justice Resource Institute, Brookline, Massachusetts, USA*
*[2]Suffolk University, Boston, Massachusetts, USA*
*[3]Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA*
*[4]National Center for Child Traumatic Stress, Durham, North Carolina, USA*

A challenge in trauma research is how to categorize and quantify trauma. Current measurement approaches (e.g. latent variable and operational definition approaches) have significant limitations. Cumulative exposure does not map well onto latent variable approaches, as traumatic events do not occur because of an unobserved trauma latent variable. Second, the local independence assumption of latent variable approaches does not allow for causal / directional associations among signs or symptoms. Exposure to trauma increases risk of future trauma (i.e. re-victimization); thus, causal relationships among traumatic events and types are likely. Operational definitions fail to consider co-occurrence among indicators, and trauma types tend to co-occur in meaningful ways (e.g., Pynoos, et al., 2014). The current study examined the co-occurrence of trauma using network analyses. Network analyses represent an alternative to traditional measurement models with

less restrictive assumptions and the ability to incorporate age of onset to examine temporal precedence among trauma types. The Trauma History Profile (THP) was administered to 618 treatment seeking children and youth ages 4 to 18 (52.8% female). The THP assesses lifetime exposure to 20 trauma types. Participants were exposed to 4.9 different trauma types including Neglect (63%), Psychological Maltreatment (58.1%), Impaired Caregiving (52.3%), Physical Abuse (51.3%) and Domestic Violence (43.2%). Participants experienced multiple exposures occurring within the early caretaking environment. The generalized similarity model (GSM, Kovacs, 2010) was used to construct a network of trauma types, based on their generalized similarity, to visualize their relationships and detect cohesive groups. Four clusters emerged. Cluster one included overt forms of trauma occurring at the individual level (i.e. physical and sexual abuse, psychological maltreatment). Cluster two included environmental forms of trauma at the family level (i.e. neglect, impaired caregiving) and cluster three included environmental forms of trauma occurring at the broader community level (i.e. community and school violence). Finally, cluster four represented acute forms of trauma that occurred with relatively low base rates (e.g., war, medical trauma). In terms of temporal precedence, neglect and psychological maltreatment were the two types of CAs that were most predictive of latter occurrences of other maltreatment and trauma. Results demonstrate the potential utility of network analysis to understand the co-occurrence of multiple types of trauma and maltreatment. Neglect and psychological maltreatment were identified as potentially important targets for interventions designed to reduce further exposure to trauma and maltreatment.

## Symposium
## Thursday, November 9
## 4:30 PM to 5:45 PM
## Salon 3
## Assessment and Diagnosis Track

# Multigenerational Legacies of Trauma in their Complexities: A Multidimensional, Multidisciplinary Examination of Current Questions, Findings and Theoretical Formulations

(Assess Dx, Intergen, Lifespan, M, Global)

**Elmore Borbon, Diane, PhD MPH**[1]; Engdahl, Brian, PhD[2]
[1]*UCLA/Duke University National Center for Child Traumatic Stress, Washington, District of Columbia, USA*
[2]*Brain Sciences Center, Minneapolis VAMC, Minneapolis, Minnesota, USA*

Since their inception, ISTSS and the traumatic stress community have included multigenerational issues in their thinking, focus, and approach to addressing the long-term complexities of trauma. This symposium includes presentations from leading scholars and researchers in this major area of work who will present current findings examining the multigenerational legacies of trauma from differing perspectives, with different measures, asking the questions differently, in diverse populations. Results indicate that some offspring of trauma survivors experience significant epigenetic and psychosocial effects. Implications of these findings for the traumatic stress field and survivor communities around the world will be discussed.

## The Evolution of Intergenerational Perspectives of Psychological Trauma in ISTSS and the Traumatic Stress Field

(Assess Dx, Intergen, Lifespan, M, Global)

**Kudler, Harold, MD**
*USA Department of Veterans Affairs, Washington, District of Columbia, USA*

Since its inception, ISTSS has incorporated multigenerational issues in its thinking, focus, and approach to studying and treating the long-term effects of traumatic stress. The ISTSS Intergenerational Transmission of Trauma and Resilience Special Interest Group (SIG) has played a key leadership role by serving as a support network for those interested in studying and promoting the role of both vulnerability and resilience to trauma, prevention of re-traumatization, and transmission of traumatization and its legacies. This presentation by the current chair of the Intergenerational Transmission of Trauma and Resilience SIG will include an overview of intergenerational perspectives of psychological trauma and its complex evolution across time and populations. Areas for continued growth, exploration, and collaboration will also be identified.

## Epigenetic Changes in Offspring of Holocaust Survivors

(Assess Dx, Intergen, Adult, M, Global)

**Yehuda, Rachel, PhD**
*J. J. Peters Veterans Affairs Medical Center; Mount Sinai School of Medicine, Bronx, New York, USA*

Recent findings have demonstrated epigenetic alterations in stress-related genes in some Holocaust offspring. How these alterations have materialized remains a mystery, as it is not known if such changes are a reflection of direct transmission of epigenetic changes through gametes, in utero programming or early differences in maternal behavior. Recent data from a sample of 70 Holocaust offspring and 26 Jewish comparison subjects will be presented, along with other recent findings, showing that Holocaust offspring showed significantly lower FKBP5 intron 7, site 6 methylation than controls (p=.022). Site 6 methylation was significantly associated with maternal age of exposure (F = 6.45; df=3,76; p=.001), whereas the association with paternal age of exposure was not significant. Interestingly, urinary 11-β-HSD2 activity, a marker that has previously been reported in associated with maternal age at exposure, was positively correlated with site 6 methylation (r=.376, n=50, p=.007). The importance of maternal exposure in childhood as an influencer of preconception biology implicates developmental programming in both mother and offspring. The directional difference in FKBP5 site 6 methyaltion and 11-β-HSD2 activity between Holocaust survivors and their offspring also suggests that epigenetic changes may reflect a possible accommodation to a long-lived effect of maternal developmental exposure.

## Research Study Quality Determines the Reported Impact of the Holocaust on Children of Survivors

(Assess Dx, Intergen, Adult, M, Global)

**Lindert, Jutta, PhD, MPH**
*University of Emden, Emden, Germany*

While the mental health consequences of surviving the Holocaust are well established, there is controversy about whether such effects are seen in children of survivors. We systematically evaluated findings from studies of the mental health of children of survivors of the Holocaust. We systematically reviewed studies from five electronic databases that used an observational quantitative study design and included: (i) exposure to the Holocaust; (ii) mental health outcomes; (iii) validated instruments; (iv) and statistical tests of associations. The quality of the selected studies was appraised using a newly developed quality assessment tool for genocide studies for evaluating Holocaust and mental health studies. Results: From 3,352 retrieved records, 18 met the eligibility criteria with heterogeneous quality. Data from the high quality studies with random sampling methods suggest that there are no statistically significant differences in the mental health of adult children of survivors offspring compared to non-survivors. However, a dearth of high quality studies with random samples and research on predictor variables on offspring of genocide survivors exists. Further high quality studies on this population are necessary and timely. Conclusion: There is an urgent need to agree on high quality research designs to study the increasing number of individuals affected by mass violence and the potential effects on their offspring.

## A Question of Who, not If: Psychological Disorders in Holocaust Survivors' Children

(Assess Dx, Intergen, Lifespan, M, Global)

**Danieli, Yael, PhD**[1]; Norris, Fran, PhD[2]
[1]*Director of the Group Project for Holocaust Survivors and their Children, New York, New York, USA*
[2]*Dartmouth Medical School; National Center for PTSD, White River Junction, Vermont, USA*

Objective: Given the inconsistent findings on the mental health of Holocaust survivors' offspring, we aimed to identify factors predicting their mood or anxiety disorders. Method: Using a web-based survey and structured clinical interviews with adult offspring, we attempted to predict disorders from 1) offspring's circumstances, 2) perceptions of parents' posttrauma adaptational styles (intrafamilial and interpersonal psychological, social and behavioral coping, mastery and defense mechanisms used by each parent), and 3) self-reported reparative adaptational impacts (offsprings' self-reported insecurity about their own competence, reparative protectiveness, need for control, obsession with the Holocaust, defensive psychosocial constriction, and immature dependency). Results: Generalized anxiety was most frequent, followed by major depression and PTSD. Two variables predicted these disorders: participants' age and reparative adaptational impacts. Parents' styles were correlated with the presence of disorder, but had no effect when the child's reparative impacts were controlled. The age effect fits epidemiologic research showing less disorder in older cohorts. Reparative impacts severity was the strongest predictor (OR = 5.3) of the disorders. When reparative impacts were low, frequency of disorder was low (8%); when reparative impacts were high, frequency of disorder was high (46%). Conclusion: Reparative adaptational impacts could guide clinicians treating disorders in children of survivors.

## Symposium
## Thursday, November 9
## 4:30 PM to 5:45 PM
## Salon 4/9
## Military Track

## The Long-term Complexities of War Captivity's Aftermath: From Biological Cells to the Family System

(Self-Care, Bio Med-Fam/Int-Torture-Mil/Vets, Adult, A, Industrialized)

**Solomon, Zahava, PhD**[1]; Figley, Charles, PhD[2]
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[2]*Tulane University, New Orleans, Louisiana, USA*

Four experienced researchers present findings from a three-decade longitudinal investigation of Israeli former prisoners of war (ex-POWs) and comparable non-captive combat veterans from the 1973 Yom Kippur War, their wives, and offspring. The veterans were assessed 18, 30, 35 and 42 after the war, their wives were assessed 30 and 37 after the war, and the offspring were assessed 40 years after the war. As a whole, the symposium addresses both biological and familial complexities emanating from the traumatic episode. Working from the inside out, the symposium first presents findings indicating the long-term implications of post-captivity PTSD and depression for ex-POWs' telomere length. The findings point to the wear-and-tear effect of long-term depression, but not PTSD, for telomere length, thus underscoring mechanisms of premature senescence among ex-POWs. Addressing the ripples of trauma surging from the epicenter of the primary victims to their family, the symposium then addresses the long-term effects of captivity for the veterans' offspring and spouses. In this context, the role of offspring personality traits play in their susceptibility to secondary traumatization is demonstrated. Specifically, the findings indicate that neurotic offspring may more vulnerable in the face of their fathers' posttraumatic stress. Taking an additional step away from the primary trauma and adopting a family system perspective, the complex interplay of factors within the marital relationship (i.e., dyadic disclosure, domestic abuse and couple forgiveness) and their implications for both spousal and offspring distress are considered. Findings indicate that ex-POWs' wives' psychiatric symptoms may be implicated by domestic abuse over and above the secondary exposure to captivity. Moreover,

depending on the degree of domestic violence, couple forgiveness predicted increments or declines in spousal distress. Finally, when considering both parents' traumatization in relation to offspring traumatization, findings indicate that the mothers'/wives' PTSS but not the fathers'/veterans' directly predicted offspring symptoms. Offspring's symptoms were also implicated by the mothers' disclosure but not the fathers', and the intergenerational transmission of trauma from the veterans was mediated by the parents' marital relationship. Taken together, these findings underscore the complexity of war captivity's disruptive aftermath as a more comprehensive clinical picture emerges. Concomitantly, clinical implications and future research directions are charted in light of the emerging significance of the family system in the complex long-term ramifications of captivity.

## A Systemic Approach to Intergenerational Transmission of Trauma: The Role of Parental Posttraumatic Stress, Marital Adjustment, and Self-disclosure

(Practice, Fam/Int-Mil/Vets-Aging-Intergen, Adult, A, Industrialized)

**Bachem, Rahel, PhD**; Solomon, Zahava, PhD; Levin, Yafit, PhD
*Tel Aviv University, Tel Aviv, Israel*

Research indicates that posttraumatic stress symptoms (PTSS) induced by war trauma may be transmitted to veterans' wives and offspring. Nevertheless, the interplay between family members has not been accounted for in such processes. Taking a family systems perspective (Minuchin, 1974), this presentation will focus on the role that wives' secondary traumatic symptoms (STS) play in trauma transmission to offspring. Furthermore, the implication of aspects in the marital relationship, namely marital quality and dyadic self-disclosure, will be examined in the consideration of the parent-child transmission. Seventy-nine triads of combat veterans and former prisoners of war, their spouses, and adult offspring were investigated. Parents were assessed in 2003 and 2008-10, offspring were assessed in 2013-14. A multiple-step mediation analysis was conducted to test long-term associations of study variables. Findings indicate that the wives' STS, but not the fathers' PTSS, directly predicted offspring's STS. Likewise, dyadic self-disclosure of the mothers, but not the fathers, predicted offspring's STS. Surprisingly, more maternal self-disclosure predicted offspring's higher STS. Finally, aspects of the parents' marital relationship mediated the intergenerational transmission of trauma only from fathers, but not from mothers. The clinical implications of these findings will be discussed.

## The Implications of War Captivity and Long-term Psychopathology Trajectories for Telomere Length

(Bio Med, Depr-Health-Mil/Vets-Aging, Older, A, Industrialized)

**Tsur, Noga, PhD**[1]; Solomon, Zahava, PhD[1]; Levin, Yafit, PhD[1]; Uziel, Orit, PhD[2]; Lahav, Meir, MD[2]; Ohry, Avi, MD[1]
[1]*Tel Aviv University, Tel Aviv, Israel*
[2]*Rabin Medical Center, Petah Tikva, Israel*

War captivity is one of the most severe man-made traumas. Though the detrimental psychological ramifications of captivity, including depression and posttraumatic stress disorder (PTSD), have been extensively investigated; the investigation of biological ramifications of captivity, especially when accompanied by long-term psychopathology is in its infancy. Of particular interest is the person's telomere length, which indicates premature senesces. This presentation will report findings from a study that examined the implications of war captivity and subsequent long-term depression and PTSD trajectories for telomere length. Ninety-nine former prisoners of war (ex-POWs) from the 1973 Yom Kippur War were evaluated for depression and PTSD at 18, 30, 35 and 42 years after the war. Data on leukocyte telomere length of ex-POWs and 79 controls was collected 42 years after the war. Results: Ex-POWs had shorter telomeres compared to controls (Cohen's d=.5). Ex-POWs with chronic depression had shorter telomeres compared to those with delayed onset of depression (Cohen's d=4.89), and resilient ex-POWs (Cohen's d= 3.87). PTSD trajectories were not implicated in telomere length (Partial eta$^2$=.16 and p=.11). These findings point to the wear-and-tear effect of long-term depression, but not PTSD, for telomere length. Implications of these findings will be discussed.

## The Role of Forgiveness in Moderating Secondary Traumatization and Domestic Violence in a Longitudinal Study of Wives of Former Prisoners of War

(Clin Res, Mil/Vets-Gender, Adult, A, Industrialized)

**Siegel, Alana, PsyD**; Lahav, Yael, PhD; Solomon, Zahava, PhD
*Tel Aviv University, Tel Aviv, Israel*

Wives of former prisoners of war (ex-POWs) are at high risk for secondary traumatization. Moreover, reenacting captivity, ex-POWs might direct violence towards their wives. Hence, ex-POWs' wives might be secondary survivors of war captivity and direct sufferers of domestic abuse. Forgiveness towards the other is claimed to have a healing effect. This study investigated the role of frequency and type of domestic abuse and the moderating effects of forgiveness on emotional and somatic distress among wives of traumatized ex-POWs. Wives of ex-POWs' (n=143) and controls (n=102) were assessed twice in a longitudinal study. Frequency of inflicted domestic abuse and wives' forgiveness towards spouses was first assessed. Wives' emotional and somatic distress was later assessed. Results showed that ex-POWs' wives suffered from more domestic abuse, psychiatric symptoms, and somatic complaints. Domestic abuse was linked to elevated distress beyond the effect of indirect exposure to war captivity. Type and frequency of domestic abuse moderated the effects of forgiveness on distress. Among participants with low levels of physical violence, forgiveness predicted reduced distress; high levels of physical violence and low levels of psychological violence, forgiveness predicted elevated distress. Forgiveness had a non-significant effect among participants with high levels of physical and psychological violence.

## The Role of Offspring's Personality Traits in the Intergenerational Transmission of Posttraumatic Stress Symptoms: The Case of Veterans' Offspring

(Self-Care, Fam/Int-Mil/Vets, Adult, A, Industrialized)

**Stein, Jacob, PhD**[1]; Levin, Yafit, PhD[1]; Zerach, Gadi, PhD[2]; Solomon, Zahava, PhD[1]
[1]*Tel Aviv University, Tel Aviv, Israel*
[2]*Ariel University, Ariel, Israel*

Combat veterans and former prisoners of war (ex-POWs) are susceptible to posttraumatic stress symptoms (PTSS). Research indicates that the ramifications of trauma are not limited to the primary victim, but may also manifest among their offspring. The mechanisms underlying this intergenerational transmission of trauma, however, are only partially understood. Thus, the role that offspring's personality traits might play in explaining individual differences remains uninvestigated. The current presentation reports findings from a study that examined veterans' offspring's Big Five personality traits, PTSS and global psychiatric distress (GD) in relation to their fathers' posttraumatic symptomatology. One hundred and twenty three dyads of fathers (79 ex-POWs and 44 combat veterans) and their adult offspring were examined. Fathers' PTSS and GD were assessed 30 and 35 years after the war, and offspring's PTSS, GD, and Big Five personality traits were assessed 40 years after the war. Mediation and moderation effects were tested. Analyses revealed that among ex-POWs' offspring, Neuroticism mediated the link between father's and offspring's PTSS and GD. Moreover, Openness to experience and Extraversion moderated the detrimental link between fathers' and offspring's psychiatric outcomes. The presentation will conclude with implications for clinical family intervention and future research.

## Symposium
## Thursday, November 9
## 4:30 PM to 5:45 PM
## Salon 5/8
## Biological/Medical Track

# Advancing Diagnostic Biological Markers for PTSD: Findings from the Cohen Veterans Center Study

(Bio Med, Assess Dx-Health-Illness-Neuro, Adult, M, Industrialized)

**Marmar, Charles, MD**
*New York University School of Medicine, New York, New York, USA*

The purpose of the Cohen Veteran Study is to accelerate research related to the discovery of biological, neurological and neuroimaging markers for Posttraumatic Stress Disorder (PTSD), as well as Traumatic Brain Injury (TBI) and depression. The identification of biomarkers will aid in the advancement of objective assessment and diagnosis of PTSD, TBI, and depression, improve understanding and prediction of the disease course, and help with the selection of treatment. This study includes many different sub-groups of veterans: with and without warzone exposure, and with and without PTSD (based on the Clinician Administered PTSD Scale for DSM-5), TBI, and depression. Study procedures related to biomarker assessment include brain imagining, blood sample collection and audio recording of speech. Presentations will address the following topics: 1) brain network basis of PTSD-associated cognitive dysfunction; 2) development of blood biomarkers for PTSD and TBI; 3) use of speech features to assess PTSD and TBI; 4) association between hippocampal function and PTSD.

# Connectomics and Cognition Define a Treatment-Resistant Form of Post-Traumatic Stress Disorder

(Bio Med, Bio Med-Neuro, Adult, M, Industrialized)

Etkin, Amit, MD PhD[1]; **Marmar, Charles, MD**[2]
[1]*Stanford University/Palo Alto VA, Palo Alto, California, USA*
[2]*New York University School of Medicine, New York, New York, USA*

Mechanistic understanding of psychiatric disorders has been hampered by extensive clinical and biological heterogeneity and heavy reliance on subjective symptoms. We investigated whether an individual-difference characterization of post-traumatic stress disorder (PTSD), focused on core information processing impairments, could reveal objectively-identifiable, clinically and mechanistically-relevant biophenotypes within the larger clinical syndrome. A quarter of PTSD patients in two cohorts displayed both impaired intrinsic resting network connectivity and verbal memory, which replicated despite substantial differences between the samples. This phenotype predicted profound treatment resistance to psychotherapy, the best-validated PTSD treatment, and differentiated these patients from those with clinically-similar conditions. We then identified specific causal circuit dysfunction contributing to this phenotype using focal non-invasive transcranial magnetic stimulation and neuroimaging. These findings ground objective parcellation of clinically-relevant PTSD subgroups in neuroscience and basic cognitive functions, and promote transition from descriptive approaches at psychopathology to causal ones.

# Novel Candidate Blood Biomarkers for PTSD

(Bio Med, Assess Dx-Bio Med-Bio/Int-Mil/Vets, Adult, M, Industrialized)

**Fossati, Silvia, PhD**
*New York University School of Medicine, New York, New York, USA*

The development of blood biomarkers for PTSD is an extremely critical area of research. Easily detectable blood biomarkers are needed for diagnostic purposes, to establish therapeutic efficacy, to better understand the biology underlying the disease, and to differentiate PTSD endophenotypes or subtypes. We analyzed biologically-driven blood biomarkers in a Cohort of Iraq and Afghanistan combat veterans and civilians recruited at the NYU Cohen Veteran Center. All subjects underwent fasting blood draws. Blood was processed following best practices for biomarkers analysis. Biomarkers in plasma and serum samples were tested in PTSD, TBI, PTSD + TBI and control subjects. Proteins, peptides and hormones chosen as candidate biomarkers were part of pathways involved in cerebral and metabolic stress and neurodegeneration, which are reported to be altered in PTSD and/or TBI patients. These pathways included cerebral and systemic inflammation, HPA

(hypothalamic-pituitary-adrenal) axis deregulation and neurodegeneration/cognitive dysfunction. Comorbidity with depression and alcohol use were considered in the analysis. Novel potential biomarkers for PTSD were identified among the targets analyzed, reaching AUC 0.75 to separate Controls from PTSD and 0.82 to separate PTSD from TBI with a single molecule.

## Anterior Hippocampal Connectivity Predicts PTSD Symptoms in Veterans

(Bio Med, Bio Med-Bio/Int-Mil/Vets-Neuro, Adult, M, Industrialized)

**Blessing, Esther, PhD, MD**[1]; Chen, Jingyun, PhD[1]; Durkin, Kathleen, PhD[2]; Abu-Amara, Duna, MPH[1]; Newman, Jennifer, PhD[3]; Etkin, Amit, MD PhD[4]; Marmar, Charles, MD[1]
[1]*New York University School of Medicine, New York, New York, USA*
[2]*New York University Langone Medical Center, New York City, New York, USA*
[3]*New York University Langone Medical Center, Department of Psychiatry, New York, New York, USA*
[4]*Stanford University/Palo Alto VA, Palo Alto, California, USA*

Objective: Hippocampal dysfunction is a candidate biological feature of posttraumatic stress disorder (PTSD): key domains that are impaired in PTSD, including contextual learning and regulation of anxiety related behaviors, depend in animal models upon hippocampal functional connections with brain regions including the amygdala and medial prefrontal cortex. Notably, relevant hippocampal function is subregionally specialized along the anterior-posterior hippocampal axis. Functional magnetic resonance (fMRI) resting state functional connectivity (rs-fc) is a sensitive method for revealing alterations in anatomical and functional neuronal connectivity in human, however few studies have examined hippocampal-brain fc in PTSD with a subregionally detailed approach. Methods: We utilized a sample of 275 male veterans aged 18-60 years, including 130 veterans with PTSD and 145 healthy controls with no lifetime history of PTSD. PTSD symptomatology was assessed by the Clinical Administered PTSD Scale (CAPS). Subregional hippocampal fs-fc was assessed using two complimentary measures, namely masked hippocampal independent component analysis using a dimensionality of 10, and a masked hippocampal voxel-wise connectivity approach. We compared resulting rs-fc between cases and controls, using non-parametric permutation testing, and in cases, assessed relationships between hippocampal rs-fc and PTSD symptom cluster scores (numbing, avoidance, arousal re-experiencing). Results: Preliminary findings suggest that PTSD is associated with reduced rs-fc between the anterior hippocampus and prefrontal regions, compared to controls; further, decreased anterior-hippocampal – medial prefrontal rs-fc predicted increased PTSD symptoms. Conclusions: These results support anterior-hippocampal rs-fc as marker of PTSD symptomatology.

## Using Speech Features to Assess the Status of a Patient that May be Suffering from PTSD or TBI

(Assess Dx, Depr-Health-Mil/Vets, Adult, M, Industrialized)

**Vergyri, Dimitra, PhD**[1]; Tsiartas, Andreas, PhD[1]; Smith, Jennifer, MA, MSc[1]; Marmar, Charles, MD[2]; Qian, Meng, PhD[2]; Li, Meng, MSc[2]
[1]*SRI International, Menlo Park, California, USA*
[2]*New York University School of Medicine, New York, New York, USA*

The objective of our work is to demonstrate that automatic speech analysis on a patient's audio recordings can be used to predict the subject's mental health state, i.e. PTSD, TBI or healthy. The recordings used for the study include 202 subjects: 50 with PTSD, 60 with TBI and 82 controls. PTSD vs control and TBI vs control categories were analyzed separately. We performed N-fold cross validation experiments with the majority class down sampled for each fold, to get equal class priors. The data were split into three equal and balanced data splits: feature section and training was performed on two thirds of the data and one third was used for validation. Results were averaged across 150 (50-folds x 3 splits) different validation sets. Our feature extraction pipeline capture a variety of speech features such as articulatory features, prosodic, spectral, temporal, speaker characteristics etc and includes short (frame level), segment level and session level statistics. We used a random forest (RF) classifier for prediction and explored different techniques for feature selection. The approach that worked best was using the two sample Wilcoxon rank sum test, and a strict P value threshold for feature selection. Averaging results across all folds achieved an AUC around 0.75 for PTSD and AUC around 0.7 for TBI.

**Symposium**
**Thursday, November 9**
**4:30 PM to 5:45 PM**
**Salon 6/7**
**Refugee Track**

## Key Idioms of Distress in South and Southeast Asia: Steps toward Culturally Sensitive Trauma Assessment and Intervention

(CulDiv, Cul Div-DV-Rape-Refugee, Lifespan, M, E Asia & Pac)

**Hobfoll, Stevan, PhD**
*Rush Medical College, Chicago, Illinois, USA*

Four researchers present cultural expressions of post-traumatic stress, or idioms of distress, found in highly traumatized populations in Cambodia, Vietnam, and India. Idioms reported by both children and adults are presented, and cultural expressions found between and across the respective regions are highlighted. Results illuminate specific idioms salient to the studied samples and indicate local expressions of distress as important indicators of symptomatology. The presentation provides recommendations for integrating idioms of distress into assessment and intervention development to optimize diagnostic and clinical efforts. Implications for local and global contexts are discussed.

## Idioms of Distress in Cambodian Children: A Step toward Culturally Sensitive Trauma Assessment and Intervention

(CulDiv, Assess Dx-CPA-Cul Div-DV, Lifespan, M, E Asia & Pac)

**Figge, Caleb, MS, PhD Student**[1]; Martinez-Torteya, Cecilia, PhD[1]; Taing, Sopheap, Assistant[2]; Chhim, Sotheara, MD[2]
[1]*DePaul University, Chicago, Illinois, USA*
[2]*Transcultural Psychosocial Organization Cambodia, Phnom Penh, Khan Sen Sok, Cambodia*

Cambodian youth experience high rates of trauma and post-traumatic stress, which significantly increase risk for a range of physical and mental health problems (Kinseth, 2009; Ministry of Women's Affairs, 2013). However, care providers often rely on Western-based nosology that does not take into account culturally-specific expressions of post-traumatic distress which hinders diagnostic accuracy and treatment effectiveness (Kohrt & Hruschka, 2010). To address this problem, the present study interviewed 30 caregivers of youth with trauma experiences and 30 youth with trauma experiences in the Battambang Province of Cambodia to identify local symptoms of distress, symptom severity, and impacted domains of functioning. Prevalent and severe idioms reported across and between youth and caregivers will be presented, as will their impact on youth domains of functioning. Next, we interviewed 20 mental health professionals working with traumatized youth in Cambodia to identify perceived causes and impact of idioms identified by youth and caregivers, the current state of childhood trauma treatment in Cambodia, and recommendations for mental health resource allocation. Study results highlight salient idioms of distress, unlikely to be captured by standard trauma assessments that should be incorporated into future diagnostic and clinical intervention efforts for those working with trauma-exposed Cambodian youth.

## Culturally Sensitive Assessment of Anxious-Depressive Distress in Vietnam: Avoiding Category Truncation

(Assess Dx, Anx-Assess Dx-Complex-Cul Div, Adult, M, E Asia & Pac)

**Hinton, Devon, MD, PhD**
*Harvard, Boston, Massachusetts, USA*

The presentation discusses what complaints are prominent in Vietnam beyond standard symptoms assessed by Western diagnostic instruments for anxiety and depression in a highly traumatized Vietnamese population. The Vietnamese Symptom and Cultural Syndrome Addendum (VN SSA) was used in a general survey (N = 1004) of five provinces in Vietnam. We found that the VN SSA items were highly and significantly correlated with a general anxious-depressive psychopathology factor (a composite measure of the General Anxiety Disorder-7; Posttraumatic Diagnostic Scale; and Patient Health Questionnaire-9). The item most highly correlated to anxious-depressive psychopathology was "thinking a lot" (r = .54), reported by 15.8% of the sample. Many other symptoms in the addendum also were prominent, such as orthostatic dizziness (i.e., dizziness upon standing up; r = .41), reported by

22.9% of the sample. By way of comparison, somatic complaints more typically assessed to profile Western anxious-depressive distress, such as palpitations, were less prominent (palpitations: r = .31, 7.1% of the sample). Study results suggest that to avoid category truncation when profiling anxious-depressive distress among Vietnamese that items other than those in standard psychopathology measures should also be assessed.

## Going in Cold: Identifying and Assessing Key Aspects of Distress among Trauma-Exposed Women from Indian Slums.

(Global, Cul Div-DV-Gender, Adult, M, S Asia)

**Patel, Anushka, PhD Student**; Kovacevic, Merdijana, MA, PhD Student; Newman, Elana, PhD
*The University of Tulsa, Tulsa, Oklahoma, USA*

**Background:** Despite high rates of trauma, including gender-based violence (GBV), in low-income countries such as India, a treatment and knowledge gap exists (Patel, 2007; Saxena et al., 2006). Indian cultural experiences of distress following trauma exposure warrant further examination. **Method:** Interviews with 45 trauma-exposed women from Indian slums were conducted, and then coded for idioms of distress. Phenomenological experience of distress was identified by coding idioms for cognitive, affective, behavioral, and physiological features. **Results:** Initially over 40 idioms emerged; Majority of idioms indexed basic universal emotion states (e.g. idioms alluding to fear, sadness, and anger) of fleeting duration or secondary emotions (e.g. guilt, shame, regret) of varying duration; (Ekman, 2007); some idioms indexed somatic distress, and others alluded to cognitive states (e.g. rumination, regret). Behavioral idioms of distress were also present (e.g. suicidal actions). One idiom - 'tension' – evinced cognitive, affective, physiological, and behavioral features; it appeared to be transdiagnostic and more chronic in nature. Tension may index a culturally unique syndrome, rather than a stand-alone idiom, as it is a complex phenomenological experience comprising varied and overlapping distress states. **Discussion:** Findings can increase awareness of colloquial expressions of distress in this group to assess non-stigmatizing clinical targets for treatment.

## Idiom of Distress in Female Survivors of Forced marriage and Gender-Based Violence during the Khmer Rouge Regime in Cambodia

(Clin Res, Clin Res-Cul Div-Health-Surv/Hist, Lifespan, M, E Asia & Pac)

**Taing, Sopheap, Assistant**
*Transcultural Psychosocial Organization Cambodia, Phnom Penh, Cambodia*

During the Khmer Rouge (KR) regime from 1975-1979, Cambodians faced a wide range of traumatic experiences, including executions, torture, forced labour, starvation, and family separation, among others. Notably, partially through the large-scale arrangement of forced marriages, sexual and gender-based violence (GBV) was widespread throughout Cambodia during the regime and has markedly impacted survivors' functioning and daily life in the years following (Anderson, 2004). A better understanding of post-traumatic distress in this population will help optimize treatment efforts for survivors of GBV in Cambodia. We conducted qualitative interviews with 30 female survivors of forced marriage under the KR regime to explore the survivors' descriptions of suffering and idioms of distress in regard to forced marriage and GBV experiences. Common themes and culturally-specific idioms of distress reported in the interviews will be presented, along with personal vignettes of GBV experiences during and after the KR regime. The presentation will discuss the interviewee responses in the context of Cambodian cultural stigma and norms, in informing contemporary GBV policy in Cambodia, clinical intervention recommendations, and the importance of culturally-sensitive assessment and treatment of GBV worldwide.

**Symposium**
**Thursday, November 9**
**4:30 PM to 5:45 PM**
**Monroe Room**
**Child Trauma Track**

## Traumatic Stress in Preschoolers: Novel Findings on Assessment, Outcomes, and Interventions

(Clin Res, Prevent, Child/Adol, M, Industrialized)

**Landolt, Markus, PhD**
*University of Zurich, Zurich, Switzerland*

Preschoolers are both at considerably high risk for exposure to trauma and experiencing adverse outcomes due to their developmental stage, their limited cognitive abilities, and their high dependence on caregivers. Although a high number of young children are affected by all kinds of trauma, our knowledge on the effects of traumatic exposure and treatment of mental health consequences in this young age group is still limited. With the introduction of a preschool-subtype of PTSD for children < 6 years in the DSM-5 there is now a growing number of studies with this neglected population. This symposium includes four presentations on assessment, outcomes, and early interventions in young children after interpersonal trauma and injury. The first presentation reports on the overlap between DSM-5 and proposed ICD-11 PTSD criteria in a sample of young foster care children after interpersonal trauma in Germany. The second presentation describes results from the EAR for Recovery study in Australia, an interesting new avenue to assess the consequences of trauma in the daily life of young children. The third and fourth presentations report on two aligned randomized controlled trials from Australia and Switzerland that examine the effects of the newly developed CARE intervention, an early intervention for young children after injury.

## Posttraumatic Stress Disorder in Young Children: Overlap between DSM-5 and ICD-11

(Assess Dx, Assess Dx-CPA, Child/Adol, M, Industrialized)

**Vasileva, Mira, PhD Student**; Petermann, Franz, PhD
*Center for Clinical Psychology and Rehabilitation, Bremen, Germany*

The DSM-5 includes criteria for posttraumatic stress disorder (PTSD) for preschool children, recognizing that their symptoms could manifest differently than in adults and combining avoidance and negative alterations in cognition and mood into one cluster. In contrast, based on current publications, there are no specifications for children planned in ICD-11 which focuses on re-experiencing, avoidance, and arousal and does not include alterations in cognition and mood. This study investigates the overlap in rates of PTSD in young children using DSM-5 and ICD-11 criteria. The sample consisted of 145 German children in foster care aged 3-7 years who experienced a potentially traumatic event. Foster parents' ratings on the Young Child PTSD Checklist (Scheeringa, 2013) were used to calculate algorithms for DSM-5 and ICD-11. Overlaps were investigated using McNemar's tests and Kappa. Discrepancies were analyzed considering symptom combinations. The rates of PTSD were 26.9% using DSM-5 and 13.1% using ICD-11 ($\kappa$=0.54, McNemar's $p<.05$). When symptoms of negative alterations in cognition and mood were excluded from the DSM-5 algorithm, there was an overlap in 95.2% of the cases ($\kappa$=0.81, McNemar's $p>.05$). Therefore, DSM-5 shows greater developmental sensitivity for young children which can be explained by combining the avoidance and the negative alterations in cognition and mood clusters.

## Preschoolers' Interactions with Parents following Injury: The EAR for Recovery Study

(Res Meth, Acc/Inj-Fam/Int-Res Meth, Child/Adol, M, Industrialized)

**Conroy, Rowena, PhD**[1]; Gunaratnam, Shaminka, BA (Hons)[2]; Barrett, Anna, PhD[2]; Mehl, Matthias, PhD[3]; Jowett, Helen, BSc[1]; Babl, Franz, MD, MPH[1]; McClure, Rod, PhD[2]; Bressan, Silvia, MD[1]; Anderson, Vicki, PhD[1]; Alisic, Eva, PhD[2]
[1]*Royal Children's Hospital, Melbourne, VIC, Australia*
[2]*Monash University, Melbourne, VIC, Australia*
[3]*University of Arizona, Tucson, Arizona, USA*

Parent-child conversations provide potential opportunities to promote young children's adjustment following trauma. There is a need, however, to better understand how these conversations unfold in daily life; this study used a novel methodology to achieve this. Participants were eighteen 3- to 7-year-olds who had been hospitalised following an accidental injury, and their families. Children wore the Electronically Activated Recorder (EAR); this device audio-recorded 30-second snippets every 5 minutes for 2 days post-discharge. Interactions were transcribed and coded according to activity, conversation partner, emotional tone, and topic (injury/non-injury). On average, 58.5% (SD=12.9%) of children's wake-time was spent interacting with others, with considerable variation across families. Children interacted most often with mothers (M=30.0% of wake-time, SD=12.9%), followed by siblings (M=29.0%, SD=19.6%), and fathers (M=16.3%, SD=12.5%). Absolute amount of injury-talk was also greatest with mothers, but there were no differences across mothers/fathers in the proportion of total talk that was injury-related. The EAR represents a feasible and useful methodology for capturing direct observational data about young children's everyday interactions following trauma, mitigating some of the challenges associated with gathering retrospective/self-report data for this population. Case examples highlighting the scope of this methodology will be presented, and implications for promoting children's recovery post-trauma discussed.

## Prevention of Post Trauma Reactions in Young Injured Children: Preliminary Results from the CARE Intervention RCT in Australia

(Clin Res, Acc/Inj, Child/Adol, M, Industrialized)

**De Young, Alexandra, PhD**[1]; Kenardy, Justin, PhD[2]; Kimble, Roy, MD[2]
[1]*University of Queensland, Southbank, QLD, Australia*
[2]*The University of Queensland, Herston, QLD, Australia*

Traumatic injury is common during early childhood and around 10-30% of young children will experience distressing and persistent psychological morbidity. This presentation will present preliminary results from an Australian randomized control trial evaluating the Coping with Accident Reactions (CARE) early intervention. CARE is designed to prevent traumatic stress reactions in young injured children. 405 children (aged 1-6 years) were screened for PTSD risk 6-8 days post injury. Parents of 'high-risk' children (M age=3.30y; SD=1.76) were randomized to receive the CARE Intervention (n = 24) or treatment as usual (n = 25) and completed baseline (9-11 days), 3- and 6-month assessments. Preliminary analyses found a medium effect size for change in PTSD symptom severity scores from baseline to 3-months (Cohen's d=.59). There was a greater reduction in scores for the intervention (M = 22.83 to 11.46 vs M = 17.84 to 14.12), although this did not reach statistical significance (p = .09). No significant group differences were found on the Child Behavior Checklist. Analyses for 6-month outcome data will also be presented. The preliminary findings from this RCT are promising as they indicate that CARE is feasible to deliver, well-received and could have positive effects in preventing the development of PTSD in this neglected population.

## Preventing Posttraumatic Stress in Young Children after Burns: Preliminary Results from the CARE Intervention RCT in Switzerland

(Clin Res, Acc/Inj-Clin Res, Child/Adol, M, Industrialized)

Haag, Ann-Christin, MSc; **Landolt, Markus, PhD**
*University of Zurich, Zurich, Switzerland*

Accidental injuries are frequent among preschoolers, with around 10-30% developing posttraumatic stress disorder (PTSD) and other comorbidities. There is no research about how symptoms could be prevented by early psychological interventions. The present study therefore aimed at developing and evaluating an early intervention (CARE: Coping with Accident Reactions) to reduce posttraumatic morbidity in young injured children. The CARE intervention is provided to the parents and includes psychoeducation, coping skills, parenting competencies, and a trauma narrative. 164 children (Mean age=2.14y; SD=0.89; range 1-4y) were screened for risk 6-8 days after a burn injury. Forty-six were randomized to the CARE intervention or treatment as usual. Outcomes were assessed 9-11 days (T1 Baseline), three (T2) and six months (T3) post-accident. The intervention group showed a larger decrease of PTSD severity from T1 to T2 than the control group (p=.06), with a medium effect size (Cohen's d=.63). Group differences regarding child behavior problems from T1 to T2 did not reach significance. Effect sizes were medium (total d=.58; internalizing/externalizing behavior d=.61/d=.51). Analyses for T3 will be presented at the conference. Preliminary results are promising as they suggest that the CARE intervention is an effective and economic preventative procedure to reduce posttraumatic morbidity in young children.

## Panel Presentation
## Thursday, November 9
## 4:30 PM to 5:45 PM
## Crystal Room
## Military Track

## Strengthening the Services and Resources Available to Veterans with Posttraumatic Stress and Associated Conditions: Understanding the Landscape of Care and the Role of Public-Private Partnerships

(Train/Ed/Dis, Comm/Int-Mil/Vets, Prof, I, Industrialized)

**McCaslin, Shannon, PhD**[1]; **Farmer, Carrie, PhD**[2]; **Kelly, Kacie, MHS**[3]
[1]*National Center for PTSD – Dissemination and Training Division, VA Palo Alto Health Care System, Menlo Park, California, USA*
[2]*RAND Corporation, Pittsburgh, Pennsylvania, USA*
[3]*Department of Veteran Affairs, Washington, District of Columbia, USA*

In this panel, we will focus on the current state of public-private collaborations and partnerships and their impact on support for veterans with posttraumatic stress and associated conditions. With increasing numbers of community organizations providing services to Veterans, it is imperative that connections are forged between these organizations and public agencies such as the Department of Veterans Affairs (VA). Such partnerships promote exchange of information and create a stronger network of support for veterans seeking behavioral health care and resources. In particular, understanding the training and support needs of behavioral health providers serving veterans in their communities and leveraging existing resources within public agencies can facilitate the development of a more comprehensive and robust support network. Recent research conducted by the RAND Corporation has shed light on the landscape of the training and support needs of behavioral health providers serving veterans in the community. These findings, efforts to meet the needs expressed, and actions taken to create a stronger national network through public-private collaborations and partnerships will be reviewed and discussed.

## Panel Presentation
## Thursday, November 9
## 4:30 PM to 5:45 PM
## Adams Room
## Assessment and Diagnosis Track

### Should Posttraumatic Stress Disorder be Classified as a Systemic Illness, Not a Mental Disorder? Implications for Clinical Practice

(Assess Dx, Acc/Inj-Bio Med-Clinical Practice-Illness, N/A, A, Global)

**McFarlane, Alexander, MD**[1]; **van der Kolk, Bessel, MD**[2]; **Vermetten, Eric, MD, PhD**[3]; Hoge, Charles, MD[4]
[1]*The University of Adelaide, Adelaide, South Australia, Australia*
[2]*Trauma Center at Justice Resource Institute, Brookline, Massachusetts, USA*
[3]*Centrum '45 Arq / Leiden University Medical Center, Leiden, ZH, Netherlands*
[4]*Walter Reed Army Institute of Research (WRAIR), Silver Spring, Maryland, USA*

This panel will summarise the substantial and accumulating body of research evidence about the extensive psychophysiological and somatic comorbidities of posttraumatic stress disorder (Pacella et al, 2013). This body of knowledge will be discussed with the proposal that there is a need to reconceptualise PTSD as a full systemic disorder (Lohr et al, 2105) rather than a disorder confined to the mind, as this primary psychological focus has distracted from the extent of somatic morbidity in PTSD. Discussion of current treatment approaches to PTSD will address the need to take an integrated oversight and develop management strategies that address the commonality of aetiology of the physical and psychological dimensions of PTSD. This need for innovative treatment approaches is highlighted by the limited effectiveness of evidence-based psychological interventions in PTSD, particularly in veteran populations (Steenkamp et al, 2015). A novel staging strategy will be presented to better clarify the sequence of the emergence of the psychological symptoms and somatic pathology in PTSD (McFarlane et al, 2107). Data from longitudinal studies of deployed military populations will be presented to exemplify this approach. The application of this strategy to develop prevention strategies for the emergency service and military personnel will be discussed.

## Workshop Presentation
## Thursday, November 9
## 4:30 PM to 5:45 PM
## Salon 2
## Treatment Track

### Addressing Language Barriers in the Treatment of Trauma-Exposed Latino Patients

(CulDiv, Acute-Chronic-Clinical Practice-Ethnic, Adult, I, Industrialized)

**Westphal, Maren, PhD**
*Pace University, Pleasantville, New York, USA*

Language barriers present a major reason for underutilization of mental health services among Latino immigrants in the United States. Given demographic changes, clinicians need to acquire specialized knowledge and skills to address the needs of this growing and underserved population. Continuing education programs in this area have tended to focus on theoretical or experiential aspects of cultural competency such as increasing cultural awareness. This workshop combines a cultural competency framework for treating trauma-exposed monolingual and bilingual patients with teaching practical strategies for communicating more effectively with patients who have limited or no English language proficiency. Drawing on her clinical experience conducting psychological assessments and conducting cognitive-behavioral therapy with Spanish-speaking patients in clinical (Bellevue Hospital and Mount Sinai/St Luke's Roosevelt Hospital Center) and research settings (the Anxiety Disorders Clinic at New York State Psychiatric Institute) as well as extensive experience teaching graduate courses on social and cultural foundations of counseling, the presenter will discuss challenges in conducting CBT for PTSD with monolingual and bilingual ethnically diverse patients and provide practical suggestions for incorporating ongoing training in a second or third language into one's daily life in the face of competing demands on time and resources. Finally, the presenter will provide research evidence and clinical anecdotes that illustrate the potential benefits of clinicians' ongoing efforts to improve foreign language and cultural

competency skills for strengthening the treatment alliance by communicating respect for patients' cultural heritage.

# Friday, November 10

## Keynote Address
## Friday, November 10
## 8:50 AM to 9:50 AM
## Grand/State Ballroom

### Etiologic Research in Psychiatry: An Historical and Conceptual Analysis
(Assess Dx, Clin Res-Complex, Adult, M, Global)

**Kendler, Kenneth, MD**
*Virginia Institute for Psychiatric and Behavioral Genetics, VCU, Richmond, Virginia, USA*

I provide a conceptual and historical review of the approach taken to the etiology of psychiatric illness. Throughout our history, psychiatry has striven for mono-causal theories – that one major risk factor is responsible for our disorders. Framed in another way, this claim has been that one explanatory perspective in psychiatry is and should be pre-eminent. I provide a few examples of such claims which have largely or entirely failed. I then advocate for the position that psychiatric disorders are inherently multi-factorial and review empirical support for this position. Our disorders are multifactorial in two senses – they involve many levels of explanation and within levels many risk factors. But the situation is even more complex as we have good evidence for interactions between levels and for causal loops which are especially relevant for disorders like PTSD. I explore the implications of this position for our conceptual approach and research agenda. I suggest that we need to adopt explanatory pluralism in our research efforts and support research programs that are able to examine at the same time, multiple levels of causal factors. The implications for this position for reductionist versus emergent theories of psychiatric illness is also explored. Finally, I comment of what this approach might mean for the relationship between explanation and understanding in the clinical approach to our patients and argue that human meaning, an irreducible feature of the human condition, has to play a significant role in most of our etiological models.

# Concurrent Session Five

## Master Methodologist
## Friday, November 10
## 10:15 AM to 11:30 AM
## Grand/State Ballroom

### A Network Perspective on Psychopathology: Theory, Methods, and its Potential Implications for Thinking about Resilience and Vulnerability

(Res Meth, Res Meth-Tech-Train/Ed/Dis-Theory, Lifespan, I, Global)

**Cramer, Angélique, PhD**
*Tilburg University, Tilburg, Netherlands*

From a network perspective, a mental disorder (e.g., depression), is the potential consequence of symptoms that interact with one another in a network structure. For example, someone loses his job, which causes him to develop sleep problems. The sleep problems, over time, cause fatigue while the fatigue causes concentration problems. The concentration problems, in turn, cause feelings of guilt, which trigger depressed mood: (insomnia -> fatigue -> concentration problems -> feelings of guilt -> depressed mood) => major depressive episode. In this talk I will, firstly, elaborate on *network theory* as a novel way of thinking about mental health disorders. Secondly, I will explain some of the state-of-the-art *methods* with which one can estimate network structures. Thirdly, I will discuss the potential implications of a network perspective on thinking about *vulnerability* and resilience. Specifically, I will discuss the possibility that vulnerability is associated with strong symptom-symptom interactions. That is, a network of depressive symptoms that is strongly connected appears to be, when put under stress, more vulnerable to developing a depressive episode than a network of depressive symptoms with relatively weak connections. I will conclude my talk by discussing some of the challenges that the network perspective in general faces in the near future.

## Symposium
## Friday, November 10
## 10:15 AM to 11:30 AM
## Salon 3
## Assessment and Diagnosis Track

### Complexity in Assessment: Objectivity in Novel Development and Validation of Measures in PTSD Populations

(Assess Dx, Comm/Int-Res Meth, Adult, M, Industrialized)

**DeBeer, Bryann, PhD**; Castillo, Diane, PhD
*VA VISN 17 Center of Excellence for Research on Returning War Veterans, Waco, Texas, USA*

Significant progress has been made in the development and validation of both clinician administered and self-report assessment instruments for post-traumatic stress disorder (PTSD). The goal of this symposium is to move beyond these standards of practice and describe cutting edge research focusing on objectivity in assessment of PTSD symptoms and related functional outcomes. Study 1 describes the development of a novel web based system which uses natural language processing and machine learning techniques to conduct transcription and phonetic coding of clinical interviews for PTSD. Potential implications include improving diagnostic assessment of PTSD and providing objective data regarding treatment progress. Study 2 describes a newly developed instrument which assesses PTSD related behaviors within the context of social interaction. The purpose of this measure is to examine behaviors related to PTSD symptoms (e.g., guarded posture) as a root cause of social functioning deficits in this population. This measure may aid in identifying new treatment targets for intervention. Study 3 seeks to validate a new method of objectively rating social functioning deficits in PTSD populations. In this method, raters evaluate a 30 second clip or “thin slice” of behavior and then indicate their willingness to engage with the participant as a measure of social rejection. This method provides collateral reports of social functioning in individuals diagnosed with PTSD. Study 4 takes an objective approach at examining discrepancies across gold-standard clinician administered and self-report measures in several

symptoms domains, including PTSD, and across multiple populations of firefighters. Overall, presentations will focus on the theme of using objective indicators of assessment in order to improve and build upon current assessment practices. The implications of these findings for clinical practice will be discussed.

## Mining Audio Cues from PTSD Interviews (MACPI)

(Tech, Assess Dx-Tech-Mil/Vets, Adult, M, N/A)

**Marx, Brian, PhD**[1]; Hu, Qian, PhD[2]; Dunn King, Trish, PhD[2]
*[1]National Center for PTSD, VA Boston Healthcare System and Boston University, Boston, Massachusetts, USA*
*[2]The MITRE Corporation, Bedford, Massachusetts, USA*

Mining Audio Cues from PTSD Interviews (MACPI) is a web based prototype system designed and developed to assist clinicians in conducting diagnostic analysis of PTSD interviews. It enables automatic transcription and phonetic indexing of the interview recordings so that the interview recordings can be accessed and analyzed with search and retrieval for systematic, quantitative, and correlational analysis. The interviews can be conducted in the office or via telephone and the recordings can be analyzed anywhere anytime repeatedly after the interview over the web with security-controlled access to data and the tool. Through natural language processing and machine learning algorithms, the system automatically detects and flags keywords and expressions that may identify individuals with PTSD. The prototype system will also detect and extract key prosodic features of speech (e.g., speech rate estimation, pause pattern, and variations of speech patterns). These non-lexical audio cues, combined with the lexical items in the interview, may assist clinicians in identifying certain mental or psychological states or processes and perhaps even confirm PTSD diagnosis. The MACPI prototype system has great potential to provide a systematic and objective means by which clinicians can measure and compare patients' speech content, as well as prosodic characteristics accompanying the lexical content during PTSD interviews. This innovative tool will improve the efficiency, consistency, and accuracy of PTSD diagnosis with repeatable analysis and evidence. It will also give clinicians another method by which they can systematically monitor the treatment progress of their PTSD patients. In this presentation, we will provide an overview of the system and offer preliminary results from an ongoing study that is examining MACPI's performance.

## The Development and Initial Validation of the Measure to Assess PTSD-related Social Behavior (MAPS)

(Assess Dx, Res Meth-Mil/Vets, Adult, M, Industrialized)

**DeBeer, Bryann, PhD**[1]; Kimbrel, Nathan, PhD[2]; Meyer, Eric, PhD[1]; Castillo, Diane, PhD[1]; Kittel, Julie, MA[3]; Morissette, Sandra, PhD[4]
*[1]VA VISN 17 Center of Excellence for Research on Returning War Veterans, Waco, Texas, USA*
*[2]Department of Veterans Affairs Medical Center, Veterans Integrated Service Network (VISN) 6 Mental Illness Research, Education and Clinical Center (MIRECC), Durham, North Carolina, USA*
*[3]University of Rochester, Rochester, New York, USA*
*[4]The University of Texas at San Antonio, San Antonio, Texas, USA*

Development of gold-standard posttraumatic stress disorder (PTSD) assessments represents a substantial advancement in the field. The next step is to capture how PTSD symptoms precisely affect social functioning. However, no validated measures exist to assess observable behavioral symptoms of PTSD (e.g., guarded posture); though measures that assess behavioral symptoms in other populations have proven useful to study social functioning (Kosson et al., 1997; 2008). It is vital to quantify these PTSD-related behaviors as they may provide new information relating to social functioning deficits. The current study aimed to develop a measure of PTSD-related behaviors, the Measure to Assess PTSD-related Social Behavior (MAPS), and to describe preliminary validation of this measure in 100 Veterans diagnosed with PTSD. The measure was developed using DSM-5 PTSD symptoms and previous instruments that assess behavioral symptoms of mental health disorders. The 13-item MAPS is rated on 30 minutes of a clinical interview. Examples of items include guarded posture (e.g., facing the door, crossing arms) or lack of focus (e.g., difficulty staying on-topic, excessive latency before responding). The MAPS demonstrated excellent internal reliability and good inter-rater reliability, convergent and discriminant validity. Focus will be on implications for understanding and capturing social functioning deficits in PTSD.

## Validation of a Thin Slice Measure of Social Functioning in a Veteran Sample with Posttraumatic Stress Disorder

(Assess Dx, Comm/Int-Mil/Vets, Adult, M, Industrialized)

**Kittel, Julie, MA**[1]; Kimbrel, Nathan, PhD[2]; Meyer, Eric, PhD[3]; Morissette, Sandra, PhD[4]; DeBeer, Bryann, PhD[3]
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[2]*Department of Veterans Affairs Medical Center, Veterans Integrated Service Network (VISN) 6 Mental Illness Research, Education and Clinical Center (MIRECC), Durham, North Carolina, USA*
[3]*VA VISN 17 Center of Excellence for Research on Returning War Veterans, Waco, Texas, USA*
[4]*The University of Texas at San Antonio, San Antonio, Texas, USA*

Previous research has indicated that collateral reports of behavior are highly useful and provide an accurate indicator of behavior (Maisto et al., 1979). However, this methodology has not been used to measure social functioning within a posttraumatic stress disorder (PTSD) population. The current study sought to validate a social functioning assessment that combined thin slices of behavior (Ambady et al., 2000), a method in which a thirty second clip of behavior is viewed and rated using the Willingness to Interact Scale (WIS; Coyne, 1976), a measure of social rejection. This method was used to evaluate social functioning in veterans with PTSD. Five independent raters watched 30 seconds of a video-recorded interview with each veteran and rated them on the WIS. The assessment demonstrated good inter-rater reliability, good internal consistency, and good convergent validity. These findings suggest that behavioral impressions of PTSD may be made very rapidly by observers. Thin slicing could be a novel and promising way to obtain collateral ratings regarding social functioning in this population. Future research is needed to determine the predictive and clinical utility of this measure.

## Trying to Spin Gold from Straw: What is State-of-the-art for Assessment of PTSD and Related Disorders in Fire Fighters?

(Assess Dx, Res Meth-Sub/Abuse, Adult, M, Industrialized)

**Gulliver, Suzy, PhD**
*Texas A&M Health Science Center, Waco, Texas, USA*

Nine studies of fire service personnel conducted by the first author and colleagues over the previous 16 years demonstrates that the assessment of psychiatric symptoms in non-treatment seeking, emergency responder populations is challenging. While structured clinical interviews are the gold standard for assessment, anonymous or near anonymous surveys yield higher rates of symptom endorsement than clinical interviews. Three of our studies used face-to-face interviews as well as paper-and-pencil measures. Doctoral-level, seasoned clinicians conducted all the face-to-face assessments. A diagnostic review group was conducted on each assessment battery. Across studies, verbally endorsed symptoms correlate with paper-and-pencil measures in the expected directions, but CAPS scores are meaningfully lower than PCL scores, symptoms on the MINI- dysphoria and depression are lower than the BDI and SCID interview for alcohol problems indicates AUD far fewer times than would be expected based on RAPI scores. Performance of measures in these three domains across three samples of firefighters will be presented in this talk, and suggestions for improved assessment practices are included.

**Symposium**
**Friday, November 10**
**10:15 AM to 11:30 AM**
**Salon 4/9**
**Military Track**

## Complicated Prescribing Practices in VA Patients with PTSD: Approaches to Observation and Improvement

(Clin Res, Clinical Practice, Adult, M, Industrialized)

**Bernardy, Nancy, PhD**[1]; Rosen, Craig, PhD[2]
[1]*National Center for PTSD, White River Junction, Vermont, USA*
[2]*VA Palo Alto Health Care System, National Center for PTSD/Stanford University, Menlo Park, California, USA*

Recent research examining prescribing practices in Department of Veterans Affairs (VA) patients with posttraumatic stress disorder (PTSD) shows that trends in prescribing are generally consistent with VA/Department of Defense (DoD) clinical practice guideline recommendations. However, treatment is more complicated in veterans with co-occurring conditions such as chronic pain, aggression, insomnia, brain injury, and other mental health and substance use disorders. Optimal medication treatment for each comorbid disorder may result in suboptimal care for the patient such as the accumulation of sedating medications. Therefore, medication treatment for PTSD treatment should be considered in the context of comorbidity. This symposium brings together speakers from the Department of Veterans Affairs to present research on prescribing practices. Presenters will illustrate approaches to understanding and improving pharmacological treatment patterns for patients with PTSD and common comorbidities. The first speaker (Dr. Cohen) will present data from an observational project that focuses on first-line antidepressants for PTSD. This study is novel in that it determines predictors and consequences of monotherapy and specific augmenting therapies. The second speaker (Dr. Shiner) will present VA administrative prescribing data on medications for treating opioid dependence in PTSD patients. These observational data examine diagnosis and treatment in PTSD patients and highlight systems implications around the use of opioid replacement therapies in VA. The third speaker (Dr. Rosen) will use administrative and primary data to examine prescribing practices to address insomnia in VA PTSD patients. This study assesses whether clinicians are appropriately targeting adjunctive insomnia medications to patients with the worst sleep problems. The fourth speaker (Dr. Bernardy) will present data from a recent study that used an academic detailing intervention and decision support tools to de-implement the use of benzodiazepines to VA patients. Provider attitudes regarding the use of the support tools will be discussed. Dr. Rosen will reflect on the clinical implications of these presentations, and consider how Department of Veterans Affairs initiatives such as the Psychotropic Drug Safety Initiative, the Opioid Safety Initiative and the national Academic Detailing Program are impacting evidence-based prescribing for Veterans with PTSD.

## Patterns of PTSD Medication Augmentation: An Analysis of National VA Data

(Practice, Clin Res-Clinical Practice-Mil/Vets, Adult, M, Industrialized)

**Cohen, Beth, MD, MAS**[1]; Woods, Anne, MS[2]; Maguen, Shira, PhD[3]; Seal, Karen, MD, MPH[3]; Bernardy, Nancy, PhD[4]; Neylan, Thomas, MD[3]
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[4]*National Center for PTSD, White River Junction, Vermont, USA*

Though serotonin reuptake inhibitors are the first-line medication for patients with PTSD, the majority of patients do not achieve an adequate response, leaving them searching for additional medications. However, there is minimal evidence to guide clinicians in selecting from the numerous second- and third-line pharmacologic treatments for PTSD. In addition, current patterns of augmenting medication use are unclear, though prior work suggests many patients are prescribed off-label antipsychotics. We used national VA data to explore treatment augmentation prescribing patterns and variation by demographics and comorbidity status. We included all patients with a PTSD diagnosis between 2007-2016 who had received an SRI for at least 30 days then started a new augmenting medication (antipsychotic, tricyclic antidepressant, mirtazapine, and prazosin) for at least 60 days. Patients were also required to remain on an SRI for at least 60 days. We excluded patients with comorbid bipolar affective disorder or psychotic

disorder. 169,982 patients met these criteria, with 40.7% prescribed prazosin, 26.3% prescribed antipsychotics, 23.7% prescribed mirtazapine, and 9.3% prescribed tricyclic antidepressants. Women were significantly more likely to receive prazosin (56.9%) and tricyclic antidepressants (16.5%). Prescribing did not substantially differ by age or era of service. Overlapping and serial use of multiple augmenting medications was common. We will present detailed data on prescribing patterns and compare changes in PTSD symptom severity with use of various classes of augmenting medications. These data demonstrate providers are using several strategies to augment SRIs. Given many of these medications have serious potential side effects and unclear benefits when added to SRIs, a comparison their effectiveness and harms in large observational studies and/or clinical trials is needed to guide prescribing.

## Trends in Opioid Use Disorder Diagnoses and Medication Treatment among Veterans with Posttraumatic Stress Disorder

(Bio Med, Clinical Practice-Sub/Abuse-Mil/Vets, Adult, M, Industrialized)

**Shiner, Brian, MD, MPH**[1]; Leonard Westgate, Christine, MS[2]; Bernardy, Nancy, PhD[3]; Schnurr, Paula, PhD[4]; Watts, Bradley, MD, MPH[1]
[1]*Dartmouth Medical School, White River Junction, Vermont, USA*
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**Objective:** Despite long-standing interest in posttraumatic stress disorder (PTSD) and opioid use disorder (OUD) comorbidity, there is a paucity of data on the prevalence of OUD in patients with PTSD. Therefore, there is limited understanding of the use of medications for OUD in this population. We determined the prevalence of diagnosed OUD and use of medications for OUD in a large cohort of patients with PTSD. **Methods:** We obtained administrative and pharmacy data for Veterans who initiated PTSD treatment in the Department of Veterans Affairs (VA) between 2004 and 2013 (n=731,520). We identified those with a comorbid OUD diagnosis (2.7%; n=19,998) and determined whether they received a medication for OUD in the year following their initial clinical PTSD diagnosis (29.6%; n=5,913). Using logistic regression, we determined the predictors of receipt of OUD medications. **Results:** Comorbid OUD diagnoses increased from 2.5% in 2004 to 3.4% in 2013. Among patients with PTSD and comorbid OUD, use of medications for OUD increased from 22.6% to 35.1% during the same time period. Growth in the use of buprenorphine (2.0% to 22.7%) was accompanied by relative decline in use of methadone (19.3% to 12.7%). While use of naltrexone increased (2.8% to 8.6%), most (87%) patients who received naltrexone also had an alcohol use disorder. Controlling for patient factors, there was a substantial increase in the use of buprenorphine, a substantial decrease in the use of methadone, and no change in use of naltrexone across years. **Conclusions:** OUD is an uncommon but increasing comorbidity among patients with PTSD. Patients entering VA treatment for PTSD have their OUD treated with opioid agonist treatments in large and increasing numbers.

## Patient Presentation and Pharmacological Management of PTSD-Related Sleep Problems in U.S. Department of Veterans Affairs Clinics

(Practice, Sleep, Adult, M, Industrialized)

Greenbaum, Mark, MS, MA[1]; Neylan, Thomas, MD[2]; **Rosen, Craig, PhD**[3]
[1]*VA Palo Alto Health Care System/Stanford University School of Medicine, Menlo Park, California, USA*
[2]*San Francisco VA Medical Center and UCSF, San Francisco, California, USA*
[3]*VA Palo Alto Health Care System, National Center for PTSD/Stanford University, Menlo Park, California, USA*

This study examined prescribing practices by clinicians in the United States Veterans Affairs (VA) health care system for treating sleep problems related to PTSD. Secondary analysis of survey and pharmacy data were conducted in samples of veterans from two periods, 2006 to 2008, and 2009 to 2013. Logistic regression tested associations between veterans' self-reported insomnia and nightmare severity and their being prescribed trazodone, prazosin, zolpidem, and benzodiazepines (controlling for PTSD severity and other covariates). In both samples, insomnia severity

independently predicted receipt of trazodone (odds ratio = 1.46 and 1.51) and nightmare severity independently predicted receipt of prazosin (OR = 2.10 and 2.99). In the later study, insomnia severity predicted receipt of zolpidem (OR = 2.00). Veterans in the later sample were more likely to receive trazodone, prazosin, and non-benzodiazepine hypnotics, and less likely to receive benzodiazepines than those in the earlier sample. Results suggest clinicians are appropriately targeting guideline-recommended medications for sleep to patients who have the most severe insomnia or nightmares. Further research is needed to optimize pharmacological and psychosocial treatments for sleep problems among veterans with PTSD.

## Engaging Clinicians and Veterans in Efforts to Decrease Benzodiazepines in Posttraumatic Stress Disorder (PTSD): De-Implementing through Academic Detailing

(Clin Res, Clinical Practice-Train/Ed/Dis-Mil/Vets, Adult, M, Industrialized)

**Bernardy, Nancy, PhD**[1]; Sherrieb, Kathleen, MD, DrPH[2]
[1]*National Center for PTSD, White River Junction, Vermont, USA*
[2]*National Center for PTSD/ Dartmouth Medical School, White River Junction, Vermont, USA*

**Background:** Benzodiazepines are not recommended by practice guidelines for the treatment of PTSD. Despite these recommendations, providers routinely prescribe benzodiazepines to Veterans with PTSD. Non-adherence suggests that increased education, training, and consultation to clinicians and Veterans can help 'de-implement' the use and harm of benzodiazepines. **Methods:** Our team used an Academic Detailing (AD) intervention and decision support tools delivered with individualized clinical pharmacist visits to de-implement the use of benzodiazepines. Data identifying prescribing practices were collected prior to and after our intervention. Participating clinicians were also interviewed about their efforts to reduce benzodiazepine use. **Findings:** Fourteen clinicians participated in the intervention and 79% had a lower percentage of Veterans with PTSD prescribed benzodiazepines at post- than at pre-intervention (p=0.029). Interviews were conducted with 13 clinicians. Clinicians discussed their attitudes and beliefs about benzodiazepine use, and identified clinician, patient and institutional barriers and facilitators to reducing the use of benzodiazepines. **Conclusions:** AD is a promising and potentially efficacious de-implementation strategy for benzodiazepine use in Veterans with PTSD. Clinician support through one-on-one visits, decision support tools and assistance tapering are important components of the AD process.

# Symposium
# Friday, November 10
# 10:15 AM to 11:30 AM
# Salon 5/8
# Biological/Medical Track

## Meta-Analyses of PTSD Molecular Genetic Studies within the HPA-Axis System

(Bio Med, Genetic, Lifespan, M, Global)

**Amstadter, Ananda, PhD**
*Virginia Institute for Psychiatric and Behavioral Genetics, VCU, Richmond, Virginia, USA*

The field has recently undergone tremendous growth in the area of molecular genetic investigations of posttraumatic stress disorder (PTSD), with over 100 published reports examining variation in over 50 genes to date. Although genome wide association designs are becoming more prevalent for PTSD, candidate gene studies are the predominate design utilized for this disorder in the extant literature. Candidate gene studies have resulted in a complex literature, fraught with inconsistent findings. One means by which this literature can be synthesized is via meta-analyses. This symposium, organized by the Genomics Special Interest Group of ISTSS, is bringing together speakers from three institutions that have been conducting meta-analyses of molecular genetic studies of genes within the hypothalamic pituitary adrenal (HPA) axis system for PTSD, a critical system in the etiology of PTSD. Dr. Nicole Nugent will present on a novel statistical approach that has been developed to examine variation in numerous genes implicated in the HPA-axis. Ms. Mackenzie Lind will present results of a meta-analysis of rs2267735 in the ADCYAP1R1 gene, with a focus on sex differences. Dr. Kaitlin Bountress will present results from a meta-analysis on BDNF, and lastly, Ms. Sage Hawn will present results the first meta-analysis of a gene-by-environment (GxE)

effect for FKBP5 and trauma predicting PTSD. This line of research provides a framework by which the robustness of molecular markers for PTSD can be assessed. This symposium can help synthesize the disparate candidate gene research. Implications for theories of the role of the HPA-axis in PTSD etiology will be discussed.

## Hypothalamic Pituitary Adrenal Axis Genes and PTSD: A Meta-analysis

(Bio Med, Bio Med-Genetic, Lifespan, M, Global)

**Nugent, Nicole, PhD**[1]; Lind, Mackenzie, BS[2]; Bacanu, Silviu-Alin, PhD[3]; Sheerin, Christina, PhD[4]; Marraccini, Marisa, PhD[5]; Bountress, Kaitlin, PhD[6]; Amstadter, Ananda, PhD[2]
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Research implicating the hypothalamic pituitary adrenal (HPA) axis in the development and maintenance of posttraumatic stress disorder (PTSD) has resulted in numerous candidate gene studies examining variation in the HPA axis. Studies were identified through PubMed and PsycINFO using general search terms [posttraumatic stress disorder OR PTSD OR traumatic stress] AND [gene OR genetic] AND [HPA axis OR hypothalamic pituitary adrenal axis] and specific genes such as [CRHR1 OR corticotrophin releasing hormone receptor] etc. 306 unique articles were screened and 24 studies met criteria (original research, human subjects, gene of interest, PTSD) for inclusion. Review authors coded articles based on a pre-determined coding manual. Due to various studies not measuring the same variants, gene level meta-analyses were conducted across 4 genes using an R script developed and implemented by S-A.B. When analyzed multivariately, GR and FKBP5 yield significant PTSD association signals. However, the signals for both genes cease to be significant if the ratio for the number of unpublished null and published studies exceeds 2/3. This research lends support for theories of PTSD that posit a central role for the HPA axis. Limitations of this research include relatively small overall sample given the small effects typically observed in genetic research.

## Association of rs2267735, in the ADCYAP1R1 Gene, with Posttraumatic Stress Disorder: a Meta-Analysis

(Bio Med, Bio Med-Genetic-Gender, Adult, M, Industrialized)

**Lind, Mackenzie, BS**[1]; Marraccini, Marisa, PhD[2]; Sheerin, Christina, PhD[3]; Bountress, Kaitlin, PhD[4]; Bacanu, Silviu-Alin, PhD[5]; Amstadter, Ananda, PhD[1]; Nugent, Nicole, PhD[6]
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Recent studies point to the potential role of the (pituitary) adenylate cyclase activating polypeptide receptor 1 (*ADCYAP1R1*) gene, which has been implicated in stress response, in posttraumatic stress disorder (PTSD). Multiple genetic association studies have examined potential PTSD risk related to this gene, with mixed results. We conducted a meta-analysis of rs2267735 in *ADCYAP1R1* in PTSD. A literature search was conducted using PubMed and PsycINFO, resulting in 9 studies that met criteria for inclusion in analysis. Three separate meta-analyses were conducted using Biostat's Comprehensive Meta-analysis: combined sex, females, and males. Results indicated that the C allele of rs2267735 conferred significant risk for PTSD in the combined sex data (OR = 1.210, 95% CI [1.007-1.454], $p$ = .042) and in the female subsample (OR = 1.328, 95% CI [1.026-1.719], $p$ = .031), but not in the male subsample (OR = 0.964, 95% CI [0.733-1.269], $p$ = .796). Our results provide evidence for an association of *ADCYAP1R1* and PTSD and indicate that there may indeed be sex differences. Implications of these findings, including the role of rs2267735 as one modulator of the stress system, will be discussed.

## GxE Effects of FKBP5 and Traumatic Life Events on PTSD: A Meta-analysis

(Clin Res, Bio Med-Genetic-Gender, Adult, M, Industrialized)

**Hawn, Sage, BS**[1]; Lind, Mackenzie, BS[1]; Sheerin, Christina, PhD[2]; Marraccini, Marisa, PhD[3]; Bountress, Kaitlin, PhD[4]; Bacanu, Silviu-Alin, PhD[5]; Nugent, Nicole, PhD[6]; Amstadter, Ananda, PhD[1]
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Twin studies have demonstrated that both genetic and environmental factors influence risk for posttraumatic stress disorder (PTSD), and there is some evidence that environmental factors may moderate genetic influence (GxE). This interplay between biology and environment may be particularly influential for PTSD, for which an environmental exposure (i.e., trauma exposure) is required for diagnosis. There are many GxE studies of genes within the PTSD literature, including those implicated in the stress response system, such as FK506 binding protein 51 (FKBP5), which regulates glucocorticoid receptor sensitivity. FKBP5 has received a lot of recent attention, with multiple studies demonstrating significant GxE in PTSD. However, given lack of replication across the GxE literature as a whole, a meta-analysis to synthesize results is warranted. Thus, we aim to conduct a meta-analysis of the GxE effects of FKBP5 and traumatic life events on PTSD. A literature search was conducted using PubMed and PsycINFO, resulting in nine studies that met criteria for inclusion. Using Biostat's Comprehensive Meta-analysis, primary analyses will focus on the GxE effect of FKBP5 and traumatic life events on PTSD. Additionally, sensitivity analyses will be conducted to account for race and sex and moderation analyses will examine additional, potentially relevant environmental factors, such as trauma type.

## Brain Derived Neurotrophic Factor (BDNF) and Posttraumatic Stress Disorder (PTSD): A Meta-Analysis

(Bio Med, Ethnic-Res Meth-Genetic-Gender, Adult, M, Industrialized)

**Bountress, Kaitlin, PhD**[1]; Bacanu, Silviu-Alin, PhD[2]; Tomko, Rachel, PhD[3]; Korte, Kristina, PhD[4]; Sheerin, Christina, PhD[5]; Lind, Mackenzie, BS[6]; Marraccini, Marisa, PhD[7]; Nugent, Nicole, PhD[8]; Amstadter, Ananda, PhD[6]
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Behavioral genetic studies suggest that PTSD is moderately heritable, with BDNF within the Neurotrophin family playing an important role in processes underlying this risk. Specifically, BDNF modulates synaptic changes, including hippocampal long-term potentiation, integral to associative memory formation and response to affective material. Thus, BDNF is implicated in fear conditioning and generalization of fear responses following a traumatic event. Despite the rationale for BDNF in risk for trauma-related anxiety, molecular genetic studies examining the relation between the BDNF variant Val66Met and PTSD have yielded a mixed picture. Adding to meta-analytic work conducted by Wang (2015), we seek to reconcile these discrepant findings by examining the relation between Val66Met and PTSD in a meta-analytic framework. A literature search using PubMed and PsycINFO was conducted, with 10 studies meeting criteria for inclusion. Using Biostat's Comprehensive Meta-analysis, we will investigate the association between Val66Met and PTSD for individuals exposed to a traumatic event. We will also conduct sensitivity analyses to explore whether effects hold across males/females, Veterans/civilians, adolescents/adults, and different racial groups (e.g., Caucasians and Asians).

Implications of findings for etiology and treatment of PTSD will be discussed.

## Symposium
## Friday, November 10
## 10:15 AM to 11:30 AM
## Salon 6/7
## Refugee Track

## Trauma in Refugee and Migrant Populations; Risk Factors for Posttraumatic Stress Disorder and Intervention Strategies

(Global, Comm/Int-Global-Rights-Refugee, Adult, M, Global)

**Sijbrandij, Marit, PhD**[1]; Nickerson, Angela, PhD[2]
[1]*VU University, Amsterdam, Netherlands*
[2]*University of New South Wales, Sydney, NSW, Australia*

Recent times have seen an unprecedented number of displaced people across the world, such as refugees seeking asylum because of war and crisis, and migrant workers who moved out of their countries due to economic reasons. Refugees and migrants may have been exposed to multiple stressors such as pre-migration and migration-related traumatic events, loss of family members, loss of livelihood, and (sexual) violence. In addition, post-migration stressors include poverty, discrimination, lack of economic prospects, and difficulties in adapting to the cultures in the host countries. Studies show that refugees and migrants are at considerable risk to develop common mental disorders, including posttraumatic stress disorder (PTSD) depression, anxiety and related somatic health symptoms. This symposium will present results of recent studies in refugee and migrant populations across Europe and Asia. Studies in the symposium will focus on the role of risk-factors in predicting psychological adjustment following migration, and strategies for effective interventions.

## Validation and Implementation of a Newly Developed Tool for Multilingual Screening in Clinical and Research Settings

(Assess Dx, Assess Dx-Pub Health-Refugee-Mil/Vets, Prof, M, Industrialized)

**Schnyder, Ulrich, MD**[1]; Schick, Matthis, MD[1]; Ewers, Simon, MA[1]; Pfaltz, Monique, PhD[1]; Passardi, Sandra, MSc[1]; Bryant, Richard, PhD[2]; Nickerson, Angela, PhD[2]; Morina, Naser, MA[1]
[1]*Zurich University, Zurich, Switzerland*
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**Background:** Psychological diagnostics and treatment of populations of different language backgrounds such as refugees are challenging tasks for mental health practitioners. Valid computer-based tools would be useful to facilitate the screening and diagnostic process in clinical and research settings. **Methods:** The Multi-Adaptive Psychological Screening Software (MAPSS), a newly developed Audio Computer-Assisted Self-Interview Software for touchscreen devices, was tested regarding its feasibility for screening purposes in clinical settings. In a randomized cross-over design including both MAPSS and paper-pencil clinician-administered interviews, 30 treatment-seeking refugees completed clinical measures. In addition five professionals tested the usability of the tool. **Results:** Results showed no differences between the two assessment modalities with regard to symptom scores. The administration via MAPSS was significantly shorter than the paper-pencil interview. Usability was rated as excellent by professionals. **Conclusion:** The results suggest that MAPSS administered via touchscreen device demonstrates good reliability, is fast to implement, cost-effective and well accepted by both patients and professionals. Potential benefits of the tool and implementation and application of MAPSS as a screening tool in implementing low intensity psychological interventions will be discussed.

## Discrimination Modifies the Effect of Cumulative Adversities on PTSD Symptom Severity among Filipino Migrant Domestic Workers in China

(CulDiv, Comm/Int-Cul Div-Ethnic-Rights, Adult, M, E Asia & Pac)

**Hall, Brian, PhD**
*University of Macau, Taipa, Macau (SAR), China*

Labor migrants constitute a large group of individuals that are at risk for trauma exposure and subsequent development of mental health symptoms. Key drivers of population health risks for migrants involve cumulative exposures to social determinants of health (e.g., discrimination) and potentially traumatic life events. These exposures are found across the migration continuum, occurring within pre-, peri-, and post-migration contexts. The current study focused on understanding discrimination as a key modifier of the association between cumulative life adversities and posttraumatic stress disorder symptom severity. Respondent driven sampling methods were utilized to enroll 750 female Filipino domestic workers in the study. The Everyday discrimination scale (EDS), Life Events Checklist (LEC-5), PTSD Checklist (PCL-5) were translated and culturally adapted for use among Filipino domestic workers. Results indicated that 14% met criteria for PTSD using the PCL cut-off score. The number of lifetime exposures to PTEs (r = .21) and greater discrimination (r = .32) were associated with higher PTSD symptom severity. Multivariable linear regression analysis showed that discrimination modified the effect of lifetime trauma exposure. Those who reported greater discrimination also reported greater current PTSD symptom severity. These results will be discussed within the growing literature that demonstrates the importance of the receiving country context for migrant mental health.

## A Network Analysis of Post-Migration Living Difficulties in Refugees and Asylum Seekers

(Practice, Refugee-Civil/War, Prof, M, Industrialized)

**Morina, Naser, MA**[1]; Schick, Matthis, MD[1]; Spiller, Tobias, MA Student[1]; Schnyder, Ulrich, MD[1]; Bryant, Richard, PhD[2]; Nickerson, Angela, PhD[2]
[1]*Zurich University, Zurich, Switzerland*
[2]*University of New South Wales, Sydney, NSW, Australia*

**Background:** Refugees demonstrate high rates of trauma-related disorders, such as post-traumatic stress disorder, depression and anxiety. Not only have refugees typically experienced multiple potentially traumatic events in their home country or on the run, but they also face substantial post-migration living difficulties (PMLD) in the resettlement environment. Such post-migration stressors are key factors of mental health outcomes in refugees and new methodologies that help to better understand these stressors are crucially needed. Network analysis as an upcoming methodology may provide further understanding of what the PMLD's refugees are experiencing. **Methods:** In a cross-sectional clinical sample of treatment-seeking refugees in Switzerland (N= 151), PMLD's were assessed using the PMLD questionnaire, and analyzed using the network approach. **Results:** Three pairs of PMLD's were connected significantly stronger than at least half of the other connections: communication difficulties und discrimination, not enough money und difficulties obtaining financial assistance, and separation and worries about family back home. Communication difficulties and isolation were the most central living difficulties, the least central were ethnic conflicts and worries about access to health care. **Conclusions:** This network analysis revealed central post-migration living difficulties that might be important in terms of implications for treatment and policy.

## Implementing Low-intensity Interventions for Common Mental Disorders in Response to the Syrian Refugee Crisis

(CulDiv, Commun-Global-Refugee-Civil/War, Adult, M, Industrialized)

**Sijbrandij, Marit, PhD**
*VU University, Amsterdam, Netherlands*

The crisis in Syria has resulted in an unprecedented increase in the number of refugees seeking asylum in Syria's neighboring countries as well as in Europe. Syrian refugees may have been exposed to multiple war stressors such including sexual violence and destruction of their homes and livelihoods, and they have often undertaken a risky and stressful flight leaving their homes for an unknown future. Studies show that refugees are at considerable risk to develop common mental disorders, including depression, anxiety, posttraumatic stress disorder (PTSD) and related somatic health symptoms. The World Health Organization has developed Problem Management Plus (PM+), a low-intensity treatment of only five sessions, to reduce symptoms of common mental disorders. PM+ can be delivered by trained non-professional helpers. Randomized clinical trial results in a conflict-affected area in Pakistan (N=346) and in female victims of gender-based violence in Nairobi, Kenya (N=421) showed beneficial effects in terms of reductions in anxiety, depression, functional disability, and posttraumatic stress than those who received an enhanced treatment as usual. With these positive findings as a starting point, the recently EU-funded STRENGTHS project will implement, scale-up and evaluate this new generation of low-intensity interventions in the context of the Syrian refugee crisis. The PM+ programmes will be implemented by peer-refugees and evaluated across refugee settings in Europe (Netherlands, Turkey, Switzerland, Germany and Sweden) and the Middle East (Jordan, Lebanon, and Egypt). In this presentation, the evidence base for STRENGTHS project will be outlined. In addition, and preliminary qualitative results concerning identification of expected barriers and facilitators implementation of the PM+ programmes will be presented.

## Symposium
## Friday, November 10
## 10:15 AM to 11:30 AM
## Monroe Room
## Treatment Track

## Pharmacologic Agents as Treatment and Adjunct to Psychotherapy for PTSD - Data with MDMA, Oxytocin and Ketamine

(Clin Res, Bio Med-Clin Res-Cog/Int, Adult, I, Industrialized)

**Wagner, Anne, PhD, Cpsych**[1]; Schnurr, Paula, PhD[2]
[1]*Ryerson University, Toronto, Ontario, Canada*
[2]*National Center for PTSD, Executive Division, White River Junction, Vermont, USA*

Novel psychotherapies, and adjuncts to existing psychotherapies, for posttraumatic stress disorder (PTSD) are necessary given the prevalence of the disorder and the effectiveness of current psychotherapies. Pharmacologic interventions, including psychedelics (empathogens), are beginning to offer information about options for these needed innovations, and truly embody the theme from self to cells, from psychotherapy to pharmacology and back. This symposium will include formative research examining fear extinction models using MDMA (Rothbaum et al.), the impact of oxytocin on neural correlates of vocal affect processing in veterans with PTSD (Sippel et al.), single dose intravenous ketamine use for PTSD treatment and the ongoing study design of a multi-dose ketamine intervention (Feder et al.), and preliminary data from the pilot treatment development study of the combination of Cognitive Behavioral Conjoint Therapy (CBCT) for PTSD (a standalone, evidence-based psychotherapy) and MDMA (Wagner et al.). This symposium will create a map of these three different substances in four different studies to investigate their promise for care after trauma.

## MDMA Facilitation of Fear Memory Extinction

(Clin Res, Anx-Bio Med, N/A, I, N/A)

**Rothbaum, Barbara, PhD, ABPP**[1]; Young, Matthew, PhD[1]; Norrholm, Seth, PhD[2]; Jovanovic, Tanja, PhD[1]; Rauch, Sheila, PhD, ABPP[2]; Reiff, Collin, MD[1]; Dunlop, Boadie, MD, MS[1]; Maples-Keller, Jessica, PhD[1]; Zwiebach, Liza, PhD[1]; Howell, Leonard, PhD[1]
*[1]Emory University School of Medicine, Atlanta, Georgia, USA*
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3,4-methylenedioxymethamphetamine (MDMA) combined with psychotherapy has been observed to have lasting positive effects on symptoms of PTSD. Studies in rodents suggest that these effects can be attributed to an enhancement of the extinction of fear memory by MDMA. This presentation will focus on translational research investigating MDMA's ability to facilitate extinction learning in rodents, in healthy humans, and ultimately in treatment-resistant PTSD patients. Data will be presented from Emory's rodent study that supports MDMA's facilitation of fear extinction learning, and, importantly, that this effect was blocked by SSRIs. This will be followed by Emory's study Evaluation of MDMA on Extinction of Fear Learning, which aims to evaluate the impact of MDMA on extinction of fear learning following experimental startle and fear consolidation in healthy humans. It is hypothesized that participants who receive MDMA after fear consolidation prior to fear extinction training will have a decreased startle response to aversive stimuli compared to participants who receive placebo. If the hypothesis is correct, MDMA may be an effective agent for the augmentation of exposure-based therapies for PTSD and other anxiety disorders. Future research will investigate using MDMA to enhance the effectiveness of Prolonged Exposure Therapy in patients with treatment resistant PTSD.

## A Preliminary Test of the Effects of Oxytocin on Neural Correlates of Vocal Affect Processing in Combat Veterans with Posttraumatic Stress Disorder

(Bio Med, Affect/Int-Mil/Vets-Neuro, Adult, I, Industrialized)

**Sippel, Lauren, PhD**[1]; Eilbott, Jeffrey[2]; Fichtenholtz, Harlan, PhD[3]; Harpaz-Rotem, Ilan, PhD[4]; Mayes, Linda, MD[2]; Pelphrey, Kevin, PhD[5]; Southwick, Steven, MD[4]
*[1]National Center for PTSD Executive Division, Geisel School of Medicine at Dartmouth, White River Junction, Vermont, USA*
*[2]Yale Child Study Center, New Haven, Connecticut, USA*
*[3]Keene State College, Keene, New Hampshire, USA*
*[4]National Center for PTSD Clinical Neurosciences Division/Yale University Dept. of Psychiatry, West Haven, Connecticut, USA*
*[5]George Washington University, Ashburn, Virginia, USA*

Posttraumatic stress disorder (PTSD) often includes emotional processing and interpersonal difficulties. Intranasal oxytocin may improve functioning in these domains via effects on social cognition. One potential mechanism is vocal affect processing, which is used to evaluate others' behavior, intentions, and mental states. Oxytocin effects also vary as a function of individual differences, such as history of childhood maltreatment. We tested the effect of oxytocin on neural correlates of happy, angry, and neutral vocalization processing in a randomized, double-blind, placebo-controlled, cross-over study with 11 male combat-exposed Iraq/Afghanistan veterans (mean CAPS-5=31.18, full PTSD criteria n=9). Whole brain general linear model-based analyses revealed a main effect of oxytocin, which increased happy (versus neutral) voice-related activation within the striatum and frontal orbital cortex, both implicated in reward processing. However, positive correlations between striatal subregion reactivity to happy voices and childhood physical abuse were attenuated in the oxytocin condition (e.g., putamen: placebo $r=0.68$, $p<0.05$, oxytocin $r=0.19$, ns), suggesting oxytocin-related reductions in reward salience for individuals exposed to more childhood trauma, potentially mediated by misappraisal of vocalizations as socially threatening (e.g., mocking). Findings inform future examinations of the use of oxytocin as an adjunctive intervention for PTSD, which may be better suited to individuals who have not experienced childhood trauma.

## Ketamine for Rapid Amelioration of PTSD Symptoms: Clinical Effects and Potential Mechanisms

(Clin Res, Bio Med, Adult, I, Industrialized)

**Feder, Adriana, MD**[1]; Glasgow, Andrew, MD[2]; Murrough, James, MD, PhD[1]; Charney, Dennis, MD[2]
[1]*Mount Sinai School of Medicine, Dept of Psychiatry, New York, New York, USA*
[2]*Mount Sinai School of Medicine, New York, New York, USA*

Currently available pharmacotherapies have demonstrated insufficient efficacy in the treatment of chronic posttraumatic stress disorder (Jeffreys et al 2012). We conducted the first proof-of-concept randomized controlled trial (RCT) of intravenous (IV) ketamine for chronic PTSD, demonstrating that a single, sub-anesthetic IV infusion of ketamine hydrochloride was superior to a sub-anesthetic IV infusion of midazolam in rapidly reducing core PTSD symptoms in 41 patients with chronic PTSD stemming from exposure to a diverse range of traumas, when assessed 24 hours post-infusion (Feder et al 2014). Greater PTSD symptom reduction at 24 hours post-infusion of ketamine remained significant after adjusting for co-morbid depressive symptom changes. We are currently conducting a follow-up RCT of repeated IV ketamine administration (compared to midazolam) for a total of six infusions over two consecutive weeks, in an attempt to replicate and extend our initial findings, and determine whether repeated ketamine administration can prolong maintenance of symptom reduction in patients with chronic PTSD. Methods and experience from the new study will be presented, including brief examples from both studies illustrating a shifting mental perspective in some treatment responders over the course of a few hours post-infusion.

## Combining Cognitive Behavioral Conjoint Therapy for PTSD and MDMA – Initial Cases

(Clin Res, Bio Med-Cog/Int, Adult, I, Industrialized)

**Wagner, Anne, PhD, Cpsych**[1]; Mithoefer, Michael, MD[2]; Mithoefer, Ann, BSN[2]; Monson, Candice, PhD, Cpsych[1]
[1]*Ryerson University, Toronto, Ontario, Canada*
[2]*Private Practice, Mount Pleasant, South Carolina, USA*

Current evidence-based psychotherapies for PTSD produce symptom improvement in approximately half of individuals in clinical trials. PTSD symptoms and difficulties in relationship functioning often co-occur, impacting the individual with PTSD and their friends, family and social networks. Novel treatment approaches that both improve PTSD symptoms and also address relationship functioning are clearly needed. CBCT for PTSD has shown strong results improving both PTSD symptoms and relationship functioning (Monson et al., 2012), and ±3,4-methylenedioxymethamphetamine (MDMA) as a standalone treatment with non-directive psychotherapy has demonstrated significant effects (Mithoefer et al., 2011; 2012). The current treatment development study combines CBCT for PTSD with MDMA in a pilot study of up to 10 cases in an effort to maximize the potential benefits of each therapy. This presentation will present results from the ongoing pilot study, as well as discuss the benefits, challenges and potential mechanisms at play in combining an evidence-based CBT intervention with MDMA.

# Panel Presentation
# Friday, November 10
# 10:15 AM to 11:30 AM
# Crystal Room
# Treatment Track

## Preparatory Treatment Activities, Are They Necessary?

(Practice, Clin Res-Clinical Practice-Cog/Int, Adult, M, Industrialized)

**Maieritsch, Kelly, PhD**[1]; **Romero, Erin, PhD**[2]; **Voss Horrell, Sarah, PhD**[3]; **Hessinger, Jonathan, PsyD**[1]; Hamblen, Jessica, PhD[4]
[1]*Edward Hines, Jr. VA Hospital, Hines, Illinois, USA*
[2]*VA Maryland Healthcare System, Baltimore, Maryland, USA*
[3]*Salem VA Medical Center, Salem, Virginia, USA*
[4]*VA National Center for PTSD/White River Junction VA Medical Center, White River Junction, Vermont, USA*

Studies of the provision of CPT and PE in VA clinics find rates of treatment initiation for veterans with a PTSD diagnosis between 6 (Shiner et al., 2012) and 11% (Mott, et al., 2014). When CPT and PE are initiated, they are frequently delayed by other

interventions (Hamblen et al., 2015). Recent studies of VA clinicians found a pervasive view that substantial preparation is necessary before beginning trauma-focused therapy (Hamblen et al., 2015; Cook et al., 2014); the perceived complexity of presentation could further influence a provider's impression. The majority of VA outpatient PTSD clinics appear to offer some form of engagement groups prior to initiating trauma-focused therapy (Hamblen et al, 2015) despite a lack of compelling data to support these activities. This panel will present program evaluation data across three VA treatment settings on the association between engaging in preparatory offerings and evidenced-based therapy (EBP) selection, dropout, and outcome. Engagement in preparatory groups was consistently not associated with initiation or completion of an EBP, yet there was evidence that individualized treatment planning was associated with EBP selection. Discussion of findings will include the impact of complexity of clinical presentation factors (i.e., trauma type, diagnostic comorbidities, etc.).

## Featured Panel Presentation
## Friday, November 10
## 10:15 AM to 11:30 AM
## Adams Room
## Treatment Track

### ISTSS Treatment Guidelines
(Train/Ed/Dis, Practice, Lifespan, M, N/A)

**Bisson, Jonathan, MD**[1]; **Goldbeck, Lutz, PhD**[2]; **Monson, Candice, PhD, Cpsych**[3]
*[1]Cardiff University School of Medicine, Cardiff, Wales, United Kingdom*
*[2]University Ulm, Department of Child and Adolescent Psychiatry/Psychotherapy, Ulm, Baden-Wuerttemberg, Germany*
*[3]Ryerson University, Toronto, Ontario, Canada*

The updated ISTSS Treatment Guidelines for PTSD are due to be published in 2018. This panel, comprising members of the ISTSS Guidelines Committee, will provide an update of the progress to date. Through interactive discussion with the audience, the panel will particularly consider:
a. The experience of working collaboratively with the ISTSS membership to identify all relevant research that should be used to inform the final Guidelines.
b. Possible reasons for inconsistencies between guidelines – why do different guideline groups come to different conclusions and recommendations despite having access to the same literature?
c. The experience of working collaboratively with other agencies to achieve an integrated international approach designed to ensure that common and accurate datasets are used to inform guideline development.

## Workshop Presentation
## Friday, November 10
## 10:15 AM to 11:30 AM
## Salon 2
## Child Trauma Track

### Trauma-Focused Cognitive Behavioral Therapy for Sex Trafficked Youth
(Practice, CSA-Complex, Child/Adol, M, Global)

**Cohen, Judith, MD**[1]; **Kinnish, Kelly, PhD**[2]; Mannarino, Anthony, PhD[3]
*[1]Allegheny General Hospital, Pittsburgh, Pennsylvania, USA*
*[2]Georgia Center for Child Advocacy, Atlanta, Georgia, USA*
*[3]Allegheny General Hospital/Drexel University College of Medicine, Pittsburgh, Pennsylvania, USA*

**Objective:** This workshop will help participants to increase their understanding and skill in using an evidence-based child and adolescent treatment, Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) for youth who experience sex trafficking.
**Methods:** The available evidence suggests that sex trafficked youth may develop symptoms consistent with complex trauma. One study documented that sex trafficked youth developed more severe and more complex PTSD symptoms than youth who experienced other types of sexual abuse (Cole et al, 2013). A recent study has documented that youth with ICD-11 complex trauma symptoms responded positively to TF-CBT treatment (Sachser et al, 2016). TF-CBT applications for complex trauma are available (Cohen et al, 2012). This workshop will describe these as they particularly apply to sex trafficked youth. Specifically, these include 1) engaging youth in psychoeducation who do not believe they were traumatized (e.g., those who view the exploiter as their "boyfriend"); 2) engaging caregivers in effective parenting who are

overwhelmed with the youth's negative behaviors; 3) developing and enhancing safety for youth who are engaging in dangerous behaviors (e.g., running away, attempting to return to "the life"); and 4) developing and processing comprehensive life narratives that are not limited to the youth's sex trafficking experiences. **Results:** A randomized controlled trial was conducted for sexually exploited girls in the Democratic Republic of Congo (primarly girls rescued from brothels). Relative to wait list, 15 sessions of group TF-CBT resulted in highly significant improvement in PTSD, depression, anxiety, conduct symptoms and prosocial behaviors (O'Callghan et al, 2013). **Conclusion:** Complex trauma applications of TF-CBT can be effective for sex trafficked youth.

## Multi-Media Presentation
## Friday, November 10
## 10:15 AM to 11:30 AM
## Salon 1
## Child Trauma Track

## Use of Innovative Approaches and Multi-Media Resources to Enhance Public Awareness on Childhood Trauma: Complexity of Responses across Individuals, Relationships, and Systems

(Multi-Media, CPA-Chronic-Clinical Practice-DV, Child/Adol, M, Industrialized)

**Kisiel, Cassandra, PhD**[1]; **Fehrenbach, Tracy, PhD**[1]; **Habib, Mandy, PsyD**[2]; Riley, Tracey, BA[1]; Sax, Rachel, MA[1]; Serpa, Daniel, LCSW[1]
[1]*Northwestern University Feinberg School of Medicine, Chicago, Illinois, USA*
[2]*Adelphi University, Garden City, New York, USA*

Trauma can have a range of complex effects on children and adolescents with the potential for varied responses across different relationships and systems, particularly if a child's trauma history is not "remembered" or identified. This workshop will highlight an innovative and comprehensive public awareness campaign, and share a variety of multi-media resources (video and web-based) on complex trauma. These educational resources include a 2-part film ("Remembering Trauma"), training guides and website, all designed to increase awareness among providers, youth and caregivers involved in various child-serving settings. We will also emphasize challenges providers may face when disseminating and supporting the use of trauma-informed resources in practice. Remembering Trauma, Part 1 (highlighted at last year's meeting) has received widespread positive feedback from both providers and family members, as a powerful education and awareness raising tool on the critical topic of trauma and misdiagnosis. Part 2 of Remembering Trauma integrates expert interviews and commentary which further elucidate and expand upon the key messages depicted in the film (Part 1). These experts represent key roles and service systems this film was intended to reach – including juvenile probation, school counseling, child psychiatry, and early childhood and adolescent mental health. It is designed to support ongoing trauma-informed education and training efforts across these and other systems. These resources were developed to address existing needs and gaps in the field and support the work of multi-disciplinary professionals. They highlight the critical importance of providers' use of a "trauma lens" in their work and advocacy efforts, emphasizing the potentially detrimental impact of not using this lens in the context of identification, assessment and service delivery across different systems. In this interactive workshop, we will highlight resources and share film clips that are designed to: 1) raise awareness on the complex effects of trauma on children over the course of development and the potential for mislabeling or misdiagnosis; 2) highlight the impact on social relationships with family members, peers, intimate partners, and one's own children, and, 3) illustrate the impact and role of providers across systems where the child may interface. We will facilitate discussion with participants about lessons learned from this process and highlight strategies for how to effectively share and implement resources and support their use in practice at both an individual level (with youth and families) and at a systems level in order to build and sustain trauma-informed systems.

# Concurrent Session Six

**Master Clinician**
**Friday, November 10**
**1:30 PM to 2:45 PM**
**Grand/State Ballroom**

## A Reactivation and Resilience (R&R) Framework for Evidence-based Psychotherapy of Complex PTSD in Adults and Developmental Trauma Disorder in Children

(Practice, Affect/Int-Clin Res-Clinical Practice-Self-Care, Lifespan, M, Industrialized)

**Ford, Julian, PhD**
*University of Connecticut Health Center, Farmington, Connecticut, USA*

Using the chapter from the newly published Handbook of Trauma Psychology on "Complex trauma and complex PTSD" as a foundation, the presenter will provide an update of the sequential relational meta-model of trauma-focused psychotherapy originally described in the 2013 book Treatment of Complex Trauma. Case examples with children and adults will be discussed to illustrate several critical therapeutic dilemmas faced by psychotherapists when treating clients with complex developmental trauma histories. A trans-theoretical R&R framework will be described for understanding and handling these dilemmas at the moment they occur, highlighting the key role in both trauma memory-focused and present-centered trauma sequelae-focused psychotherapies of: (1) therapeutic titration and utilization of in-session critical incidents involving reactivation of trauma-related survival adaptations (e.g., intrusive re-experiencing, hypervigilance, dissociation, shame, hopelessness), and (2) enhancing resilience (e.g., affect regulation, stable coherent sense of self, secure relational attachment schemas, executive function). Implications for therapist self-care and handling secondary traumatic stress reactions will be discussed.

**Symposium**
**Friday, November 10**
**1:30 PM to 2:45 PM**
**Salon 1**
**Refugee Track**

## Using the ADAPT Model to Understand Posttraumatic Mental Health

(Global, Cul Div-Refugee-Torture-Civil/War, Child/Adol, M, Global)

**Steel, Zachary, PhD**
*University of New South Wales, Randwick, NSW, Australia*

This symposium presents an overview of the ADAPT model (Adaptation and Development After Persecution and Trauma) (Silove, 1999; Silove & Steel, 2006) which identifies five psycho-social pillars of human functioning that are threatened within the context of organised violence and mass displacement. These pillars include security and safety; interpersonal bonds and networks; justice and protection from abuse; identities and roles; and institutions that confer coherence and meaning. A major prediction of the model is that PTSD will not be the only stress response observed in survivors of mass disasters and that prevalence of that disorder will be strong influenced by broader contextual factors. The presents data examining these hypotheses derived across multiple populations and clinical surveys undertaken with populations exposed to organised violence and mass displacement examining aspects of the ADAPT model.

## The Use of Bifactor Modeling to Examine the Structure of Past and Future Oriented Symptoms of Traumatic Stress amongst Four Displaced and Conflict Affected Populations Facing Ongoing Adversity

(Assess Dx, Refugee-Civil/War, Adult, M, Global)

**Steel, Zachary, PhD**[1]; Hadzi-Pavlovic, Dusan, MPsych[1]; Berle, David, PhD[2]; Momartin, Shakeh,

PhD, Cpsych[3]; Rees, Susan, PhD[4]; Silove, Derrick, MD, PhD[5]
[1]*University of New South Wales, Randwick, NSW, Australia*
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[3]*Service for the Treatment and Rehabilitation of Torture and Trauma Survivors, Carramar, NSW, Australia*
[4]*University of New South Wales, Liverpool, NSW, Australia*
[5]*University of New South Wales, Sydney, NSW, Australia*

There have been scattered descriptions in the literature suggesting that some trauma exposed individual's facing ongoing risk of additional trauma and adversity may experience intrusive future oriented symptoms (Deeprose et al 2011, Grogan 2011, Holmes et al. 2011, Kangas et al 2002). Aim: To examine the factorial structure of intrusive symptoms of traumatic threat and intrusive symptoms of posttraumatic stress in post-conflict Timor-Leste. Method: We drew on data obtained from four studies undertaken by our group:
1. A household survey of 2964 residents living in an urban and rural setting near Dili, Timor-Leste was undertaken in 2010 following a period of internecine conflict that led to mass population displacement within and around the Capital Dili;
2. A sample of 241 Mandaean Iraqi refugees and asylum seekers residing in Sydney recruited using a linkage sampling strategy;
3. A consecutive cohort sample of 116 refugees from Afghanistan and Iran attending a settlement support services following their arrival into Australia;
4.. A time by location sample of 118 Farsi- and Dari-Speaking asylum seekers and refugees in Sydney Australia who been resident in Australia for five years or less.
Participants across all studies completed the Harvard Trauma Questionnaire (HTQ) to assess symptoms of PTSD and a 9 item Traumatic Threat Scale developed by the authors that used the same response format as the HTQ and assessed the experience of intrusive fears about exposure to possible future traumatic events. We applied bifactor confirmatory factor analysis to examine the structure of PTSD and FFS items undertaken in Mplus to examine the structure of symptoms assessed by the two scales. The model fit was based on examination of model fit indices including CFI, TLI, RMSEA. Results: Fit statistics across included samples (CFI=0.981, TLI =0.969, RMSEA=0.073) supported a model containing a general factor assessing common shared variance amongst all items with a second factor across samples assessing future oriented symptoms. Third and fourth factors identified common intrusive and avoidance based symptoms across two scales. Conclusion: The results suggest that symptoms of traumatic threat linked to insecurity in the post conflict and resettlement setting may share common features of PTSD but also account for a large proportion of posttraumatic stress symptomatology. This has important implications as to how we understand and best respond to post-conflict mental health symptoms in populations exposed to ongoing threat of traumatic exposure.

## Development and Refinement of the Adapt Index for Measuring Psychosocial Adjustment in Refugees Using Item Response Theory

(Assess Dx, Comm/Vio-Cul Div-Civil/War, Adult, M, E Asia & Pac)

**Tay, Alvin, PhD**[1]; Kareth, Moses, BA[2]; Tam, Natalino, Undergraduate[2]; Rees, Susan, PhD[2]; Silove, Derrick, MD, PhD[1]
[1]*University of New South Wales, Sydney, NSW, Australia*
[2]*University of New South Wales, Liverpool, NSW, Australia*

The ADAPT index is a 62-item psychosocial assessment designed to measure the broader eco-social disruptions experienced universally by refugees in five core domains (safety and security, attachments and networks, access to justice, roles and identities, existential meaning) following mass conflict and displacement. This study aimed to apply Item Response Theory (IRT) to refining the ADAPT index, a key module of the Refugee Mental Health Assessment Package (R-MHAP) previously validated in West Papuan refugees from Papua New Guinea. The analytic sample included 487 refugees from a whole-of-household survey conducted in 2016 in Kiunga, PNG, the closest township to the Indonesia-occupied West Papua. The culturally adapted R-MHAP was applied to assess traumatic exposure, ongoing adversities, the eco-social disruptions, and symptoms of common mental disorders (CMDs) of particular relevance to refugees. Confirmatory factor analysis (CFA) was used to assess the dimensionality of the ADAPT index. Items with loadings less 0.4 were dropped and a bi-factorial model (with the ADAPT domains as the five grouping factors) was found to be the best-fitting

solution. Locally dependent items with large modification indices with significant residual correlations (≥0.3) between item pairs were identified and excluded. Item discrimination and difficulty parameters were estimated using a polytomous graded response model for each of the five subscales using weighted least squares means and variances. As a further test of concurrent validity, we examined the correlations between the ADAPT subscale scores and functional impairment. Based on the IRT analysis, we reconfigured the ADAPT index into a empirically tested robust set of 44 items. Within the item pool of the five subscales, items from the sense of justice subscale showed the highest item discrimination, whereas items from the roles and identities subscale had the lowest discrimination.

## Individual, Cultural and Community Factors Affecting Adaptation to Displacement and Access to Services among Syrian Refugees in Jordan

(Commun, Comm/Int-Cul Div-Refugee-Civil/War, Lifespan, M, M East & N Africa)

**Wells, Ruth, BSc Hons Psychology**[1]; Abo Hilal, Mohammad, Clinician in Psychiatry[2]; Said Yousef, Rania, Ms[2]; Steel, Zachary, PhD[3]; Plested, Barbara, PhD[4]; Hunt, Caroline, Professor[5]; Lawsin, Catalina, DPsych, Clin[6]
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There is an immediate need for interventions to promote psychosocial adaptation among Syrian refugees in countries of first asylum. Implementation must take into account the interplay between individual and contextual factors in determining both distress and access to care. We conducted a two-stage assessment to model how individual, community and cultural factors modulate response to potentially traumatic events (PTEs) to guide context sensitive service implementation. Stage 1 Systematic Review: Humanitarian organisation needs assessments with Syrian refugees in Jordan were systematically searched in academic and grey literature databases, key humanitarian organisation websites and Google (Feb 2011 -Jun 2015). A structured qualitative synthesis of Syrian refugee reported psychosocial needs was conducted. Review of 2256 articles identified 29 psychosocial needs assessments (May 2012- Jun 2015) with a total sample of 15 720 Syrian refugees in 13 regions of Jordan. Respondents reported that distress due to PTEs was worsened by both environmental (financial, housing, employment) and psychosocial outcomes (loss of role and social support, inactivity), which were themselves stressors. Stage 2 Community Readiness: The Community Readiness Model was used to assess local community preparedness to address psychosocial needs. Semi-structured interviews (n=8) and a focus group (n=11) were conducted with key informants and stakeholders in Amman, Jordan (Dec 2013 – Sep 2016). Informants were Syrian and Jordanian activists and psychosocial workers providing community relief through grassroots networks. Community readiness stage, from one (no awareness) to nine (community ownership), was scored across six dimensions through inter-rater consensus. Thematic analysis explored barriers to care. Informants reported disparity between sudden international service implementation (stage 6) and local community leadership (stage 2), attitudes (stage 4) and knowledge of western mental health concepts (stage 3) and services (stage 3). Cultural attitudes to mental health, stigma, lack of knowledge of services and limited service availability were noted as barriers to care. Local resources (stage 4) included cultural knowledge of local psychosocial staff, but lack of work rights and technical support contributed to burnout. Conclusions: Response to PTEs among Syrian refugees is modulated by contextual stressors, which may be addressed by participatory engagement strategies. Such strategies have the potential to enable sustainable, culturally appropriate interventions if access to rights (e.g. work rights) and resources (e.g. in-depth clinical training and supervision) can be secured to support local staff.

## The Association between Post-Arrival Adversity and PTSD Symptoms among Afghan and Iranian Asylum Seekers and Refugees: Findings from a Representative Sample

(Global, Comm/Int-Cul Div-Global-Refugee, Adult, M, Industrialized)

**Berle, David, PhD**[1]; Steel, Zachary, PhD[2]; Abedy, Haleh, MPsych[2]; Rostami, Reza, PGDip Psych[2]

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Asylum seekers and refugees face multiple challenges in adjusting to the post-migration environment. Uncertainties about visa status and the endorsement of refugee claims have been identified as factors contributing to PTSD symptoms during the post-settlement period (e.g., Nickerson et al., 2011; Steel et al., 2011). However, previous studies have relied upon convenience or selected samples. Moreover, there remains an absence of research investigating the association between post-settlement social, financial and occupational adversity and PTSD symptoms. **Objective:** We sought to determine whether post-settlement adversity was associated with post-settlement PTSD symptoms in refugees and asylum seekers after controlling for lifetime trauma exposure and anger attacks. **Method:** We used a randomly selected time by location sampling framework to recruit 74 participants (Median age = 35) of recent arrivals (<5yrs) from Afghanistan (36%) and Iran (64%) as they attended one of 15 different community grocery stores in Sydney catering to these communities. A kish grid was then used to select the customer or a family member of the customer who was then invited to participate based on the representative sampling framework. Participants completed the Anger Attacks Questionnaire, Harvard Trauma Questionnaire and a validated measure of post-arrival adversity, the Post-Migration Living Difficulties Checklist (Steel et al., Br J Psychiatry, 2006). **Results:** Linear regression analyses were conducted. After controlling for lifetime trauma and the presence of anger attacks, total post-settlement adversity was a significant predictor of PTSD symptoms (Standardised Beta = 0.62, 95% CI = 0.34, 1.02). Secondary analyses suggested that social separation and disconnection (Standardised Beta = 0.32, 95% CI = 0.06, 2.69); socio-economic (Standardised Beta = 0.61, 95% CI = 1.16, 3.44) and visa-related adversity (Standardised Beta = 0.44, 95% CI = 0.50, 3.03); but not health-related adversity ($p > 0.05$), significantly predicted PTSD symptoms during post-settlement. **Discussion:** Our study extends previous findings by using a representative sampling framework and a multi-dimensional measure of post-settlement adversity. Overall adversity during the post-settlement period was a unique predictor of PTSD symptoms. Consistent with previous research conducted using selected samples, we found that visa uncertainty was associated with PTSD symptoms. Our findings that a) social separation and disconnection, and b) socio-economic factors were associated with PTSD symptoms indicates a need for increased resources to be directed towards these domains of the post-settlement journey. Future research should investigate these relationships prospectively.

## Symposium
## Friday, November 10
## 1:30 PM to 2:45 PM
## Salon 3
## Assessment and Diagnosis Track

## Elucidating the Mechanisms of Dysfunction in PTSD and Depression

(Clin Res, Affect/Int-Cog/Int-Depr, Adult, M, Industrialized)

**Arditte Hall, Kimberly, PhD**[1]; Pineles, Suzanne, PhD[2]
[1]*National Center for PTSD-Women's Health Science Division, VA Boston Healthcare System and Boston University, Boston, Massachusetts, USA*
[2]*National Center for PTSD, VA Boston Healthcare System, Boston University School of Medicine, Boston, Massachusetts, USA*

Comorbidity between posttraumatic stress disorder (PTSD) and depressive disorders is common. Individuals with comorbid PTSD and depression often experience greater functional impairment and poorer response to treatment than individuals with either diagnosis alone. Despite a wealth of research on this topic, the relations between PTSD and depression continue to be complex and are not fully understood. With this in mind, research that a) identifies transdiagnostic mechanisms of dysfunction or b) elucidates disorder-specific vulnerabilities stands to improve our theoretical understanding of these conditions and our subsequent ability to treat them. The proposed symposium will present cutting-edge research on psycho-bio-behavioral markers of risk for PTSD and depression. In keeping with this year's theme, the symposium will highlight multiple levels of analysis, including neurobiological, cognitive, psychophysiological, and subjective vulnerabilities. First, Dr. Negar Fani will present research examining the associations between anhedonic manifestations of PTSD and depression and white matter substrates. Next, Ms. Casey May will present data showing that deficits in reward

processing (often found in individuals with depression) are present in individuals with PTSD and are related to re-experiencing symptoms. Dr. Kimberly Arditte Hall will then report on similarities and differences in the use of state/trait emotion regulation strategies among depressed military veterans with and without comorbid PTSD. Finally, Dr. Abigail Powers Lott will share findings on neural, psychophysiological, and cognitive aspects of emotion dysregulation among chronically traumatized women. Dr. Suzanne Pineles is an expert on mechanisms underlying trauma-related psychopathology, and will serve as the symposium's discussant.

## White Matter Biomarkers of Anhedonia in Trauma Survivors

(Bio Med, Depr-Neuro, Adult, M, Industrialized)

**Fani, Negar, PhD**
*Emory University School of Medicine, Atlanta, Georgia, USA*

**Background:** Anhedonia emerges in some people following a traumatic event. Although depression and PTSD have some shared anhedonic features, some are distinct (e.g., emotional numbing), and little is known about the neural signatures of these symptom manifestations. The present study examined associations between post-traumatic and depressive anhedonic symptoms and white matter microarchitecture. **Methods:** Twenty-seven participants aged 19 to 58 were recruited from the emergency department of a level I trauma center within 24 hours of trauma and received diffusion tensor imaging within one month. Measures of PTSD (PTSD symptom scale) and depression (BDI) were obtained at 6 months post-trauma, and anhedonia items from each measure were summed separately, with one common item (lack of interest in activities) removed. **Results:** After covarying earlier trauma exposure (childhood maltreatment) and lifetime alcohol abuse, uncinate fasciculus microarchitecture (fractional anisotropy; FA) was significantly associated with anhedonic features of depression (r=-41, r<.05), but not PTSD, at 6 months. Participants who endorsed one or more emotional numbing PTSD symptom (n=9) had significantly lower left cingulum FA, compared to those with none (n=18; F1,24=5.13, p<.05). **Conclusions:** Anhedonic manifestations of depression and PTSD appear to have distinct white matter substrates. These findings suggest potential biomarkers for the development of these symptoms in recently-traumatized people.

## Reward Processing in Posttraumatic Stress Disorder (PTSD)

(Clin Res, Affect/Int-Cog/Int, Adult, M, Industrialized)

**May, Casey, BS**; Wisco, Blair, PhD
*University of North Carolina, Greensboro, North Carolina, USA*

Prior research indicates that positive emotion is dampened in PTSD. Frequent trauma re-experiencing may explain this dampening, but the role of trauma re-experiencing in processing of positive emotion has not yet been tested. We examine reward processing among individuals diagnosed with PTSD using the *Clinician-Administered PTSD Scale-5* (*n*=26) and trauma-exposed controls without PTSD (*n*=26). Participants play a wheel-of-fortune task under neutral and trauma primes. On each trial, participants are presented with a wheel-of-fortune spinner, rate expectation of reward (anticipatory pleasure, AP), are shown the outcome of the spin, and rate satisfaction with that reward (consummatory pleasure, CP). Each task is primed with an audio script of the trauma or a neutral event (neither positive nor negative). Consistent with hypotheses, preliminary results (*n*=23; 13 PTSD, 10 trauma-exposed controls) indicate the PTSD group reported lower AP and CP than controls (AP $\eta^2$=.169, CP $\eta^2$=.013). This group difference was moderated by the trauma prime—the PTSD group rated lower AP and CP in the trauma versus neutral condition (AP $\eta^2$=.065, CP $\eta^2$=.018). These preliminary findings suggest that individuals with PTSD demonstrate deficits in reward processing, further exacerbated by trauma reminders. Implications for psychotherapy focused on increasing positive emotion in PTSD will be discussed.

## State and Trait Emotion Regulation in Veterans with PTSD and Depression

(Clin Res, Affect/Int-Cog/Int-Depr, Adult, M, Industrialized)

**Arditte Hall, Kimberly, PhD**[1]; Rosebrock, Laina, MA[2]; Pineles, Suzanne, PhD[3]; Rando, Alora, BA[4]; Liverant, Gabrielle, PhD[4]
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*Boston, Massachusetts, USA*
*[4]Suffolk University, Boston, Massachusetts, USA*

Though emotion dysregulation is a core feature of unipolar depression and posttraumatic stress disorder (PTSD), the extent to the presence of each disorder is associated with use of specific emotion regulation (ER) strategies remains unclear. Seventy-six veterans with unipolar depression (n = 41 with current PTSD [PTSD+] and n = 35 without PTSD [PTSD-]) reported on their trait-level use of ER strategies, including acceptance, suppression, and rumination. They then underwent a sad mood induction, after which state use of acceptance, suppression, and rumination was assessed. As compared to PTSD- participants, PTSD+ participants reported less trait-level use of acceptance (p=.006, d=.66) and more trait-level use of suppression (p=.004, d=.68). The groups did not differ on trait-level rumination (p=.24, d=.27). A similar pattern emerged for state ER; PTSD+ participants reported less acceptance (p=.04, partial η2=.06) and more suppression (p=.003, partial η2=.12), but no difference in use of rumination (p=.91, partial η2<.001) as compared to PTSD- participants. Findings remained even after controlling for depression symptom severity. Among individuals with depression, the presence of comorbid PTSD is associated with a particularly problematic pattern of ER, which may serve to maintain acute negative affect and clinical symptoms over time.

## In Search of Underlying Mechanisms of Risk: Examination of Affective Functioning Dimensions in PTSD and Depression among Chronically Traumatized Adults

(Clin Res, Chronic-Depr, Adult, M, Industrialized)

**Powers Lott, Abigail, PhD**[1]; Fani, Negar, PhD[1]; Jovanovic, Tanja, PhD[1]; Bradley, Bekh, PhD[2]
*[1]Emory University School of Medicine, Atlanta, Georgia, USA*
*[2]Atlanta VAMC/Emory University, Decatur, Georgia, USA*

Emotion regulation, physiological function, and attentional patterns are important interconnected components of broader affective functioning and provide an opportunity to examine similarities and differences in emotional mechanisms impacting PTSD and depression in chronically traumatized individuals. This presentation will take a multi-method approach and cover data from three separate studies conducted in an urban sample of African American women with high levels of interpersonal trauma exposure. Data presented will include examination of 1) neural correlates of emotion dysregulation and their relationship with PTSD and depression (N=92) using fMRI during an emotional faces task, 2) psychophysiological markers of emotion dysregulation (N=157) using a measure of heart rate variability, and 3) differences in attentional bias patterns by PTSD and depression diagnosis (N=109) using eye tracking technology during an emotional faces task. Self-report measures of trauma exposure, emotion dysregulation, PTSD, and depression were obtained across studies. Structured clinical interviews (Clinician Administered PTSD Scale, MINI International Neuropsychiatric Interview) were also conducted for psychiatric diagnoses. Results from each study will be discussed and clinical implications for treatment will be highlighted.

## Symposium
## Friday, November 10
## 1:30 PM to 2:45 PM
## Salon 4/9
## Child Trauma Track

## History Repeating Itself? Elucidating Risk Factors for the Intergenerational Transmission of Trauma in High Risk Samples

(Clin Res, Chronic-Complex-Fam/Int-Intergen, Lifespan, I, Industrialized)

**Liebman, Rachel, PhD**
*Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA*

Research tells us that behavior is predetermined by a complex interplay between genetic, biological, parental and cultural influences (Harper, 2005; Bowers & Yehuda, 2015). High rates of trauma in children of parents with their own extensive trauma histories has led to increasing research on the mechanisms by which trauma is transmitted from parent to child. This symposium presents findings from four studies that examine each of these factors as pathways by which to understand the intergenerational transmission of trauma. Much research on intergenerational trauma has emphasized

the role of sociocultural context, in terms of exposure to historical, cultural, and community-based violence, as a primary factor that contributes to trauma's insidiousness across generations (Walters et al, 2011). As such, a goal of this symposium is to elucidate potential mechanisms of action in high-risk samples who are at particular risk for intergenerational trauma. Through examination of factors across multiple levels of analysis (biological, individual, and dyadic) this symposium seeks to underscore some of the factors that explain why and how trauma is passed down across generations. Findings are oriented in three prominent theoretical models commonly used to understand intergenerational trauma: epigenetics, social learning theory, and attachment theory. Specifically, results highlight 1) epigenetic markers and maternal symptoms that increase the risk for child exposure to and symptoms of trauma, 2) physiological responses that are implicated in dyadic co-regulation, and 3) the potential mitigating effect of positive parenting on child trauma symptoms among trauma-exposed mothers and children. These findings highlight the insidiousness of trauma across generations, and point to valuable treatment targets (e.g., physiological reactivity, positive parenting practices, relationship building, and emotion regulation) to break the intergenerational cycle. The symposium also raises several areas for future empirical inquiry including the role of harsh or unresponsive parenting, and co-regulation of physiological reactivity in the development of child trauma symptoms.

## Maternal Complex PTSD as a Predictor of Daughter Premorbid Complex Trauma Symptoms

(Clin Res, Chronic-Complex-Intergen, Lifespan, I, Industrialized)

**Liebman, Rachel, PhD**[1]; Ragbeer, Shayne, PhD[2]; Walsh, Dayton, PhD[3]
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[2]*Columbia University/NY State Psychiatric Institute, NY, New York, USA*
[3]*University of Rochester, Rochester, New York, USA*

The intergenerational transmission of mental health symptoms related to trauma is well known. Complex PTSD (CPTSD) has a profound impact on the development and maintenance of close relationships (Cook, et al, 2005) and likely impacts a parent's ability to respond to their children's needs, which may put them at risk for exposure to trauma and the development of trauma-related symptoms. Past evidence links maternal trauma exposure to child maltreatment (Dubowitz, et al., 2001) as well as impaired family cohesion, parenting satisfaction, and presence of emotional abuse (Gold, et al., 2007; Berz, Taft, Watkins, & Monson, 2008). Though the intergenerational impact of CPTSD has yet to be directly examined, research on related psychiatric disorders like Borderline Personality Disorder (BPD) lends support to the hypothesis that maternal CPTSD symptoms interfere with child functioning. Specifically, past evidence suggests that maternal personality pathology is associated with problematic parenting, and that both of these predict the development of child personality pathology (Ehrensaft, et al, 2003). Despite these findings, there is a paucity of research linking maternal CPTSD to the experience of trauma and trauma-related symptoms in the next generation, above and beyond the effects of maternal trauma exposure alone. The purpose of this study was to examine the hypothesized risk conferred by CPTSD in terms of both direct (child trauma and trauma-related symptoms) and indirect (parenting practices) risk factors for the development of child complex trauma. Finally, as research on the diagnostic differences between CPTSD and PTSD is still growing, a second aim of the study was to distinguish the effects of maternal CPTSD from those attributed to traditional PTSD. The sample included N = 73 mothers and their 9-13 year old daughters recruited from a high-risk community sample. Both mothers and daughters had high rates of trauma exposure (> 90%). Using multiple regression analyses and controlling for maternal trauma exposure, maternal CPTSD symptoms were associated with child maltreatment exposure ($p = .05$), and child antisocial ($p < .05$), borderline ($p < .01$), eating disorder ($p < .05$) and depression symptoms ($p = .05$), while PTSD was not. CPTSD, but not PTSD, was also associated with self-reported negative parenting attitudes (i.e., role reversal ($p < .05$) and inappropriate expectations ($p < .05$)), but parenting attitudes did not predict child maltreatment or child trauma-related symptoms. Results highlight maternal CPTSD as an important risk factor for child trauma exposure and symptoms that could be premorbid sequalae of complex trauma.

## Maternal Posttraumatic Stress during Pregnancy and Intergenerational Transmission of Epigenetic Risk

(Bio Med, Bio Med-Prevent-Intergen, Lifespan, I, Industrialized)

**Grasso, Damion, PhD**[1]; Covault, Jonathan, MD, PhD[2]; Johnson, Amy, MD[2]
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[2]*University of Connecticut School of Medicine, Farmington, Connecticut, USA*

Effects of trauma exposure can be transmitted across generations to shape pathways to impairment in offspring, with the prenatal period identified as especially pivotal. An emerging literature focuses on the influence of maternal posttraumatic stress (PTS) during pregnancy (Kim, Harrison, Godecker, & Muzyka, 2014). PTS affects up to 40% of pregnant women, particularly underserved populations with health disparities (Yildiz, Ayers, & Phillips, 2016). Prenatal PTS may interrupt healthy development of biological stress systems in offspring, which may operate through epigenetic processes (Zhang & Meaney, 2010). The current study involves a high-risk, predominantly Hispanic cohort of pregnant women and their newborn infants with the goal of examining linkages between maternal PTS during pregnancy, and infant epigenetic patterns in FKBP5, a gene implicated in stress response functioning (Klengel et al., 2013). Ninety-eight percent of the cohort endorsed lifetime trauma exposure, with 30% meeting criteria for PTSD. Infants of mothers with high PTS during pregnancy had significantly greater methylation levels than infants of mothers with no PTS at two binding sites (Cohen's d = .70). Infant methylation was also associated with other indicators of maternal impairment, as well as with maternal methylation, suggesting epigenetic transmission. Implications for understanding intergenerational mechanisms will be discussed.

## Relations among Self-Reported Trauma/Adversity Experiences and Symptoms, Parenting, and Child and Caregiver Respiratory Sinus Arrhythmia Response to Solitary or Joint Task

(Bio Med, Fam/Int-Intergen, Lifespan, I, Industrialized)

**Kiser, Laurel, PhD, MBA**[1]; Fishbein, Diana, PhD[2]; Gatzke-Kopp, Lisa, PhD[2]; Vivrette, Rebecca, PhD[1]; Creavey, Kristine, MS[2]; Stevenson, Jennifer, MS[1]
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[2]*Penn State University, University Park, Pennsylvania, USA*

Mounting evidence suggests strong relations between family conflict, parenting and respiratory sinus arrhythmia (RSA), a component of stress physiology (Del Guidice et al, 2011; Diamond, Fagundes, & Butterworth, 2011; El-Sheikh, Harger, & Whitson, 2001; Hastings, Nuselovici, Utendale, Coutya, McShane, & Sullivan 2008). The present pilot study was designed to investigate how children, ages 9 to 14 years old, and their primary caregivers (N=40) respond to affective challenge and how their responses impact one another's physiology. Using a community sample, we examined caregiver-child RSA while viewing negative, positive and neutral video clips/pictures (condition) either alone or jointly (task). Further, we explored the relations among self-reported trauma/adversity experiences and symptoms, parenting, and change in RSA response by task. Results indicate caregivers' RSA responses showed greater sensitivity to task as well as to trauma exposure/symptoms and parenting style than their children. For example, caregivers who reported more severe negative cognitions and mood symptoms of PTSD and more symptoms overall also tended to display increased average RSA when with their child than when alone. Results will be reviewed based on Porges' Polyvagal Theory (Porges, 2001, 2007) and related to intergenerational transmission of stress/trauma in caregiver-child relations.

## Responsive Parenting Buffers the Impact of Maternal Mental Health Symptoms on Young Children among IPV-Exposed Families

(Clin Res, DV-Fam/Int-Intergen, Lifespan, I, Industrialized)

**Greene, Carolyn, PhD**[1]; McCarthy, Kimberly, BA[2]; Wakschlag, Lauren, PhD[3]; Briggs-Gowan, Margaret, PhD[4]
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[2]*University of Connecticut Health Center, Farmington, Connecticut, USA*
[3]*Northwestern University Feinberg School of Medicine, Chicago, Illinois, USA*
[4]*University of Connecticut School of Medicine, Farmington, Connecticut, USA*

The detrimental impact of maternal mental health on children is well-documented. Indeed, a number of studies indicate that maternal psychological distress partially mediates the effects of intimate partner violence (IPV) on children's mental health functioning (Zarling, 2013; Levendosky et al; 2006). Although parenting deficits and increased risk for harsh parenting following IPV are frequently cited as an explanatory pathway for this relationship, not all investigations support the relationship between IPV and compromised parenting. In fact, positive parenting has been found to buffer the effects of IPV on children (Miller-Graff et al, 2016). This study examines the moderating effect of responsive parenting on the specific link between maternal mental health (depression and PTSD) and children's posttraumatic stress symptoms among IPV-exposed mother-child dyads. The study utilizes a high-risk sample of preschool-age children (N=400) in an urban region of the Midwest. Mothers' and children's mental health symptoms were reported by mothers, and responsive parenting was coded globally by independent observers viewing videotaped mother-child interactions. Analyses revealed interaction effects between both mothers' PTSD and depressive symptoms and responsive parenting on children's trauma symptoms ($p < .001$ for both interactions), indicating a reduced effect of maternal symptoms on children's symptoms among mothers displaying more responsive parenting.

## Symposium
## Friday, November 10
## 1:30 PM to 2:45 PM
## Salon 5/8
## Treatment Track

## Precision Medicine in Trauma: Selecting the Optimal Treatment for an Individual with PTSD

(Clin Res, Clinical Practice-Res Meth, Adult, M, Industrialized)

**Cohen, Zachary, MA, PhD Student**[1]; Schnurr, Paula, PhD[2]
[1]*University of Pennsylvania, Philadelphia, Pennsylvania, USA*
[2]*National Center for PTSD, Executive Division, White River Junction, Vermont, USA*

The push for personalized and precision approaches in mental health involves identifying and translating the predictive information from moderators into treatment recommendations. PTSD is an especially important context for treatment selection, with multiple evidence-based treatments available and little structured guidance as to which one a given individual should receive. Although recent work has shown that clinicians hold beliefs about patient factors that could inform these decisions (Raza & Holohan, 2015), formal approaches to generate reliable recommendations are still in developmental stages (Cloitre et al., 2016). In this symposium, clinical researchers from two countries and three universities will present different approaches to treatment selection for PTSD in three contexts: cognitive-behavioral therapy vs. eye movement desensitization and reprocessing, prolonged exposure vs. cognitive processing therapy, and prolonged exposure vs. present-centered therapy. The samples used comprise both sexual and non-sexual trauma, are drawn from both veteran and civilian populations, and were collected in both naturalistic and RCT settings. Many of the moderators that will be featured (e.g., depression, anger, and PTSD symptom clusters) are consistent with the existing literature and across multiple studies. This symposium highlights the complexity and heterogeneity of individual differences in treatment response, and presents approaches that will generate individualized treatment recommendations to improve outcomes in PTSD. Our discussant, the Executive Director of the VA National Center for PTSD, will discuss practical

challenges and implications for how these approaches can help translate research findings into practical tools that improve real-world outcomes.

## Predictors and Moderators of Symptom Change in Prolonged Exposure and Present-Centered Therapy in Female Veterans with PTSD

(Clin Res, Res Meth-Mil/Vets, Adult, M, Industrialized)

**Lunney, Carole, MA**[1]; Cohen, Zachary, MA, PhD Student[2]; Wiltsey Stirman, Shannon, PhD[3]; Wiley, Joshua, PhD[4]; DeRubeis, Robert, PhD[2]; Schnurr, Paula, PhD[1]
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[4]*Monash University, Clayton, Victoria, Australia*

The aim of this study was to examine the utility of the Personalized Advantage Index (PAI) treatment-selection approach using data from a randomized clinical trial of Prolonged Exposure (PE) and Present-Centered Therapy (PCT). Participants were 284 female veterans and active-duty personnel with PTSD. Treatment predictors were identified with a two-step, data-driven variable selection approach using random forests and AIC-penalized stepwise variable selection. PTSD severity, reexperiencing and hyperarousal symptom severity, and the SF-36 physical component score were identified as moderators. Treatment credibility was identified as a prognostic predictor. Treatment recommendations were generated using these predictors with 10-fold cross-validation. Those who got their model-indicated treatment had better outcomes than those who got their contraindicated treatment. This advantage was 48.3 vs. 62.5 on the Clinician-Administered PTSD Scale (CAPS) among the 60% of participants with the strongest treatment recommendations. Despite an overall 7.2-point advantage for PE over PCT, a 9.2 CAPS advantage for PCT was observed for the 32 participants for whom PCT was strongly indicated. Thus, the PAI can not only identify individuals for whom a larger benefit of the stronger treatment can be expected, but also a subgroup of those for whom the weaker treatment may result in better outcomes.

## Improving Outcomes through a New Variable Selection Approach for Treatment Selection in Sexual Trauma PTSD

(Clin Res, Res Meth, Adult, M, Industrialized)

**Cohen, Zachary, MA, PhD Student**[1]; Wiltsey Stirman, Shannon, PhD[2]; DeRubeis, Robert, PhD[1]; Smith, Brian, PhD[3]; Resick, Patricia, PhD, ABPP[4]
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[4]*Duke University Medical Center, Durham, North Carolina, USA*

Multiple evidence-based interventions are available for PTSD, but little guidance exists for selecting which treatment an individual should receive. We demonstrate an actuarial method that uses patient characteristics to predict differential response in two treatments for PTSD. Using data from a randomized clinical trial data (n = 160) comparing prolonged exposure and cognitive processing therapies for rape trauma PTSD, we combine four variable selection approaches to identify robust moderators of treatment response. We identify moderators consistent with other treatment selection efforts in the PTSD literature (e.g., depression, anger, dissociation) as well as novel predictors (e.g., sleep problems, trust, self-blame). We use these variables with 10-fold cross-validation and linear regression to generate response predictions that indicate which treatment is expected to be most beneficial for each individual. In the context of two treatments with equivalent average outcomes, we find that patients who receive their model-indicated intervention have lower post-treatment scores on the Clinician-Administered PTSD Scale (6.4 points) than those who receive their non-indicated intervention. We discuss the implications of the identified moderator relationships for clinicians, review the methodological advantages of this novel approach to variable selection, and outline a project in which we plan to prospectively test this model.

## What Works for Whom in Sexual Trauma PTSD: Patient Characteristics Indicate which Treatment They are most likely to Complete

(Clin Res, Clin Res-Cog/Int-Rape-Res Meth, Adult, M, Industrialized)

**Keefe, John (Jack), MA, PhD Student**[1]; Wiltsey Stirman, Shannon, PhD[2]; Cohen, Zachary, MA, PhD Student[1]; DeRubeis, Robert, PhD[1]; Smith, Brian, PhD[3]; Resick, Patricia, PhD, ABPP[4]
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[4]*Duke University Medical Center, Durham, North Carolina, USA*

**Background:** Dropout from effective psychosocial therapies for PTSD is high and unpredictable. Aims: To demonstrate a method that uses patient characteristics to predict differential retention in two treatments for PTSD. **Method:** A multivariable model of dropout risk was constructed with randomized clinical trial data (n = 160) comparing prolonged exposure and cognitive processing therapies for rape trauma PTSD. A two-step bootstrapped variable selection algorithm was applied to identify robust moderators of dropout as a function of treatment condition. Five-fold cross-validation models yielded estimates of probability of dropout for each patient in each condition. Dropout rates between patients who did and did not receive their indicated treatment were compared. **Results:** Dropout was lower among patients assigned to their indicated, as opposed to their non-indicated, treatment (relative risk = 0.49). Moderators included childhood physical abuse, relationship conflict, anger, and racial minority status, all of which were associated with more dropout in PE relative to CPT. **Conclusions:** Multivariable treatment selection models have the potential to improve retention rates in PTSD treatment.

## Individual Treatment Selection for Patients with Post-traumatic Stress Disorders based on a Personalized Advantage Index

(Res Meth, Clin Res-Clinical Practice-Cog/Int-Res Meth, Adult, M, Industrialized)

**Deisenhofer, Ann-Kathrin, MA, PhD Student**[1]; Delgadillo, Jaime, PhD[2]; Rubel, Julian, PhD[1]; Zimmermann, Dirk, MA, PhD Student[1]; Schwartz, Brian, MA, PhD Student[1]; Lutz, Wolfgang, Professor[1]
[1]*University of Trier, Trier, Rheinland-Pfalz, Germany*
[2]*University of Sheffield, Sheffield, South Yorkshire, United Kingdom*

**Background**: Cognitive behavioral therapy (CBT) as well as eye movement desensitization and reprocessing (EMDR) have been shown to be effective for the treatment of post-traumatic stress disorder (PTSD) in several randomized controlled trials and systematic meta-analytic reviews. Yet, in all trials there are patients that do not seem to benefit from these interventions or patients that even deteriorate during therapy. **Aims**: To illustrate and test a new method for integrating predictive information to aid in individual treatment selection. **Method**: A decision-making model was applied to data from Improving Access to Psychological Therapies (IAPT) which is a national program of mental healthcare in England, United Kingdom. In a naturalistic setting, PTSD patients received either EMDR (N = 75) or CBT (N = 242) using the Patient Health Questionnaire (PHQ) as outcome measure. Variables predicting differential response were detected via an automated genetic algorithm and afterwards were included in regression models, permitting the calculation of each patient's personalized advantage index (PAI), in PHQ units. **Results**: The PAI was applied successfully as a new model to treatment selection, implemented in the context of two equally effective treatments. **Conclusions**: The results are discussed in the context of practical application and existing literature.

**Symposium**
**Friday, November 10**
**1:30 PM to 2:45 PM**
**Salon 6/7**

## Understanding the Role of Sociocognitive Factors in Risk for and Outcomes of Sexual Victimization among College Students

(Clin Res, Rape, Adult, M, Industrialized)

**Wilson, Laura, PhD**[1]; **Newins, Amie, PhD**[2]; Resick, Patricia, PhD, ABPP[3]
[1]*University of Mary Washington, Fredericksburg, Virginia, USA*
[2]*University of Central Florida, Orlando, Florida, USA*
[3]*Duke University Medical Center, Durham, North Carolina, USA*

Four psychological scientists will present on factors associated with risk of sexual victimization and survivor outcomes among female and male college students. This line of research is particularly important because sexual violence is alarmingly common among college students and is associated with a myriad of negative psychosocial outcomes. The presenters will discuss a range of risk factors associated with increased risk for sexual victimization, including previous victimization, risk judgment, response choices, alcohol use, and "the party culture." The presenters will also highlight the complexities of survivor outcomes, including how survivors label their experiences (i.e., rape acknowledgment) and the role of beliefs (e.g., acceptance of rape myths) in understanding symptomatology (e.g., depression symptoms, alcohol use). Overall, the results suggest that the mechanisms behind understanding risk for sexual victimization and pathways to post-victimization functioning are multifaceted. The findings demonstrate that, in order to better understand and predict risk for and outcomes of sexual violence, researchers should test complex models that include numerous risk and protective factors (e.g., rape myth acceptance, rape acknowledgment, alcohol use, previous victimization). In addition to discussing the specific results of each study, the presenters will also address the clinical and empirical implications of the findings. These implications include how the results relate to the use of empirically-based psychotherapies, such as Cognitive Processing Therapy, and prevention efforts on college campuses.

## Risk Processing, Alcohol Use, and College Women's Sexual Victimization

(Clin Res, Cog/Int-Rape-Sub/Abuse-Gender, Adult, M, N/A)

**Yeater, Elizabeth, PhD**
*University of New Mexico, Albuquerque, New Mexico, USA*

Sexual assault on college campuses has reached epidemic proportions, yet the etiological variables responsible for violence in these contexts remain unclear. This project examined (1) whether difficulties with risk judgment and response choice predicted victimization, and (2) whether alcohol-related risk factors moderated the associations between previous victimization, risk judgment, response choices, and sexual victimization during the prospective period. Four hundred eighty one (N=481) freshman women completed risk judgment and response choice tasks and alcohol problem measures at baseline and again at 6-months (N=453). Structural equation models revealed a marginal indirect effect of prior victimization on post victimization via changes in risk judgment and response selection ($p=.07$). There also was a significant indirect effect ($p<.05$) of risk judgment on victimization at follow up. The direct effect of victimization history on follow-up victimization was also strong ($r=.43$). Once quantity/frequency of alcohol use was added to the model, it was strongly related to prior victimization ($r=.27$), negatively predicted risk judgment, so women who used more alcohol judged situations to be less risky ($r=-.18$), and predicted future victimization ($r=.11$). These results, including the high rates of victimization during the study (47.2%), suggest that additional work is needed to understand the contextual determinants of victimization.

## Sexual Assault among College Men: A Quantitative and Qualitative Investigation

(Social, Rape-Gender, Adult, M, Industrialized)

**Littleton, Heather, PhD**[1]; Layh, Marlee, BS, BA[1]; Rudolph, Kelly, PhD Student[1]; Haney, Laura, PhD Student[1]; Ullman, Sarah, PhD[2]
[1]*East Carolina University, Greenville, North Carolina, USA*
[2]*University of Illinois Chicago, Chicago, Illinois, USA*

Recent studies suggest that college men are also frequently sexual assault victims, but is limited by use of non-validated screening measures, varying prevalence estimates, and a lack of investigation of assault characteristics. The current study examined the assault characteristics of a sample of college men (n = 47; 12% of the full sample) who endorsed a sexual assault experience since age 14 on a validated screening measure. Quantitative findings supported that 80% of victims were unacknowledged (did not label it a victimization), and 73% of assaults involved a female perpetrator. Nearly 50% reported they were binge drinking at the time of the assault, and 52% reported engaging in moderately assertive resistance (e.g., saying no). In contrast, only 28% reported that the assailant used moderately severe force (e.g., using their body weight, holding them down) and only 9% that she or he used severe force (e.g., hitting, slapping, or beating, using a weapon). Qualitative findings supported that men's sexual assaults most often occurred in party settings after drinking, and involved a woman forcing the victim to engage in a sexual act when he was not capable of resisting or consenting due to substance use. Implications of the findings for understanding sexual assault among college men and the role of party culture in fueling sexual violence are discussed.

## Rape Myth Acceptance and Rape Acknowledgment: The Mediating Role of Sexual Refusal Assertiveness

(Clin Res, Cog/Int-Rape, Adult, M, Industrialized)

**Newins, Amie, PhD**[1]; Wilson, Laura, PhD[2]
[1]*University of Central Florida, Orlando, Florida, USA*
[2]*University of Mary Washington, Fredericksburg, Virginia, USA*

It has been well documented that many women who experience an event that meets the definition of rape do not label it as such, a phenomenon known as unacknowledged rape (Wilson & Miller, 2016). Research examining predictors of rape acknowledgment is needed. In this study, 181 female rape survivors completed an online survey assessing rape myth acceptance, sexual refusal assertiveness, and rape acknowledgment. The indirect effect of rape myth acceptance on rape acknowledgment through sexual refusal assertiveness was estimated. The indirect effects of two types of rape myths (He didn't mean to and Rape is a deviant event) were significant and positive. Specifically, acceptance of these two rape myths was negatively related to sexual refusal assertiveness, which was negatively associated with likelihood of rape acknowledgment. While sexual refusal assertiveness has been shown to be associated with decreased likelihood of experiencing a sexual assault (e.g., Livingston, Testa, & VanZile-Tamsen, 2007; Schry & White, 2013), the results of this study may indicate that individuals who have strong beliefs that they can say no to unwanted sexual contact are more likely to use more benign terms for their own experiences of rape because they believe they would have been able to protect themselves if they were raped.

## The Impact of Rape Acknowledgment on Survivor Outcomes: The Moderating Effect of Rape Myth Acceptance

(Clin Res, Rape, Adult, M, Industrialized)

**Wilson, Laura, PhD**[1]; Newins, Amie, PhD[2]
[1]*University of Mary Washington, Fredericksburg, Virginia, USA*
[2]*University of Central Florida, Orlando, Florida, USA*

Although approximately 60% of rape survivors do not acknowledge their experience as rape, little is known about how rape acknowledgment relates to post-trauma functioning. Recently, it has been suggested that more complex models of rape acknowledgment should be examined. In the current study, the moderating effect of rape myth acceptance on the relationships between rape acknowledgment and depression symptoms, frequency of alcohol use, and average quantity per drinking episode was examined in a sample of 181 rape survivors recruited from a university. Generally, the results supported that rape myth acceptance moderated the influence of rape acknowledgment on depression symptoms and average quantity per drinking episode, but not frequency of alcohol use. The findings demonstrated that, among survivors high on rape myth acceptance, acknowledged rape survivors reported worse outcomes than unacknowledged rape survivors. Additionally, among survivors who were low on rape myth acceptance, unacknowledged rape reported worse outcomes than acknowledged rape survivors. It is recommended that clinicians consider factors, such as rape myth acceptance, when using labels for sexual assault experiences. These findings confirm that the relationship between rape acknowledgment and post-trauma outcomes is complex and that additional research on potential moderators is needed.

**Panel Presentation**
**Friday, November 10**
**1:30 PM to 2:45 PM**
**Crystal Room**
**Treatment Track**

## Alternative Approaches to Trauma Treatment: The Role of Creativity, Collaboration, and Self Paced Exposure in PTSD Interventions

(Practice, Clinical Practice-Commun-Mil/Vets-Theory, Adult, M, Industrialized)

**Yehuda, Rachel, PhD**[1]; **Patton, Benjamin, MA**[2]; **van der Kolk, Bessel, MD**[3]; **Tuval-Mashiach, Rivka, PhD**[4]
[1]*J. J. Peters Veterans Affairs Medical Center; Mount Sinai School of Medicine, Bronx, New York, USA*
[2]*Columbia Teachers College, New York, New York, USA*
[3]*Trauma Center at Justice Resource Institute, Brookline, Massachusetts, USA*
[4]*Bar-Ilan University, Ramat Gan, Israel*

Despite high rates of distress and the availability of efficacious treatments, as many as half of US veterans with posttraumatic stress disorder or depression do not seek care. Despite high rates of distress and the availability of efficacious treatments, as many as half of US veterans with posttraumatic stress disorder or depression do not seek care (Elbogen, 2013). The aim of the proposed panel is to discuss the potential and opportunities in alternative approaches to treatment, which may benefit veterans and trauma survivors. The discussion will evolve around two innovative models—The I Was There (IWT) video-based therapy, and a theater-based therapy program. The I Was There (IWT) film workshop is a practical implementation of a short and collaborative video-based therapy for veterans coping with service-related stress (Tuval-Mashiach & Patton, 2014), and theater based therapy was developed by Prof. Van der Kolk. The two models share the focus on visual, rather than verbal processing, alternative perception of the role of exposure, and the use of creative arts to help traumatized people restructure traumatic experiences. Specifically, Mr. Benjamin Patton will describe and illustrate the IWT model and intervention. Prof. Bessel Van der Kolk will describe the theater-based therapy program and its therapeutic components. Prof. Rivka Tuval-Mashiach will describe potential mechanisms of change in the two models, and present empirical data on the impact of the IWT model. Prof. Rachel Yehuda will discuss the challenges these models raise for existing assumptions and guidelines for therapy with traumatized patients.

**Panel Presentation**
**Friday, November 10**
**1:30 PM to 2:45 PM**
**Adams Room**
**Treatment Track**

## Diversity in the Traumatic Stress Field: A Psychologist, Anthropologist/Linguist, and Buddhist Minister Raise Questions about Delivering Western Trauma-Focused Treatments in Asia

(CulDiv, Clinical Practice, Lifespan, M, Industrialized)

Felix, Erika, PhD[1]; **Shelby, Janine, PhD**[2]; **Sreetharan, Cindi, PhD**[3]; **Zavala, Jesse, BA**[4]
[1]*University of California, Santa Barbara, Santa Barbara, California, USA*
[2]*The University of California, Torrance, California, USA*
[3]*Arizona State University, Tempe, Arizona, USA*
[4]*Uinversity of Illinois at Chicago, Chicago, IL , Illinois, USA*

This innovative presentation is designed to address diversity issues in the traumatic stress field by raising challenges in disseminating and applying trauma-focused EBPs and post-disaster interventions to Japanese survivors. Panelists from psychology, linguistics, and religion will promote audience participation as they grapple with ideas about the degree to which Western-based treatments coalesce with Japanese sociocultural, linguistic, and spiritual practices. Many EBTs for trauma have shown promising results in Japan (Asukai et al., 2010; Kameoka et al., 2015). However, difficulties applying Western approaches have also been noted (Foa, Gilihan, & Bryant, 2013; Huey 2014; Kim, 2011, and Roysircar, 2009). Furthermore, differences in post-disaster intervention preferences in Japan have been illuminated (Fukasawa et al., 2013; Kim, 2011). Cultural, linguistic, and spiritual factors likely

influence how treatments are received by trauma survivors, but have neither been well integrated into the most commonly exported EBTs for trauma nor well explored in the literature. The first panelist, a psychologist, will provide a brief review of research and issues related to adapting Western-based EBTs for Asian survivors (e.g., relatively greater Japanese emphasis on mind-body relationships (Iwadare, et al., 2014; "gaman [patient endurance with dignity]," "mimaoru [watchful waiting or attentive monitoring]," and the natural recovery process). In contrast, Westerners' relative comfort level verbalizing distressing experiences/negative emotions, and preference to avoid or pathologize pain (Briere, 2015) will be discussed. The second panelist, an anthropologist and linguistic expert will discuss conceptual translation (i.e., translating not merely words but concepts the words represent), which is recognized in the linguistics field as difficult and imperfect. Some concepts routinely used in Japanese mental health contexts, do not easily translate into recognized therapeutic interventions in the US (i.e., mimamoru, gaman, and "arugamama," which means "as things are." The semantic breadth of these terms as well as their situational deployment will be examined and discussed in order to gain insight into how such terms can be used to better serve both survivors and those delivering trauma interventions. The third panelist will describe elements of Shinsu Buddhist philosophy, including the importance of seeing and accepting things as they are, mindfulness, gratitude and humility. Questions will then be posed to generate discussion, including attendees' experiences delivering EBTs in cross-cultural contexts, whether conceptual translation of treatment protocols is necessary, and how challenges can be addressed when Western EBTs are delivered in Asia.

## Workshop Presentation
## Friday, November 10
## 1:30 PM to 2:45 PM
## Salon 2
## Treatment Track

## Integrating and Optimising Imagery Rescripting in PTSD Treatment – from Practice to Research to Practice

(Practice, Clinical Practice-Cog/Int-Grief, Adult, M, N/A)

**El-Leithy, Sharif, Clinical Psychologist**[1]; **Murray, Hannah, Clinical Psychologist**[2]
[1]*South West London and St George's NHS Trust, London, United Kingdom*
[2]*Oxford University, Oxford, Oxfordshire, United Kingdom*

Imagery rescripting techniques are increasingly integrated into CBT, to directly modify the emotional impact of distressing mental imagery and associated meanings (Arntz 2012). There is also now evidence that imagery rescripting can stand-alone as a treatment for PTSD symptoms including nightmares, and also enhance the efficacy of imaginal reliving. With reference to cognitive models of PTSD and memory, two experts in trauma-focused cognitive therapy will provide an overview of the imagery rescripting literature and its application in both simple and complex PTSD presentations. They will also present novel results from a number of quantitative, qualitative and single case studies of imagery rescripting conducted in routine clinical settings. From this they will derive a clinical framework to help participants effectively implement rescripting techniques, integrate them within a CBT model, and formulate and overcome common obstacles. The workshop will give both an overview of the extant literature, and present a range of case material of the application of imagery rescripting. Practical examples and tips on how to implement these techniques will be given, including through video case material and live demonstrations. Participants will be invited to reflect on and role-play how they will apply similar strategies to their own cases.

**Featured Workshop Presentation**
**Friday, November 10**
**1:30 PM to 2:45 PM**
**Monroe Room**

## Addressing Vicarious Trauma among First Responders Using the Vicarious Trauma Toolkit

(Self-Care, Train/Ed/Dis, Prof, M, Industrialized)

**Tieszen, Lisa, LICSW**[1]; **Kia-Keating, Maryam, PhD**[2]
[1]*Northeastern University, Brookline, Massachusetts, USA*
[2]*University of California, Santa Barbara, Santa Barbara, California, USA*

Two presenters (social work and clinical psychology) will introduce the newly launched Office for Victims of Crime's Vicarious Trauma Toolkit (VTT), a free, multimedia, online resource for organizations serving victims of violence and exposure to traumatic stressors. Addressing vicarious trauma is critical to first responders' mental health, overall organizational health, and high quality victim support services. The VTT was developed through a national partnership led by the Institute on Urban Health Research and Practice at Northeastern University. Two National Summits took place with representatives from organizations including International Association of Chiefs of Police, International Association of Fire Chiefs, National Association of State EMS Officials, National Children's Advocacy Center, National Center for Victims of Crime, and the International Society for Traumatic Stress Studies (ISTSS). The toolkit was piloted in seven communities across the United States, heterogeneous in location and size. This workshop will introduce participants to VTT materials including agency guidelines, presentations with detailed instructor notes, and a collaborative assessment using the Vicarious Trauma Organizational Readiness Guide, a free tool that helps assess an agency's strengths and gaps in staff support. Videotape segments from the toolkit will be included. Suggestions for vicarious trauma-informed approaches will be discussed based on audience interaction.

# Concurrent Session Seven

## Featured Presentations
## Flash Talks
## Friday, November 10
## 3:00 PM to 4:15 PM
## Grand/State Ballroom

### Previous Traumatic Events and Subsequent PTSD: What is the Role of Cognitions?

(Assess Dx, Acute-Cog/Int, Adult, I, Global)

**Freedman, Sara, PhD**[1]; Goren, Yael, MA[1]; Shalev, Arieh, MD[2]
[1]*Bar-Ilan University, Ramat Gan, Israel*
[2]*New York University Langone Medical Center, New York, New York, USA*

**Introduction**: Studies have shown that previous exposure to traumatic events results in weaker coping resources when confronted with a subsequent traumatic event. In addition, exposure to multiple previous events, particularly those that were interpersonal, or occurred in childhood, increases the risk of PTSD following a subsequent event. The aim of this study was to examine the integrated contribution of the characteristics of previous traumatic events, together with negative cognitions, in order to predict the severity of PTSD symptoms following a subsequent traumatic event. **Method:** The present study analysed data from the JTOPS study (Shalev et al., 2011; Shalev et al., 2012), and examined 735 adult subjects who were attended a clinical interview within three weeks of a traumatic event. Most participants arrived in the ER as a result of an MVA. The study variables were measured using a clinical interview to diagnose PTSD (CAPS), and questionnaires to identify previous traumatic events (SLESQ), posttraumatic cognitions (PTCI) and a socio-demographics. **Results:** The results showed that previous experience of an interpersonal traumatic event was related to negative cognitions. Negative cognitions mediated the relationship between previous traumatic events and the severity of PTSD symptoms after a current traumatic event. **Conclusions:** The findings confirm previous studies and reinforce the significance of negative cognitions when dealing with traumatic events. More efficient identification of patients at high risk of developing post-traumatic symptoms may be helped by these results. The clinical implications of these results will be discussed.

### Genetic and Epigenetic Regulation of Gene Expression Associated with Post-traumatic Stress Disorder (PTSD)

(Bio Med, Gen/Int-Bio/Int-Genetic, Adult, M, Industrialized)

**Kim, Grace, BS, MS**[1]; Armstrong, Don, PhD[1]; Koenen, Karestan, PhD[2]; Aiello, Allison, MS, PhD[3]; Wildman, Derek, PhD[1]; Uddin, Monica, PhD[4]
[1]*University of Illinois, Urbana, Illinois, USA*
[2]*Harvard School of Public Health, Boston, Massachusetts, USA*
[3]*University of North Carolina at Chapel Hill, Gillings School of Global Public Health, Chapel Hill, North Carolina, USA*
[4]*University of Illinois, Champaign, Illinois, USA*

Many genetic and environmental factors contribute to the emergence of post-traumatic stress disorder (PTSD). Although PTSD is moderately heritable, large-scale genome-wide association and candidate gene studies have had limited success, to date, in identifying replicable risk variants, supporting the use of more integrative approaches that may reveal putative regulatory roles of genetic and epigenetic factors in PTSD-associated gene expression (GE). Here, we explore single nucleotide polymorphisms (SNPs) and DNA methylation levels (5mC) that may be involved in dysregulation of PTSD-associated GE in leukocytes. SNP, 5mC, and GE were assayed using the Illumina OmniExpress, HM 450K, and HT-12 BeadChip arrays, respectively, in consenting adult participants of the Detroit Neighborhood Health Study (SNP and GE testing, N=111; 5mC and GE testing, N=102). Trauma exposure and PTSD histories were collected via structured telephone interviews. Cis-eQTL/M and differential GE analyses reveal multiple SNPs and 5mC that contribute to PTSD-associated GE, some of which are in genes previously implicated in disorders thought to have overlapping genetic risk with PTSD, such as schizophrenia and depression. Our study generates mechanistic hypotheses regarding dysregulation observed in PTSD and identifies potential blood-based biomarkers of the disorder.

## The Behavioral Economics of PTSD and Alcohol Problems: The Role of Substance-Related and Substance-Free Reinforcement

(Clin Res, Sub/Abuse-Mil/Vets, Adult, M, Industrialized)

**McDevitt-Murphy, Meghan, PhD**; Murphy, James, PhD
*The University of Memphis, Memphis, Tennessee, USA*

While largely unexplored in the context of PTSD, behavioral economics is a framework that offers concepts that have helped further the understanding substance misuse. Generally, behavioral economics seeks to describe behavioral choices in terms of the costs (including money, time, effort, etc.) and benefits (short-term and long-term) to the individual. The proposed paper would describe patterns of substance-related and substance-free reinforcement (vis a vis activity participation) among veterans with and without PTSD. Prior research has shown that the proportional substance-related reinforcement (i.e., the ratio of substance-related reinforcement relative to total reinforcement, including both substance-related and substance-free) predicts intervention response. Data from our sample of 59 OEF/OIF veterans showed that the ratio of substance-related reinforcement was significantly higher for the PTSD group than the non-PTSD group and that this was due to differences in substance-free reinforcement. We investigated relations between PTSD symptom severity scores and engagement in substance-free vs. substance-related activities. Results suggested that CAPS-derived severity scores for total PTSD, numbing, and hyperarousal were all inversely correlated with both the frequency (r ranged from -.029 to -.371) and enjoyment (r ranged from -.292 to -.358) of substance-free activities, and that none of the PTSD severity scores were significantly related to the frequency/enjoyment of substance-related activities. These findings suggest that anhedonia may contribute to under-engagement in substance-free activities, which may play a role in changing substance misuse.

## When is Enough Really Enough: An Examination of Diminishing Returns with Extension of Prolonged Exposure in a Clinical Effectiveness Sample

(Practice, Clin Res-Clinical Practice-Cog/Int-Mil/Vets, Adult, M, Industrialized)

**Ready, David, PhD**[1]; Lamp, Kristen, PhD[2]; Rauch, Sheila, PhD, ABPP[3]; Astin, Millie, PhD[1]; Norrholm, Seth, PhD[1]
[1]*Atlanta VAMC/Emory University, Decatur, Georgia, USA*
[2]*Atlanta VA Medical Center, Atlanta, Georgia, USA*
[3]*Emory University School of Medicine/Atlanta Veteran's Administration, Atlanta, Georgia, USA*

The impact of having more than eight Prolonged Exposure (PE) sessions was examined with 444 veterans treated within a VA PTSD program. A Kaplan-Meier survival analysis indicated that on average, veterans who achieved Meaningful Change (MC) (50% reduction on the PTSD Symptom Scale - Self-Report (PSS-SR)) did so within 16 sessions. Patients were split based on achieving MC by session eight and MC by the end of PE. The overall rate of MC was 32.9%. Forty percent who completed PE or dropped out by session eight achieved MC. A subset of 159 patients who had more than eight sessions without achieving MC by session eight had a 22.6% MC rate. If post eight session sessions had been restricted to those with at least a ten percent reduction on the PSS-SR by session eight, only 72 (45.3%) of the 159 would have received more sessions. In this hypothetical situation, our data predict that the percent who achieved MC may have nearly doubled (to 41.7%). Subsequent analyses focused on identifying factors that predicted meaningful change, and on examining how likely it was for those who did not achieve MC by session 8 to go on to have MC by the end of treatment. These findings provide preliminary evidence that restricting sessions based on change by session eight could significantly increase the percentage of patients who go on to achieve MC and save a substantial amount of clinician time.

## Resting-State Functional Connectivity and Diffusion Tensor Imaging Predictors of Cognitive Processing Therapy Treatment Response in Women with PTSD

(Clin Res, Bio/Int-Neuro, Adult, M, Industrialized)

**Vuper, Tessa, MA**; Graziano, Robert, BS; Bruce, Steven, PhD
*University of Missouri St. Louis, Saint Louis, Missouri, USA*

Though numerous empirical treatments for PTSD exist, 10-70% of individuals show no response to treatment (Schottenbauer et al., 2008). Previous research demonstrated increased functional activation of limbic and prefrontal brain regions (i.e. amygdala, insula, anterior cingulate cortex (ACC)) differentiates PTSD treatment responders from nonresponders during emotional processing tasks at baseline (Colvonen et al., 2017). However, no studies have examined baseline differences in responders and nonresponders using resting state functional connectivity (rs-fcMRI) or diffusion tensor imaging (DTI). In this study, 33 adult women with PTSD following interpersonal violence completed rs-fcMRI and DTI scans before 12 weeks of cognitive processing therapy (CPT). Treatment response was defined as PTSD diagnosis remission or a 50% decrease in symptoms following treatment completion, while nonresponse was defined as less than a 50% symptom decrease or dropout. Between-groups analyses indicated treatment responders exhibited functional connectivity between insula and frontal pole ($p<.001$) and between insula, amygdala, ACC, and occipital cortex ($p<.001$) that was absent in nonresponders. DTI analyses indicated higher fractional anisotropy in the external capsule, a white matter tract running parallel to the insula, predicted treatment response ($p=.024$). These results elucidate neurobiological characteristics of the insula that differentiate PTSD recovery from nonresponse prior to CPT completion.

## Canine Companionship is Associated with Attenuated Responses to Loud Tones in PTSD

(Bio Med, Affect/Int-Bio Med-Bio/Int-Mil/Vets, Adult, M, Industrialized)

**Woodward, Steven, PhD**[1]; Jamison, Andrea, PhD[2]; Gala, Sasha, JD[2]
[1]*National Center for PTSD-Dissemination and Training Division, Palo Alto, California, USA*
[2]*National Center for PTSD – Dissemination and Training Division, VA Palo Alto Health Care System, Palo Alto, California, USA*

Interest has emerged in the potential value of animal-assisted interventions in posttraumatic stress disorder. We examined associations between canine companionship and responses to a series of loud tones, a paradigm that has discriminated persons with and without posttraumatic stress disorder in numerous prior studies. Twenty-three U.S. military veterans engaged in inpatient treatment for posttraumatic stress disorder and concurrently participating in a service animal training intervention were repeatedly tested with and without their service canines present on a loud tones protocol replicating the methods of Pitman and Orr. The amplitudes of cardiac, corrugator electromyelographic, and electrodermal responses elicited by a series of fifteen loud tones were analyzed as a function of presence/absence of canine and accumulated days of canine companionship. The statistical methods used accommodated the non-normal distributions of the electromyographic and electrodermal responses. The presence of a canine companion attenuated cardiac and electrodermal responses but not electromyelographic responses to loud tones. Though subject to caveats, these results suggest that service canine companionship is associated with acute attenuation of defensive responses to aversive stimuli in Veterans with chronic severe posttraumatic stress disorder.

## Childhood Maltreatment and Post-deployment Psychological Distress: Deployment PTSD Symptoms as Mediators

(Prevent, CPA-CSA-Mil/Vets, Adult, I, Industrialized)

**Presseau, Candice, PhD**[1]; Contractor, Ateka, PhD[2]; Reddy, Madhavi, PhD[3]; Shea, M. Tracie, PhD[4]
[1]*VA Boston Healthcare System, MAVERIC, Boston, Massachusetts, USA*
[2]*University of North Texas, Denton, Texas, USA*
[3]*The University of Texas Health Science Center at Houston, Houston, Texas, USA*
[4]*Alpert Medical School of Brown University, Providence, Rhode Island, USA*

Childhood maltreatment is an established predictor of psychological and physical health problems. However, limited research addresses pathways though which childhood maltreatment influences mental health of military personnel following their returns from deployment. The current study investigated (1) relations between childhood maltreatment and psychological distress at baseline and one-year post-deployment; and (2) the mediating role of deployment-related PTSD symptom clusters in those relations. Emotional numbing was hypothesized to function as the primary mediator in the childhood maltreatment-distress chain. The sample included 127 OIF/OEF members of US Army National Guard and Reserve units. Models were tested using the PROCESS Macro (Hayes, 2013). Results showed that childhood maltreatment significantly positively predicted distress at baseline (*B* = .133, *SE* = .065, *95% CI*: .004,.262*)*, but not one-year follow-up (*B* = .059, *SE* = .080, *95% CI*: -.098, .217); emotional numbing was the only deployment PTSD symptom cluster to mediate the childhood maltreatment-distress relationship at both time points. Other deployment-related PTSD symptom clusters demonstrated unique patterns of associations with childhood maltreatment and distress across time points. Our findings suggest that childhood maltreatment is related both directly and indirectly through emotional numbing to psychological distress in the time closely following return from deployment. The importance of attending to emotional numbing symptoms among Veterans with experiences of childhood maltreatment post-deployment is highlighted.

## How Does PTSD Unfold in Real Time? Contemporaneous and Temporal Networks of PTSD Symptoms during Conflict Exposure

(Res Meth, Assess Dx-Chronic-Civil/War-Theory, Adult, M, Industrialized)

**Greene, Talya, PhD MPH**[1]; Gelkopf, Marc, PhD[1]; Fried, Eiko, PhD[2]; Epskamp, Sacha, PhD[2]
[1]*University of Haifa, Haifa, Israel*
[2]*University of Amsterdam, Amsterdam, Netherlands*

Recently, network models, rather than latent variable models, have emerged in the study of PTSD symptom dynamics. So far, only cross-sectional studies have been performed (Bryant et al., 2016, Armour et al., 2017). We present the first longitudinal network analysis study exploring intra-individual PTSD symptom dynamics. Two groups of Israeli civilians: a general sample (n=110), and a sample with a psychiatric history (n=92)), reported PTSD symptoms (PCL-5; Weathers et al., 2013), twice-daily for 30 days during the 2014 Israel-Gaza conflict. Multilevel network analysis produced two PTSD networks: contemporaneous (within-timepoint associations) and temporal (associations between consecutive timepoints). Contemporaneous connections were mostly positive, with strong associations between avoidance symptoms, between hypervigilance and startle response, and between flashbacks and emotional reactivity. DSM-5 PTSD clusters were well-defined, although amnesia was related to the avoidance cluster. The temporal network featured startle response as a central node, strongly predicting symptomatology at the following timepoint, followed by sleep disturbance, flashbacks, and loss of interest. The temporal network showed some surprising negative edges, with flashbacks and avoidance of thoughts predicting less symptomatology at the following assessment. These novel findings indicate that startle response, sleep disturbance, flashbacks, and loss of interest may be key drivers of PTSD.

## Interpersonal Psychological Theory of Suicide in Child Abuse Survivors: Mediators of Suicide Resilience among African American Women

(Clin Res, CPA-CSA, Adult, M, Industrialized)

**Allbaugh, Lucy, MA, PhD Student**[1]; Florez, Ivonne, MA, PhD Student[1]; Render Turmaud, Danielle, BA[2]; Quyyum, Nadia, BS[1]; Dunn, Sarah, PhD, ABPP[1]; Kaslow, Nadine, PhD, ABPP[1]
[1]*Emory University School of Medicine, Atlanta, Georgia, USA*
[2]*Mercer University, Atlanta, Georgia, USA*

The interpersonal-psychological theory of suicidal behavior (IPTS) is an exemplary model for understanding the desire for suicidal behavior. As such, it is important to explore its applicability in ethnoracial minority groups at increasing risk for suicidal behavior, such as low-income African American women. Guided by the IPTS, the current study examined the potential link between three types of childhood abuse (physical, sexual, emotional) and suicide resilience, and explored whether the three components of the IPTS model (thwarted belongingness, perceived burdensomeness, acquired capability for suicide) mediated these associations. In a sample of low-income, African American women (n = 179), higher levels of each of the three types of childhood abuse correlated with lower levels of suicide resilience. Parallel mediation analyses using bootstrapping techniques revealed that increased acquired capability for suicide mediated all three associations and perceived burdensomeness mediated one of the links (emotional abuse – suicide resilience). This presentation will consider the clinical implications of these findings in terms of attending to the acquired capability for suicide and suicide resilience in the assessment and treatment of low-income, suicidal, African American women.

## Psychological Hazards of Transitional Justice Benefits

(Global, Aggress-Comm/Vio-Surv/Hist-Intergen, Adult, M, E & S Africa)

**Neugebauer, Richard, PhD, MPH**[1]; Pozen, Joanna, JD[2]; Sezibera, Vincent, PhD[3]; Ntaganira, Joseph, MD, PhD[3]
[1]*Columbia University and New York State Psychiatric Institute, New York, New York, USA*
[2]*Columbia University, New York, New York, USA*
[3]*National University Of Rwanda, Butare, Southern Province, Rwanda*

Transitional justice attempts to deal with legacies of massive human rights violations, e.g., South Africa's TRC, by helping communities deal with the past by having crimes publicly acknowledged. Hearings aim to be psychotherapeutic by giving voice to victims' suffering. However, accounts of atrocious violence may produce psychological harm and participants and spectators. We examine local Rwanda gacaca trials of alleged genocidaires in this context. Gacaca courts were held locally throughout Rwanda 2002-2012. In 2011, we conducted a cluster random survey of 500 Rwandans (94% participation rate) to assess exposure to violence and current levels of posttraumatic stress symptoms (PCL-C) and clinical depression (MINI-Depression module.) Individuals were asked if they had first learned of a relative's death at gacaca. Of the 28% assenting to this item, 40.2% met for probable PTSD criteria vs 25.4% ($p<.001$) in the rest of the sample in controlled analyses; parallel figures for depression were 41.9% vs 25%. For spectators, comprising the largest group of attendees, 72.7% met criteria for clinical depression vs 14.5% in the remainder of the sample ($p<.001$). The contribution of transitional justice to long term reconciliation may be substantial, but its potential to cause psychological harm requires urgent study.

## The Effects of Dissociation on Analogue Trauma Symptoms after Trauma Processing among Women with Varying Histories of Lifespan Victimization

(Practice, Cog/Int-Complex-Dev/Int, Adult, M, Industrialized)

**Valdez, Christine, PhD**[1]; Lilly, Michelle, PhD[2]
[1]*California State University Monterey Bay, Seaside, California, USA*
[2]*Northern Illinois University, DeKalb, Illinois, USA*

Empirical findings have identified two subtypes of PTSD; the traditional form that includes hyperarousal reactions and another form involving ongoing dissociation following trauma. This is reflected in the new diagnostic criteria for PTSD with the dissociative specification focused on the experience of high levels of depersonalization and/or derealization. PTSD involving ongoing dissociation appears to characterize more complex cases for

individuals exposed to protracted trauma. Yet, our current understanding of the role of dissociation in relation to PTSD symptoms is limited with inconsistent empirical findings. This study aims to elucidate the complex associations between childhood polyvictimization, dissociation, and trauma-relevant symptomatology. Participants completed baseline measures of trait dissociation, and then at least one week later, they completed self-report measures of state trauma intrusions, guilt, and anxiety before and after participating in a trauma recall task. Results revealed that trauma intrusions, guilt, and anxiety increased after trauma recall overall, though trauma exposure groups differed in the manifestation of these outcomes. Less depersonalization and greater derealization predicted increases in anxiety overall, though between groups, this only remained true for those exposed to childhood polyvictimization. Results suggest dissociative tendencies may be most relevant in the processing of trauma-related material for those exposed to childhood polyvictimization.

## Evidence for a Cyclical Relationship between Distress and Media Exposure to Collective Trauma

(Journalism and Trauma, Chronic-Pub Health-Social-Terror, Adult, I, Industrialized)

**Thompson, Rebecca, MA**; Garfin, Dana Rose, PhD; Holman, E. Alison, PhD; Cohen Silver, Roxane, PhD
*University of California, Irvine, Irvine, California, USA*

Previous research has suggested that media exposure to collective traumas is associated with a host of negative outcomes. There is also some evidence that this relationship may be cyclical – exposure to trauma-related media is associated with increased worry and distress, which is, in turn, associated with seeking out media when future traumas arise (i.e., the uncertainty management hypothesis). We examine how prior exposure to disaster-related media, prior life experiences, and fears about future acts of violence may predict future exposure to disaster-related media and distress. A U.S. national probability sample (with oversampling in Boston and New York metropolitan areas; N=4,675; 79.08% participation rate) was recruited for a study of responses to the 2013 Boston Marathon bombing (BMB) 2-4 weeks post-bombing. This panel was followed over the following three years for a total of six waves of data collection, the last of which focused on panelists' responses to the 2016 Orlando Nightclub Shooting (ONS; N=3,035; 74.5% participation; 68.4% retention from Wave 1). Poststratification weights were applied to facilitate population-based inferences. Structural equation modeling analyses revealed that media exposure to the BMB was associated with posttraumatic stress symptoms six months later, which was in turn associated with fears and worry about future acts of violence, which predicted hours of media exposure and acute stress responses to the ONS. Additionally, BMB-related media exposure indirectly predicted ONS-related acute stress through BMB posttraumatic stress symptoms, fear and worry about future terrorism, and ONS-related media exposure. As such, it appears that post-disaster media use perpetuates a cycle of increased distress and increased media use in the future, consistent with the uncertainty management hypothesis. Individuals with a high degree of fear surrounding an event are more likely to consume disaster-related media, possibly as a coping mechanism – however, it seems that this may backfire by exacerbating distress responses. Implications for the media, mental health professionals, and public health will be discussed.

**Symposium**
**Friday, November 10**
**3:00 PM to 4:15 PM**
**Salon 1**
**Treatment Track**

## EBP implementation in Complex Treatment Systems and Settings: Training, Access, Processes, and Outcomes

(Clin Res, Train/Ed/Dis, Adult, M, Industrialized)

**Beristianos, Matthew, MA**
*National Center for PTSD, VA Palo Alto Health Care System, Menlo Park, California, USA*

Evidence based psychotherapies (EBP) for PTSD, particularly Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE), involve numerous complexities during implementation. This symposium will consider various stages of EBP implementation in a variety of clinical settings. This symposium will present studies from the United States and Canada in various clinical settings, focusing on both patients and clinicians. The first study compared two learning collaborative strategies for training Canadian clinicians who had attended a CPT workshop. The second study considers the reach of CPT and PE in the U.S. Veteran Affairs Healthcare system after an intensive training and implementation effort, particularly the factors that affect which veterans are receiving those treatments. The third investigation took place in Canadian outpatient clinics, examining whether training strategies and patient-level factors predicted symptom exacerbations during CPT, and whether symptom exacerbation predicted treatment engagement or outcomes. Finally, the last study examined the ability to implement CPT, Cognitive Behavioral Therapy, and Motivational Interviewing with trauma-exposed, low-income participants in an urban, community health clinic in the United States. This study will also present clinical examples of situations in which clinical decisions were made about creative fidelity. We will discuss implications for future EBP practice for trauma exposed populations.

## A Randomized Comparison of Two Learning Collaborative Strategies to Support Newly Trained Clinicians in Delivering Cognitive Processing Therapy

(Train/Ed/Dis, Clin Res, Adult, M, Industrialized)

**Beristianos, Matthew, MA**[1]; Monson, Candice, PhD, Cpsych[2]; Shields, Norman, PhD[3]; Masina, Tasoula[2]; Finley, Erin, PhD[4]; Wiltsey Stirman, Shannon, PhD[5]
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[5]*NCPTSD-Dissemination & Education Div, Palo Alto Healthcare System, Menlo Park, California, USA*

Numerous research studies have demonstrated that short-term cognitive-behavioral psychotherapies, such as Cognitive Processing Therapy (CPT), lead to substantial and sustained improvements in PTSD symptoms (Resick et al., 2002; Resick et al., 2008; Resick et al., 2012). There has been little research to identify the most effective strategies for training providers, or for providing long-term support to facilitate ongoing, high quality use of evidence-based psychotherapies (EBPs) in routine care settings. Whether the focus of implementation efforts should be fidelity to EBPs or adaptation of either the EBP or the setting to facilitate EBP use has not been determined (Chambers et al., 2013; Stirman et al., 2012). In this study, clinicians (n=35) who attended a workshop were randomized into either a twelve-month Continuous Quality Improvement-oriented Learning Collaborative (CQI) or a Fidelity-oriented Learning Collaborative (FID) to learn to deliver CPT. Patient (n=66) symptoms were assessed via weekly self-reported PTSD inventories and periodic assessment of other symptoms and functioning. Clinicians uploaded recordings of every CPT session and completed reports of their CPT use and adaptation every month. At the end of the twelve-month learning collaborative phase, the two conditions were compared using the longitudinal data on engagement and dropout at the clinician and client level, clinical outcomes, clinician fidelity, and adaptation of CPT. Preliminary data suggests that patients whose therapists participated in the CQI condition may have experienced greater symptom change, although both groups improved. CQI

therapists reported more adaptations to CPT that were fidelity-consistent, but groups did not differ on self-reported fidelity-inconsistent adaptations. Analyses with all data from the twelve-month consultation phase will be presented, and patterns of observer-rated fidelity in the two conditions will also be examined. These results will be discussed in the context of the broader training and implementation literature, and future directions for research will be discussed.

## Which Veterans Receive Evidence-Based Psychotherapy for PTSD?

(Practice, Train/Ed/Dis-Mil/Vets, Adult, M, Industrialized)

**Rosen, Craig, PhD**[1]; Clothier, Barbara, MS[2]; Noorbaloochi, Siamak, PhD[2]; Smith, Brandy, BA[3]; Orazem, Robert, PhD[3]; Sayer, Nina, PhD[4]
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[4]*Minneapolis VA Health Care System, Minneapolis, Minnesota, USA*

The U.S. Department of Veterans Affairs (VA) has been promoting use of Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE) for a decade, but little is known about which patients are getting these treatments. As part of a mixed-methods study, we used natural language processing to analyze progress notes of 6251 patients who received psychotherapy at PTSD clinics in nine purposefully selected VHA medical centers in fiscal year 2015. CPT or PE was initiated by 2173 of the patients (35%) who received psychotherapy in these clinics. Most CPT/PE recipients were male, were designated as having service-connected disability from PTSD, and had 2 or more psychiatric comorbidities – but these characteristics were even more prevalent among veterans not getting those treatments. In multivariate analyses, veterans were less likely to receive CPT or PE if they were male (OR = .74 to .99), had a recent psychiatric hospitalization (OR = .47 to .80), had more co-occurring psychiatric diagnoses (OR per diagnosis = .85 to .93), were Hispanic (OR = .60 to .89), were older (OR per year = .986 to .994), had service-connected disability for PTSD (OR = .70 to .88), or lived further from a VA clinic (OR per mile = .998 to .999). More work is needed to identify and address barriers to Hispanic and older veterans receiving CPT and PE.

## Symptom Exacerbations in a Cognitive Processing Therapy Community Sample

(Clin Res, Clin Res-Clinical Practice-Cog/Int, Adult, M, Industrialized)

**Larsen, Sadie, PhD**[1]; Mackintosh, Margaret-Anne, PhD[2]; Evans, Wyatt, PhD[3]; Monson, Candice, PhD, Cpsych[4]; Wiltsey Stirman, Shannon, PhD[5]
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[3]*University of Texas Health Science Center at San Antonio, Fort Hood, Texas, USA*
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Concerns regarding the tolerability of trauma-focused treatments have hindered the full utilization of these treatments, despite evidence for their efficacy. Previous studies have examined the frequency and effect of symptom exacerbations, but primarily in randomized clinical trials with few symptom assessments. We examined frequency and outcomes of symptom exacerbations in a sample of participants in VA Canada Operational Stress Injury Clinics, community-based clinics, and private practices throughout Canada who received Cognitive Processing Therapy (CPT) from clinicians who utilized training and consultation for CPT. Participants (n = 169) completed self-report measures of PTSD at each session. A majority of participants (67%) experienced a symptom exacerbation (increase of 6 or more points) at some point during the course of CPT. However, these exacerbations did not predict dropout, meaningful change in PTSD symptoms, or final PTSD scores. Exacerbations in the second half of treatment predicted a slower rate of improvement, but did not predict dropout or recovery from PTSD. No examined variable predicted who would experience an exacerbation. These results add to a small literature indicating that symptom exacerbations may be a normal, transient part of treatment and do not predict an inability to experience symptom improvement during a course of trauma-focused therapy.

## Creative Fidelity: Persevering in the Administration of Manualized Protocols Despite Seemingly Insurmountable Odds

(Clin Res, Commun-Comm/Vio, Adult, M, Industrialized)

Galovski, Tara, PhD[1]; **Chappuis, Courtney, Doctoral Student**[2]
[1]*National Center for PTSD-Women's Health Science Division, VA Boston Healthcare System and Boston University, Boston, Massachusetts, USA*
[2]*University of Missouri St. Louis, St. Louis, Missouri, USA*

Research has identified predictors of poor outcome and premature drop-out including comorbidity, complex trauma histories, treatment engagement and logistics such as childcare, transportation. Such factors impede the ability to engage patients in treatment and maintain fidelity to protocols. This study sought to assess the ability to implement CPT, CBT and MI in an inner city, community mental health clinic with 72 trauma-exposed participants suffering from severe mental illness (100%) including active psychosis, and PTSD (62%), active substance use disorder (30%), major depression (65%), etc.. Almost half (47%) were homeless/transient housing, all lived below the poverty line and reported substantial trauma histories. All patients were referred by the judicial system for trauma-focused therapy as a part of our jail diversion project. In the ITT sample, mixed effects modeling showed main effect of time was significant for PTSD and depression (p's<.001). PCL scores dropped an average of 14.19 points and BDI-11.61 points. In the completer sample (56%), 69% dropped below clinical cutoffs for PTSD. Despite the burden carried by this patient population, substantial therapy gains were made. Clinical examples will explicate decisions about creative fidelity due illiteracy, homelessness, active psychosis, substance use, and legal complications.

## Symposium
## Friday, November 10
## 3:00 PM to 4:15 PM
## Salon 3
## Assessment and Diagnosis Track

## Competing Conceptualizations of PTSD: Differences across Measurement Models, Analytic Techniques, and Classification Systems

(Assess Dx, Pub Health-Res Meth-Mil/Vets-Theory, Adult, M, Industrialized)

**Lee, Daniel, MS**; Weathers, Frank, PhD
*Auburn University, Auburn, Alabama, USA*

The DSM-5 made substantial revisions to the diagnostic criteria for PTSD. With these revisions emerged a series of competing conceptualizations of PTSD. Alternative classification systems (e.g., ICD-11), measurement models (e.g., Anhedonia, Hybrid), and analytic approaches (e.g., network analysis) have raised challenges to the phenomenology of PTSD. The goal of this symposium is to present recent work examining competing conceptualizations of DSM-5 PTSD. In the first presentation, Dr. Reid will present an examination of heterogeneity within DSM-5 PTSD diagnostic criteria using a recently developed technique for quantifying heterogeneity (Olbert et al., 2014). In the second presentation, Dr. Samantha Moshier will present a multi-measure examination of network connectivity of DSM-5 PTSD symptoms among a large sample of US veterans. In the third presentation, Mr. Lee will present a series of confirmatory factor analyses using both questionnaire and interview data to examine a) method effect in the factor structure of DSM-5 PTSD and b) construct validity evidence of newly proposed symptom clusters. In the fourth presentation, Dr. Blair Wisco will present a comparison of diagnostic prevalence rates and psychiatric comorbidities between DSM (IV/5) and ICD-11 PTSD diagnoses in two nationally representative samples of U.S. military veterans. Dr. Frank Weathers will serve as discussant.

## Applying Network Theory to DSM-5 PTSD: A Comparison of Clinician- and Patient- Rated Instruments

(Assess Dx, Clin Res, Adult, M, Industrialized)

**Moshier, Samantha, PhD**[1]; Gay, Natalie, BA[2]; Wisco, Blair, PhD[3]; Mitchell, Karen, PhD[4]; Lee, Daniel, MS[5]; Sloan, Denise, PhD[4]; Weathers, Frank, PhD[5]; Schnurr, Paula, PhD[6]; Keane, Terence, PhD[4]; Marx, Brian, PhD[7]

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[4]*National Center for PTSD, VA Boston Healthcare System, Boston University School of Medicine, Boston, Massachusetts, USA*
[5]*Auburn University, Auburn, Alabama, USA*
[6]*National Center for PTSD, Executive Division, White River Junction, Vermont, USA*
[7]*National Center for PTSD, VA Boston Healthcare System and Boston University, Boston, Massachusetts, USA*

Network analytic methods provide a tool for understanding posttraumatic stress disorder (PTSD) symptom dynamics and for identifying symptoms most central to the PTSD network. However, network studies of DSM-5 PTSD to date have relied exclusively on self-report instruments. The aim of this study was to examine the network connectivity of DSM-5 PTSD symptoms among 347 US veterans with subthreshold (n=74) or full PTSD (n=273) who completed the Clinician-Administered PTSD scale for DSM-5 (CAPS-5) and the self-report PTSD Checklist for DSM-5 (PCL-5) in reference to the same trauma. We estimated separate PTSD symptom networks with CAPS-5 and PCL-5 data, evaluated symptom centrality and conducted a permutation test comparing the global strength and structure of the CAPS-5 and PCL-5 networks. In the CAPS-5 network, the most central symptoms were intrusive memories, physiological reactions to reminders, detachment, anhedonia, negative emotions, and numbing. In the PCL-5 network, the most central symptoms were detachment, negative emotions, avoidance of external reminders, feeling upset by reminders, and anhedonia. Despite overlap in some of the most central symptoms and in many of the strongest symptom connections, there were also substantial differences in the networks. The Network Comparison Test indicated that the networks differed significantly in both structure and strength, with stronger connectivity between symptoms in the PCL-5 network. Implications and future directions for network studies of PTSD will be discussed.

## Heterogeneity of the DSM-5 PTSD Diagnostic Criteria: A Quantitative Analysis

(Assess Dx, Res Meth-Theory, Adult, M, Industrialized)

**Reid, Meredith, PhD**; Weathers, Frank, PhD; Denney, Thomas, PhD; Petri, Jessica, MS; Kramer, Lindsay, MS

*Auburn University, Auburn, Alabama, USA*

The diagnostic criteria for PTSD have been criticized for permitting extremely high levels of heterogeneity. In DSM-IV, PTSD had one of the highest number of possible diagnostic combinations and disjoint combinations (those sharing no symptoms), and these both increased eight-fold in DSM-5. However, observed coherence (homogeneity) in empirical samples is substantially higher than theoretical levels. Following Olbert et al. (2014), we examined coherence of DSM-IV and DSM-5 PTSD and major depressive disorder (MDD) in trauma-exposed undergraduates. PTSD diagnosis was based on a lenient (symptoms only) or stringent rule (symptoms plus a moderate cutoff on total severity score). Preliminary analyses (N=302) revealed several important results. First, disjoint PTSD combinations were rare for the lenient rule and absent for the stringent rule. Second, coherence was higher for the stringent rule. Third, coherence was higher for DSM-IV PTSD using the lenient rule but higher for DSM-5 using the stringent rule. Last, coherence for DSM-5 using the stringent rule was comparable to coherence for MDD, with an average shared proportion of symptoms of about two-thirds. Thus, DSM-5 PTSD criteria yield moderate coherence, comparable to that for MDD. For the final paper, results for two additional samples (combined N=4000+) will be presented.

## DSM vs. ICD-11 Criteria for Posttraumatic Stress Disorder: A Comparison in Two National Samples of U.S. Military Veterans

(Assess Dx, Pub Health-Mil/Vets, Adult, M, Industrialized)

**Wisco, Blair, PhD**[1]; Marx, Brian, PhD[2]; Miller, Mark, PhD[3]; Wolf, Erika, PhD[3]; Krystal, John, MD[4]; Southwick, Steven, MD[5]; Pietrzak, Robert, PhD[5]
[1]*University of North Carolina, Greensboro, North Carolina, USA*
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The proposed ICD-11 criteria for posttraumatic stress disorder (PTSD) differ substantially from DSM-5. ICD-11 eliminated several PTSD symptoms thought to be nonspecific, with the goal of reducing psychiatric comorbidities. However, this change also results in a narrower PTSD definition that may fail to capture individuals with clinically significant PTSD. In this study, we evaluated concordance between DSM (IV/5) and ICD-11 PTSD diagnoses in a web survey of two nationally representative samples of U.S. military veterans (ns=3517 and 1484). Lifetime and past-month PTSD symptoms were assessed with the DSM-IV-based PTSD Checklist-Specific Stressor version and the DSM-5-based PTSD Checklist-5. Psychiatric comorbidities were assessed using MINI Neuropsychiatric Interview modules. We found that a significantly greater proportion of veterans met criteria for lifetime and past-month PTSD under DSM-IV/5 than under ICD-11. 21.8-35.9% of those who met criteria under DSM IV/5 did not meet under ICD-11, whereas only 2.4-7.1% of those who met under ICD-11 did not meet under DSM-IV/5. Psychiatric comorbidities did not significantly differ between DSM-IV/5 and ICD-11. These findings indicate that the proposed ICD-11 criteria identify fewer PTSD cases than DSM without reducing psychiatric comorbidities. Clinical implications and possible changes to the ICD-11 criteria, slated for publication in 2018, will be discussed.

## Method Variance in the Assessment of DSM-5 Posttraumatic Stress Disorder

(Assess Dx, Res Meth-Mil/Vets-Theory, Adult, M, Industrialized)

**Lee, Daniel, MS**[1]; Bovin, Michelle, PhD[2]; Weathers, Frank, PhD[3]; Palmieri, Patrick, PhD[4]; Schnurr, Paula, PhD[5]; Sloan, Denise, PhD[6]; Marx, Brian, PhD[7]
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The four-factor model of posttraumatic stress disorder (PTSD) in DSM-5 has been found to have adequate fit in several recent confirmatory factor analysis (CFA) studies. However, several alternative models have yielded superior fit, and consensus regarding the best model has yet to be established. Notably, these studies have relied exclusively on questionnaire data, and thus their findings may be at least partly attributable to a method effect. This study examined the factor structure of DSM-5 PTSD symptoms using both questionnaire and interview data to examine the degree to which assessment method impacted the factor structure. Participants (N = 359) were veterans who completed self-report and clinician-administered measures of PTSD in reference to the same index event. The DSM-5 four-factor measurement model of PTSD provided adequate fit to the data. However, several other models fit significantly better and the seven-factor Hybrid model (Armour et al., 2015) fit best. Further, little evidence of a method effect was observed. These findings suggest that results of previous DSM-5 PTSD CFAs supporting the Hybrid model are not attributable to a method effect. However, additional construct validity research is needed to determine which model provides the best conceptual representation of PTSD symptoms.

**Symposium**
**Friday, November 10**
**3:00 PM to 4:15 PM**
**Salon 4/9**
**Military Track**

## Mild Traumatic Brain Injury and Posttraumatic Stress: Using Military and Civilian Samples to Contextualize a Complex Relationship

(Clin Res, Acc/Inj-Acute-Assess Dx, Adult, A, Industrialized)

**Hunt, Josh, PhD**[1]; Hoge, Charles, MD[2]
[1]*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*
[2]*Walter Reed Army Institute of Research/US Army, Bethesda, Maryland, USA*

Research examining the relationship between mTBI and PTSD has shown that mTBI is associated with an increased risk for PTSD following a traumatic injury. This symposium brings together researchers from both military and civilian populations to explore this relationship and contextualize it within four separate empirical investigations. Three of the presenters conducted research within the civilian population in two separate Level 1 trauma centers located within diverse metropolitan settings in the U.S. The other presenter collected data within a U.S. military population. The topics covered in this symposium are comprehensive, and will include the impact of methodology on findings relating mTBI and PTSD, as well as the relationship between personality, posttraumatic psychological distress, and symptom self-report among civilian and military populations.

## Predictors of PTSD Symptoms in a Prospective Inpatient Trauma Sample with and without Mild Traumatic Brain Injury

(Assess Dx, Acc/Inj-Acute-Affect/Int, Adult, A, Industrialized)

**Nelson, Lindsay, PhD, LP**[1]; deRoon-Cassini, Terri, PhD[2]
[1]*Academic Medical Center, Milwaukee, Wisconsin, USA*
[2]*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*

This study investigated the degree to which personality traits versus other neuropsychological and injury-related variables predict PTSD symptoms at 3-months post-injury in a civilian patient sample. Patients (*N* = 155, 75 mTBI, 80 non-mTBI controls) were recruited prospectively while admitted to a level I trauma center for traumatic injuries, where they completed a bedside evaluation comprised of an interview to establish a diagnosis of mTBI and a neuropsychological assessment battery (emphasizing ratings of personality traits, current psychiatric symptoms, and TBI symptoms, in addition to a brief neurocognitive examination). Outcome was operationalized as total score on the PTSD Checklist for DSM-5 (PCL-5) administered via phone at 3 months post-injury. MTBI status (ascertained via acute post-injury patient interview and medical record information) did not predict 3-month PCL-5 scores. Personality traits explained 28% of the variance in PTSD symptoms and contributed uniquely to prediction beyond other strong predictors (in particular, assaultive cause of injury and acute emotional distress). Path analyses supported a mediation model whereby maladaptive personality traits influence later PTSD symptoms partially through exacerbation of acute post-injury distress.

## PTSD and Mild Traumatic Brain Injury in the Civilian Traumatic Injury Population: A Prospective Study of a Level 1 Trauma Center Population

(Clin Res, Acc/Inj-Acute-Assess Dx, Adult, A, Industrialized)

**Warren, Ann Marie, PhD**
*Baylor University Medical Center, Dallas, Texas, USA*

There is a substantial overlap in symptomatology between those who have suffered a mild traumatic brain injury (mTBI) and those with PTSD following an acute injury. The current study utilized a prospective cohort design to examine this relationship among individuals with and without mTBI after admission to a Level I trauma center. Participants were assessed during hospitalization, at three and six months after enrollment. The Primary Care PTSD Screen and PTSD Checklist Civilian version were used to determine probable PTSD. International Classification of Diseases, 9th Rev. codes were used to determine mTBI. Of those enrolled 63% (n = 311) completed 3-month follow up, and 47% (n = 231) completed 6-month follow-

up. Although mTBI was associated with an increased risk of PTSD at three months (p = 0.04) this relationship was nonsignificant (p = .06) when demographics were included. However, this relationship was significant (p = .04) at six months and remained significant when demographics were included. The findings of this study bolster a growing body of research linking mTBI during an acute injury to the later development of PTSD in both military and civilian populations. These findings will help health care providers identify patients at risk for PTSD after injury.

## Role of Personality and Deployment-Related Mild TBI in Predicting PTSD Symptoms among National Guard Soldiers

(Assess Dx, Acc/Inj-Mil/Vets, Adult, A, Industrialized)

**Polusny, Melissa, PhD**[1]; Erbes, Christopher, DrPH[2]; Arbisi, Paul, PhD, ABPP[2]
[1]*Minneapolis VAHCS, Center for Chronic Disease Outcome Research, University of Minnesota Medical School, Minneapolis, Minnesota, USA*
[2]*Minneapolis VA Health Care System and University of Minnesota Medical School, Minneapolis, Minnesota, USA*

Mild traumatic brain injury (mTBI) is increasingly recognized as an important risk factor for posttraumatic stress symptoms (PTSS), but few studies have accounted for the influence of pre-trauma individual differences on this relationship. We conducted a prospective, longitudinal survey of National Guard soldiers from two Brigade Combat Teams (N=750) one month prior to deployed to Iraq (T1), 2-3 months after returning home (T2), and one year post-deployment (T3). MMPI-2/MMPI-2 RF Restructured Clinical (RC) Scales (shortened versions) were administered at T1. Deployment-acquired mTBI was assessed using items adapted from the Defense and Veterans Brain Injury Center screening tool, and combat experiences were assessed using scales from the Deployment Risk and Resilience Inventory at T2. PTSS were assessed using the PTSD Checklist at all waves. Preliminary results showed personality dimensions (RC1 Somatization and RC7 Dysfunctional Negative Emotions) were significant independent predictors of PTSS one year post-deployment (T3). After further controlling for combat exposure and injury, deployment-acquired mTBI (i.e., injury with loss or change in consciousness), but not post-concussive symptoms (i.e., memory or concentration problems) reported at T2, was predictive of PTSS at T3. Additional analyses will explore the influence of symptom reporting bias on these relationships. Implications will be discussed.

## Exploring the Impact of an Alternative Methodology on the Relationship Between mTBI and PTSD

(Clin Res, Acc/Inj-Acute-Assess Dx, Adult, A, Industrialized)

**Hunt, Josh, PhD**; Durbin, Samantha, BS; Schumann, Nicholas, MS; deRoon-Cassini, Terri, PhD
*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*

Research in civilian (Warren et al., 2015) and military (Hoge et al., 2008) samples examining the relationship between mild traumatic brain injury (mTBI) and PTSD has shown that experiencing an mTBI is associated with an increased risk of PTSD. This research has relied primarily on retrospective self-report. In this study, the research team developed a comprehensive chart-review process to assess for mTBI. Participants were enrolled following admission to a level 1 trauma center and the Clinician Administered PTSD Scale for DSM-5 was then administered by graduate and postdoctoral level mental health professionals an average of 6.5 months after injury, yielding a follow-up sample of 241 participants (PTSD = 27.8%; mTBI = 26.1%). Chi-square analysis yielded a nonsignificant ( $X^2$= 3.256, p = .071) relationship between mTBI and PTSD. The effect size (Φ = -.116), although non-significant trended toward a small inverse relationship in which those who had experienced an mTBI were at less risk for the later development of PTSD. These findings indicate that when mTBI is assessed more objectively, the relationship with PTSD is no longer significant. Explanations for this include emerging evidence of the relationship between self-reported mTBI and the tendency for some survivors to somaticize psychological distress.

**Symposium**
**Friday, November 10**
**3:00 PM to 4:15 PM**
**Salon 5/8**
**Biological/Medical Track**

## From Animal to Human Studies: The Role of the Endocannabinoid System in Trauma and Chronic Stress

(Bio Med, Acc/Inj-Bio/Int, Adult, M, Industrialized)

**deRoon-Cassini, Terri, PhD**
*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*

Emerging research suggests that the endocannabinoid signaling system (ECSS) modulates the stress response to reduce anxiety. The ECSS consists of the CB1 cannabinoid receptor (CB1R) and two endogenous ligands (N-arachidonylethanolamine (AEA) and 2-arachidonoylglycerol (2-AG). CB1R are very highly expressed throughout the brain, particularly in regions involved in the processing of fear. ECSS is perfectly designed to regulate synaptic activity particularly in the limbic regions of the brain, a region of interest in those with PTSD. Preclinical studies demonstrate that hypoactivity of the ECSS produces effects that are similar to symptoms of PTSD, including increased anxiety-like behaviors, deficient extinction of aversive memories and sleep dysregulation. Components of the ECSS have been shown to be anxiolytic and promoting of fear extinction. While there is emerging evidence to suggest a role of the ECSS in PTSD, there is much left unknown, including how soon after a trauma the endocannabinoid system is deficient in those with who are symptomatic and the impact of exogenous cannabis on PTSD and circulating endocannabinoids. Data will be presented on traumatic stress exposure in reduced endocannabinoid signaling and that CB1 agonism in the nucleus accumbens enhances extinction of fearful memories and the relationship of the endocannabinoid system to traumatic stress and escalation of substance use.

## CB1 Cannabinoid Receptor Signaling and Extinction of Fear in a Preclinical Model

(Bio Med, Affect/Int-Anx-Bio Med, N/A, M, N/A)

**Hillard, Cecilia, PhD**
*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*

**Purpose:** Previous work has demonstrated that CB1 cannabinoid receptor signaling in the amygdala is essential for the regulation of fear extinction and its activation can lead to enhanced extinction. However, CB1 receptors are widely expressed and agonists have significant off-target effects. Alternative approaches to increased CB1 signaling are needed. Sterol carrier protein (SCP) increases amygdalar expression of the CB1R. **Procedure:** Mice lacking SCP-2 were examined in the fear conditioning paradigm. CB1 receptor mRNA expression and binding site density were measured in wild-type and knock out mice. **Results:** SCP-2 knock out mice had significantly more mRNA for the CB1 receptor, accompanied by an increase in binding site density in the amygdala but not other brain regions. SCP-2 knock out mice exhibited significantly less anxiety-like behaviors and extinguished fear more quickly than wild type mice. They were not different in behavioral studies of memory. **Conclusions:** These findings provide a potential alternative mechanism for the regulation of CB1 signaling in the amygdala that potentiates the extinction of fearful memories.

## The Endocannabinoid System in a Traumatic Injury Sample

(Bio Med, Acc/Inj-Bio Med, Adult, M, Industrialized)

**deRoon-Cassini, Terri, PhD**[1]; Chesney, Samantha, MS, PhD Student[2]; Hillard, Cecilia, PhD[1]
[1]*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*
[2]*Marquette University, Milwaukee, Wisconsin, USA*

Background: Emerging research suggests that the endocannabinoid signaling system (ECSS) modulates the stress response to reduce anxiety. The ECSS consists of the CB1 cannabinoid receptor (CB1R) and two endogenous ligands (N-arachidonylethanolamine (AEA) and 2-arachidonoylglycerol (2-AG). The objective of this study was to determine the involvement of the ECSS in acute and long-term

psychological distress following traumatic injury. Methods: Traumatic injury patients (n = 280) admitted to a Level I trauma center completed a blood draw (cortisol, 2-AG, and AEA) and the Clinician Administered PTSD Scale (CAPS) at hospital (baseline) and 6-months following injury. Results: Acutely all patients experienced high levels of 2-AG and by 6 months, 2-AG was significantly lower in those with PTSD. Acute levels of cortisol were related to 6 month 2-AG. Additionally, particular alleles related to receptor genes involved in the ECSS have significant relationships with 6 month PTSD and Depression after injury. Discussion: Following preclinical research the ECSS appears to be involved in responding after trauma and related to PTSD development, and can be considered a target for intervention.

## Role of Marijuana Use on PTSD and Circulating Endocannabinoids: Prospective Longitudinal Study

(Bio Med, Acute-Bio/Int-QoL-Sub/Abuse, Adult, M, Industrialized)

**Fagbemi, Olufisayo, MD Candidate**[1]; **Brandolino, Amber, BA**[2]; Hillard, Cecilia, PhD[1]; deRoon-Cassini, Terri, PhD[1]
[1]*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*
[2]*Marquette University, Milwaukee, Wisconsin, USA*

**Purpose:** The CB1 endocannabinoid receptor regulates behaviors relevant to posttraumatic stress disorder (PTSD), such as anxiety, fear and extinction of aversive memories. Marijuana contains the CB1 receptor agonist, delta-9-tetrahydrocannabinol. This study's goal was to evaluate the effect of marijuana use on PTSD and circulating levels the endocannabinoid, 2-arachidonoylglycerol (2-AG). **Procedure:** Study was conducted at an urban level 1 trauma center. PTSD symptom severity (CAPS), self-reported marijuana use, and blood samples were acquired at baseline (in-hospital) and 6 months post-injury. Analyses were run using SPSS. **Results:** 280 traumatic injury patients (mean age 40) were enrolled. Marijuana users were significantly younger ($r = .411$, $p = .000$) than non-users. Patients using at 6 months had significantly higher scores in PTSD total symptom severity ($t(154) = 2.702$, $p = .008$) and significantly lower ($t(94.704) = -2.807$, $p=.006$) 2-AG levels than non-users. Patients using at only 6 months had significantly lower total symptom severity scores than those using at both time points ($t(44)=2.036$, $p=.048$). **Conclusions:** These findings provide important insights into PTSD risks and may aid clinicians in responding to patient queries about marijuana use and PTSD self-treatment.

## Role of Endocannabinoid Recruitment in Stress-Induced Escalation of Cocaine Intake

(Bio Med, Sub/Abuse, N/A, M, N/A)

**McReynolds, Jayme, PhD**[1]; Wolf, Colten, BS[1]; Starck, Dylan, BS[1]; Hillard, Cecilia, PhD[2]; Mantsch, John, PhD[1]
[1]*Marquette University, Milwaukee, Wisconsin, USA*
[2]*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*

Stress is an important contributing factor to addiction and is problematic as stress is unavoidable in daily life. Therefore, understanding the neurobiological mechanisms that underlie the contribution of stress to addiction is critical. Addiction can be characterized, in part, by a loss of control over drug intake that is modeled by escalating patterns of drug self-administration (SA). We have previously shown in rats demonstrating stable cocaine SA under limited-access conditions (2-h/day), a stressor, electric footshock stress, administered daily at the time of training can escalate cocaine intake in a glucocorticoid-dependent manner. Stress-induced escalation of SA is likely the consequence of neuroplastic changes that persist long after periods of repeated stress end. These changes may involve neurobiological mediators that connect stress-responsive and reward systems in the brain, such as the endocannabinoid system (eCB) and may occur in regions implicated in both stress and reward, such as the ventral tegmental area (VTA). Therefore, we hypothesize that repeated stress at the time of SA induces a persistent increase in eCB signaling, particularly in the VTA, which results in escalation of cocaine use and increased susceptibility to later reinstatement. Male SD were trained to SA cocaine (0.5 mg/kg/inf) on a FR 4 schedule in 4 X 30 min SA sessions separated by 5-min drug-free periods. Some rats received footshock in the SA chamber during the 5 min drug-free period over 14 days. Footshock administration resulted in an increase in cocaine intake over 14 days and this effect persisted for at least 5 days after cessation of footshock. Systemic administration of the CB1R antagonist AM251 30 min prior to the SA session attenuated cocaine intake only in stress-escalated rats. Furthermore, intra-VTA administration of AM251 15 min prior to the SA session attenuates cocaine intake in stress-escalated

rats. In separate groups of rats, once responding for cocaine was extinguished, rats were tested for reinstatement of drug-seeking behavior by administration of a priming injection of cocaine (2.5, 5, or 10 mg/kg, i.p.). Rats who received footshock during SA demonstrated augmented reinstatement to all doses of cocaine. Furthermore, as with SA, the CB1R antagonist AM251 given 30 min prior to injection of high-dose cocaine (10 mg/kg, ip) significantly attenuated cocaine-primed reinstatement only in rats with a history of stress-induced escalation of cocaine intake. These data suggest that stress-induced neuroplastic changes occur, likely in the eCB system, in regions of the brain that influence expression of escalated cocaine intake and augmented cocaine-primed reinstatement, such as the VTA, and that these changes may be glucocorticoid-dependent.

## Symposium
## Friday, November 10
## 3:00 PM to 4:15 PM
## Salon 6/7
## Refugee Track

## The Assessment and Treatment of Trauma in Complex Settings: How Culture can Impact the Experience of Trauma, Symptom Presentation, and Treatment Implications

(CulDiv, Chronic-Cog/Int-Commun-Global, Adult, I, Global)

**Monson, Candice, PhD, Cpsych**
*Ryerson University, Toronto, Ontario, Canada*

The ubiquity of large-scale traumatic events locally and globally has led to interest in understanding how such events are experienced and expressed from one culture to the next (Wilson, 2007). Additionally, the growing body of literature on cultural competence has increased awareness of including the emic perspective, which represents local conceptualizations of traumatic events and their sequelae; such knowledge can enhance culturally sensitive methods of adapting and implementing interventions in non-Western settings (White & Marsella, 1989). Of particular note in the emic viewpoint is the increased interest in understanding the impact of trauma not only for individuals but also the social context within which they are embedded. This symposium includes talks on the assessment and treatment of trauma across four countries. Two clinical psychology doctoral students will present their research on the complexity of psychological reactions to traumatic life experiences in Sri Lanka and India and two clinician researchers will present findings on the innovative adaption of trauma interventions in Israel and with American Indian women in the United States. Fiona Thomas will start with a presentation on the intersection between ongoing stressors, resilience, and trauma-related outcomes amongst return migrants in Northern Sri Lanka. Anushka Patel will follow with a preliminary model of ethnopsychology, including how distress is generated and regulated based on findings from interviews with trauma-exposed women from Indian slums. Moving from assessment to treatment, Dr. Debra Kaysen will present findings from a community-based participatory research (CBPR) program adapting cognitive processing therapy (CPT) in collaboration with tribal partners. Finally, Dr. Yael Shoval-Zuckerman will discuss the adaptation and implementation of Cognitive-Behavioral Conjoint Therapy (CBCT) in Israel to treat posttraumatic stress disorder (PTSD) and enhance relationships, in intimate couples in which one partner was diagnosed with PTSD. Dr. Candice Monson, an expert in traumatic stress and co-developer of CPT and CBCT, will finish by threading together similarities and differences across presentations to emphasize considerations for assessing and treating traumatic stress in complex, cross-cultural settings.

## ‘I Put a Stone on My Heart and Kept Going’: An Ethnopsychological Model of How Distress is Generated and Regulated among Trauma-Exposed Women from Indian Slums.

(Global, Cul Div-DV-Gender, Adult, I, S Asia)

**Patel, Anushka, PhD Student**; Kovacevic, Merdijana, MA, PhD Student; Newman, Elana, PhD
*The University of Tulsa, Tulsa, Oklahoma, USA*

**Rationale:** Although low-and-middle income countries (LMICs) shoulder a large burden of global mental illness, research from LAMICs is scant (Patel, 2007). Western diagnostic categories may not apply cross-culturally (Kohrt et al., 2014) as cultural concepts of distress (CCDs) and mind-body concepts (i.e. ethnophysiology) differ due to unique social determinants of health. Instead, local models of

distress generation and regulation can inform treatment adaptations to maximize cultural sensitivity and clinical relevance. **Method:** As poverty and gender disadvantage predict worse psychological outcomes in LMICS, 45 trauma-exposed women from Indian slums were interviewed using the explanatory model interview catalogue (Weiss, 1997). The CCDs and ethnophysiology expressed in semi-structured interviews were analyzed with grounded theory and constant comparison methodology. **Results:** Over 40 CCDs emerged; interpersonal stressors were attributed causes for all, but medical and daily stressors were also common; prominent ethnophysiological concepts included 'dil' (heart), 'dimaag' (brain), and 'man' (heart-mind). **Discussion:** A preliminary model of ethnopsychology, including how distress is generated and regulated emerged in the mind, heart, and heart-mind. The same mind-body concepts in this study were observed in Nepali samples (Kohrt & Hruschka, 2010). This study depicts culturally rooted distress among trauma-exposed women in India.

## Mechanisms of Change in Cognitive Processing Therapy among American Indian Women

(CulDiv, Affect/Int-Cog/Int, Adult, I, Industrialized)

**Kaysen, Debra, PhD, ABPP**[1]; Bedard-Gilligan, Michele, PhD[1]; Huh, David, PhD[2]; Smartlowit-Briggs, Lucy, MSW[1]; Pearson, Cynthia, PhD[1]
*[1]University of Washington, Seattle, Washington, USA*
*[2]University of Washington School of Medicine, Seattle, Washington, USA*

American Indian (AI) communities have rates of violence exposure more than twice the national level (Department of Justice, 2004) and elevated lifetime rates of PTSD (Beals, Belcourt-Dittloff, Garroutte, et al., 2012; Beals, Novins, Whitesell, et al., 2005). However, there are no studies of evidence based PTSD treatments among AIs. Cognitive Processing Therapy (CPT) is a widely used evidence-based treatment for PTSD (Forbes et al., 2010). Within the CPT literature, there is relatively little research testing theorized mechanisms of change (Schumm et al., 2016), or testing CPT within diverse communities (Dixon et al., 2016). The two theorized mechanisms of action in CPT are emotion regulation (processing of natural emotions) and cognitive restructuring (Resick, Monson, & Chard, 2007). An additional potential mechanism of change is increasing self-efficacy as individuals learn increased coping skills. In this pilot study of CPT-cognitive version (CPT-C) adapted for AI's we examined change in cognitions, emotion regulation, and self-efficacy as predictors of change in PTSD in 60 AI women. Three path analysis models were used to examine whether change in 1) distress tolerance, 2) post-traumatic maladaptive beliefs, or 3) trauma coping self-efficacy were associated with differences in PTSD symptoms at post-treatment and 3 month follow-up, controlling for baseline symptomatology. Preliminary analyses indicate a one-standard deviation increase in distress tolerance and coping self-efficacy from baseline predicted a 0.5-standard deviation reduction in PTSD symptoms at post-intervention/follow-up assessment ($\beta$'s = -.52 to -.45, p's < .001). A one-standard deviation decrease in maladaptive beliefs from baseline predicted a 0.5-standard deviation reduction in PTSD symptoms at post-intervention/follow-up assessment ($\beta$ = .48, p = .001). Findings support cognitive restructuring as a means of change in CPT-C. Although self-efficacy and emotion regulation are not explicitly taught, these also appear to be mechanisms of change in CPT-C.

## Cultural Adaptation of Cognitive-Behavioral Conjoint Therapy for PTSD in an Israeli Context

(CulDiv, Clinical Practice-Cul Div-Train/Ed/Dis, Adult, I, Industrialized)

**Shoval-Zuckerman, Yael, PhD**[1]; Dekel, Rachel, PhD[1]; Freedman, Sara, PhD[1]; Ennis, Naomi, MA Student[2]; Monson, Candice, PhD, Cpsych[2]
*[1]Bar-Ilan University, Ramat Gan, Israel*
*[2]Ryerson University, Toronto, Ontario, Canada*

Treatments that have been developed in Western societies are not always suitable for use in different cultures. Since the uptake and dissemination of evidence based therapies is essential, it is important to understand the cultural adaptations needed in order to successfully implement interventions in a different society. This paper will describe the cultural adaptation of Cognitive-Behavioral Conjoint Therapy (CBCT) for posttraumatic stress disorder (PTSD), which was developed and tested in North America. CBCT is a manualized psychotherapy involving two patients, usually intimate partners, designed to treat PTSD and its comorbid symptoms and enhance relationships. The manual was translated by an Israeli team and implemented in an Israeli clinic after training the local team. The team was comprised of therapists trained as couple therapists, and cognitive behavior therapists. Throughout the process, the treatment protocol was treated as a living document;

as the team developed improvements for adaptation. In this presentation, we will illustrate the process of cultural adaptation. This included shaping the appropriateness of language, changing the clinical examples given throughout the protocol, and finding Israeli-relevant metaphors. We will discuss the implications of this process for this particular intervention and its dissemination, as well as for PTSD treatments in general.

## A Social Ecological Analysis of Displacement and Resilience in Northern Sri Lanka

(Global, Chronic-Comm/Vio-Refugee-Civil/War, Adult, I, S Asia)

**Thomas, Fiona, PhD Candidate**[1]; McShane, Kelly, PhD, Cpsych[1]; Siriwardhana, Chesmal, PhD[2]
[1]*Ryerson, Toronto, Ontario, Canada*
[2]*London School of Hygiene and Tropical Medicine, London, London, United Kingdom*

The 26-year civil war in Sri Lanka left communities uprooted from familiar ecological contexts (IDMC, 2014). Despite experiencing exposure to violence and secondary traumatic events such as loss of family and dangerous journeys, literature on resilience challenges the expectation that conflict-affected individuals will uniformly manifest dysfunction (Barber, 2013). Applying the Conservation of Resources theory (Hobfoll, 2015), this study sought to understand the mediating and moderating factors that influence the relationship between stressors, resilience, and the maintenance of trauma in migrants. Participants (n=1025) were recruited from primary healthcare clinics in northern Sri Lanka and completed a demographic and displacement history questionnaire, the Wagnild Resilience Scale, and the Harvard Trauma Questionnaire. Preliminary analysis indicates the presentation of trauma symptoms and resilience differs, depending on age at displacement and is moderated by other variables such as family structure, education interruption, and conflict participation. A model of theoretical variables and relations among them will be presented. Using an ecological framework of resilience, future community-based research can holistically combat the consequences of war through multiple points of intervention that are responsive to the complex nature of war-related stressors (Betancourt, 2008).

# Symposium
# Friday, November 10
# 3:00 PM to 4:15 PM
# Monroe Room
# Child Trauma Track

## Challenges of Child and Adolescent Trauma Assessments

(Assess Dx, Dev/Int, Child/Adol, I, Industrialized)

**Allwood, Maureen, PhD**
*John Jay College, CUNY, New York, New York, USA*

Understanding the complexity of trauma from self to cells is dependent on reliable and valid assessments from childhood through adulthood. To this end, this symposium addresses several ongoing tensions and debates regarding the assessment of trauma exposure and symptoms among children, adolescents, and emerging adults. The first two presenters will discuss the underlying dimensions of the PTSD diagnosis among two groups of youth who are generally not targeted for trauma assessments, including justice-involved youths and non-referred emerging adults. Both presentations highlight the developmental implications of their findings regarding PTSD's symptom structure. The last two presentations confront the debate as to whether it is re-traumatizing to ask youth to revisit their trauma through assessment. The third paper examines concordance of trauma reporting through interviews with mother-child dyads. The finding that mothers' own symptoms are associated with informant discrepancies is crucial to understanding the complexities of trauma and from whom trauma information should be gathered. The fourth presentation includes data from youth who were directly asked about their responses to trauma-related questions. More than 90% of the responses expressed no negative concerns. Together these presentations focus on measurement issues that are universal and critical to the understanding of the complexity of trauma.

## Confirmatory Factor Analyses of the Structure of the DSM-5 PTSD Diagnosis in an Adolescent Sample: Comparison of the Four, Six, and Seven Factor Models

(Assess Dx, Assess Dx-Res Meth, Child/Adol, I, Industrialized)

**Modrowski, Crosby, MS, PhD Student**; Kerig, Patricia, PhD
*University of Utah, Salt Lake City, Utah, USA*

Since the release of the DSM-5 revised criteria for the PTSD diagnosis, a number of studies investigating its underlying dimensionality have found that alternative models provide a better fit to the data than the manual's proposed 4-factor conceptualization. These include a 6-factor Externalizing model (Liu et al., 2014), a 6-factor Anhedonia model (Tsai et al., 2014), and a 7-factor Hybrid model (Armour et al., 2014, 2015). However, an important limitation of this research is that it has been limited to adults and no published studies yet have investigated the underlying dimensionality of the DSM-5 criteria in youth. To address this gap, the present study compared these models in a sample of 355 trauma-exposed detained adolescents (Mage=15.97, SD=1.26) who completed the Posttraumatic Stress Disorder Reaction Index for DSM-5 (Pynoos & Steinberg, 2014). Results of confirmatory factor analyses demonstrated that the DSM-5 4-factor model was a poor fit to the data (CFI=.69;SRMR=.161;RMSEA=.095) and that the Anhedonia (CFI=.86;SRMR=.063;RMSEA=.065) and Externalizing (CFI=.85;SRMR=.052;RMSEA=.067) models were equally plausible fits to the data. These results align with other studies using adult samples demonstrating support for alternative models of PTSD and suggest there may be some unique ways in which posttraumatic stress symptoms manifest in adolescents.

## Trauma Assessments across Developmental Stages: Is There an App for That?

(Assess Dx, Dev/Int, Child/Adol, I, Industrialized)

**Allwood, Maureen, PhD**
*John Jay College, CUNY, New York, New York, USA*

Measuring PTSD symptoms from childhood into adulthood has been hampered by use of different measures across different developmental stages. This study examined the psychometric properties of the PTSD Reaction Index (PTSD-I) across age groups, gender, and race/ethnicity among a sample of diverse college students (n=783). On average, this non-referred sample experienced multiple traumas and over 19% were above the cut-off for clinically significant PTSD symptoms. The factor structure for the measure was similar for late adolescents (17-19) and for emerging adults (20-25). However, age-group differences were found for DSM-IV numbing and avoidance symptoms, with the younger cohort reporting significantly more avoidance symptoms (t=-3.42, p=.001). The developmental implications of the findings will be discussed along with differences found across race/ethnicity groups. Overall, exploratory analyses indicated that the PTSD-I is an appropriate screener for young adults. Findings also suggest that the factors aligned most closely with the DSM-5 factor structure versus that of the DSM-IV. Confirmatory factor analysis will be conducted to confirm this hypothesis. The outcomes of the study will aid in the understanding of PTSD symptoms over the course of development from childhood through emerging adulthood, which further helps to capture the complexities associated with trauma exposure.

## Youth Responses to Trauma Screening in Non-Mental Health Community Settings

(Assess Dx, CPA-Chronic-Commun-Ethics, Child/Adol, I, Industrialized)

**Smith, Stefanie, PhD**
*Alliant International University, San Francisco, California, USA*

Assessing trauma history is integral to youth research and clinical work, but some providers and IRBs are hesitant about youth trauma screening. Most are concerned about re-traumatizing youth, especially when screening is conducted by non-treating providers (Goodman, 1999; Harris & Fallot, 2001). While some research demonstrates that adults are not distressed and often react positively to being asked about trauma history (Goodman, 1999; Gallop, et al. 1995), this research has not focused on youth. This mixed methods study examined the reactions of 181 youth to participating in trauma history screening (TESI-CRF-R; Ippen et al., 2002) during intakes for non-mental health services. On average, the racially

diverse sample experience 5.14 traumas and almost all (97%) identified experiencing at least one. Overall 58.56% of the responses were positive, 28.18% were neutral, 6.63% were negative but not distressful, and 6.63% were ambiguous/"I don't know." Qualitative data analysis reveals more specific themes within these categories. Results suggest that screening for trauma in youth can have numerous benefits, including improving social relationships within the system of care, at almost no emotional distress to the youth. The presentation will also discuss some helpful approaches to preparing mental health and non-mental health persons to conduct trauma screenings.

## Mother-Child Discrepancies in Report of PTSD Symptoms in Dyads Who Have Experienced Intimate Partner Violence

(Assess Dx, DV-Fam/Int-Intergen, Lifespan, I, Industrialized)

**Samuelson, Kristin, PhD**[1]; Zenteno, Christiane, PhD[2]; Wilson, Christina, PhD[3]
[1]*University of Colorado at Colorado Springs, Colorado Springs, Colorado, USA*
[2]*Alliant International University, San Francisco, California, USA*
[3]*Atlanta VA Medical Center, Atlanta, Georgia, USA*

Clinicians often rely on parent report to assess childhood trauma and PTSD symptoms, yet discrepancies between mothers' and children's reports of mental health functioning are common. An added layer of complexity is introduced when mothers and children experience a "shared" trauma, such as experiencing and witnessing intimate partner violence (IPV). In a sample of 48 racially diverse mother-child dyads in which the mothers had experienced IPV and the children (ages 7-16) had witnessed it, we examined parent-child discrepancies around PTSD symptom report. Mothers and children were interviewed separately using the Schedule for Affective Disorders and Schizophrenia for School-Age Children. Mothers were also interviewed about their own PTSD symptomatology (CAPS). Maternal report was moderately correlated with child report of PTSD symptoms ($r = .32$, $p = .026$). Severity of maternal PTSD symptomatology was significantly and linearly related to informant discrepancy regarding child PTSD, such that more maternal PTSD symptoms was associated with higher reports of child PTSD symptomatology than the children reported. These results support the need for multiple sources of information when assessing childhood trauma, especially when mothers themselves have PTSD. This presentation will also discuss additional challenges in child trauma assessment, including confidentiality, mandated reporting, and threats to validity.

# Panel Presentation
# Friday, November 10
# 3:00 PM to 4:15 PM
# Crystal Room
# Treatment Track

## Adapting Evidence-Based PTSD Treatments for Delivery in Intensive Treatment Settings

(Practice, Clin Res-Train/Ed/Dis, Adult, M, Industrialized)

**Held, Philip, PhD**[1]; **Maples- Keller, Jessica, PhD**[2]; **Wild, Jennifer, DPsych(Clin)**[3]; **Monroe, J. Richard, PhD**[4]; **Zandberg, Laurie, PsyD**[5]
[1]*Rush University Medical Center, Chicago, Illinois, USA*
[2]*Emory University School of Medicine, Atlanta, Georgia, USA*
[3]*Oxford University, Oxford, Oxfordshire, United Kingdom*
[4]*Cincinnati VA Medical Center, Cincinnati, Ohio, USA*
[5]*University of Pennsylvania, Philadelphia, Pennsylvania, USA*

Panelists will discuss strategies for and benefits of adapting evidence-based trauma-focused interventions for delivery in intensive treatment formats in both veteran and civilian populations. Data from randomized controlled trials, open trials, and clinical practice samples suggest that evidence-based trauma-focused interventions delivered in intensive formats produce statistically significant and clinically meaningful reductions in PTSD. Panelists will discuss four different intensive treatments which utilize Prolonged Exposure, Cognitive Processing Therapy, or Cognitive Therapy for PTSD and range in length from 1-7 weeks. Benefits, such as circumventing treatment barriers and session frequency, as well as potential challenges of delivering EBPs in an intensive format will be discussed from provider and patient perspectives.

Panelists will review key elements (e.g., psychoeducation, imaginal/in-vivo exposure, and cognitive restructuring) of different evidence-based trauma treatments and discuss specific adaptations and modifications, such as delivering treatments in group-individual hybrid formats, individualizing the treatment approach, and structuring treatment provider communications, and consultations to facilitate switching between treatment modalities in intensive treatments. Panelists will also discuss the feasibility and acceptability of the intensive programs.

## Panel Presentation
## Friday, November 10
## 3:00 PM to 4:15 PM
## Adams Room

## Mass Violence: Understanding the Complexity of Trauma and Grief in Communities

(Commun, Acute-Cul Div-Death-Terror, Lifespan, I, Industrialized)

**Brymer, Melissa, PhD, PsyD**[1]; **Gurwitch, Robin, PhD**[2]; **Fetchet, Mary, LCSW**[3]; **Reyes, Gilbert, PhD**[4]
[1]*National Center for Child Traumatic Stress at UCLA, Los Angeles, California, USA*
[2]*Duke University Medical Center, Durham, North Carolina, USA*
[3]*VOICES of September 11, New Canaan, Connecticut, USA*
[4]*Tulalip Tribes, Santa Barbara, California, USA*

Vast media attention occurs after mass violence, with reporters asking how it could occur, who is at fault, who is impacted, and what should be done. The National Child Traumatic Stress Network has responded to over 50 mass violence events, including school violence. To appreciate the complexity for how these events impact communities, one needs to consider the socially highlighted characteristics of events, the perceived motivations of perpetrators, the perceived impact and expressed experiences of victims, and subsequent stresses that communities experience afterwards. How the systems within the community (e.g., government, first responders, legal system, school, and local media) and outside of the community (e.g., state and national politics and national media, supportive gestures by prominent entertainment and sports organizations), respond immediately and over time can impact the community's recovery or adjustment to losses. Regional and local-cultural characteristics also inform significant differences in reactions to trauma and the design and implementation of response strategies. Timetables for healing and recovery are different across systems and unique factors affect each of these. Using their diverse experiences with response to mass violence events, the panel will examine factors impacting recovery and lessons learned. They will also address grief trajectories and why we need to put more emphasis on the effects of losses.

## Workshop Presentation
## Friday, November 10
## 3:00 PM to 4:15 PM
## Salon 2
## Child Trauma Track

## Treating Emotion Dysregulation in Patients with Co-occurring PTSD and Eating Disorders Who Report a History of Childhood Trauma

(Practice, CSA-Clinical Practice-Complex, Adult, M, Industrialized)

**Westphal, Maren, PhD**[1]; **Horowitz, Melissa, PsyD**[2]
[1]*Pace University, Pleasantville, New York, USA*
[2]*American Institute of Cognitive Therapy, New York, New York, USA*

Posttraumatic Stress Disorder (PTSD) co-morbidity among individuals with eating disturbances ranges from 11% to 52%, highlighting the clinical significance of addressing trauma in the treatment of disordered eating. Approximately 30% of individuals diagnosed with eating disorders report a history of childhood sexual abuse (CSA), a type of trauma that has been found to predict the development of bulimia nervosa and other bulimic disorders in prospective longitudinal studies. Rooted in an affect regulation model, dialectical behavior therapy (DBT) is particularly well-suited to targeting difficulties in regulating intense negative emotions such as shame that are common among CSA survivors. The workshop will begin by delineating emotion regulation mechanisms that link trauma and eating psychopathology and briefly review recent empirical

research on the effectiveness of DBT adapted for bulimia nervosa and binge eating disorder. Participants will receive an introduction to DBT case formulation using vignettes and learn to incorporate selected DBT components into the treatment of patients with PTSD who endorse patterns of over-eating in response to trauma reminders and other emotionally distressing situations. The format of the workshop is highly interactive, incorporating role-plays and small-group exercises.

# Concurrent Session Eight

**Featured Presentations**
**Flash Talks**
**Friday, November 10**
**4:30 PM to 5:45 PM**
**Grand/State Ballroom**

## Do "Tribal" Warriors Get PTSD? Combat Stress and Moral Injury in Turkana Pastoralists of Northwest Kenya

(CulDiv, Cul Div-Civil/War-Mil/Vets-Theory, Adult, I, E & S Africa)

**Zefferman, Matthew, PhD**; Mathew, Sarah, PhD
*Arizona State University, Tempe, Arizona, USA*

Is combat-related PTSD, as some argue (e.g., Junger 2016), a collection of symptoms unique to soldiers from large-scale industrial societies? Or is it, as some argue (e.g., Cantor 2009), a collection of symptoms with universal applicability and deep evolutionary roots? To what extent can combat trauma be explained by a fear response and to what extent can it be explained by moral injury? These questions have been difficult to answer because combat stress research has almost entirely been conducted in large-scale industrial societies with similar cultural norms and moral beliefs about war. To better answer these questions I conducted interviews with over 150 pastoral warriors from the Turkana people of northwest Kenya. Warfare is common in the Turkana. Over half of adult male mortality in our study population is due to combat and about half of our sample has at least one visible bullet scar. For each warrior I collected data on combat exposure, their moral beliefs, exposure morally injurious events and PTSD symptom severity using a modified version of PCL-5. I found that the Turkana warriors in our sample had a high frequency and severity of PTSD symptoms. However, compared to the normalized symptom severity of a US military veteran sample, they have lower severity of symptoms associated with moral injury. This suggests that some symptoms of PTSD may be more universal and based on fear while others are more related to moral injury and may be lower in societies, like the Turkana, where warfare and killing the enemy is widely celebrated. However, I also found that the moral beliefs of Turkana warriors varies widely and that killing in combat has dramatically negative effects on some warriors. This suggests that susceptibility to moral injury is partially, but not completely, determined by societal and cultural influence.

## Genetic and Environmental Influences on PTSD and Resilience: A Unified Dimension of Vulnerability to Traumatic Stress

(Bio Med, Assess Dx-QoL-Genetic, Adult, M, Industrialized)

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This study examined shared and unique sources of genetic and environmental influences on PTSD symptom severity and resilience in a sample of 3,318 male Vietnam War-era twin pairs who participated in a follow-up study with the Vietnam Era Twin Registry. PTSD severity was assessed with the PTSD-Checklist and resilience with the 10-item version of the Connor-Davidson Resilience Scale. PTSD severity and resilience were strongly correlated ($r$ = -.59). Latent biometric models revealed that 59% of the shared variance across the two variables was due to a single genetic factor, with the remainder of the covariance attributable to a single non-shared environmental factor. The heritability of resilience was 25% and of PTSD was 49%. Confirmatory factor analysis was next employed to represent the broader spectrum of vulnerability versus adaptation to traumatic stress, spanning high PTSD severity on one end and

resilience at the other. Biometric models revealed that the heritability of this spectrum (66%) exceeded that for either PTSD or resilience alone. Results suggest the need to refine phenotypes for genetic association studies to focus on the broader dimension of traumatic stress. Aligning the phenotypic structure with the genetic architecture underlying PTSD and resilience may yield improved ability to detect molecular genetic markers of trauma-related outcomes.

## "No Health without Mental Health:" A Trauma-Exposed Health Workforce in Western Uganda

(Global, Cul Div-Depr-Pub Health, Other, M, E & S Africa)

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*Objective:* This study aimed to examine the mental health of the health workforce in a post-conflict, rural region of Western Uganda. *Method:* This presentation will focus on quantitative data about trauma and trauma symptoms from a 14-month mixed-methods study of healthcare providers in Fort Portal, Uganda. Participants (n=208; 67% female) completed three administrations of psychosocial measures assessing trauma history and symptoms of PTSD, secondary traumatic stress (STS), and depression. The use of a participatory approach to the study's design aided interpretation of findings. *Results:* On average, these healthcare providers reported experiencing about 4 different types of traumatic events with a range of up to 13 types of events. Almost 60% reported experiencing a physical assault and more than 40% reported witnessing a sudden/violent death. Rates of clinically significant symptoms of PTSD, STS, and depression were very high and stable over time. The roles of gender and professional experience, associations among trauma exposure, symptoms and sociodemographics, and variation in symptom presentations will be discussed in light of Uganda's cultural context. *Conclusions:* Findings underscore the need for increased mental health awareness and targeted mental health programs in addition to infrastructural changes within the healthcare and health education systems in Uganda and other low-resource settings.

## Left Hippocampal Volume is Inversely Associated with PTSD Symptom Improvement in Post-9/11 Veterans Undergoing CBT

(Bio Med, Clinical Practice-Mil/Vets-Neuro, Adult, M, Industrialized)

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Posttraumatic stress disorder (PTSD) may be associated with reduced left hippocampal volume (van Rooij et al., 2015). This study aims to assess whether left hippocampal volume predicts response to Cognitive Behavioral Therapy (CBT) for PTSD. Fifteen post-9/11 veterans (age M = 33.3; SD = 7.3; 20% female) underwent MRI imaging before receiving individual Cognitive Processing Therapy or Prolonged Exposure for PTSD (N = 5; N = 10). Participants were assessed at baseline and after treatment endpoint with the PTSD Checklist (PCL-5; Weathers et al., 2013) and Neurobehavioral Symptoms Inventory (NSI; Defense and Veterans Brain Injury Center, 2014). Associations between hippocampal volume and symptom reduction (a continuous variable) or clinically significant treatment response (a binary variable defined by PCL-5 score reduction ≥ 10; Weathers et al., 2013) were examined. Treatment responders had smaller left hippocampal volumes compared to non-responders ($t(14) = 2.6$, $p = 0.02$). Further, reduced left hippocampal volume correlated with greater PCL-5 and NSI score reduction ($r = -0.53$, $p = 0.04$; $r = -0.54$, $p = 0.05$). When controlling for baseline scores, left hippocampal volume remained significantly inversely associated with NSI score reduction ($B = -0.02$, $SE = 0.01$, $p = 0.04$) and trended toward inverse association with PCL-5 score reduction ($B = -0.03$, $SE = 0.01$, $p = 0.06$). Preliminary results suggest reduced left hippocampal volume may predict increased PTSD treatment response in post-9/11 veterans receiving CBT. Further study with a larger sample size could help identify individuals at higher risk of treatment non-response.

## In Their Own Words: Clinician Experiences and Challenges in Administering Evidence-Based Treatments for PTSD in the Veterans Health Administration

(Clin Res, Affect/Int-Clinical Practice-Complex-Mil/Vets, Prof, M, Industrialized)

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The results of two intensive focus groups centered on the experiences of clinicians working in the PTSD clinic at a New England Veterans Affairs Medical Center will be presented. The aim of the study was to increase understanding of clinician experiences with administering evidence-based psychotherapies (EBPs) for PTSD (Cognitive Processing Therapy and Prolonged Exposure Therapy) in an ecologically valid clinical setting (VA PTSD clinic), in an effort to begin to bridge the existing practice-research gap. Clinicians (n=12) came from several disciplines and were trained in and regularly administer the EBPs as part of their clinical responsibilities. Consensual Qualitative Research, a rigorous iterative qualitative research paradigm, was employed to analyze the data obtained during two separate hour-long focus groups. Results will describe clinician perceptions of: 1) the strengths and weaknesses of the EBPs, 2) implementation challenges specific to the VA and/or the veteran population, 3) treatment efficacy and moderating variables, 4) recommended modifications to existing protocols based on clinical experiences, including how, when, and why clinicians deviate from EBP manuals, and 6) the "active ingredients" of treating PTSD that span specific treatments or approaches. Clinical implications will be discussed, emphasizing the complexity of treating traumatic stress in a veteran population.

## Following the Trail of Early Trauma: The Link between Childhood Maltreatment and Exposure and Response to Violence in Adulthood

(Social, CPA-Chronic-Comm/Vio-DV, Adult, M, Industrialized)

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Traumatic events in childhood can influence exposure to subsequent trauma and reactions to these experiences in complex ways. Using data, collected via the Internet, from an ongoing, representative sample of U.S. adults (N=4675), we demonstrate that type and amount of maltreatment experienced during childhood (i.e., physical abuse, neglect, witnessing violence between parents, sexual assault) increases the likelihood of exposure to intimate partner violence (IPV) in adulthood. Childhood maltreatment was also associated with psychological response to community-level violence (i.e., terrorism). In covariate adjusted models, controlling for the relative contribution of each, physical harm (OR=3.17, p<.001), sexual assault (OR=2.32, p <.001), and childhood neglect (OR=1.01, p<.001), were associated with adult IPV exposure. When combining these four childhood traumas into a count variable, cumulative effects were identified: increasing number of exposures was associated with incremental increased odds of IPV (OR=2.22, p<.001). Childhood physical harm (β=.12, p=.033) and witnessing parental violence (β=.40, p<.001) were also associated with acute stress (AS) response to a violent community trauma (Boston Marathon bombing) during adulthood; cumulative effects were also indicated (β=.18, p<.001). Results replicated for AS responses collected in the immediate aftermath of a second violent community trauma: the 2016 Orlando nightclub shooting (physical abuse as child: β=.24, p=.015; witnessed violence as child: β=.39, p=.019; cumulative effects: β=.17, p=.005). Results suggest a complex relationship between exposure to violence in childhood and adulthood experiences: interpersonal maltreatment in childhood predicted experiences of IPV, childhood exposure to violence predicted more deleterious acute reactions to terrorism, and cumulative effects of childhood maltreatment were identified.

## Pathways from Assaultive Violence to Posttraumatic Stress, Depression, and Generalized Anxiety Symptoms through Stressful Life Events

(Pub Health, Anx-Comm/Vio-Cul Div-Rape, Adult, M, Industrialized)

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Assaultive violence events are associated with increased risk for adverse psychiatric outcomes, including posttraumatic stress (PTS), depression, and generalized anxiety. Prior research has indicated that economic, legal, and social stressors that follow assaultive events may explain the increased risk for adverse psychiatric outcomes, yet longitudinal studies have not adequately examined this pathway. In the current study, we aimed to address this limitation. Participants (N=1360) were from a longitudinal population-based study of adults living in Detroit. At three waves, participants completed inventories of assaultive violence, economic, legal, and social stressors, and PTS, depression, and generalized anxiety. Longitudinal mediation models evidenced good fit with the data and, in each, the paths from Wave 1 assaultive violence to Wave 2 stressors, and from Wave 2 stressors to Wave 3 symptoms were significant (range of Standardized Estimates:0.09-0.15, all $p<0.01$). Additionally, the indirect paths from Wave 1 assaultive violence to Wave 3 symptoms via W2 stressors were significant (range of Standardized Estimates:0.01-0.02, all $p<0.05$). The results suggest that interventions that prevent and mitigate survivors' exposure to economic, legal, and social stressors may reduce the risk of adverse psychiatric outcomes in the aftermath of violent assaults.

## Models of Moral Injury: A Replication and Extension

(Assess Dx, Mil/Vets, Adult, M, N/A)

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Moral Injury (MI) and PTSD are well-documented responses to military deployment, yet little is known about the relationship between these conditions. A number of theoretical models have proposed potential pathways (for example Jinkerson, 2016); at the same time, little empirical work has tested these models. Jordan and colleagues (2017) recently tested a model that examined combat experiences, MI, and the mediating role of emotions in predicting symptoms of PTSD in military veterans. While an important contribution, this model was limited by its use of single-item emotion indicators and inability to separate exposure from appraisal of transgressive acts. The current study aims to better understand the psychological consequences of moral injury by replicating and extending this model by incorporating an assessment of transgressive acts, broader measures of emotions, and the addition of depression as an outcome with data collected from 162 military veterans using online survey methodology. The results of the current study support the necessity of separately examining exposure and appraisal of potentially morally injurious experiences; the importance of guilt, shame, and anger as mediators of the impact of moral injurious experiences; and the need for further research into the core and secondary effects of moral injury.

## Complex and Multiple Traumas and Resilience among Street Children in Haiti: A Socio-ecological Model

(Global, CSA-Complex-Nat/Dis-Neglect, Child/Adol, A, Latin Amer & Carib)

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**Background:** In Haiti, as in several developing countries across the world, the phenomenon of street children has become a major public health issue. These children are often victims with interpersonal traumas and adverse life events (neglect, maltreatment, psychological, physical and sexual abuse). This article aims to investigate interpersonal and non-interpersonal traumas experienced by street children and explore coping and resilience strategies they set up to deal with adversities in a logic of survival, relying on a mixed method approach. **Methods:** A group of 176 street children, aged 9 to 17 (Girls=13), was recruited in Port-au-Prince. Participants completed measures assessing PTSD, depression and anxiety symptoms, social support and resilience. Semi-structured interviews were conducted among 48 of them to document the events that led the children to settle in the street, traumatic experiences and resilience and coping strategies. **Results:** A qualitative analysis of the data using a grounded theory approach showed that street children experienced multiple and complex traumas (neglect, maltreatment, psychological, physical and sexual abuse, pedophilia, etc.). However, they have shown self-efficacy to face their traumatic experiences and few of them (less than 20%) show scores reflecting clinical rates of PTSD, depression and anxiety symptoms. A socio-ecological model of multiple traumas and a model of coping, survival and resilience strategies are conceptualized. **Conclusions:** Results demonstrate a need to develop programs that prioritize client-centered and integrated practices that combine psychological, social, economic supports and social and vocational integration based on evidence-based practice and the real needs of these children, in a perspective of social justice.

## Imagery Rescripting versus STAIR/Imagery Rescripting for PTSD related to Childhood Abuse: A Randomized Controlled Trial

(Clin Res, CPA-CSA-Chronic-Clinical Practice, Adult, M, Industrialized)

**Raabe, Sandra, PhD Candidate**[1]; Ehring, Thomas, PhD[2]; Arntz, Arnoud, Professor[3]; Kindt, Merel, Professor[3]
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[2]*Ludwig-Maximilians-University, Munich, Bavaria, Germany*
[3]*Universiteit van Amsterdam, Amsterdam, Netherlands*

A recent randomized controlled trial examined two main questions: 1) what is the efficacy of Imagery Rescripting (ImRs) as stand-alone treatment for patients with complex PTSD related to a history of childhood abuse, and 2) does the addition of a skills training in emotion and interpersonal regulation (STAIR) as a preparatory phase prior to the ImRs-treatment phase enhance the treatment effect for PTSD-symptoms. This presentation provides data on a comparison of ImRs as stand-alone treatment compared to the sequential treatment (STAIR/ImRs) and to a waitlist control group. Data consist of single-blind obtained interview-based measures for PTSD, and self-report measures for PTSD-symptoms, emotion regulation, and interpersonal functioning. Assessments were conducted at pre-/post and 3-month follow-up. Results of a linear mixed models analysis show that both treatments are effective in reducing PTSD symptoms, but there is no evidence that STAIR/ImRs is more effective than ImRs alone. Compared to waitlist STAIR alone does not significantly reduce PTSD-symptoms.

## Applying Machine Learning to Predict PTSD Outcomes

(Res Meth, Assess Dx-Clin Res-Res Meth, Adult, I, Industrialized)

**Wetterneck, Chad, PhD**
*Rogers Memorial Hospital, Oconomowoc, Wisconsin, USA*

Many studies have investigated predictors of treatment outcome or dropout in PTSD treatment with variables ranging from patient characteristics (Cloitre et al,. 2016; Van Minnen et al., 2002) to psychopathology, personality or other clinical constructs (Cloitre et al., 2005; Van Minnen et al., 2002). While these studies have been helpful, they are often limited by smaller sample sizes and use of computation models that are limited in predictive ability. New models of analysis, including machine learning have been developed and have already helped predict development of intrusive memories (Clark et al., 2014), early reactions to traumatic events (Galatzer-Levy et al., 2014) and posttraumatic stress (Karstoft et al., 2015). The present study aims to apply machine learning to the prediction of PTSD treatment outcome. In the first part of the study, data from 120 patients diagnosed with PTSD in a specialty treatment program was used to assess predictors of treatment utilizing dimensional

variables of psychopathology (i.e., from the Personality Assessment Inventory), interpersonal functioning, posttraumatic cognitions, centrality, maladaptive schemas, experiential avoidance, and patient characteristics. We identified a number of variables that were most predictive in treatment of PTSD severity (as measured by the PCL-5) and used them to train the model that will be applied to a second set of 40 patients, whose data is already collected. We will review the findings of significant predictors and how to apply these guidelines to the current program and other outpatient programs. An overview of how machine learning can provide models for other programs and outpatient therapy will also be discussed.

## Symposium
## Friday, November 10
## 4:30 PM to 5:45 PM
## Salon 1
## Refugee Track

## Meeting the Mental Health Needs of Trauma Affected Populations in the Democratic Republic of Congo – Innovations in Interventions and Expanding Availability of Services

(Global, Pub Health-Civil/War-Gender, Lifespan, I, W & C Africa)

**Bass, Judith, PhD, MPH**
*Johns Hopkins University Bloomberg School of Public Health, Baltimore, Maryland, USA*

The populations living in eastern Democratic Republic of the Congo (DRC) have experienced more than 20 years of conflict and instability, with widespread reports of sexual violence used as a tool of war against women and girls. At the community level, this instability has led to social and economic disruption, and despite an increased focus on mental health services research in the past decade, access to mental health services in the area remains limited. This symposium presents results from multiple studies addressing needs of Congolese trauma-affected populations through innovative interventions and study designs. The first speaker will present on mental health, economic and education outcomes of a community-based trial of a innovative economic assets program for adolescents and their parents. The second speaker will present on an innovative model for expanding availability of a group Cognitive Processing Therapy (CPT), previously trialed in the region. The model uses mobile health workers to reach populations in rural villages. The third speaker will present on an ongoing trial of integrating CPT components with women's empowerment activities to look at health promotion and violence prevention among DRC women living in refugee camp in Tanzania. The final speaker will present results from 5-year follow up of the original CPT trial participants to identify enduring impacts of the program on the participants, the local CPT providers, and the communities in which they work. The speakers will address the implications of these findings for reducing the treatment gap for trauma-affected populations within the region and more broadly.

## Bringing the "Bookmobile" Model to Mental Health: Use of Mobile Therapists to Extend Access to Cognitive Processing Therapy in Eastern Congo

(Global, Commun-Rape-Train/Ed/Dis-Civil/War, Adult, I, W & C Africa)

**Kaysen, Debra, PhD, ABPP**[1]; Mudekereza, Alice, MD[2]; Molton, Ivan, PhD[1]; Clemmer, Cass, BA[2]; Bass, Judith, PhD, MPH[3]
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[2]*IMA World Health, Washington, District of Columbia, USA*
[3]*Johns Hopkins University Bloomberg School of Public Health, Baltimore, Maryland, USA*

There is high need for mental health services for sexual violence victims in eastern Democratic Republic of Congo (DRC) and limited mental health infrastructure. Cognitive Processing Therapy was effective in an RCT in reducing PTSD and depression and improving functioning in DRC (Bass et al., 2013). The current program examined ways to expand access to CPT and leverage a small number of trained providers within an existing psychosocial program. Given limited numbers of providers trained in CPT, placing providers in each village was not feasible. Lack of transportation and insecurity reduced the feasibility of survivors travelling 1-2 days to receive CPT at a central location. This program approached the dilemma of access to groups by implementing mobile therapy; utilizing motorbikes to transport CPT providers to provide treatment in remote villages. Data collection is still

ongoing. Currently 142 patients have completed CPT and an additional 135 are in treatment, with the majority receiving mobile CPT services via providers on motorbikes. The project had anticipated a 50% dropout rate if clients had to travel to district headquarters for counseling. Using mobile CPT outreach services the program has a 5% dropout rate. Future analyses will examine mental health outcomes from CPT group participation. However, preliminary results support use of mobile therapy to extend reach and reduce drop-out while implementing evidence-based treatments in low-resource settings. Implications for expansion of care in other settings with similar challenges (few trained providers, rural settings) will be discussed.

## Impact of a Youth-Parent Asset Transfer Program in DRC on Mental Health, Food Security and School Attendance

(Clin Res, Fam/Int-Health-Pub Health-Civil/War, Child/Adol, I, W & C Africa)

**Glass, Nancy, PhD**
*Johns Hopkins School of Nursing, Baltimore, Maryland, USA*

Rural families in eastern DRC are challenged in building economic stability after prolonged conflict. This randomized community trial examines effectiveness of the Rabbits for Resilience (RFR) program that engages youth in training, raising and breeding rabbits, on mental health, food security and education outcomes. RFR recruited males and females (10-15 years) and parents in 10 villages. Youth were randomized to: 1) RFR only, 2) RFR with parent in Pigs for Peace (PFP), an adult asset transfer program, or 3) PFP only. Data were collected at baseline, 8- and 25-months. 509 youth completed baseline; 86.6% completed 25-month follow-up. At baseline, youth reported an average 2.5 lifetime traumas; 36% missed 3 or more school days in prior month. Youth in RFR plus PFP showed greater improvement in externalizing behaviors than youth in RFR only (p=.043). Youth in RFR plus PFP had greater declines in physical problems than youth in RFR only (p=.036). Days missed from school declined more rapidly for youth with rabbits than those without (p=.054). All groups improved in food security (p<.001). Engaging in an asset program can have a positive impact on youth mental health, food security and school attendance. This impact is enhanced when parents are also engaged.

## Enduring Effects of Cognitive Processing Therapy for Female Survivors of Sexual Violence in Eastern Congo: 5 Year Trial Follow Up

(Global, Cog/Int-Global-Pub Health-Gender, Adult, I, W & C Africa)

**Bass, Judith, PhD, MPH**[1]; Murray, Sarah, PhD[1]; Lakin, Daniel, MA[2]; Bolton, Paul, MB, BS[3]; Kaysen, Debra, PhD, ABPP[4]
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In 2011, female sexual violence survivors in 15 villages participated in a randomized controlled trial comparing group CPT with individual support in eastern DRC. Trial results indicated significant impacts of CPT at 6-months on combined depression/anxiety and posttraumatic stress (effect sizes 1.6 and 1.3, respectively). In February 2017, we re-interviewed women and providers in 6 of the CPT villages; the 7th village too unstable to return to. Of the 134 original CPT participants, 118 were invited (10 could not be located and 6 had passed away or moved out of the area); 85% (n=101) completed the 5-year follow up. All 6 CPT providers completed semi-structured interviews about current CPT knowledge and ongoing experiences using CPT. We will present enduring impacts and data on whether and how women continued to use CPT. Initial analyses of provider interviews suggest that despite a lack of financial support, providers continued to use CPT with survivors of sexual violence and became known in their communities as a resource for women experiencing violence. They discussed novel ways they have incorporated CPT components into other activitites (violence prevention, microfinance). The CPT participants and providers expressed the ongoing need for psychological support in a context of ongoing violence.

## Piloting the Nguvu Program: An Integrated Intervention to Reduce Psychological Distress and Intimate Partner Violence for Congolese Refugees in Nyarugusu Refugee Camp

(Pub Health, Cog/Int-DV-Refugee-Gender, Adult, I, E & S Africa)

**Greene, Claire, MPH**[1]; Likindikoki, Samuel, MD[2]; Ventevogel, Peter, MD[3]; Bonz, Annie, LCAT[4]; Bass, Judith, PhD, MPH[1]; Mbwambo, Jessie, MD[2]; Tol, Wietse, PhD[1]
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The Nguvu program combines two evidence-based interventions to improve mental health (shortened Cognitive Processing Therapy) and reduce intimate partner violence (IPV; empowerment counseling) among refugees. In preparation for a cluster-randomized trial, we piloted the integrated intervention with 60 Congolese women affected by past-year IPV and moderate-severe psychological distress in Nyarugusu refugee camp. Participants completed a baseline assessment of IPV history, psychological distress and hypothesized mediators/moderators of intervention impact and were enrolled in the 8-week intervention. A subset (n=17) completed qualitative interviews at the end of the pilot to explore strengths and weaknesses of the Nguvu program. At baseline, approximately 85% of participants reported lifetime experience of all three forms of IPV (psychological, physical and sexual); on average, the sample reported high levels of psychological distress (mean score 2.3±0.3 on scale of 0-3). Validation of outcome measures revealed good construct validity, test-retest reliability ($r>0.70$), inter-rater reliability (IRR>0.85) and internal consistency ($\alpha>0.75$) with few exceptions. Implementation challenges include gaps in facilitator competencies, operational barriers and retention. In qualitative interviews participants reported finding Nguvu beneficial, but also identified barriers to participation.

## Symposium
## Friday, November 10
## 4:30 PM to 5:45 PM
## Salon 3
## Child Trauma Track

## Investigating the Complexity of the Associations among Traumatic Stress Exposure, PTSD, and Adolescent Justice Involvement: Youth Characteristics, Interpersonal Contexts, and Outcomes

(Assess Dx, Chronic-Comm/Int-Dev/Int-Ethnic, Child/Adol, M, Industrialized)

**Kerig, Patricia, PhD**
*University of Utah, Salt Lake City, Utah, USA*

A wealth of research confirms that the negative effects of childhood trauma exposure are exacerbated in the adolescent period, especially among the disproportionately ethnic minority and disadvantaged youth who become involved in the juvenile justice system. However, our attempts to better serve these youth have been limited by a paucity of research devoted to understanding more complex developmental, individual, and interpersonal factors underlying for the association between traumatic stress and adolescent justice involvement. The present symposium brings together four papers from research laboratories that are making original contributions to these efforts. The first investigates the impact of timing of trauma exposure on trauma-linked developmental mechanisms implicated in youth delinquency, including emotion dysregulation and emotional numbing/callousness. The second investigates the associations amongst posttraumatic stress symptoms, negative parent-child relationships, and youth attachment as risks for gang activity in a traumatized justice-involved sample. The third examines legal and treatment outcomes for justice-involved youth who have experienced polytraumatization. The fourth utilizes a large national dataset of trauma-exposed youth to investigate racial disparities in justice-involved youth's access to trauma-informed treatments and services. Taken together, these papers shed new light on mechanisms that might inform the development of effective interventions for trauma-exposed at-risk youth.

## Timing of Trauma Exposure and Underlying Mechanisms of Risk for Youth Justice Involvement: Emotional Dysregulation versus Emotional Deficits

(Assess Dx, Affect/Int-Aggress-Chronic-Dev/Int, Child/Adol, M, Industrialized)

Lin, Betty, PhD; **Kerig, Patricia, PhD**
*University of Utah, Salt Lake City, Utah, USA*

A large body of research attests to the fact that childhood trauma exposure is associated with increased risk for delinquent behavior in adolescence; however, little research to date explicates the underlying developmental mechanisms that account for that association. Developmental traumatology theory suggests that there may be different developmental pathways toward delinquency depending on the timing of trauma exposure. In particular, trauma-informed models for at-risk youth have differentiated between early-onset posttraumatic reactions involving affective deficits, characterized by emotional numbing/callousness,, versus later-onset posttraumatic reactions involving affective disturbance, characterized by emotion dysregulation. To investigate this hypothesis, 822 detained youth (74% male, 26% female, $M_{age}$ = 16.07) provided self-reports of past trauma exposure, emotion dysregulation, and emotional numbing/callousness. Official justice system records provided information about youth offending. Results of path models conducted in Mplus 7.31 indicated that exposure to trauma in early childhood, but not middle childhood or adolescence, was associated with numbing/callousness, which in turn was associated with youth offending. In contrast, trauma exposure in adolescence was associated with emotion dysregulation. These data point to possible underlying trauma-related developmental mechanisms that confer risk for maladaptive outcomes and may inform intervention efforts to divert traumatized youth from an antisocial course.

## The Roles of Posttraumatic Stress, Parent-Child Relationship Quality, and Youth Attachment in the Gang Activity of Justice-Involved Adolescents: A Moderated Mediation Model

(Clin Res, Dev/Int-Fam/Int, Child/Adol, M, Industrialized)

**Mozley, Michaela, BS**; Fortuna, Anthony, BS; Kerig, Patricia, PhD
*University of Utah, Salt Lake City, Utah, USA*

Trauma exposure and posttraumatic stress symptoms (PTSS) have been demonstrated to increase the risk of adolescent gang involvement (Kerig et al., 2016) but little research to date has explicated the mechanisms accounting for these associations. Negative parent-child relationships have been implicated (Adler et al., 1984) in that youth may seek reprieve from family stress through gang membership (Quinn et al., 2017). However, other work suggests that the impact of family factors may depend on youths' attachment styles and whether those are secure versus avoidant or anxious (El-Sheikh & Buckhalt, 2003). In order to investigate these hypotheses, 181 trauma-exposed detained youth (49 girls, 132 boys) completed self-report measures of PTSS, anxious/avoidant attachment, and gang involvement. Parents completed measures of parenting aggravation and warmth. Results of moderated mediation demonstrated that the relation between PTSS and gang involvement exhibited indirect effects through parental aggravation at moderate levels of anxious attachment and moderate-to-high levels of avoidant attachment. This pattern was not found for parental warmth. Results suggest that interventions aimed to decrease involvement in gang activity for traumatized adolescents may benefit from considering parent-youth relationship quality, as well as the youths' attachment styles, as key mechanisms for diverting youth from risky behaviors.

## Polyvictimization and Associations with Mental Health and Legal Outcomes in Detained Juveniles

(Assess Dx, Aggress-Chronic-Gender, Child/Adol, M, N/A)

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Trauma screening has been identified as an essential element of a trauma-informed juvenile justice system (NCTSN, 2016). High rates of polyvictimization (Ford et al., 2013), PTSD (Abram et al., 2004), and research linking both to adverse behavioral and health outcomes underscore the need for integrating trauma screening results, juvenile justice case management, and services planning (Ford et al., 2012). This presentation reports a replication and extension of a previous latent class analysis of trauma screening data including 344 consecutive admissions to two juvenile detention centers over a 4-month time period using a new trauma history and PTSD symptom screener, the Structured Trauma-related Symptoms and Experiences Screen (STRESS). A poly-victim class (9%), a community violence/attachment trauma class (38%), and a moderate stress/adversity class (53%) were identified. Youth in the poly-victim and community violence/attachment trauma classes endorsed more internalizing and externalizing problems on a companion mental health screen and PTSD symptoms on the STRESS. Analyses of the prospective relationship of screening classes and PTSD symptoms with detention disciplinary incidents and 12-month legal outcomes are reported. Empirically-based implications for linking trauma screening to both immediate and long-term service planning for youth involved in juvenile justice, as well as future research directions, are discussed.

## Deconstructing Racial Disparities for Service Utilization among Justice-Involved Youth

(Practice, Acute-Complex, Child/Adol, M, Industrialized)

**Pickens, Isaiah, PhD**
*National Center for Child Traumatic Stress at UCLA, Los Angeles, California, USA*

Justice-involved youth are more frequently exposed to traumatic experiences than youth in the general population while also being disproportionately represented by ethnic minorities. Recent findings from cross-sectional data comparing 3,561 trauma-exposed youth in the community to 680 youth recently involved with the juvenile justice system revealed Black and Hispanic youth were significantly less likely to engage mental health services despite having comparable levels of trauma-exposure as their White counterparts in both justice and non-justice involved groups. The present study will extend this research by utilizing this sample to explore the moderating role of race for the relationship of numerous correlates of intensive and non-intensive service utilization. Implications for addressing racial disparities in the juvenile-justice system will be discussed.

**Symposium**
**Friday, November 10**
**4:30 PM to 5:45 PM**
**Salon 4/9**
**Military Track**

## The Use of Psychological Health Screening as a Tool to Improve Organizational Resilence

(Prevent, Journalism-Prevent-Pub Health-Mil/Vets, Adult, M, Global)

**Greenberg, Neil, MD, MsC**[1]; Jetly, Rakesh, MD, FRCPC[2]
[1]*King's College London, London, London, United Kingdom*
[2]*Canadian Forces Health Services Group Headquarters, Ottawa, Ontario, Canada*

Psychological health screening methods are used by a wide range of military and civilian organisations in order to both prevent higher risk workers (e.g. military personnel or emergency services) from developing trauma-related mental health problems and to detect such problems early after exposure to potentially traumatic events (e.g. post deployment or post a major incident) in order to provide early therapeutic or supportive interventions. However, whilst the use of screening methodologies is often fueled by political, managerial and media pressures which dictate that higher risk personnel should be properly looked after, there is a considerable lack of evidence showing whether screening methodologies are in fact an effective use of resources. This symposium comprises of a number of international presentations on this topic and aims to provide attendees with high quality evidence on this important topic and in particular to address whether they are indeed effective mechanisms to improve help-seeking and improve mental health status in those who the techniques are intended to benefit.

## Post-deployment Screening for Mental Disorders and Tailored Advice about Help-seeking in the UK Military: a Cluster Randomised Controlled Trial

(Prevent, Assess Dx-Pub Health-Mil/Vets, Adult, M, Industrialized)

**Greenberg, Neil, MD, MsC**; Fear, Nicola, PhD; Wessely, Simon, FRCPsych; Rona, Roberto, MD, PhD; Burdett, Howard, PhD
*King's College London, London, United Kingdom*

**Background** The effectiveness of post-deployment screening for mental disorders has not been assessed in a randomised controlled trial. We assessed whether post-deployment screening for post-traumatic stress disorder (PTSD), depression, anxiety, or alcohol misuse was effective. We defined screening as the presumptive identification of a previously unrecognised disorder using tests to distinguish those with probable disorders from those who probably did not so that those with probable disorders could be referred appropriately, and assessed effectiveness and consequences for help-seeking by the odds ratio at follow-up. **Methods** This was a cluster randomised controlled trial in UK military personnel after deployment to Afghanistan. Platoons were randomly assigned (1:1 initially, then 2:1) by stratified block randomisation with randomly varying block sizes of two and four to the screening group, which received tailored help seeking advice, or the control group, which received general mental health advice. Initial assessment took place 6–12 weeks after deployment; follow-up was 10–24 months later. Follow-up measures were the PTSD Checklist–Civilian Version, Patient Health Questionnaire-9, Generalised Anxiety Disorder-7 scale, Alcohol Use Disorder Identification Test (AUDIT), and self-reported help-seeking from clinical and welfare providers. All participants and investigators, other than the person who analysed the data, were masked to allocation. Primary outcomes were PTSD, depression or generalised anxiety disorder, and alcohol misuse at follow-up. A key secondary outcome was assessment of help-seeking behaviour. Comparisons were made between screening and control groups, with primary analyses by intention to treat. **Findings** Between Oct 24, 2011, and Oct 31, 2014, 434 platoons (n=10,190 personnel) were included: 6350 personnel in the screening group and 3840 personnel in the control group. 5577 (88%) of 6350 were screened and 3996 (63%) completed follow-up; 3149 (82%) of 3840 received control questionnaires and 2369 (62%) completed follow-up. 1958 (35%) of 5577 personnel in

the screening group declined to see tailored advice, but those with PTSD (83%) or anxiety or depression (84%) were more likely than non-cases (64%) to view the advice (both p<0·0001). At follow-up, there were no significant differences in prevalence between groups for PTSD (adjusted odds ratio 0·92, 95% CI 0·75–1·14), depression or anxiety (0·91, 0·71–1·16), alcohol misuse (0·88,0·73–1·06), or seeking support for mental disorders (0·92, 0·78–1·08). **Interpretation** Post-deployment screening for mental disorders based on tailored advice was not effective at reducing prevalence of mental health disorders nor did it increase help-seeking.

## Mental Health Screening for the Japan Ground Self-Defense Force Personnel Dispatched following the Great East Japan Earthquake

(Prevent, Nat/Dis-Tech/Dis, Other, M, Global)

**Nagamine, Masanori, MD, PhD**[1]; Shigemura, Jun, MD, PhD[1]; Tanichi, Masaaki, MD[1]; Saito, Taku, MD[2]; Yoshino, Aihide, MD, PhD[1]; Yamamoto, Taisuke, MD, PhD[1]; Takahashi, Yoshitomo, MD, PhD[3]; Shimizu, Kunio, MD, PhD[1]
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[2]*Department of Psychiatry, National Defense Medical College, Tokorozawa, Saitama, Japan*
[3]*University of Tsukuba, Tsukuba, Ibaraki, Japan*

Approximately 70,000 Japan Ground Self-Defense Force (JGSDF) personnel were dispatched in response to the 2011 Great East Japan Earthquake and the tsunami and nuclear disaster that followed. Mental health screening was conducted thrice—at one, six, and twelve months after mission completion—using a registered form as part of their personnel health management program. This study was conducted to evaluate the mental health of the JGSDF personnel and the correlates. Data were collected and analyzed for 56,753 participants. The Impact of Event Scale-Revised (IES-R) and Kessler Psychological Distress Scale (K10) were used to assess general post-traumatic stress response (PTSR) and psychological distress (GPD) respectively. Individuals who scored ≥25 points on the IES-R and K10 were allocated into the high-PTSR and high-GPD group respectively. The factors related to high-PTSR and high-GPD were extracted via a logistic regression analysis. The rates of high-PTSR and high-GPD reduced to approximately 1% of the total sample at 12 months after mission completion. The following factors were significantly related to high-PTSR or high-GPD status, with odds ratios of ≥2.0: deployment length of ≥3 months, being personally affected by the disaster, and being overworked continuously for ≥3 months after mission completion. No significant influence was observed for having to engage in duties with radiation exposure risk. Our findings suggest that officials may be able to plan safer disaster relief activities by shortening personnel's deployment length, taking the personnel who were personally affected by disasters into consideration, and avoiding post-mission overwork. From interventional point of view, administrators interviewed individuals who fell into the high-PTSR and high-GPD groups, and encouraged a portion of them to consult clinical psychologists and medical institutions. While we could not verify the effectiveness of mental health screening in this study, some of the high- PTSR/GPD personnel might have received early-stage medical intervention after these administrator interviews.

## Enhanced Post Deployment Screening in the Canadian Armed Forces: Does it Help?

(Prevent, Prevent-Mil/Vets, Adult, M, Industrialized)

**Jetly, Rakesh, MD, FRCPC**
*Canadian Forces Health Services Group Headquarters, Ottawa, Ontario, Canada*

The Canadian Armed Forces developed its unique mental health screening program, Enhanced Post Deployment Screening (EPDS), shortly after Canada began its involvement in Afghanistan (2002). Screening for mental health problems is common amongst militaries yet there is considerable divergence in how and when the screening is completed. EPDS will be described and contrasted with other screening programs. EPDS screening involves a detailed questionnaire that is scored prior to a 40-minute semi-structured interview with a mental health clinician. Common mental health problems are assessed using the Patient Health Questionnaire and the Posttraumatic Stress Disorder Checklist. Several different examinations of the EPDS have occurred and will be described. As an example, EPDS results of 16 193 personnel who deployed in support of the mission in Afghanistan between 2009 and 2012 were examined. Symptoms of one or more common mental health problems were seen in 10.2% of subjects and an association with combat exposure was observed. The aim of post deployment screening is to identify mental health problems and, ideally, get the individuals into care sooner than would have occurred otherwise

Further studies are planned including an attempt to demonstrate the utility of EPDS as a tool that does in fact achieve this aim. The Canadian Armed Forces remain committed to EPDS as it felt that the screening particularly with a one to one discussion with a MH professional is a unique opportunity and may address barriers to care that exist in military populations.

## Post-deployment Screening Results from the Netherlands

(Prevent, Assess Dx-Res Meth-Mil/Vets, Adult, M, Industrialized)

**Snijders, Jolanda, PhD Student**[1]; Duel, Jacco, PhD[2]; Hoencamp, Rigo, MD, PhD[1]; Vermetten, Eric, MD, PhD[3]
[1]*Ministry of Defence, Utrecht, Ut, Netherlands*
[2]*Veteran's Institute, Doorn, Ut, Netherlands*
[3]*Military Mental Health Research/UMC Utrecht, Utrecht, Ut, Netherlands*

Since the mid-1990's, the Dutch armed forces use a questionnaire to screen for several deployment related mental and physical health complaints among personnel that returned from a military mission. The type of complaints, the items that were used for measuring a specific complaint, and the timing of screening changed over time. Moreover, the way health care was provided to those who indicated they might have deployment related health needs changed over time as well. In the Netherlands, a debate was started among those involved with veteran's health care about the adequacy of the post-deployment health assessment questionnaire. Issues that were raised were, among others, the response rates of 40% over recent years, the increasing tempo of operations that makes it difficult to find the right moment of screening, and the way the questionnaire is embedded in the deployment related care system. The aim of this study is to contribute to a better understanding of how the Netherlands Armed Forces tried to improve organizational resilience by using the post-deployment health assessment questionnaire over the past decades. Therefore, this study addresses three questions. First, what changed over time, and why, regarding the content of the questionnaire and the timing of conducting the health assessment. Second, what changed over time, and why, regarding the way health care was provided when it was indicated according to the health assessment. Third, what deployment related health complaints were reported by Dutch military personnel over the past decades after deployment? We will use the database that contains the screening results of around 40,000 military personnel for answering the latter question.

# Symposium
# Friday, November 10
# 4:30 PM to 5:45 PM
# Salon 5/8
# Biological/Medical Track

## Blood-based Biomarkers of Chronic PTSD – Embracing Biological Complexity of Trauma Outcomes in World Trade Center Disaster Responders

(Bio Med, Gen/Int-Bio/Int-Terror-Genetic, Adult, A, Industrialized)

**Feder, Adriana, MD**[1]; **Waszczuk, Monika, PhD**[2]; Yehuda, Rachel, PhD[3]
[1]*Mount Sinai School of Medicine, Dept of Psychiatry, New York, New York, USA*
[2]*Stony Brook University, Stony Brook, New York, USA*
[3]*J. J. Peters Veterans Affairs Medical Center; Mount Sinai School of Medicine, Bronx, New York, USA*

The emergence of psychopathological responses after traumatic experiences is mediated by a myriad of neurobiological mechanisms, some of which are responsible for the persistence of symptoms for years after the original trauma. A comprehensive evaluation of functional neuroendocrine and genomic biomarkers in samples of trauma-exposed individuals with chronic posttraumatic stress disorder (PTSD) is critical to informing the development of targeted treatment interventions for this population. In this symposium, four clinical researchers will present new and exciting findings on blood-based biomarkers of chronic PTSD. Talks will be based on research conducted in one traumatized population –responders to the World Trade Center (WTC) disaster– many of whom continue to suffer from clinically significant PTSD symptoms over 15 years following the disaster. The research samples that are the focus of this symposium are unique in that they include diverse groups of individuals –both traditional (e.g., police) and non-traditional (e.g., construction workers) responders, who were all exposed to the same disaster, at the same point in time, but with differing levels of severity. First, genetic processes are known to play an important role in the etiology and maintenance of PTSD. We will present and discuss novel findings on gene expression and methylation associated with chronic PTSD, as well as a range of biological networks regulated by these

genes. Second, neuroendocrine blood biomarkers can help elucidate hormonal mechanisms underpinning chronic PTSD. Novel findings on the role of cortisol and estradiol in chronic PTSD will be presented, including their complex interactions with genetic vulnerability and sex differences. Genetic and neuroendocrine biomarkers of PTSD promise to enhance clinical practice by identifying novel treatment targets and informing prediction efforts. Together, the talks assembled for this symposium respond to this year's ISTSS theme of 'Trauma and Complexity: From Self to Cells' by explicating multifaceted biological mechanisms underpinning long-term psychological responses to trauma.

## HPA Axis Function and Genomics: Evidence of Distinct Biological Subtypes of Chronic PTSD?

(Bio Med, Terror-Genetic, Adult, A, Industrialized)

**Feder, Adriana, MD**[1]; Daskalakis, Nikolaos, PhD, MD[2]; Southwick, Steven, MD[3]; Yehuda, Rachel, PhD[4]; Pietrzak, Robert, PhD[3]
[1]*Mount Sinai School of Medicine, Dept of Psychiatry, New York, New York, USA*
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[4]*J. J. Peters Veterans Affairs Medical Center; Mount Sinai School of Medicine, Bronx, New York, USA*

Following the 9/11 World Trade Center (WTC) attacks, tens of thousands of traditional and non-traditional responders were involved in rescue and recovery work, and over a third continue to suffer from chronic, clinically significant PTSD symptoms, including full and subthreshold PTSD (Feder et al 2016, Pietrzak et al 2012). A diverse sample of 300 WTC responders with PTSD symptom severity ranging from none/very low to high symptom levels were recruited from the WTC Health Program using stratified random sampling. Participants completed face-to-face clinical assessments with the CAPS and SCID, followed by the dexamethasone suppression test (DST), and blood collection to measure plasma cortisol and ACTH levels, and for NR3C1/FKBP5 genotyping, methylation and gene expression studies. Preliminary analyses in 192 WTC responders (83% male, mean age=55) revealed a significant main effect of NR3C1, and interactions between NR3C1 and FKBP5 polymorphisms and WTC-related exposure severity in predicting PTSD symptom levels. Among responders with PTSD, FKBP5 SNP rs1360780 risk allele carriers exhibited DST cortisol super-suppression, not observed in C/C homozygotes, suggesting distinct biological subtypes of chronic PTSD. Additional analyses in a larger sample will incorporate NR3C1 and FKBP5 methylation and gene expression data to further probe abnormalities in HPA-axis function in chronic PTSD.

## Association between Estradiol and PTSD in Men and Women across Populations

(Bio Med, Mil/Vets-Gender, Adult, A, Industrialized)

**Bowers, Mallory, PhD**[1]; Abu-Amara, Duna, MPH[2]; Flory, Janine, PhD[3]; Marmar, Charles, MD[2]; Feder, Adriana, MD[4]; Yehuda, Rachel, PhD[3]
[1]*Mount Sinai School of Medicine/J.J. Peters VA Medical Center, Bronx, New York, USA*
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Posttraumatic stress disorder (PTSD) is twice as prevalent among women as men, raising questions about an association between PTSD and biological factors that are differentially organized according to sex/gender. Consequently, the estrogen system is an appealing target for investigation, as estrogen hormones circulate at higher levels in women compared to men. Estradiol, the predominant estrogen hormone, has been previously associated with emotion, fear learning, and psychopathology in women. Men also synthesize estradiol, although at lower levels compared to women, and, therefore, estradiol has been understudied in relation to behavioral and psychological dimensions in men. In order to address the hypothesis that estradiol is associated with PTSD and, additionally, is associated with PTSD in a gender-specific manner, an association between estradiol and PTSD in both genders should be clarified. Plasma estradiol levels were assayed in biological samples collected from participants recruited through two separate studies designed to assess biomarkers of PTSD in military veterans and World Trade Center (WTC) responders. Participants were grouped according to gender and presence or absence of PTSD as measured by the DSM-IV/V CAPS. Contrary to expectation, a significant main effect of group revealed that men and women with PTSD had lower levels of plasma

estradiol overall compared to subjects without PTSD. A main effect of PTSD on estradiol was observed in both veteran and WTC cohorts. In conclusion, estradiol may be linked with PTSD in both women and men. These data are counter to the hypothesis that estradiol may play a role in increased prevalence of PTSD among women, which has been propagated by studies that exclusively examine estradiol levels in women and not in men.

## Differential Gene Expression Profiling in Posttraumatic Stress Disorder among the World Trade Center Responders

(Pub Health, Pub Health-Res Meth-Terror-Genetic, Adult, A, Industrialized)

**Kuan, Pei-Fen, PhD**; Waszczuk, Monika, PhD; Kotov, Roman, PhD; Yang, Xiaohua, MS; Bromet, Evelyn, PhD; Luft, Benjamin, MD
*Stony Brook University, Stony Brook, New York, USA*

Gene expression approach has provided promising insights into the pathophysiology of posttraumatic stress disorder (PTSD). RNA sequencing (RNA-Seq) has emerged as a powerful platform for unbiased transcriptome-wide expression profiling. The objective of this study is to elucidate differential gene expression and the biological pathways associated with PTSD in the World Trade Center (WTC) responders. Transcriptome-wide expression study using the RNA-Seq, on RNA derived from whole blood, was conducted in 324 WTC responders (201 never, 81 current and 42 past PTSD). Current+never PTSD samples were randomly split to form discovery (N=195) and replication (N=87) cohorts. Differentially expressed genes identified in RNA-Seq were used in pathway analysis and to create a prediction model for PTSD via a machine learning approach. 448 differentially expressed genes were identified in the discovery cohort, out of which 99 remained significant in the replication cohort. Several biological pathways were found, including glucocorticoid receptor signaling and immunity-related pathways. The prediction model achieved AUC 0.764 in the replication cohort, with comparable scores in current and past PTSD, which was significantly higher than in trauma-exposed controls. We confirmed the role of FKBP5 in PTSD and identified additional differentially expressed genes that may constitute biomarkers for this condition. Together with the pathway analyses results, these gene expression findings point to HPA-axis and immune dysregulation as key biological processes underpinning PTSD. Furthermore, a novel prediction model that differentiates PTSD patients from trauma-exposed controls might be a useful predictive tool for research and clinical practice, if validated in independent cohorts.

## DNA Methylation Associated with PTSD in World Trade Center Responders: An Epigenome-wide Study

(Bio Med, Gen/Int-Bio/Int-Terror, Adult, A, Industrialized)

**Waszczuk, Monika, PhD**; Kuan, Pei-Fen, PhD; Kotov, Roman, PhD; Bromet, Evelyn, PhD; Luft, Benjamin, MD
*Stony Brook University, Stony Brook, New York, USA*

Previous epigenome-wide association studies (EWAS) of posttraumatic stress disorder (PTSD) have been inconsistent. This may be due to small sample sizes and measurement differences. The current presentation will report on results from an EWAS of 473 World Trade Center responders, which is the largest to date for PTSD. The analyses investigated DNA methylation patterns, and biological pathways influenced by differentially methylated genes, associated with PTSD. Methylation was profiled on blood samples using Illumina 450K Beadchip. EWAS analyses compared current versus never PTSD cases, assessed using a diagnostic interview, adjusting for cell types and demographic confounders. Pathway and gene set enrichment analyses were performed to understand the complex biological systems of PTSD. The results included no significant epigenome-wide associations for PTSD at a false detection rate $p<.0.05$. However, several pathways significant in PTSD emerged and included a regulator of synaptic plasticity, oxytocin signaling, cholinergic synapse, and inflammatory disease pathways. Overall, the current EWAS was the largest to date, and the failure to detect significant epigenome-wide associations is in contrast with disparate findings from previous, smaller EWA and candidate gene studies of PTSD. Enriched gene sets involved in several biological pathways, including stress response, inflammation and physical health, were identified in PTSD, supporting the view that multiple genes may play a role in this complex disorder.

**Symposium**
**Friday, November 10**
**4:30 PM to 5:45 PM**
**Salon 6/7**
**Child Trauma Track**

## Influence of Type and Timing of Adverse Childhood Experiences on Psychopathology and Brain Structure

(Bio Med, CPA-CSA-Neglect-Neuro, Adult, M, Industrialized)

**Schmahl, Christian, MD**
*Central Institute of Mental Health, Dept. of Psychosomatic Medicine, Mannheim, Germany, Mannheim, Baden-Württemberg, Germany*

Adverse childhood experiences (ACE) have been associated with diverse forms of psychopathology, not only PTSD but also other conditions such as depression and dissociative disorders. Structural brain changes in stress-sensitive brain regions were demonstrated in traumatized individuals with and without PTSD. However, studies report heterogeneous results and need to be replicated. Certain vulnerable periods of traumatization as well as the specific ACE type may contribute to the understanding of heterogeneity in findings regarding psychopathology as well as structural brain changes. This symposium will have a specific focus on the importance of sensitive time periods as well as type of ACE in personality development, psychopathology (e.g. depression and dissociation) as well as volumes of hippocampus and amygdala. Both imaging studies revealed similar sensitive periods for volumetric alterations. Of note, all studies presented here used the same instrument for the assessment of ACE, the Maltreatment and Abuse Chronology of Exposure (MACE) scale.

## Type and Timing of Adverse Childhood Experiences Differentially Affect Severity of PTSD, Dissociative and Depressive Symptoms in Adult Inpatients

(Assess Dx, Anx-CPA-Depr-Neglect, Adult, M, Industrialized)

**Schalinski, Inga, PhD, MSc**[1]; Teicher, Martin, MD, PhD[2]; Nischk, Daniel, PhD[3]; Hinderer, Eva, MSc[4]; Rockstroh, Brigitte, PhD[5]
[1]*University of Konstanz, Department of Psychology; Clinical and Neuropsychology, Konstanz, Germany*
[2]*McLean Hospital, Harvard Medical School, Belmont, Massachusetts, USA*
[3]*University of Konstanz, Reichenau, Baden-Württemberg, Germany*
[4]*Center for Psychiatry Reichenau, Konstanz, Baden-Württemberg, Germany*
[5]*University of Konstanz, Konstanz, Germany*

**Background:** A dose-dependent effect of Adverse Childhood Experiences (ACE) on the course and severity of psychiatric disorders has been frequently reported. In support of stress-sensitive periods during development, recent evidence indicates an additional impact of type and timing ACE on symptom severities in adulthood. The present study seeks to clarify the impact of ACE on symptoms that are comorbid across various diagnostic groups: symptoms of posttraumatic stress disorder (PTSD), dissociation, and depression. **Methods:** Exposure to abuse and neglect up to age 18 were assessed in N = 181 psychiatric inpatients using the Maltreatment and Abuse Chronology of Exposure scale. Conditioned random forest regression was used to define the importance of type and timing and cumulative ACE for predicting symptoms levels. **Results:** Results indicated that PTSD symptoms and dissociation were best predicted by overall ACE severity (in addition to neglect at pre-school ages). In contrast, type and timing specific effects showed higher importance for depression compared to cumulative ACE: neglect at age 8-9 was related to enhanced symptoms of depression. **Conclusion:** In support of the sensitive periods, present results indicate augmented vulnerability by type and timing of ACE. PTSD, the most severe stress-related disorder, and dissociation vary with cumulative ACE.

## Childhood Maltreatment and Normal Adult Personality Traits: Evidence for Developmental Sensitive Periods of Exposure

(Prevent, Affect/Int-CPA-Complex-Dev/Int, Lifespan, M, Industrialized)

**Khan, Alaptagin, MD**[1]; McCormack, Hannah, BA[2]; Bolger, Elizabeth, MA[1]; McGreenery, Cynthia, Assistant[2]; Teicher, Martin, MD, PhD[1]

[1]*McLean Hospital, Harvard Medical School, Belmont, Massachusetts, USA*
[2]*McLean Hospital, Belmont, Massachusetts, USA*

An association between childhood maltreatment and personality disorders is well documented in literature. However, a link between maltreatment and normal personality traits remains relatively understudied. Thus, we aimed to investigate a possible link between specific types and timing of abuse and its overall impact on normal adult personality traits, with an emphasis on sensitive exposure periods. 135 subjects (46M/89F) between the ages of 18-19 years (mean age 18.92 ± 0.59), were interviewed (SCID-II-TR) and severity and timing of exposure to ten forms of maltreatment were assessed using the (MACE) scale. Personality was assessed using 240 item (NEO PI-R). Random Forest regression analysis (cforest) to calculate the maximal importance of exposure across age and type of maltreatment, revealed that emotional abuse (in particular Peer Emotional Abuse) at ages 14/15 was the strongest predictor of developing neuroticism along with its sub-facets ($t=26.8$ $p<10^{-30}$). In contrast the other personality dimension which correlated strongly with maltreatment was that of Agreeableness which was significantly influenced by Parental Verbal Abuse at ages 10/11 ($t=3.67$ $p<0.002$). This study provides further evidence that childhood maltreatment is a risk factor not only for developing maladaptive personality disorder traits but also for the 'normal' range of personality functioning.

## Are there Effects of Childhood and Adolescent Maltreatment on Brain Development during Sensitive Time Periods?

(Bio Med, CSA-Chronic-Dev/Int-Neuro, Adult, M, Industrialized)

**Thome, Janine, PhD Candidate**[1]; Herzog, Julia, PhD Candidate[2]; Demirakcac, Traute, PhD[1]; Rausch, Sophie, PhD Candidate[2]; Bohus, Martin, MD[1]; Lis, Stefanie, PhD[2]; Schmahl, Christian, MD[2]
[1]*Central Institute of Mental Health, Mannheim, Baden-Württemberg, Germany*
[2]*Central Institute of Mental Health, Dept. of Psychosomatic Medicine, Mannheim, Germany, Mannheim, Baden-Württemberg, Germany*

Background: Deleterious effects of childhood maltreatment and early deprivation on brain volume are widely reported. Yet, there is an upcoming interest in the type and timing of maltreatment, as first evidence points to differential effects on brain volume. The current effort aims at taking a closer look on the link between type and timing of childhood maltreatment in female subjects with and without a Posttraumatic Stress Disorder (PTSD). Methods: In a sample with a history of adverse childhood experiences, with (N=42) and without (N = 26) PTSD, we assessed exposure to early life maltreatment from age 6 up to 17 using the Maltreatment and Abuse Chronology of Exposure interview (MACE). Alteration in brain volume was further contrasted to non-exposed trauma controls (N=23). Covariations of MACE severity at different ages with brain volume was calculated in traumatized subjects by applying conditional random forest regression. Results: PTSD subjects were characterized by smaller right hippocampal volume compared to HC subjects. Contrasted to trauma control subjects, PTSD individuals had smaller left amygdala, and a trend towards smaller right amygdala and anterior cingulate volume. Based on permutation tests, overall MACE severity was not found to be an important predictor for the bilateral amygdala and right hippocampal volume. Importantly, bilateral amygdala volume were best predicted by age 13, while right amygdala volume was additionally predicted by age 10. With respect to the right hippocampal volume, best prediction was found by MACE severity at age 10, 11, and 13. Conclusion: The present investigation confirms previous findings on the relationship between brain volume and trauma exposure during sensitive periods. The talk will further extend this topic in providing a more detailed examination of specific types of traumatization and its' relation to sensitive periods and brain volume.

## Differential Effects of Childhood Neglect and Abuse during Sensitive Exposure Periods on Male and Female Hippocampus

(Bio Med, CPA-Neglect-Neuro-Gender, Lifespan, M, Industrialized)

**Teicher, Martin, MD, PhD**[1]; Anderson, Carl, PhD[1]; Ohashi, Kyoko, PhD[1]; Khan, Alaptagin, MD[1]; Polcari, Ann, PhD[2]; Rohan, Michael, PhD[1]; Vitaliano, Gordana, MD, PhD[1]; McGreenery, Cynthia, Assistant[2]; Bolger, Elizabeth, MA[1]; McCormack, Hannah, BA[2]
[1]*McLean Hospital, Harvard Medical School, Belmont, Massachusetts, USA*
[2]*McLean Hospital, Belmont, Massachusetts, USA*

The hippocampus is a highly stress susceptible structure. We assessed whether childhood allostatic load or timing of maltreatment were more important predictors of hippocampal volume. 3T MRIs were collected on 336 subjects (18-25 years) and analyzed using FreeSurfer, FSL and FIRST. Exposure to broad categories of abuse and neglect during each year of childhood were assessed using the Maltreatment and Abuse Chronology of Exposure scale and evaluated using artificial intelligence and predictive analytics. Male hippocampal volume was predicted by neglect, but not abuse, up through 7 years of age. Female hippocampal volume was predicted by abuse, but not neglect, at 10, 11, 15 and 16 years. Exposure at peak age had greater predictive importance than number of types, duration or cumulative severity of maltreatment. Primary effects of neglect on male hippocampus were on CA1 followed by dentate gyrus and affected hippocampal shape throughout head, body and tail, particularly on the left side. In contrast, abuse had greatest effects on CA3 and dentate gyrus in females and had prominent affects on shape of head and tail with sparing of the body. Neglect appears to foster inadequate hippocampal development in males while abuse produces a stress-related deficit in females.

## Symposium
## Friday, November 10
## 4:30 PM to 5:45 PM
## Monroe Room
## Treatment Track

## Novel Approaches to Optimizing PTSD Evidence-Based Therapy Dissemination

(Train/Ed/Dis, Tech-Train/Ed/Dis, Prof, I, Industrialized)

**Charney, Meredith, PhD**; Simon, Naomi, MD
*Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA*

This symposium presents data on innovative efforts to disseminate two gold standard PTSD treatments into community settings: Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT). The four clinical education and research centers employ unique methods incorporating traditional and technology-driven approaches to disseminating evidence-based treatments for PTSD. This includes a learning collaborative model (The CPT Learning Collaborative at Duke University Medical Center), the use of web-based and/or in person trainings (Center for Deployment Psychology), a hybrid model of technology and in person dissemination (The Home Base Program at the Massachusetts General Hospital), and the use of technology for consultation (National Center for PTSD). Dr. Simon, who leads the dissemination efforts of the Home Base program at the Massachusetts General Hospital, will be our discussant.

## What do Providers Treating Veterans with PTSD Want to Know? A Novel Program to Support Implementation of Evidence Based Treatments for Veterans in Community Settings

(Practice, Mil/Vets, Adult, I, Industrialized)

**Norman, Sonya, PhD**[1]; McKee, Todd, MDIv[2]; Hamblen, Jessica, PhD[3]
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Understanding the challenges and questions providers face in delivering evidence-based treatments is critical to developing resources, trainings, and policies to support providers in delivering such treatments. The PTSD Consultation Program through the National Center for PTSD is a novel resource that supports providers in delivering evidence based psychotherapy and pharmacotherapy for PTSD to U.S. Veterans. The goal of this presentation is to share data regarding the types of questions about which providers treating U.S. veterans with PTSD seek consultation. Providers from any health profession call or email the program with a question and are assigned a consultant (psychologist, psychiatrist, or pharmacist) to assist with a response. In FY 2016, the program received 1371 consultation requests. Most questions were about treatment (32%) and/or educational resources for providers or their clients (29%) and/or diagnosis, screening, and assessment (27%). Other common questions were about program development (14%), referrals (11%), and medication (5%). Questions regarding treatment

were broadly to learn about evidence based treatment (EBT) or how to proceed with an EBT particular case. How these data informed the development of new resources and trainings will be described.

## Sustainability of Cognitive Processing Therapy in Community Agencies Trained Using a Learning Collaborative Methodology

(Train/Ed/Dis, Clin Res-Clinical Practice-Cog/Int-Commun, Prof, I, Industrialized)

**LoSavio, Stefanie, PhD**[1]; Dillon, Kirsten, PhD[1]; Murphy, Robert, PhD[2]; Resick, Patricia, PhD, ABPP[1]
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Although effective treatments for post-traumatic stress disorder (PTSD) exist, their use in community settings is disappointingly low. Even when clinicians receive training in evidence-based treatments, this does not necessarily lead to long-term adoption: Research indicates that training alone is insufficient to change clinical practices. To address this problem, we trained community clinicians in an evidence-based treatment for PTSD (Cognitive Processing Therapy; CPT) using a Learning Collaborative methodology—an intensive framework focused on both training in the intervention and development of a sustainable practice. Sixty clinicians within 18 agencies from across the state of North Carolina began the year-long Collaborative. The CPT Learning Collaborative led to the rostering of the majority of clinicians (63%) as CPT Providers, a high degree of fidelity to the model (average competence ratings "satisfactory" to "good"), and excellent patient PTSD symptom outcomes ($d$ = 3.0 for treatment completers). In this presentation, we will present the 6- and 12-month follow-up data from our CPT Learning Collaborative, in which we assessed continued use of CPT at each agency. Results indicated that the Learning Collaborative model led to excellent sustainability outcomes (e.g., 95% of rostered providers still providing CPT at the 6-month follow-up). These results suggest that the Learning Collaborative model is a promising approach for the dissemination of PTSD treatments, leading to high levels of both training success as well as treatment sustainability in community agencies.

## Training Community Providers in Prolonged Exposure and Cognitive Processing Therapy to Treat Military Service Members: Outcomes of a Group Consultation Program

(Train/Ed/Dis, Tech-Train/Ed/Dis, Prof, I, Industrialized)

**Charney, Meredith, PhD**[1]; Chow, Louis, PhD[1]; Jakubovic, Rafaella, BS[2]; Federico, Lydia, BA[2]; Bui, Eric, MD, PhD[1]; Simon, Naomi, MD[1]
*[1]Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA*
*[2]Massachusetts General Hospital, Boston, Massachusetts, USA*

Reports suggest few community providers are trained in or utilizing evidence-based treatments (EBTs) for PTSD despite many service members seeking medical care outside the VA. We developed a training model to disseminate two EBTs for PTSD: Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT). We held two 2-day PE trainings and two 2-day CPT trainings. A subset of participants engaged in 6 months of group consultation calls. Across trainings (n=183), EBT knowledge and comfort working with service members increased from pre to post-training (40.6% vs. 80.0% and 43.5% vs. 84.2%). At 3 months post-training, those who received consultation were more likely to implement an EBT, $\chi 2$ (1, N = 145) = 16.61, p<.001, and utilize a PTSD assessment, $\chi 2$ (1, N = 145) = 16.05, p<.001, than non-consultation participants. At 6 months post-training, consultation participants were more likely to complete or close to completing an EBT, $\chi 2$ (1, N = 134) = 20.57, p<.001, feel mostly or fully comfortable with the protocol, $\chi 2$ (1, N = 134) = 8.94, p=.003, and, of those who treat service members, implement an EBT, $\chi 2$ (1, N = 43) = 6.98, p=.008. Consultation following trainings in EBTs for PTSD may enhance implementation in practice.

## Training Providers in the Use of Evidence-Based Psychotherapies: A Comparison of In-Person and Online Delivery Modalities

(Train/Ed/Dis, Tech-Train/Ed/Dis, Prof, I, N/A)

**Mallonee, Sybil, PhD Student**[1]; Phillips, Jennifer, PhD[2]; Holloway, Kevin, PhD[2]; Riggs, David, PhD[3]
[1]*Uniformed Services University, Bethesda, Maryland, USA*
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[3]*Uniformed Services, University of the Health Sciences, Bethesda, Maryland, USA*

Evidenced based psychotherapies (EBPs) are primarily disseminated via in-person workshops, which have been shown to be effective in training clinicians. However, there is limited space at these workshops, they occur in limited locations, and the time and money required to travel to these workshops is limiting for many providers. An online virtual and interactive training is a potential solution to increase EBP training opportunities for providers. The study objective was to examine the potential utility of online EBP workshops. In-person workshops were compared with live 3-D workshops conducted in the online virtual and interactive platform, SecondLife. Analysis of the data demonstrated that participants, regardless of training modality, demonstrated significant knowledge gains and that the magnitude of these gains did not differ across the in-person and virtual online training modalities. Participants in the online and in-person modality also did not differ in their perceived readiness to implement the EBP after the workshop. A significant difference in training satisfaction was found between the two modalities, with the in-person training group reporting higher satisfaction ratings than the online training participants. Overall, these findings suggest that virtual online EBP training is at least as effective as in-person training.

## Panel Presentation
## Friday, November 10
## 4:30 PM to 5:45 PM
## Crystal Room

## How PTSD Affects Relationships: Using the Power of Relationships to Recover from Trauma

(Practice, Clinical Practice-Cul Div-Fam/Int, Adult, I, Industrialized)

**Watters, Kristy, PsyD**[1]; **Weber, Dana, PhD**[2]; **Luedtke, Brandi, PsyD**[3]; **Voelkel, Emily, PhD**[4]
[1]*G.V. (Sonny) Montgomery V.A. Medical Center, Jackson, Mississippi, USA*
[2]*Hines VA Hospital, Hines, Illinois, USA*
[3]*Phoenix VA Healthcare System, Phoenix, Arizona, USA*
[4]*Michael E. DeBakey VA Medical Center; Baylor College of Medicine, Houston, Texas, USA*

This panel will review the role of social support in PTSD and how PTSD affects relationship functioning. Social support post-trauma has emerged as one of the strongest factors associated with PTSD (Brewin et al., 2000; Ozer et al., 2003). Clinicians and clients often describe the devastating influence PTSD can have on relationships, and research suggests PTSD contributes to significant family and relationship difficulties (Monson et al., 2009; Taft et al., 2011). Possibly in response to these and other findings, greater emphasis is being placed on involving families in veterans' treatment within the VA system. Panelists will discuss how to: 1) obtain collateral information from a partner (including assessing for intimate partner violence), 2) effectively educate couples about PTSD and relationships, and 3) identify ways in which a partner may maintain symptoms. After discussing relevant research in the above areas, panelists from diverse VA systems will discuss their experiences, using case examples from their unique settings and other client diversity factors. Lastly, discussion about useful intervention strategies to address PTSD in the context of a relationship will be provided, including introduction to one trauma-focused couple's therapy (CBCT for PTSD; Monson & Fredman, 2012).

**Panel Presentation**
**Friday, November 10**
**4:30 PM to 5:45 PM**
**Adams Room**
**Child Trauma Track**

## High Impact Longitudinal Designs and Multi-Level Analysis: Moving From Insight to Intervention across the Lifespan

(Train/Ed/Dis, Bio/Int-Res Meth, Lifespan, M, N/A)

**Shalev, Arieh, MD**[1]; **Jovanovic, Tanja, PhD**[2]; **Tuma, Farris, ScD**[3]; **Borja, Susan, PhD**[3]; **Wagner, Ann, PhD**[3]
[1]*New York University Langone Medical Center, New York, New York, USA*
[2]*Emory University School of Medicine, Atlanta, Georgia, USA*
[3]*National Institute of Mental Health/NIH, Bethesda, Maryland, USA*

Patterns of responses to traumatic events have been identified from large and small, prospective and retrospective studies of trauma survivors. Differences between and within trajectories have been observed in symptom onset, course, and associated impairment and further heterogeneity exists in the putative biological signals at the individual level (e.g. neurocognitive, hormonal, psychophysiology). Identifying specific targets to guide practical and efficient early intervention strategies is a scientific and public health priority and efforts are underway toward this objective. The National Institute of Mental Health (NIMH) expresses high enthusiasm for research on neurobiological, behavioral, cognitive, and developmental processes that are likely to explain differences in response to trauma and that can be interrogated to reveal potentially modifiable targets and mechanisms of intervention. This panel will feature examples of current carefully designed research, including a focus on evolving differences in emotion regulation and threat detection/reactivity that may explain heterogeneity in children and adults. Panelists will share insights into the choice of domains, study designs, measures, and preliminary data to support age and/or trauma stage specific mediators of response as well as potential pathways to clinical impact. Current efforts and opportunities (gaps) in research to advance understanding of and interventions for trauma related sequelae will also be discussed.

**Workshop Presentation**
**Friday, November 10**
**4:30 PM to 5:45 PM**
**Salon 2**
**Child Trauma Track**

## Trauma Sensitive Schools: Moving from Awareness to Classroom Application

(Train/Ed/Dis, Complex-Train/Ed/Dis, Child/Adol, M, N/A)

**Daniel, Sara, MSW**[1]; **Zindler, Monica, MS**[2]; **McCoy, Katherine, Dsc**[3]
[1]*University of Wisconsin - Milwaukee, Milwaukee, Wisconsin, USA*
[2]*University of Wisconsin-Madison, Madison, Wisconsin, USA*
[3]*Brandman University, Irvine, California, USA*

In the state of Wisconsin, the Department of Public Instruction (hereafter WDPI) has embarked on a Trauma Sensitive School project to create a better understanding of the components of a trauma sensitive school as well as to design a sustainable model for school-wide implementation of trauma sensitive practice. This three year project began in January of 2016. Paralleling the work of PBIS(Positive Behavior Interventions and Support) the state has developed three levels of intervention. Year one of the project focused on tier one. This is the universal level which promotes school-wide awareness of the high prevalence of the exposure to adversity in our schools and creates a safe collaborative environment throughout the school for all students. Schools are instructed to select an internal coach that works with a team within the school. These coaches meet regularly with external coaches supported by WDPI, who mentor them in their work of leading a team of school personnel toward trauma sensitive schools practice. The coach works with the team to use individualize the approach of the content to the entire school personnel based on current school culture and identified staff development needs. In this workshop, three presenters will discuss this project. Sara Daniel, LCSW (Director of Clinical Services), will discuss the design of the project as well as share the learning modules, resources and implementation tools that she co-authored. These resources are used to support school based internal coaches throughout the state to apply the concepts in the classroom and other school

environments. Access to these resources will be shared with participants as they are web based and available to anyone for use free of charge. Monica Zindler, MS School Psychology (internal coach) representing one of the current schools involved in the first cohort of schools will share information on the application of trauma sensitive schools into practice in a high school setting. Kate McCoy, PhD (research analyst for WDPIP) will share the data from year one of the project and its impact on educator attitudes regarding trauma informed care, impact of school culture and climate as well as the impact on behavioral school indicators.

# Saturday, November 11

## Keynote Address
## Saturday, November 11
## 8:50 AM to 9:50 AM
## Grand Ballroom

### Understanding and Mitigating the Impact of Early-Life Adversity on Disease Risk: Towards Developmental Programming of Lifelong Health

(Bio Med, CPA-CSA-Depr-Dev/Int, Lifespan, M, Industrialized)

**Heim, Christine, PhD**
*Charite Universitatsmedizin Berlin, Berlin, Germany*

Adversity in early life, such as childhood abuse, neglect and loss, is a well-established major risk factor for developing a range of psychiatric and medical disorders later in life. Biological embedding of maltreatment during development is thought to underlie this long-term increased risk. Our results suggest that childhood trauma in humans is associated with sensitization of the stress response, glucocorticoid resistance, decreased oxytocin activity, inflammation, reduced hippocampal volume and changes in cortical fields that are implicated in the perception or processing of the abuse. The consequences of childhood trauma are moderated by genetic factors and mediated by epigenetic changes in genes relevant for stress regulation. Understanding trajectories of biological embedding, and their moderation by gene-environment interaction, is critical to enable us to design novel interventions that directly reverse these processes and to derive biomarkers that identify children who are at risk to develop disorders or are susceptible to a specific intervention. Such advances will promote personalized care based on risk profiles and will inform targeted interventions to mitigate the adverse outcomes of early-life stress and promote lifelong health.

# Concurrent Session Nine

## Master Clinician
## Saturday, November 11
## 10:15 AM to 11:30 AM
## Grand Ballroom

### MDMA-assisted Psychotherapy for PTSD: An Update on Evidence from Thirteen Years of Clinical Trials

(Clin Res, Bio Med-Chronic-Clin Res-Mil/Vets, Adult, M, Industrialized)

**Mithoefer, Michael, MD**[1]; Mithoefer, Ann, BSN[1]; Wagner, Mark, PhD[2]; Jerome, Lisa, PhD[3]
[1]*Private Practice, Mount Pleasant, South Carolina, USA*
[2]*Medical University of South Carolina, Charleston, South Carolina, USA*
[3]*Multidisciplinary Association for Psychedelic Studies, Santa Cruz, California, USA*

MDMA (3,4-methylenedioxymethamphetamine) was used as an adjunct to psychotherapy for approximately ten years before legal clinical administration ended in 1985 when, because of growing recreational use under the name "Ecstasy", MDMA was placed in Schedule 1 by the Drug Enforcement Administration. Several case series were published during this period, but no controlled Clinical Trials were conducted until Grob published the first US Phase 1 trial in healthy volunteers in 1998. Between 2004 and the present there have been six Phase 2 Clinical trials testing MDMA-assisted psychotherapy for subjects with PTSD that had not responded to existing treatments. In November 2016, based on the evidence from Phase 2 studies, the FDA gave clearance to proceed to Phase 3, multicenter clinical trials that are now planned to begin in 2018. This presentation reviews the physiological effects of MDMA and the possible neurophysiological mechanisms underlying its therapeutic effects. The manualized treatment approach used in Phase 2 trials will be described. An emphasis will be placed on the study design and results of two randomized, placebo controlled clinical trials conducted by the authors, the first one treating primarily crime-related PTSD and the other treating PTSD in military veterans, firefighters and police officers. The first trial, which has been published, demonstrated statistically and clinically significant response in Clinician Administered PTSD Scores (CAPS) in 83% of the group randomized to MDMA-assisted psychotherapy, compared to 25% in the group receiving the same psychotherapy with inactive placebo. A published long term follow-up of this cohort showed sustained benefit for at least 74% of participants a mean of 45 months later (range 17-74 months). Preliminary results of the recently completed study with veterans and first responders also showed a large effect size. Pooled results of the 6 completed Phase 2 trials are presented, with a mean effect size of 0.9 across 6 studies including a total of 107 participants. The nature of the therapeutic experience is illustrated with quotes from participants and a short video clip of an MDMA-assisted psychotherapy session. There is a brief description of the likely Phase 3 protocol and the training program for MDMA research therapists.

## Symposium
## Saturday, November 11
## 10:15 AM to 11:30 AM
## Salon 3
## Assessment and Diagnosis Track

### Perception and Processing of the Self among PTSD Affected Individuals: Contributions of Neurocognitive Functioning and Social-Cognition to Functional Outcomes

(Clin Res, Assess Dx-Cog/Int-Bio/Int-Neuro, Adult, M, Industrialized)

**Smith, Andrew, PhD**
*University of Utah/VA Salt Lake City Healthcare System, Salt Lake City, Utah, USA*

Recent meta-analytic evidence indicates that many veterans who engage in our best evidence based treatments for PTSD are likely to maintain a diagnosis after completing treatment (see Steenkamp et al., 2015). As such, it is important to understand how persistent PTSD symptoms influence heterotypic, functional outcomes (social/occupational functioning; quality of life). The current symposium presents four studies aimed at understanding mechanisms that produce negative downstream effects of PTSD symptoms, with emphases on

transactions between neurocognitive functioning, social cognition, and self-perception. Each study incorporates important control variables, complimentary research methodologies that integrate across levels of analyses (self-report; neuropsychological measures; brain imaging), and advanced statistics to help to understand downstream effects of PTSD particularly related to perception and processing of the self. Study 1 (N = 123 treatment seeking OEF/OIF/OND veterans) employs path analysis to understand how PTSD symptoms lead to depression and diminished quality of life— not through classic effects on emotion regulation problems (included as a covariate control)—but through biased social-cognitive processes (i.e., coping self-efficacy and negative cognitions about the dangerousness of others). Study 2 (N = 154 OEF/OIF/OND veterans) employs structural equation modeling to demonstrate that self-perception of cognitive problems—but not objective neuropsychological performance—partially mediates the relationship between PTSD symptoms and functional outcomes. Study 3 (N = 268 trauma exposed adults) employs path analysis to understand the mechanisms by which PTSD is related to perception of cognitive problems, as a function of posttraumatic cognitions and coping self-efficacy. Study 4 includes two samples (Study 4a, N = 10 female survivors of partner violence with PTSD; Study 4b, N = 39, male combat veterans), employing neuropsychological assessment and brain imaging methodologies to show that default mode regions involved in self-referential processing may work in dynamic concert with executive control regions to alter cognitive function for individuals with PTSD. Through integration of these complementary methodologies and levels of analysis, the studies in this symposium provide insight for understanding social-cognitive and self-perceptual biases—problems that so regularly present among patients with trauma-related pathology. In doing so, we provide inroads to targeting factors that drive posttraumatic dysfunction across mental/physical health, social, occupational, and existential dimensions.

## Perception of Cognitive Problems, Not Objective Neuropsychological Test Performance, Mediates Relationship between PTSD and Functional Outcomes

(Practice, Cog/Int-Mil/Vets, Adult, M, Industrialized)

**Samuelson, Kristin, PhD**[1]; Abadjian, Linda, PhD[2]; Jordan, Josh, BA[3]; Bartel, Alisa, MA, PhD Student[1]; Vasterling, Jennifer, PhD[4]; Seal, Karen, MD, MPH[5]
*[1]University of Colorado at Colorado Springs, Colorado Springs, Colorado, USA*
*[2]San Francisco VA Medical Center (VAMC-SF), San Francisco, California, USA*
*[3]Alliant International University, San Francisco, California, USA*
*[4]National Center for PTSD, VA Boston Healthcare System and Boston University, Boston, Massachusetts, USA*
*[5]San Francisco VA Medical Center and UCSF, San Francisco, California, USA*

Posttraumatic stress disorder (PTSD) has been consistently linked to poorer functional outcomes, including quality of life, health problems, and social and occupational functioning. Less is known about the potential mechanisms by which PTSD leads to poorer functional outcomes. We hypothesized that neurocognitive functioning and perception of cognitive problems would both mediate the relationship between PTSD diagnosis and functioning. In a sample of 154 Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn (OEF/OIF/OND) veterans, we assessed PTSD symptoms, history of TBI, depression, self-report measures of quality of life, social and occupational functioning, and reintegration to civilian life, and perception of cognitive problems. Veterans also completed a comprehensive neuropsychological battery. Results of structural equation models revealed that perception of cognitive problems, but not objective neuropsychological performance, mediated the relationship between PTSD symptoms and functional outcomes after controlling for TBI, depression, education, and a premorbid IQ estimate (b = -9.53, 95% BC CI: [-13.97, -5.96]), showing a large effect size (.50). These results highlight the strong influence of veterans' perceptions of functioning on outcomes, and underscore the importance of addressing appraisals of post-trauma cognitive functioning in treatment as a means of improving functional outcomes.

## PTSD Symptoms and Perception of Cognitive Problems: The Roles of Posttraumatic Cognitions and Trauma Coping Self-Efficacy

(Practice, Clinical Practice-Cog/Int, Adult, M, N/A)

**Bartel, Alisa, MA, PhD Student**[1]; Valadez, Racquel, Undergraduate[1]; Jordan, Josh, BA[2]; Samuelson, Kristin, PhD[1]
[1]*University of Colorado at Colorado Springs, Colorado Springs, Colorado, USA*
[2]*Alliant International University, San Francisco, California, USA*

PTSD is associated with mild neurocognitive deficits, yet clients' self-reported cognitive impairment often does not correlate with objective performance. As PTSD is also associated with negative appraisals about the self, traumatic event, and one's ability to cope, this study examined posttraumatic cognitions as a moderator and trauma coping self-efficacy as a mediator of the relationship between PTSD symptoms and self-reported cognitive problems. A sample of 268 trauma-exposed adults completed the PTSD Checklist for DSM-5, the Posttraumatic Cognitions Inventory, the Trauma Coping Self-Efficacy Scale, the Cognitive Self-Report Questionnaire, and the Quality of Life Scale. Negative appraisals were a significant moderator in the relationship between PTSD symptoms and perception of cognitive problems ($B = -.252$, $p = .001$). Appraisals about the self, the world, and self-blame significantly predicted perception of cognitive problems, $F(3,238) = 46.35$, $p < .001$, with negative cognitions related to the self and self-blame, but not the world, adding statistical significance to the prediction, $p < .01$. In participants with high levels of negative posttraumatic cognitions, perception of cognitive problems was high regardless of PTSD symptom level. In a mediator analysis, there was a significant indirect effect of trauma coping self-efficacy ($b = .125$, 95% CI [.088, .172]). Finally, there was evidence of moderated mediation, such that trauma coping self-efficacy was a mediator only when posttraumatic cognitions were low or average. Results indicate that posttraumatic appraisals related to the event, self, and capability to cope play significant roles in perception of cognitive problems. Clinically, in patients where there is a perception of cognitive impairment, cognitive behavioral therapy focused on altering negative self-perceptions and appraisals may be beneficial.

## Activation and Functional Connectivity of Brain Regions Involved in Self-referential Processing may Contribute to PTSD and Cognitive Symptoms

(Bio Med, DV-Bio/Int-Mil/Vets-Neuro, Adult, M, Industrialized)

**Aupperle, Robin, PhD**[1]; Clausen, Ashley, MA, PhD Student[2]
[1]*Laureate Institute for Brain Research, Tulsa, Oklahoma, USA*
[2]*University of Tulsa, Tulsa, Oklahoma, USA*

Posttraumatic stress disorder (PTSD) is often associated with reduced executive functioning performance, which has been theorized to result from abnormal prefrontal cortex (PFC) recruitment. Here, we present data from two different studies examining how PTSD relates to (a) neural responses during inhibition and (b) task-independent PFC functional connectivity. Study 1 included 10 women with PTSD from intimate partner violence and 12 female control subjects who completed the stop signal task during functional magnetic resonance imaging (fMRI). Linear mixed models were used to investigate group differences in activation. Study 2 consisted of 39 male combat veterans who completed the multisource interference task during fMRI. Robust regression analyses were used to assess relationships between brain activation and PTSD severity and neuropsychological performance. In both studies, PTSD related to greater activation of default mode regions (medial prefrontal cortex, posterior cingulate) during easier trials of the study tasks. In Study 2, worse PTSD symptoms and neuropsychological performance related to reduced functional connectivity between medial PFC regions and lateral PFC and/or inferior frontal gyrus. Results indicate that default mode regions thought to be involved in self-referential processing or self-focus may interplay dynamically with executive control regions to impact cognitive function for individuals with PTSD.

## Effects of PTSD Symptoms on Depression and Quality of Life: Altered Social-Cognition and Self-Perception as Delivery Mechanisms

(Clin Res, Cog/Int-Depr-QoL-Mil/Vets, Adult, M, Industrialized)

**Smith, Andrew, PhD**[1]; Holohan, Dana, PhD[2]
[1]*University of Utah/VA Salt Lake City Healthcare System, Salt Lake City, Utah, USA*
[2]*Salem VA Medical Center, University of Virginia School of Medicine, Virginia Tech Carilion School of Medicine, Roanoke, Virginia, USA*

Considering that PTSD symptoms persist in chronic form for a significant number of veterans even after completing our best evidence based treatments (Steenkamp et al., 2015), it is important to understand downstream effects that persistent PTSD symptoms may promote. Whereas symptoms of PTSD and depression overlap and co-exist, little evidence exists to understand how persistent PTSD symptoms may devolve into depression and diminished life quality. The current study sought to examine how PTSD predicts altered social-cognitive appraisals (i.e., perception of self/coping; perception of the dangerousness of others and the world), which may in-turn lead to higher depression and diminished quality of life. With a sample of 123 OEF/OIF veterans seeking treatment in a VA facility, we employed path modeling with fit statistics and bootstrapping re-sampling to estimate an explanatory model. Notably, we also controlled for the effects of difficulty with emotion regulation, as moving beyond emotion regulation as a sole explanation of how PTSD promotes pathology. Results revealed a good fitting model (SRMR = .006; CFI and TLI = 1.00; x2[1] = .662, p = .42), producing large effects predicting depression (R2 = .65, F[5, 117] = 43.17, p < .001) and quality of life (R2 = .49, F[6,116] = 18.80, p <.01). Specific results showed that the pathways by which PTSD predicted quality of life appraisals and depression indirectly, working through social cognitive appraisals (higher negative cognitions about the dangerousness of others; diminished coping self-efficacy). Neither PTSD nor emotion regulation difficulties were direct contributors to depression or quality of life problems. Discussion focuses on how social-cognitive appraisals should and can be targeted in therapies in order to prevent PTSD's influence on heterotypic outcomes that have ecological validity in the lives of veterans (e.g., meaningful life).

## Symposium
## Saturday, November 11
## 10:15 AM to 11:30 AM
## Salon 4/9
## Military Track

## PTSD Does Not Occur in Isolation: The Wide-reaching Impact of PTSD on Romantic Partners

(Clin Res, Aggress-Depr-Sub/Abuse-Mil/Vets, Adult, I, Industrialized)

**Walter, Kristen, PhD**[1]; Fredman, Steffany, PhD[2]
[1]*Naval Health Research Center, San Diego, California, USA*
[2]*Penn State University, University Park, Pennsylvania, USA*

Posttraumatic Stress Disorder (PTSD) not only affects individuals, but also significantly impacts the romantic partners of those with the disorder. Many facets of partners' lives can be negatively influenced by PTSD, including experiencing their own mental health and relationship satisfaction difficulties, changing their behaviors to accommodate PTSD, and experiencing intimate partner violence (IPV) directed toward them. This symposium illustrates the various ways PTSD can affect partners through research incorporating diverse study designs and samples. First, data from the largest study of U.S. military families that explores service member demographic, military, and mental health factors associated with the mental health of military spouses will be featured. Next, data will be presented that examine relationship satisfaction among recently-deployed service members and its association with PTSD. The following presentation investigates a novel area of behavioral changes among partners in response to PTSD and how, in turn, changes in these alterations in behavior are related to treatment outcome among veterans receiving cognitive behavioral conjoint therapy. The symposium will conclude by featuring IPV outcomes for both partners from a randomized controlled trial of behavioral couples therapy for civilian women with a drug use disorder. Collectively, these presentations highlight the influence of PTSD on romantic partners.

## Efficacy of Behavioral Couples Therapy versus Individual Recovery Counseling for Addressing Intimate Partner Violence among Women with Drug Use Disorders

(Clin Res, DV-Fam/Int-Sub/Abuse-Gender, Adult, I, Industrialized)

**Schumm, Jeremiah, PhD**[1]; Timothy, O'Farrell, PhD, ABPP[2]; Murphy, Marie, PhD[3]; Muchowski, Patrice, ScD[4]
[1]*Wright State University, Dayton, Ohio, USA*
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[3]*Harvard Medical School at the VA Boston Healthcare System, Brockton, Massachusetts, USA*
[4]*AdCare Hospital of Worcester, Inc., Worcester, Massachusetts, USA*

Prior studies of behavioral couples therapy for substance use disorder (BCT-SUD) show that participation in BCT-SUD is associated with reductions in intimate partner violence (IPV). Most studies have examined BCT-SUD have included men with SUD. Only one study to date has examined BCT-SUD among women with drug use disorders. This presentation will describe IPV outcomes from a randomized clinical trial comparing BCT-SUD to individual drug counseling (IRC) for women with drug use disorders (N= 61; O'Farrell et al., 2017). Women in both conditions received 26 sessions over 13 weeks. Sixty-six percent reported female-to-male (F-to-M) and 56% reported male-to-female (M-to-F) IPV physical assault at baseline (1 year before treatment). Ninety-eight percent reported F-to-M and 97% reported M-to-F psychological aggression at baseline. Baseline frequency of F-to-M and M-to-F physical assault was significantly lower in BCT-SUD versus IRC. Results from generalized estimating equations showed significant decreases from baseline to 12-month follow-up in F-to-M psychological aggression and physical assault and in M-to-F psychological aggression. M-to-F physical assault significantly declined in IRC but not BCT-SUD. Controlling for baseline outcomes, IRC had significantly lower F-to-M and M-to-F physical assault at 12-month follow-up. Implications will be discussed for addressing IPV among women with drug use disorders.

## Partner Accommodation of Veterans' PTSD Symptoms: Baseline Correlates and Prediction of Couple Therapy for PTSD Treatment Outcomes

(Clin Res, Comm/Int-Mil/Vets, Adult, I, Industrialized)

**Pukay-Martin, Nicole, PhD**[1]; Fredman, Steffany, PhD[2]; Chard, Kathleen, PhD[1]
[1]*Cincinnati VA Medical Center, Cincinnati, Ohio, USA*
[2]*Penn State University, University Park, Pennsylvania, USA*

Partner accommodation of PTSD symptoms refers to partners modifying their behaviors in response to patients' symptoms to decrease patient distress and/or to minimize relationship conflict; it is cross-sectionally associated with greater psychopathology and lower relationship satisfaction for both partners in community couples in which one partner has PTSD (Fredman et al., 2014). Research with veteran couples demonstrates that, although accommodation is chiefly a reaction to patient PTSD, it also prospectively predicts patients' situational avoidance (Campbell et al., 2017), considered the key factor maintaining PTSD. We sought to extend these findings by investigating partner accommodation in 49 veterans with PTSD and their partners engaged in Cognitive-Behavioral Conjoint Therapy for PTSD in a VA PTSD clinic. Pretreatment accommodation, assessed by the Significant Others' Response to Trauma Scale (SORTS; Fredman et al.), was positively correlated with partner-rated PTSD severity and partners' depression severity and was negatively correlated with both patient and partner relationship satisfaction. Accommodation decreased significantly from pre- to posttreatment (d = 0.58). Finally, controlling for pretreatment scores, decreases in accommodation significantly predicted gains in posttreatment patient- and partner-rated PTSD symptoms, patient and partner depressive symptoms, and patient and partner relationship satisfaction. Discussion will focus on accommodation as an important treatment target.

## Relationship Quality of Recently Deployed Military Service Members and their Partners

(Pub Health, Affect/Int-Fam/Int-Mil/Vets, Adult, I, N/A)

**Kritikos, Tessa, MA**[1]; DeVoe, Ellen, PhD, MSW[2]
[1]*Boston University, Boston, Massachusetts, USA*
[2]*Boston University School of Social Work, Boston, Massachusetts, USA*

Married couples form the foundation of military families. However, on average, couples become significantly less satisfied with their marriages across the deployment cycle. Reduced satisfaction places partners at risk for psychological distress and family problems. The present study uses data from an intervention study for recently deployed service members (SMs) and their home-front partners (HFPs) to examine relationship satisfaction. Each partner completed the Dyadic Adjustment Scale as a measure of relationship satisfaction, in addition to measures of psychological distress. We identify correlates of partners' perceptions of functioning and how satisfaction relates to mental health and PTSD. We also examine the effect of an intervention on relationship quality. Results reveal that 64.1% (N=66) of dyads reported being satisfied in their relationship at baseline. However, greater couple distress was related to more PTSD symptoms in service members ($r(103)=-.490$, $p<.001$), spouses ($r(103)=-.227$, $p=.021$), and in spouses' reports of SMs' PTSD ($r(103)=-.194$, $p=.05$). For HFPs, intervention had a positive, statistically significant effect ($\eta 2 = .056$, $p =.025$) on relationship satisfaction. Variations in relative risk for couple distress among SMs and HFPs highlight the need to assess both partners to clarify risk factors and modifiable targets of intervention.

## Risk Factors for Depression among Military Spouses: The Contributions of Demographic, Military, and Service Member Psychological Health

(Pub Health, Depr-Mil/Vets, Adult, I, Industrialized)

**Walter, Kristen, PhD**[1]; Donoho, Carrie, PhD[2]; LeardMann, Cynthia, MPH[1]; O'Malley, Christopher, MPH[1]; Riviere, Lyndon, PhD[2]; John, Curry, PhD[3]; Adler, Amy, PhD[2]
[1]*Naval Health Research Center, San Diego, California, USA*
[2]*Walter Reed Army Institute of Research (WRAIR), Silver Spring, Maryland, USA*
[3]*Duke University Medical Center, Durham, North Carolina, USA*

The mental health of service members has been increasingly examined following more than a decade of military operations in Iraq and Afghanistan; however, less attention has been devoted to investigating the mental health of military spouses and the effect of the service members' mental health on them. The current study used data from the largest study of military families in the United States to explore the demographic, military-specific, and service member mental health correlates of probable Major Depressive Disorder (MDD) among military spouses. Data from 8,930 service member-spouse dyads from all military branches were analyzed; demographic and military-specific factors were assessed using administrative records and survey data. Results showed that 5.3% of spouses met criteria for probable MDD. An increased risk for depression was associated with lower education, lack of full-time employment, prior military service, having four or more children, and being married to an enlisted spouse. Interestingly, deployment was not significantly related to spousal depression. Spouses of service members with posttraumatic stress disorder (PTSD), depression, and/or alcohol problems were more likely to have depression, although in fully-adjusted models PTSD appeared as the primary factor associated with spousal depression, which has implications for programming and treatment provision.

**Symposium**
**Saturday, November 11**
**10:15 AM to 11:30 AM**
**Salon 5/8**
**Biological/Medical Track**

## Recent Advances in Understanding the Role of Sleep in the Development of Trauma Memories and PTSD

(Clin Res, Clin Res-Bio/Int-Prevent-Sleep, Adult, M, Global)

**Kleim, Birgit, PhD**[1]; Mellman, Thomas, MD[2]
[1]*University of Zurich, Zürich, ZH, Switzerland*
[2]*Howard University College of Medicine, Washington, District of Columbia, USA*

Sleep problems are a core feature of PTSD and one of the most difficult symptoms to manage and modulate in treatment. Sleep disturbance is not only a negative outcome from PTSD, however, but may also contribute to its onset and to subsequent comorbidity. The role of sleep in processing trauma and subsequent emotional memories of a traumatic experience is thus a frontier topic in understanding adaptive and pathological adaptation to trauma and for advancing treatment. In this symposium, we will present recent data on (i) sleep's moderating role of the relationship between PTSD and fear reinstatement, (ii) the impact of sleep loss on the brain's reward system as candidate underpinnings of comorbid mood and substance disorders in PTSD, (iii) the effects of sleep after experimental trauma on intrusive emotional memories, and (iv) the preservation of diminished arousal during sleep and adaptive trauma memory processing. Together, the presentations assign a key role to sleep in emotional memory development and later change of these memories, as well as in the development of PTSD. These results have implications for understanding pathways to PTSD, as well as for prevention and intervention science. Dr Mellman will serve as a discussant integrating the findings and place them into perspective.

## Sleep Quality Moderates the Relationship between PTSD Symptoms and Reinstatement of Fear

(Bio Med, Affect/Int-Bio Med-Sleep, Adult, M, Industrialized)

**Felmingham, Kim, PhD**[1]; Zuj, Daniel, PhD Candidate[2]; Nicholson, Emma, BSc Hons Psychology[2]; Chia Ming Hsu, Ken, MPsych[2]
[1]*University of Melbourne, Melbourne, Victoria, Australia*
[2]*University of Tasmania, Hobart, Tasmania, Australia*

Fear reinstatement examines the return of fear following re-exposure to aversive stimuli and is considered an experimental analogue of the return of fear. Given the integral role of repeated exposure to trauma-reminders in maintaining a conditioned fear response, fear reinstatement is a particularly pertinent paradigm to examine return of fear in PTSD. 92 participants (30 with PTSD, 30 trauma-exposed controls, and 32 non-trauma exposed controls) completed a standardized fear conditioning and extinction paradigm in which they were re-exposed to electric shocks following extinction. Results revealed slower fear extinction in PTSD, but no group differences in fear conditioning or fear reinstatement and no direct relationship between fear reinstatement and PTSD symptoms. Moderation analyses revealed that higher PTSD symptoms were associated with greater fear reinstatement to the CS+ in individuals with poorer sleep quality. This finding highlights a significant role of sleep quality in fear reinstatement and the return of fear, which is in line with previous research emphasizing a role for sleep in the consolidation of fear memories.

## Sleep and Brain Reward Circuit: Candidate Underpinnings of Comorbid Mood and Substance Use Disorders in PTSD

(Bio Med, Bio/Int-Sleep-Neuro, Adult, M, Industrialized)

**Germain, Anne, PhD**
*University of Pittsburgh, Pittsburgh, Pennsylvania, USA*

**Introduction:** Sleep disturbance is a risk factor of common comorbid conditions in PTSD, such as

mood and addictive disorders, which are associated with altered neural responses to reward stimuli. This study aimed to investigate the impact of sleep loss on neural response to monetary reward. **Methods:** 153 healthy good sleepers (age range: 18-30 years old; mean 23.7±3.2, 55% women) completed a baseline overnight polysomnographic study in the laboratory. The following night, they were randomized to total sleep deprivation (SD, N =33), sleep restriction (SR: 50% of habitual sleep duration, N=46), or normal sleep (NS, N=46). Between 18:00 and 20:00, before and after randomization, participants completed a monetary reward task while in the 3T scanner. BOLD signals in regions of interest (ROIs) were compared across the three sleep condition for reward anticipation and outcome, before and after randomization. ROI analyses were conducted using SPM8 and SPSS. **Results:** Pre-to post-randomization SR and SD significantly reduced BOLD activation in the right amygdala compared to NS during reward anticipation. The SD group also showed attenuated activation on the OFC during reward anticipation pre- to post-randomization compared to the NS and SR groups. The SR showed significantly greater activation of the caudate pre- to post-randomization compared to the NS and SD group, whereas SD attenuated caudate activation during reward outcome. **Conclusion:** Sleep loss blunts amygdala responses to reward signaling cues relative to NS, while SR enhances activation of the caudate during reward outcome compared to NS and SD. The differential effects of acute total and partial sleep loss on neural responses to the receipt of extrinsic rewards may reflect opposite end of a common mechanism that contribute to the relationship between sleep disturbance and depression at one end of the spectrum, and impulsivity, risky behaviors, and substance misuse at the other.

## Effects of Sleep after Experimental Trauma on Intrusive Emotional Memories

(Clin Res, Cog/Int-Sleep, Adult, M, Industrialized)

**Kleim, Birgit, PhD**[1]; Wilhelm, Ines, PhD[1]; Seifritz, Erich, MD[1]; Rasch, Björn, PhD[2]
[1]*University of Zurich, Zürich, Switzerland*
[2]*U C Davis School of Medicine, Fribourg, Switzerland*

Sleep's role in the context of experiencing trauma has been a topic of debate that is of central importance to understand the development of intrusive emotional memories post- trauma. Here we present results from two studies on sleep's effect in the immediate aftermath of experiencing an analog trauma in the laboratory on reducing intrusive emotional memory formation. Healthy participants (Study 1: N= 65, Study 2: N= 30) were exposed to an experimental laboratory trauma. They viewed a neutral and a trauma film in the laboratory and were randomly allocated to either a group that slept following film viewing or a group that remained awake. Sleep was recorded with electroencephalogram in a subgroup of participants in the sleep group. All participants recorded intrusive memories in the week following the film. Sleep groups experienced fewer and less distressing intrusive trauma memories compared to the wake group. These effects were particularly evident toward the end of the week. Duration spent in stage N2 as opposed to light N1 sleep, a higher number of fast parietal sleep spindles and a lower rapid eye movement sleep density predicted intrusion frequency. Taken together, our results have clinical implications and set the ground for early-intervention sleep studies following trauma and prevention of chronic posttrauma disorders.

## Sleep and Processing Trauma Memories

(Bio Med, Clin Res-Sleep, Adult, M, Industrialized)

**Kobayashi, Ihori, PhD**; Mellman, Thomas, MD
*Howard University College of Medicine, Washington, District of Columbia, USA*

Sleep has been implicated in learning that is key to adaptive processing of trauma memories. Experimental studies that have demonstrated sleep's involvement in trauma memory processing in humans have used analogues of trauma for stimuli. This study evaluated relationships between sleep and adaptive emotional processing of trauma memories following written narrative exposure (WNE) to traumatic events experienced by participants with clinically significant PTSD symptoms. 21 urban-residing non-treatment-seeking adults with full or subthreshold symptoms of PTSD completed four sessions of 30-minutes WNE with the first session either in the evening or the morning. There was a significant reduction of PTSD symptom severity after the four WNE sessions, but there was no interaction between group assignment based on the initial session's proximity to sleep and initial or total reduction of PTSD symptom severity. Polysomnography following evening WNE revealed increased duration of total sleep and N2 minutes and percent, reduced N3 percent, and increased eye movement density during rapid-eye-movement

(REM) sleep compared with baseline recordings. Reduced N3 percent and increased REM density were associated with less improvement of PTSD symptoms. These findings suggest a relationship between preservation of diminished arousal during sleep and adaptive trauma memory processing.

## Symposium
## Saturday, November 11
## 10:15 AM to 11:30 AM
## Salon 6/7
## Treatment Track

## Beyond Training: Strengthening Mental Health Professionals and Systems for Effective, Long-Term Care in Violence-Affected, Low Resource Settings

(Practice, Global, Lifespan, M, Global)

**Bunn, Mary, MA, LCSW, PhD Student**
*University of Chicago, Chicago, Illinois, USA*

In the last two decades, the international community has increasingly acknowledged the mental health consequences of violence on individuals and communities, both in terms of immediate functioning and longer-term recovery. In addition to high levels of trauma-related symptoms and impairment in social and emotional functioning, conflict and violence also target and dismantle the infrastructure necessary for treatment, leaving few local professionals and structures in place that can lead and direct effective care. Global mental health programming, therefore, requires approaches that emphasize gaps in trauma-related care and equal attention to the need to build the capacity of local mental health providers and systems to implement treatment. In this symposium, we will summarize the state of research on the utilization of paraprofessionals for trauma focused mental health service delivery. The presentation will also discuss the development of a training intervention for paraprofessionals and include two case studies from Colombia and the Democratic Republic of Congo that highlight emerging models for training and supervising mental health providers in low resource, conflict-affected settings. Collectively, our results demonstrate that paraprofessionals can develop the skills necessary to deliver specialized trauma-focused interventions and that effective programming needs to include attention to individual, community and system level outcomes.

## Paraprofessionals as Providers of Mental Health Interventions in Low-Resource Humanitarian Settings: A Systematic Review and Meta-Analysis of the Literature

(Clin Res, Global-Civil/War, Lifespan, M, Global)

**Lambert, Jessica, PhD**[1]; **Bunn, Mary, MA, LCSW, PhD Student**[2]
[1]*California State University, Turlock, California, USA*
[2]*University of Chicago, Chicago, Illinois, USA*

A primary barrier to addressing the mental health treatment gap in low- and middle-income countries (LIMCs) affected by humanitarian crises is the lack of mental health specialists and limited options for formal training of new providers. Task-sharing, i.e. the training of paraprofessionals to provide psychological interventions, has been recommended as a strategy for scaling up mental health services (Eaton et al., 2011; Kakuma et al., 2011). Outcome evaluation of interventions implemented by paraprofessionals is essential to ensure that task-sharing is indeed a viable approach for closing the treatment gap. In this presentation, we will discuss results of a systematic review and meta-analysis of randomized controlled trials (N = 22) and uncontrolled studies (N = 8) with paraprofessionals as providers in for trauma-affected populations in 15 different LIMCs. Interventions included both trauma-focused, manualized treatments and less structured psychosocial interventions with adults and children who presented with posttraumatic stress symptoms and other mental health concerns. Overall, results suggest non-specialists can effectively administer a variety of treatments for individuals experiencing trauma-related distress. Summary effect sizes and potential moderators of treatment outcomes will be presented, along with study limitations. Additionally, recommendations for outcome evaluation based on the literature will be discussed.

## Scaling Up Mental Health Services in the Iraqi Healthcare System

(Practice, Global, Adult, M, Global)

**Bunn, Mary, MA, LCSW, PhD Student**
*University of Chicago, Chicago, Illinois, USA*

While mental health and psychosocial programming are recognized as critical components of relief and development efforts in post-conflict settings, programming often does not take into consideration longer-term integration into health systems, or development of appropriate cadres of workers. In humanitarian and post-conflict contexts, supervision systems vary, as does length of training and the extent to which mental health programs are sustainable and effective. In this presentation, we describe the development and dissemination of a comprehensive mental health curriculum for paraprofessional community mental health workers (CMHW) placed within the Iraqi primary healthcare system. The curriculum emphasizes basic knowledge and skills of a helping professional, working and training in the community and advocacy. The training intervention was developed using an iterative, participatory action model and a total of 50 CMHWs were trained over the course of two years, including 240 hours of in-person training and monthly field supervision. Since its original development, the curriculum and methodology has been adapted for use with paraprofessionals in other countries. The model has implications for global mental health services, highlighting the need to develop competencies broadly, adapt materials to local contexts, and collaborate with health systems for greater, long-term integration.

## Strengthening Mental Health Systems in Eastern Democratic Republic of Congo

(Practice, Global, Adult, M, W & C Africa)

**Kahorha, Constantin, MS**
*Heartland Alliance, Chicago, Illinois, USA*

Since 1997, ethnic conflict and civil war has been widespread in the Democratic Republic of Congo (DRC), particularly the eastern regions of North and South Kivu. A study found high rates of exposure to sexual violence and human rights abuses in this region and high rates of depression and posttraumatic stress (Johnson et al., 2010). And yet, access to mental health remains extremely limited. In this presentation, we describe the development of an innovative clinical program model that places newly-graduated psychologists in a one-year clinical internship at a district hospital. Interns provide trauma informed care and also train hospital medical staff on mental health and screening and referral to psychological care. Government and program stakeholders agree that these interventions have substantially shifted medical service providers' attitudes and practices. Upon completion, 50% of interns have obtained full-time jobs as clinicians, thus growing the pool of local mental health professionals. The program has also shaped data collection systems and mental health priorities at the national level. These findings suggest that the benefits of investing in the capacity of mental health providers goes beyond individual service users in low resource settings and can have substantial benefits for improving health systems overall.

## Community Mental Health Service Program for Victims of Torture and Violence in Colombia

(Practice, Rights, Adult, M, Latin Amer & Carib)

**Mendieta, Diego, MA**; **Stapleton, Jaye, MPH**
*Heartland Alliance, Chicago, Illinois, USA*

In Colombia, over five million individuals victimized by the armed conflict suffer from trauma-related symptoms. Access to appropriate treatment is limited due to the shortage of mental health professionals and weak institutional capacity. In this presentation, we describe the development of a community based model of clinical care to address the needs of affected communities. Community mental health workers (CMHWs) identify peers in need of mental health services and deliver individual and group-based services designed to treat the broad effects of trauma and violence. Results from a controlled trial found that the interventions were complementary and resulted in significant decreases in trauma-related symptoms and increased functioning for individual participants. Practice based evidence also suggests that CMHWs are empowered through their role as change agents, fostering the rehabilitation of their communities and that the program resulted in positive outcomes at the community level, such as increased resilience and social inclusion. Lessons learned from this clinical program have important implications including the importance of evaluating changes at the individual, community and provider level when

assessing the multi-faceted benefits of mental health programming in conflict affected settings.

## Symposium
## Saturday, November 11
## 10:15 AM to 11:30 AM
## Monroe Room
## Child Trauma Track

## Child Disaster Mental Health Research: What We Know and Where We Need to Go

(Pub Health, Health-Nat/Dis-Res Meth, Child/Adol, I, Global)

**Felix, Erika, PhD**
*University of California, Santa Barbara, Santa Barbara, California, USA*

Following four decades of research on child post-disaster mental health, we know that disaster exposure can increase risk for posttraumatic stress disorder (PTSD), but much remains to be known about risk for other child mental health problems. As a field, we need to understand what we collectively know based on the extant empirical knowledge, and define the research directions we now need to pursue in order to best inform disaster response and recovery efforts over the immediate and long-term aftermath. We present the results of a meta-analysis of non-PTSD mental health outcomes in children following disaster exposure to summarize our current state of knowledge. We then identify methodological issues that have hindered our efforts to systematically summarize the state of the research, ideas for how to address them, and promising new directions of study identified in the field. Ethical and practical considerations in the process of conducting disaster research are discussed as a means to move the field forward in engaging disaster-affected communities. Finally, the essential questions that our field still needs to address are identified as a starting point for audience discussion and engagement.

## The Impact of Natural Disasters on Internalizing and Externalizing Symptoms in Youth: A Systematic Review and Meta-Analysis

(Assess Dx, Assess Dx-Nat/Dis, Child/Adol, I, N/A)

**Rubens, Sonia, PhD**[1]; Felix, Erika, PhD[2]; Hambrick, Erin, PhD[3]
[1]*Santa Clara University, Santa Clara, California, USA*
[2]*University of California, Santa Barbara, Santa Barbara, California, USA*
[3]*University of Missouri - Kansas City, Kansas City, Missouri, USA*

Natural disasters pose significant risk for mental health problems in youth. While most research has focused on posttraumatic stress disorder (PTSD) as the primary outcome in the aftermath of disasters, a number of studies have also examined other mental health outcomes in the wake of disaster exposure. This study includes a systematic review and meta-analysis of the literature linking disaster exposure and non-PTSD mental health outcomes in children and adolescents. Based on 56 studies with 63 unique effect sizes, using a random effects model, the overall average effect size of disasters on internalizing symptoms was r = 0.188. Based on 24 studies with 27 unique effect sizes, the overall average effect size of disasters on externalizing symptoms in the random effects model was r = .10. Heterogeneity of studies, publication bias, and moderator analyses examining age, time since the disaster, location, and reporter were also evaluated and will be discussed. Findings suggest the importance of assessing for diverse mental health concerns following disaster exposure, and also point to gaps in the literature on symptoms assessed in youth after exposure to disasters.

## Methodological Issues in the Current State of Child Disaster Mental Health Research

(Res Meth, Nat/Dis, Child/Adol, I, Global)

**Felix, Erika, PhD**[1]; Rubens, Sonia, PhD[2]; Hambrick, Erin, PhD[3]
[1]*University of California, Santa Barbara, Santa Barbara, California, USA*
[2]*Santa Clara University, Santa Clara, California, USA*
[3]*University of Missouri - Kansas City, Kansas City, Missouri, USA*

Meta-analysis and systematic reviews helps us summarize our state of knowledge as a field and discern future empirical directions to round out our evidence base. Although 463 records were initially identified for the meta-analysis using our search criteria, 399 were excluded upon further review. This presentation summarizes the data on the reasons why these articles were excluded, and the implications moving forward, in order to include as much of the available research as possible in future meta-analysis efforts. For example, 10.3% of the excluded studies met all other criteria, but did not provide the needed statistical information to be included; an additional 10.3% measured PTSD only; 8.5% did not separate children from adults in their analysis; and 6.3% did not measure disaster exposure. In addition, this review identified several studies that were bringing the field of child disaster mental health research into important new directions, beyond the predominant focus on the exposure to PTSD relationship. For example, 10.3% of the studies explored understudied child and adolescent problems (e.g., substance use or developmental disorders) or other aspects of psychosocial adjustment (e.g., self-concept, prosocial behavior, well-being). Practical strategies for addressing areas of concern and building upon promising new directions will be discussed.

## Conducting High-Quality Community-Based Disaster Mental Health Research with Children: Ethical and Practical Considerations

(Res Meth, Dev/Int-Fam/Int-Nat/Dis, Child/Adol, I, Industrialized)

**Hambrick, Erin, PhD**[1]; Vernberg, Eric, PhD, ABPP[2]
[1]*University of Missouri - Kansas City, Kansas City, Missouri, USA*
[2]*University of Kansas, Lawrence, Kansas, USA*

Disaster mental health (DMH) research with children poses ethical and practical challenges. Yet, benefits of child DMH research may outweigh risks of engaging this potentially vulnerable population in research. Experts have opined that much child DMH research is biased at best and flawed at worst. Given the pressing need for high-quality research in this area and the many challenges inherent in such research, we discuss how to improve child DMH research while remaining sensitive to ethical and practical challenges. To do so, we describe a study conducted with 8 to 12-year-old survivors of an E5F tornado. The aim was to examine how aspects of children's recollections of the tornado were associated with mental health problems a year post-tornado. Ethical challenges we encountered included determining which participants would be at a low risk of participation-related harm. Practical challenges included forging genuine collaborations with a disaster-affected community that was over three hours from our university. We describe our small successes, such as finding ways to include members of the community in recruitment and data collection. We also describe how our attention to ethical considerations created research design challenges. Finally, we propose strategies for conducting rigorous community-based child DHM research.

## Understanding Disasters' Impact on Youth: Where Have We Been and Where Do We Go from Here?

(Pub Health, Dev/Int-Nat/Dis-Prevent-Terror, Child/Adol, I, Industrialized)

**La Greca, Annette, PhD**; Danzi, BreAnne, MS
*University of Miami, Coral Gables, Florida, USA*

Remarkable strides have been made in understanding disasters' impact on youth. Yet, there is an urgent need for this research to continue to evolve and be responsive to recent developments. This presentation highlights key aspects of child disaster research, identifying important directions for the field. First, we discuss the need to clarify the conceptualization of PTSD in youth (e.g., DSM-5 and ICD-11 identify different youth) and broaden the range of outcomes studied (e.g., anxiety, depression, and poor health occur but are overlooked). Second, conceptual

models of risk and resilience need to move beyond main effects (e.g., impact of life stressors on outcomes) and consider the role of moderating variables (e.g., gender, culture, genetics, parental distress) that interact to mitigate or exacerbate disasters' impact. Third, efforts to follow youth over multiple time points are needed, so that predictors of youths' patterns of risk and resilience can be better understood and translated into effective interventions. Fourth, increased focus on disasters resulting from "extreme weather" (due to climate change) and "terrorist attacks" will be especially informative in today's sociopolitical environment. Finally, efforts to evaluate short-term interventions for disaster exposed youth and longer-term interventions for youth with significant PTSD continue to be needed.

## Panel Presentation
## Saturday, November 11
## 10:15 AM to 11:30 AM
## Crystal Room
## Treatment Track

## Identifying and Overcoming Barriers to Training Community Providers in Evidence-Based Treatments for PTSD

(Train/Ed/Dis, Commun-Tech-Mil/Vets, Prof, M, Industrialized)

**Chow, Louis, PhD**[1]; Charney, Meredith, PhD[1]; Federico, Lydia, BA[2]; Jakubovic, Rafaella, BS[2]; Bui, Eric, MD, PhD[1]; Simon, Naomi, MD[1]; **Yusko, David, PsyD**[3]; **Zwiebach, Liza, PhD**[4]; **LoSavio, Stefanie, PhD**[5]; **Riggs, David, PhD**[6]
[1]*Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA*
[2]*Massachusetts General Hospital, Boston, Massachusetts, USA*
[3]*University of Pennsylvania, Philadelphia, Pennsylvania, USA*
[4]*Emory University School of Medicine, Atlanta, Georgia, USA*
[5]*Duke University Medical Center, Durham, North Carolina, USA*
[6]*Center for Deployment Psychology, Bethesda, Maryland, USA*

Research studies provide strong support for the use of cognitive behavioral therapy as a best practice approach for treating PTSD. Despite this, community providers, who are often on the front lines of treating both civilian and military populations with PTSD, are either not trained in or not utilizing the best practices therapies (Cook and Wilstey Stirman, 2015; Richards et al, 2016). In this panel, we will review recent research supporting the importance of disseminating evidence based care for PTSD (e.g. Chard et al., 2012; Eftekhari et al., 2013), with an emphasis on Prolonged Exposure and Cognitive Processing Therapy, into routine care settings. We will discuss the current struggle to find consensus on how best to accomplish dissemination; specifically, which elements are key to training, the role of system-level support, best methods for assessing successful outcomes, and the use of web-based versus in person trainings (Ruzek & Rosen, 2009; Ruzek et al., 2012; Cook and Wilstey Stirman, 2015). This panel will include experts in dissemination of evidence-based treatments for PTSD from four clinical and research centers including the Massachusetts General Hospital, Duke University, University of Pennsylvania, Emory University, and the Center for Deployment Psychology. Discussion will include future dissemination efforts.

## Panel Presentation
## Saturday, November 11
## 10:15 AM to 11:30 AM
## Adams Room
## Treatment Track

## Addressing Suicidality in Treatment among Trauma-Exposed Individuals

(Practice, Clin Res-Clinical Practice-Cog/Int-Mil/Vets, Adult, M, N/A)

**Smith, Noelle, PhD**[1]; **Rozek, David, PhD**[2]; **Mota, Natalie, PhD**[3]
[1]*James A. Haley VA Medical Center, Tampa, Florida, USA*
[2]*University of Utah, Salt Lake City, Utah, USA*
[3]*University of Manitoba, Winnipeg, Manitoba, Canada*

In this panel, we will address common questions that arise across various settings when treating individuals with a history of trauma exposure and concurrent suicidal thoughts and behaviors. Traumatic experiences are thought to serve as a mechanism for elevations in suicide risk (Bryan, Cukrowicz, West, & Morrow, 2010) and PTSD is often associated with

suicidal thoughts and behaviors, as well as death by suicide (Wisco et al., 2015). First, we will review relevant literature on the relation between trauma exposure across the lifespan and suicidal thoughts and behaviors. Next, we will present on relevant interventions and treatments for addressing these frequently co-occurring presentations. Panelists will discuss a) how to effectively engage in in crisis response and safety planning with trauma-exposed individuals who are in an acute crisis; b) when and how to engage individuals in trauma-focused treatments when suicidality is present, including the potential incorporation of cognitive behavioral therapy for suicidality; and c) ways to manage suicidality during treatment for PTSD. Panelists work with various populations (e.g., civilian, military, veterans) in different settings (outpatient, crisis response center, primary care). Finally, we will discuss recommendations for future directions in research and clinical practice related to the treatment of individuals with suicidality and trauma symptoms.

## Workshop Presentation
## Saturday, November 11
## 10:15 AM to 11:30 AM
## Salon 2
## Refugee Track

## International Forced Displacement: From Legal Differences to Clinical Practice

(Practice, Cul Div-Global-Rights-Refugee, Lifespan, I, Global)

**Utržan, Damir, MS, ABD, LMFT** [1]; **Ruhlmann, Lauren, MS, PhD Student**[2]; **Mooren, Trudy, PhD**[3]; Rosner, Rita, PhD(c)[4]
[1]*University of Minnesota-Twin Cities Campus, St. Paul, Minnesota, USA*
[2]*Kansas State University, Manhattan, Kansas, USA*
[3]*Centrum 45, Arq Research, Oegstgeest, Netherlands*
[4]*Catholic University Eichstaett-Ingolstadt, Eichstaett, Germany*

The sociopolitical landscape around the world is drastically changing. Violence forced 24 people from their homes each minute last year, yielding 14.3 million refugees, 1.8 million asylum-seekers, and 20.9 million victims of human trafficking. Countries once viewed as a haven from oppression began enacting restrictive immigration policies that potentially violate international law. Yet legal designations continue to be used interchangeably without regard for implications. The intersection of unique risk factors and increasingly restrictive immigration policies, in North America and Europe alike, increase existing vulnerabilities of psychological trauma by undermining coping resources and resilience. What is human rights advocacy and how can it serve as a foundation for clinical practice? These questions, albeit broad, are critical to delivering culturally sensitive care informed by legal standards. This four-part interactive workshop will provide participants with a brief overview of important legal definitions, in addition to, their impact on clinical practice while embracing an ethos of human rights advocacy. The current global migration crisis, along with prevalence and intersection of human trafficking, is presented in the first part. The second part will address the unique challenges of working with these populations in clinical settings. This includes, but is not limited to: (1) confronting barriers to establishing safety and stability; (2) treating the devastating effects of physical and psychological trauma; (3) directly addressing ambiguous loss and moral injury; and (4) navigating cultural dynamics. This workshop will use multimedia (e.g., videos, sound bites, etc.) and handouts to provide participants with a dynamic experience.

## Multi-Media Presentation
## Saturday, November 11
## 10:15 AM to 11:30 AM
## Salon 1

## PTSD: Beyond Trauma: Screening and Discussion

(Multi-Media, Acute-Chronic-Journalism, N/A, I, Industrialized)

**Reed, Patrick, MA**[1]; **Brunet, Alain, PhD**[2]; **Stolbach, Bradley, PhD**[3]; van der Kolk, Bessel, MD[4]; Lanius, Ruth, MD, PhD[5]
[1]*Reed Media, Toronto, Ontario, Canada*
[2]*McGill University, Douglas Mental Health University Institute, Montreal, Quebec, Canada*
[3]*University of Chicago, Chicago, Illinois, USA*
[4]*Trauma Center at Justice Resource Institute, Brookline, Massachusetts, USA*
[5]*University of Western Ontario, London, Ontario, Canada*

Pop culture's focus on the military's struggle with Posttraumatic Stress Disorder obscures the facts that PTSD affects more civilians than soldiers, and more women than men. So when filmmakers Patrick Reed and Andréa Schmidt set out to make a documentary about PTSD for the Canadian Broadcasting Corporation's science program, "The Nature of Things," they sought to shift away from this overly narrow focus. Drawing on their experience covering war, genocide, and natural disaster they asked: When so many people experience the trauma of sudden loss, near-death, and violence, what makes some people more vulnerable to PTSD than others? They found that while researchers are developing increasingly clear images of the brain circuitry that manifests as PTSD, and the list of therapeutic interventions is growing, what makes people vulnerable is as complex as individuals' (and their families' and communities') histories of trauma. Reed will introduce four 2-5 minute excerpts from "PTSD: Beyond Trauma." Following each, researchers appearing in the film will discuss: what makes some individuals vulnerable to impairment after trauma and others resilient; how research impacts practice and vice versa; what kinds of evidence matter most to intervention developers and patients; and the challenge of communicating complex questions and issues to a broad audience.

# Concurrent Session Ten

## Master Methodologist
## Saturday, November 11
## 1:30 PM to 2:45 PM
## Grand Ballroom
## Methods to My Madness

(Res Meth, Assess Dx-Clin Res-Cul Div-Psych, Adult, M, Industrialized)

**Pole, Nnamdi, PhD**
*Smith College, Northampton, Massachusetts, USA*

Psychological science is devoted to phenomena that can only be indirectly observed using instruments that are limited in both reliability and validity. These shortcomings may not be concerning when one's goals are restricted to testing theory under well controlled circumstances but they become more worrisome when challenged to apply research to complex real-world situations. Professor Pole will share his efforts to grapple with a number of thorny methodological problems over the course of his career. First, he will describe the challenges of verifying psychotherapy integrity without manualization and establishing evidence of causal change in therapy without randomization. Second, he will discuss the value and challenges in simultaneously assessing subjective, behavioral, and psychophysiological concomitants of emotion to better understand trauma-related psychopathology and psychotherapy. Third, he will explore complexities in studying the role of sociodemographic identity (especially race and ethnicity) in traumatized populations. Finally, he will consider the importance of aggregated evidence that may emerge via meta-analysis and other research review methods. This will include lessons learned from his term as an Associate Editor of Psychological Bulletin. Overall, the talk aims to inspire and invite innovation in trauma research methods to better meet the intricacies of clinical reality.

## Symposium
## Saturday, November 11
## 1:30 PM to 2:45 PM
## Salon 1
## Refugee Track

## Culture, Migration, and Trauma: Addressing the Mental Health Needs of Trauma-exposed Disenfranchised Communities in Current Times

(CulDiv, Ethnic-Global-Refugee-Social, Lifespan, M, Global)

**Matlow, Ryan, PhD**[1]; Smith, Stefanie, PhD[2]
[1]*Stanford University School of Medicine, Stanford, California, USA*
[2]*CSPP at Alliant International University, San Francisco, California, USA*

Disenfranchised populations including immigrant, refugee, and historically under-resourced communities are disproportionately exposed to trauma, adversity, and posttraumatic stress. Recent domestic and international events and policies have led to increased perceptions of threat and lack of safety among members of historically vulnerable communities. This sociopolitical climate may add to the complex interplay between individual traumas, societal relationships, and culture by exacerbating posttraumatic stress and risk for additional trauma exposure. In order to provide innovative and culturally sensitive interventions and systems of care, mental health specialists must recognize the importance of specific community needs and the cultural and political context in which services are provided. This symposium's presentations will inform current work supporting communities experiencing discrimination, displacement, deportation, and culture-based violence. A panel of clinicians and researchers specializing in local and international interventions will report on recent analyses of mental health needs, patterns of access, and practice approaches for individuals, families, and communities from disenfranchised and disadvantaged backgrounds. Presenters will discuss the needs and hardships of providing culturally sensitive tailored mental health services under such complex conditions.

## Addressing the Complex Experience of Traumatic Stress for Latino Immigrants in the Current Political Climate

(Practice, Commun-Cul Div-Refugee, Lifespan, M, Industrialized)

**Matlow, Ryan, PhD**
*Stanford University School of Medicine, Stanford, California, USA*

Mexican and Central American Latino immigrants in the US exemplify the impact of complex interactions between trauma exposure, culture, and a country's political climate on traumatic stress. Latino immigrants experience high rates of trauma exposure before, during, and after the migration process, resulting in high rates of trauma-related psychopathology (Jaycox, et al., 2002). Recent national policies resulting in increased real and perceived risk for arrest or deportation further complicates the experience of Latino immigrants, potentially increasing distress and anxiety. These unique circumstances engender a need for clinician sensitivity to the cultural and political factors affecting Latino immigrant communities. This presentation will review practice approaches that address some of these complex factors and social contexts. Such approaches include community-based efforts to share information and resources, to develop safe and supportive spaces, and to provide culturally tailored clinical interventions. To demonstrate, we will focus on adaptations to the Attachment, Regulation, and Competency framework (Blaustein & Kinniburgh, 2010) that were implemented as part of a 12-session multi-family group intervention for Latino adolescents and their caregivers that addressed the complex interplay between immigration stress, trauma exposure, and disrupted attachment relationships.

## The Pipeline to Mental Health Care for Victims of Crime: An Assessment of Access and Acceptance of Treatment for Traumatic Distress in Low-income and Culturally Diverse Adults

(CulDiv, Comm/Vio-Cul Div-Pub Health, Adult, M, Industrialized)

**Ghafoori, Bita, PhD**
*California State University, Long Beach, Long Beach, California, USA*

**Background**: Historically underserved communities experience a complex interplay between violence exposure, SES, and race/culture that influence mental health service utilization. There is need to better understand how these factors interact to influence access and acceptance of treatment. **Methods:** Participants were 941 adults who had experienced crime/violence. **Results:** Sample characteristics included exposure to multiple traumas (M =3.8) and high endorsement of PTSD (PCL-5 M = 47.9) and depression (BSI-18 M = 68). Of those individuals who were screened, 79.4% (n = 748) attended a consultation, 56.5% (n = 532) attended an intake, and 43.9% (n = 414) attended the first session of therapy. Logistic regression analyses were used to examine associations between factors influencing service engagement and attendance outcomes. After controlling for significant covariates, it was found that participants with higher PTSD and depression scores were significantly more likely to attend the intake session (for PTSD: OR = .98, $p < .05$; for depression: OR = 1.05, $p < .01$). **Discussion:** This study highlights the temporal process that unfolds after trauma exposure and that higher levels of PTSD and depression may be important with respect to treatment initiation and acceptance. Implications for engaging diverse/under resourced/disenfranchised communities will be discussed.

## "I'd Rather not Talk About it": The Intricacy of Treating Bedouin Veterans of the IDF Diagnosed with PTSD

(CulDiv, Clinical Practice-Comm/Int-Ethnic-Mil/Vets, Adult, M, Industrialized)

**Shorer, Shai, PhD**[1]; Caspi, Yael, ScD[2]; Goldblatt, Hadass, PhD[3]; Azaiza, Faisal, PhD[3]
[1]*Bar-Ilan University, Ramat Gan, Israel*
[2]*Rambam Medical Health Care Campus, Haifa, Israel*
[3]*Haifa University, Haifa, Israel*

Treatment of trauma survivors from traditional non-Western communities is often further complicated by the ongoing exposure to stressful circumstances in their daily surroundings. Unfamiliarity with trauma related concepts and lack of an open dialogue regarding post-traumatic responses in their community, fuel the commonly existing negative stigma towards mental health, and make the use of psychological treatment socially unacceptable. Bedouin soldiers serve in the Israeli Defense Forces (IDF) since its establishment, mostly as combat soldiers and trackers. Coming from traditional, Muslim backgrounds, they maintain a complex set of conflicted personal and cultural identities, which becomes a major source of ongoing stress once PTSD has developed. We will present findings from a qualitative study, illuminating the complexity of the situation from two perspectives: Interviews conducted with 11 Bedouin IDF veterans who suffered from chronic combat-related PTSD, and 10 therapists who worked with this population. The notion of a 'dual injury', typical of the experience of the Bedouin veterans, will be described through vignettes, highlighting difficulties involved in conducting and utilizing psychotherapy under such cultural circumstances. The findings suggest that participation in 'talk therapy' might inflict further damage for traditional minority veterans. Dilemmas concerning this situation will be presented and debated.

## Mental Health of Syrian Child Refugees: Barriers to Treatment and Effective Interventions

(Global, Chronic-Rights-Refugee-Civil/War, Child/Adol, M, M East & N Africa)

**Soudi, Laila, MSc**
*Stanford University, Stanford, California, USA*

The Syrian Civil War is the single worst humanitarian crisis of our time with more than 14 million having been killed or displaced. Half of those affected are children. Six years into the War, the mental health of Syrian refugees—particularly children and adolescents—is not adequately understood. This talk will focus on the identified barriers and facilitators to seeking mental health treatment on behalf of Syrian child refugees and their families as informed by the presenter's research in Greece and Jordan. Focus groups with 30 refugees were facilitated through a triage-based referral network among NGOs and were led by mental health professionals from the same culture as refugees. While variable, major barriers identified include lack of Arabic-speaking personnel, lack of other basic necessities such as food, lack of trust among refugees themselves for medical professionals, and stigma in seeking mental health treatment. Taking results from focus groups into account, this talk will present an effective approach to deliver mental health services (namely: task-sharing) in which refugees themselves are empowered to deliver mental health services amongst their own community. Task-sharing (Patel, 2012) has been proven cost-effective in alleviating mental health symptoms in other low-income settings where access to specialist care is not readily available.

## Symposium
## Saturday, November 11
## 1:30 PM to 2:45 PM
## Salon 3
## Assessment and Diagnosis Track

## Progress in the ICD-11 Classification of Disorders Specifically Associated with Stress - Shortly before ICD-11's Ratification

(Assess Dx, Global, N/A, M, Global)

**Maercker, Andreas, PhD, MD**
*University of Zurich, Zurich, CH, Switzerland*

**Objectives:** This symposia intends to provide a detailed progress report of the work of the Working Group for "Disorders specifically associated with stress" at World Health Organization (WHO) on the development of the ICD-11 diagnoses of PTSD, Complex PTSD, Prolonged Grief Disorder and Adjustment Disorder. The ratification and international implementation is planned for 2018. **Methods:** The symposium will include four presentations. The first will describe WHO's timeline for the ICD revision together with recent research on ICD-11 Prolonged Grief Disorder and Adjustment Disorder. The second will give an overview of the studies on the ICD-11 PTSD diagnosis and will provide key findings. The third will summarize recent major findings on Complex PTSD and its particular relevance to clinicians. And the fourth will discuss a comprehensive study on PTSD and Complex PTSD in the United Kingdom. **Results:** Strategies and key results will be presented that advance ICD-11's goal of improving the clinical utility through a global, multilingual, and multidisciplinary development and data collection process, emphasizing the participation of low- and middle-income countries, in order to make the ICD-11 a more effective tool in the identification and management of disorders in the field of trauma and severe stress. **Conclusions:** In order for those who need services for trauma- and stress-related problems, the conditions that define their eligibility for services must be based in a classification that is valid and useful around the world.

## General Overview and the State-of-the Art for PGD and Adjustment Disorder Diagnoses in ICD-11

(Assess Dx, Pub Health, N/A, M, Global)

**Maercker, Andreas, PhD, MD**
*University of Zurich, Zurich, CH, Switzerland*

In 2018, the assembly of Word Health Organization (WHO) is expected to approve the 11th revision of the International Classification of Diseases (ICD-11). This will soon be accompanied by implementation of this classification around the world. The disorders specifically associated with stress, including PTSD, Complex PTSD, Prolonged Grief Disorder (PGD), and Adjustment Disorder were subject to a large number of research projects within and independent from WHO's activities. The second part of my presentation focuses on the two conditions of PGD and adjustment disorder and will provide an overview on recent field and clinical research for these diagnoses.

## ICD-11 Complex PTSD: Symptom Profiles across Four Countries

(Assess Dx, Chronic-Complex-Global-Theory, Adult, M, Global)

**Cloitre, Marylene, PhD**[1]; Hyland, Philip, PhD[2]; Shevlin, Mark, PhD[3]; Brewin, Chris, PhD[4]; Roberts, Neil, DPsych(Clin)[5]; Bisson, Jonathan, MD[6]
[1]*National Center for PTSD-Dissemination and Training Division, Menlo Park, California, USA*
[2]*National College of Ireland, Dublin, Ireland*
[3]*University of Ulster, Derry, United Kingdom*
[4]*University College London, London, United Kingdom*
[5]*Cardiff and Vale University Health Board, Cardiff, United Kingdom*
[6]*Cardiff University School of Medicine, Cardiff, Wales, United Kingdom*

The presentation will summarize the evidence to date regarding the construct validity for ICD-11 Complex PTSD, it's factor structure and sample characteristics that distinguish it from PTSD including trauma history, comorbidity and functional impairment. Data from four different countries will be presented evaluating similarities and differences in the proposed Complex PTSD symptom profile. The development of self-report and clinical interview

measures for Complex PTSD will be discussed particularly in terms of the ICD mission of enhancing the clinical utility of trauma and stress related disorders world-wide.

## Measuring PTSD and CPTSD Using the Newly Developed ICD-TQ: Reliability & Validity in Two UK Samples

(Assess Dx, Complex, Adult, M, Industrialized)

**Karatzias, Thanos, PhD, Cpsych**[1]; Shevlin, Mark, PhD[2]; Hyland, Philip, PhD[3]; Fyvie, Claire, DPsych(Clin)[4]; Roberts, Neil, DPsych(Clin)[5]; Bisson, Jonathan, MD[6]; Brewin, Chris, PhD[7]; Jumbe, Sandra, PhD[8]; Downes, Anthony, PhD[9]; Cloitre, Marylene, PhD[10]
[1]*Edinburgh Napier University & Rivers Centre for Traumatic Stress, Edinburgh, Scotland, United Kingdom*
[2]*University of Ulster, Derry, United Kingdom*
[3]*National College of Ireland, Dublin, Ireland*
[4]*NHS Fife, Edinburgh, Scotland, United Kingdom*
[5]*Cardiff and Vale University Health Board, Cardiff, United Kingdom*
[6]*Cardiff University School of Medicine, Cardiff, Wales, United Kingdom*
[7]*University College London, London, United Kingdom*
[8]*Health and Care Research Wales Workforce, Cardiff, Wales, United Kingdom*
[9]*Betsi Cadwaldr Health Board, Flintshire, Wales, United Kingdom*
[10]*National Center for PTSD-Dissemination and Training Division, Menlo Park, California, USA*

**Objective:** International Classification of Diseases version 11 (ICD-11) proposals include a narrow model of Posttraumatic Stress Disorder (PTSD) comprised of six symptoms reflecting three factors: (1) Re-experiencing in the here and now, (2) avoidance, and (3) sense of current threat. It is proposed that a sibling diagnosis, Complex PTSD (CPTSD), will also be included and will comprise PTSD symptoms plus 'Disturbances in Self-Organization' (DSO) symptoms. DSO reflects three factors: Affective Dysregulation, Negative Self-Concept, and Disturbances in Relationships. This paper reports on the validity and reliability of ICD-11 Trauma Questionnaire (ICD-TQ), a self-report measure of PTSD and CPTSD, from two studies in Scotland and Wales. **Method:** Participants were two trauma exposed samples in Scotland (N = 193) and Wales (N = 171). Participants in the Scottish sample completed measures of traumatic life events, DSM-5 PTSD, emotion dysregulation, self–esteem, and interpersonal difficulties. Participants in the Welsh sample completed measures of life events, DSM-5 PTSD, depression, GAD and panic disorder, post-traumatic cognitions and emotion regulation. **Results:** In both samples, a two-factor second-order model reflecting the distinction between PTSD and CPTSD best represented the data from the ICD-TQ. Confirmatory factor analysis supported the factorial validity of the ICD-TQ with results in line with ICD-11 proposals. The ICD-TQ also demonstrated satisfactory internal reliability, and correlation results indicated that the scale exhibited convergent and discriminant validity. In the Welsh sample, rates of ICD-11 PTSD and CPTSD were significantly lower than DSM-5 PTSD. In the Scottish sample, CPTSD was more strongly associated with more frequent and a greater accumulation of different types of childhood traumatic experiences and poorer functional impairment. In the Welsh sample, PTSD symptoms, but not Disturbances in Self-organisation (DSO) associated with CPTSD, positively predicted levels of Panic Disorder; whereas DSO symptoms, but not PTSD, positively predicted levels of depression, levels of negative cognitions about the self and the world, and negatively predicted levels of distress tolerance. PTSD and DSO were both significant, positive predictors of GAD symptoms, but it was PTSD that was a stronger predictor than DSO. **Conclusion:** Results provide support for the psychometric properties of the ICD-TQ. Findings also suggest that ICD-11 diagnoses fewer trauma-exposed individuals than DSM-5. Future theoretical and empirical work will be required to generate a final version of the ICD-TQ that will match the diagnostic structure of PTSD and CPTSD when ICD 11 is published.

## Conceptualization of PTSD in Children and Adolescents: What is the Current State of Evidence?

(Assess Dx, Dev/Int, Child/Adol, M, Industrialized)

**La Greca, Annette, PhD**; Danzi, BreAnne, MS
*University of Miami, Coral Gables, Florida, USA*

Major revisions have been made to models of posttraumatic stress disorder (PTSD). Yet, it is not known how well various models fit children's trauma responses, even though children are a vulnerable population after trauma exposure. This presentation reviews what is known about PTSD symptoms in

youth to inform the ICD-11 conceptualization in a developmentally appropriate manner. Across studies, findings reveal that PTSD prevalence in children and adolescents is significantly affected by the model used. For preschoolers (<6 years), DSM-5 includes a developmental subtype that requires symptoms of re-experiencing (1), avoidance or cognition/mood (1), and arousal (2). This model identifies 3-8 times more children than DSM-IV; at present, studies have not examined ICD-11 criteria among preschoolers. For children (7 – 11 years) and adolescents, there is poor overlap between the DSM and ICD-11 models of PTSD; here, the inclusion of intrusive memories in ICD-11 might make the definitions more compatible. In general, the ICD-11 criteria include many observable symptoms (e.g., startle response, hypervigilance, nightmares, avoidance of situations) that children and caregivers may be able to identify and report. However, further research on the ICD-11 conceptualization of PTSD for children and adolescents is needed to advance developmentally-informed diagnostic guidelines.

## Symposium
## Saturday, November 11
## 1:30 PM to 2:45 PM
## Salon 4/9
## Military Track

## Understanding Veteran Attrition across the Continuum of PTSD Care

(Clin Res, Clinical Practice-Mil/Vets, Adult, M, Industrialized)

**Hundt, Natalie, PhD**[1]; Norman, Sonya, PhD[2]
[1]*Michael E. DeBakey VA Medical Center, Houston, Texas, USA*
[2]*National Center for PTSD, San Diego, California, USA*

As obtaining evidence-based PTSD therapy is a multi-step process, it is important to examine attrition from care at every step of the process from initial recognition and referral, to assessment, to initiation and completion of therapy. Although patients with PTSD do not drop out of evidence-based treatments more frequently than patients with other disorders (Hembree, 2003; Imel, 2013), attrition from PTSD care is a significant public health problem, particularly among Veterans. Predictors of initiation and completion of Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT) among Veterans include age, service era, referral source, history of psychiatric hospitalization, and service connection status (eg, Kehle-Forbes et al., 2016; Keller & Tuerk, 2016; Mott et al., 2014). This symposium extends prior findings by: a) examining predictors of attrition from the intake/assessment process in a VA PTSD Clinic, b) qualitatively examining Veterans' self-reported reasons for not initiating PE or CPT, and c) examining predictors of drop out from special populations, including Veterans with comorbid substance use disorders and Veterans receiving PTSD therapy via telehealth or in-home therapy.

## Veteran Engagement in the Intake Assessment Process for Post-Traumatic Stress Disorder

(Clin Res, Clinical Practice-Res Meth, Adult, M, Industrialized)

**Lamkin, Joanna, PhD**[1]; Stanley, Melinda, PhD[2]; **Hundt, Natalie, PhD**[2]; Thompson, Karin, PhD[2]
[1]*Michael E. DeBakey VA Medical Center; Baylor College of Medicine, Houston, Texas, USA*
[2]*Michael E. DeBakey VA Medical Center, Houston, Texas, USA*

Research addressing psychotherapy treatment engagement for PTSD typically focuses on retention after therapy has already begun (Schottenbauer et al., 2008). However, the phase of treatment prior to beginning psychotherapy, where patients are setting goals and making decisions about treatment, sees significant dropout. Moreover, interpersonal factors (e.g., social support, personality traits) are infrequently included as predictors of PTSD treatment engagement. Including interpersonal factors may add predictive power to already known predictors of disengagement, given the comorbidity between PTSD and personality disorders (Dunn et al., 2004). The goal of the present study is to assess interpersonal factors as predictors of completing the intake assessment process among a sample of 80 Veterans (data collection ongoing) who received a consult for PTSD treatment. In the last three months, 40% of patients scheduled for an intake session did not attend, and 42% scheduled for an orientation session did not attend. Low emotional stability, conscientiousness, agreeableness, social support, and emotion regulation are hypothesized to predict low engagement, which will be measured as attendance at intake and/or orientation in logistic regression models. Findings will be discussed with regard to

interventions that could address these aspects of treatment engagement.

## "Opting out": A Qualitative Study of Veteran PE and CPT 'Refusers'

(Practice, Clin Res-Mil/Vets, Adult, M, Industrialized)

**Hundt, Natalie, PhD**[1]; Ecker, Anthony, PhD[2]; Helm, Ashley, MA[1]; Stevens, Justin, BA[3]; Stanley, Melinda, PhD[1]
[1]*Michael E. DeBakey VA Medical Center, Houston, Texas, USA*
[2]*Michael E. DeBakey VA Medical Center; Baylor College of Medicine, Houston, Texas, USA*
[3]*Sam Houston State University, Huntsville, Texas, USA*

Between 6-50% of Veterans with PTSD receive evidence-based treatments, Prolonged Exposure (PE) or Cognitive Processing Therapy (CPT; Hundt et al., 2017; Mott et al, 2014; Shiner et al., 2013). Barriers to Veterans' PTSD treatment in general include stigma, logistical barriers, lack of knowledge about PTSD, and beliefs that discourage treatment seeking (e.g., Sayer et al., 2009; Stecker et al., 2013). However, little research has examined Veterans' motives for refusing PE or CPT specifically. We recruited a diverse group of Veterans (n = 24) who were diagnosed with PTSD, admitted to an outpatient VA PTSD clinic, and offered PE or CPT, but did not begin either treatment within one year post-diagnosis. Qualitative interviews assessed Veterans' attitudes, beliefs, experiences in seeking PTSD care, initial impressions of PE and CPT, and reasons for lack of engagement. Although data analysis is ongoing, preliminary themes suggest that barriers fell primarily into these categories: 1) concerns about PE or CPT, 2) lack of understanding that evidence-based treatments exist, 3) logistical barriers, 4) stigma, and 5) concerns about the VA or VA providers. Themes suggest a variety of ways the system of care may be transformed to more fully engage reluctant Veterans.

## Predictors of Veteran Retention in Sequential and Integrated Therapy for Co-Occurring PTSD and Substance Use Disorders

(Clin Res, Sub/Abuse-Mil/Vets, Adult, M, Industrialized)

**Kehle-Forbes, Shannon, PhD**[1]; Polusny, Melissa, PhD[2]; Oslin, David, MD[3]
[1]*Minneapolis VA Health Care System, Minneapolis, Minnesota, USA*
[2]*Minneapolis VAHCS, Center for Chronic Disease Outcome Research, University of Minnesota Medical School, Minneapolis, Minnesota, USA*
[3]*University of Pennsylvania; Philadelphia VAMC, Philadelphia, Pennsylvania, USA*

Dropout rates from evidence-based psychotherapies addressing comorbid substance use disorder (SUD) and PTSD can be as high as 82% (Miles et al., 2012). A better understanding of why patients drop out of these effective treatments can facilitate the development of interventions to improve retention. We sought to identify pre-treatment predictors of treatment retention in a sample of 183 Veterans with comorbid DSM-IV PTSD and SUD who were randomized to receive either a sequential (4 sessions of motivational enhancement therapy [MET] followed by 12 sessions of prolonged exposure [PE]) or integrated (16 sessions of integrated MET and PE) course of treatment. Across the two conditions, Veterans attended an average of 8.80 (SD = 4.47) sessions and 47.5% of the sample completed 10 or more sessions; retention did not differ by treatment condition. Preliminary findings from a linear regression found that higher scores on the Brief Addiction Monitor Protection (BAM) subscale (factors that support sobriety) were significantly associated with greater session attendance. There was also a significant interaction between the BAM Use subscale and therapy type, such that greater substance use was associated with more sessions attended in the sequential, but not the integrated, treatment. Interactions between therapy type and state anxiety (State Trait Anxiety Inventory – State Subscale), and therapy type and a measure of adverse consequences of drinking (Short Inventory of Problems) approached significance. Findings from a logistic regression using dropout (attending at least 10 sessions was considered completion) as the dependent variable were similar to those of the linear regression, although the interaction between therapy type and state anxiety was significant in this analysis. There was a positive association between state anxiety and treatment completion in the sequential, but not the integrated, condition. Future research directions, including potential targets for interventions to increase retention, will be discussed.

## Examining Dropout from Prolonged Exposure Therapy in a Veteran Sample

(Clin Res, Clinical Practice-Mil/Vets, Adult, M, Industrialized)

**Wells, Stephanie,MS**[1]; Grubbs, Kathleen, PhD[2]; Glassman, Lisa, PhD[2]; Sohn, Min Ji, BS[1]; Savage, Ulysses, BA[3]; Chatfield, Miranda, BS[1]; Wickramasinghe, Induni, BA[4]; Golshan, Shahrokh, PhD[5]; Morland, Leslie, PsyD[6]
[1]*Veterans Medical Research Foundation, San Diego, California, USA*
[2]*San Diego VA/University of San Diego, San Diego, California, USA*
[3]*VA Health Care System, La Jolla , California, USA*
[4]*Veterans Medical Research Foundation, La Jolla, California, USA*
[5]*University of California, San Diego, La Jolla, California, USA*
[6]*National Center for PTSD, San Diego, California, USA*

Prolonged Exposure therapy (PE) is an effective treatment for posttraumatic stress disorder (PTSD); however, veterans dropout from PE at high rates. The current study utilized quantitative and qualitative data from an ongoing variable length study comparing PE delivered via three different delivery modalities. Data from 157 veterans were examined for factors associated with dropout. Forty-eight percent of veterans in the study (n = 75) dropped out of PE. The most common times for dropout were between randomization and session 1 (17%) and after the first imaginal exposure (17%). Treatment completers and dropouts did not significantly differ on baseline demographic or clinical variables (e.g., age, PTSD or depression symptoms, perceived stigma or barriers to care, credibility of PE, or willingness to use PE). Sex was significantly associated with dropout; 52% of males dropped out of therapy compared to 35% of females ($\chi^2 = 3.75$, df = 1, p = .04). Veterans' reasons for dropping out of therapy included relocation, scheduling difficulties, dissatisfaction with PE, symptom increases during PE, health problems, competing demands, and lack of privacy. Future analyses will examine differences in dropout rates between delivery modalities and will examine process variables as predictors of dropout; clinical implications will be discussed.

# Symposium
# Saturday, November 11
# 1:30 PM to 2:45 PM
# Salon 5/8
# Biological/Medical Track

## Trauma and Health Disparities: Linking Trauma to Health and Breaking the Link

(Bio Med, Chronic-Ethnic-Health-Gender, Lifespan, M, Global)

**Hobfoll, Stevan, PhD**
*Rush Medical College, Chicago, Illinois, USA*

Traumatic stress has been increasingly linked to both psychological and physical health disparities. The physical health consequences of traumatic stress, especially among low income, inner city minority populations has enormous consequences for quality of life, morbidity, mortality, and financial costs on the society. This symposium presents diverse work on inner-city women of color and other vulnerable populations. Presentations examine the mechanisms by which traumatic stress may be translated to physical-health distress, including medical risk markers (e.g., CRP), medical complications of pregnancy, pain, high blood pressure, metabolic syndrome, and drug abuse. We will examine both long term impacts of child abuse and neglect as well as traumatic events in adulthood, particularly focusing on African American women and women of color. A major question that arises is whether psychological intervention on PTSD and traumatic distress or natural resiliency processes associated with recovery are found to "break" the linkage between traumatic stress and negative health outcomes. Clearly, some health outcomes once present, such as diabetes and heart disease become self-perpetuating, and may not be reversed, but only limited. Other health outcomes, such as pain, pregnancy outcomes, musculo-skeletal pain, obesity, and premorbid cardio and endocrinological changes might be reversed or even presented if the trauma-psychological distress-health chain is broken. Presenters will present prospective and intervention studies on the link between psychological trauma and health outcomes among inner-city women of color and other vulnerable populations.

## From Traumatic Stress to Health Disparities: An Examination of Inner-City Women of Color

(Bio Med, Chronic-Prevent-Sub/Abuse-Gender, Lifespan, M, Industrialized)

**Hobfoll, Stevan, PhD**[1]; Burns, John, PhD[2]; Purim Shem Tov, Yanina, MD[2]; Aranda, Frances, PhD, MPH[2]; Lillis, Teresa, PhD[3]
[1]*Rush Medical College, Chicago, Illinois, USA*
[2]*Rush University Medical Center, Chicago, Illinois, USA*

Traumatic stress has been increasingly linked to both psychological and physical health disparities. The physical health consequences of traumatic stress, especially among low income, inner city minority populations has enormous consequences for quality of life, morbidity, mortality, and financial costs on the society. This symposium presents interdisciplinary work to show the diverse and prospective effects of interpersonal trauma across the lifespan. Presentations examine the mechanisms by which traumatic stress may be translated to physical-health distress, including medical risk and blood markers (e.g., CRP & the endocannabinoid system), health-related complications (e.g., pain, high blood pressure, metabolic syndrome) behavioral risk factors (e.g., drug abuse), and interpersonal vulnerabilities (e.g., family support and conflict). Studies examine the immediate as well as long term impacts of child abuse and neglect as well as traumatic events in adulthood, with a particular focus on the African-American community who are at disproportionate risk for trauma-exposure and negative health outcomes. Our findings investigate basic relations between trauma-exposure and physical health, pediatric populations vulnerable to maltreatment, and pregnant women at risk for medical complications of pregnancy. We present novel psychological interventions which may "break" the linkage between traumatic stress and negative health outcomes for these vulnerable populations. Specific attention is paid to trauma types, health outcomes, gender differences, and developmental timing of the trauma, to provide nuanced perspectives for how the chain between unique, comorbid psychological and physical health presentations can be broken.

## Reducing Posttraumatic Stress in the Obstetric Care Setting: A Pilot Test of an Integrated Psychological-Obstetric Intervention

(Clin Res, Bio Med-CSA-Illness, Adult, M, Industrialized)

**Stevens, Natalie, PhD**
*Rush University Medical Center, Chicago, Illinois, USA*

Posttraumatic stress (PTS) during pregnancy is a powerful risk factor for adverse maternal-infant outcomes, especially among low-income minority women. Interventions are needed to enhance women's coping and minimize the trauma-re-evoking aspects of genitally-invasive obstetrical care that can exacerbate PTS. The aims of this pilot study were to 1) examine the relationship of trauma to obstetric care experiences of pregnant trauma survivors and 2) pilot test an integrated psychological-obstetrical intervention delivering Cognitive-Behavioral Therapy (CBT) and trauma-sensitive obstetric care to women with PTS. 45 pregnant trauma survivors (53% African-American, 42% Hispanic/Latina) participated. More than half (60%) reported childhood physical or sexual abuse and 46% reported multiple lifetime interpersonal traumas. More than half (58%) experienced pregnancy complications and nearly half (46%) required non-routine, genitally-invasive obstetrical intervention. PTS symptoms were associated with impaired sense of efficacy for communicating needs to obstetric providers at baseline. 21 women received the integrated intervention and 20% evidenced reliable improvement in PTS. Data show that pregnant trauma survivors may be exposed to more frequent invasive obstetrical intervention while simultaneously lacking confidence for managing patient-provider interactions. Results indicate that an integrated intervention approach is a promising way to help pregnant abuse survivors overcome PTS and ultimately, may improve pregnancy outcomes.

## Neglect in the Pediatric Emergency Department: Examining Physical and Emotional Deprivation in a High-Risk Pediatric Population

(Clin Res, Acc/Inj-Anx-Health-Neglect, Child/Adol, M, Industrialized)

**Cohen, Joseph, PhD**[1]; Menon, Suvarna, PhD Candidate[1]; Thomsen, Kari, Candidate[1]; Adams, Zachary, PhD[2]; Danielson, Carla, PhD[2]
[1]*University of Illinois, Champaign, Illinois, USA*
[2]*Medical University of South Carolina, Charleston, South Carolina, USA*

The present study examined neglect within a low-income, urban, pediatric emergency department (PED), a population at disproportionate risk for childhood maltreatment and psychological distress. Our first goal was to compare levels of neglect within a PED to those reported in community, pediatric primary care, and child protection services (CPS) samples. Our second aim was to examine a) whether neglect uniquely related to mental health in the PED and b) what mechanism (i.e., poverty, childhood adversities, interpersonal conflict, interpersonal social support) best explained this relation. Finally, we examined whether any of our findings varied as a function of sex, age, race, injury type, or severity of injury (as measured by the Emergency Severity Index). 100 youth visiting the PED (51% female; ages 8-14; 57% African-American) completed dimensional measures of neglect, internalizing distress, and familial/peer functioning and caregivers completed questionnaires for youth mental health, familial/peer functioning and childhood adversities experienced by his or her child. In sum, youth visiting the PED experienced elevated levels of emotional and physical neglect compared to community and primary care samples, but not to the level of a CPS sample. Furthermore, physical neglect uniquely predicted self and parent-reported internalizing symptoms, but not externalizing symptoms. This relation was best explained by parental interpersonal conflict, as opposed to familial social support, peer social support/conflict, poverty-exposure, or childhood adversities. None of our findings varied as a function of demographics or PED visit characteristics, suggesting that these relations are consistent across pediatric populations within the PED. Overall, these findings highlight the PED as an important context for preventative programming for neglect, and suggest protocols that are family-focused may be especially beneficial. These preventative programs could connect trauma-exposed families to necessary services and help reduce burgeoning emergency medicine healthcare costs.

## The Role of Cortisol and the Endocannabinoid System in PTSD and Health Disparities after Trauma Injury

(Bio Med, Acc/Inj-Acute-Bio Med, Adult, M, Industrialized)

**deRoon-Cassini, Terri, PhD**[1]; Chesney, Samantha, MS, PhD Student[2]; Hillard, Cecilia, PhD[1]
[1]*Medical College of Wisconsin, Milwaukee, Wisconsin, USA*
[2]*Marquette University, Milwaukee, Wisconsin, USA*

**Background:** The Endocannabinoid signaling system (ECSS), which consists of 2-arachidonoylglycerol (2-AG) and anandamide (AEA), acts as a buffer after trauma. There are disparities in quality of life after traumatic injury and it is unclear if this system is recruited similarly across gender and race. **Methods:** 280 trauma patients admitted to a Level I trauma center completed a blood draw (cortisol, 2-AG, and AEA) and the PTSD symptom check list (PCL 5) at hospital (baseline) and 6-months following injury. **Results:** PCL 5 was significantly higher in women at baseline ($t = -3.08$, $p < .01$) and 6 months after injury ($t = -2.25$, $p < .01$), cortisol was significantly lower in women at baseline ($t = 2.3$, $p < .03$) and 6 months ($t = 2.4$, $p < .02$), particularly for African American Women ($t = -1.9$, $p = .05$). Baseline cortisol was significantly related to 6 month 2-AG, women and ethnic minorities were more likely to have 6 month PTSD, and 2-AG was significantly lower for those diagnosed. **Conclusions:** There appears to be a contributory role for the acute glucocorticoid response and longer term ECSS in chronic PTSD for those most at risk. The role for the ECSS in treatment will be discussed.

**Symposium**
**Saturday, November 11**
**1:30 PM to 2:45 PM**
**Salon 6/7**
**Military Track**

## New Directions in Assessing and Treating Intimate Partner Violence among Women and Men Veterans in the Department of Veterans Affairs

(Clin Res, Aggress-Clin Res-DV-Social, Adult, M, Industrialized)

**Creech, Suzannah, PhD**[1]; Orchowski, Lindsay, PhD[2]
[1]*VA VISN 17 Center of Excellence for Research on Returning War Veterans, Waco, Texas, USA*
[2]*Brown University Warren Alpert Medical School, Providence, Rhode Island, USA*

Over the past decade numerous research studies have indicated that high rates of intimate partner violence (IPV) among U.S. military veterans may convey risk for physical and mental health problems, as well as social, occupational and legal difficulties (Kimerling et al., 2016; Marshall, Panuzio & Taft, 2005). Women veterans are at high risk for experiencing IPV compared to their civilian counterparts (Dichter, Cerulli & Bossarte, 2011), and male veterans with mental health disorders, particularly PTSD, evidence high rates of IPV use compared to both civilians and other veterans who do not have mental health disorders (Taft, Watkins, Stafford, Street & Monson, 2011). In response to this issue, in 2012 the Department of Veterans Affairs (VA) convened a Domestic Violence (DV)/IPV task force to develop recommendations for a national program. One year later, the taskforce finalized 14 recommendations to expand screening, prevention and intervention for women and men veterans, as well as to introduce a VA employee assistance program (Veterans Health Administration Domestic Violence Task Force, 2013). Perhaps for the first time in a major healthcare system, this program places special emphasis on providing treatment to those who may be using violence or aggression in their relationships, on eliminating the use of stigmatizing language, and on implementing screening for the experience of IPV within primary care. This symposium describes results from several research studies testing and evaluating new approaches to screening, understanding and intervening to address the use of IPV and the consequences of experiencing it among women and men Veterans seeking care at the VA. First, Dr. Iverson will describe findings from a large, longitudinal study of predictors of IPV in post-9/11 veterans. This is important as until recently, most work to understand predictors of IPV among veteran samples has been based on pre-9/11 groups. Next, Dr. Dichter will describe new evidence on the consequences of the experience of recent IPV, using data from a sample of over 8,000 women veterans who screened positive for past-year IPV. Dr. Portnoy extends prior work to develop an evidence-based IPV screener to help identify those who may be using IPV behaviors in their relationships. Finally, Dr. Creech will describe early results from the VA roll-out of an evidence-based group intervention designed to prevent and end the use of IPV in military and veteran samples.

## Predictors of Intimate Partner Violence Perpetration and Victimization Among Post-9/11 Veterans Evaluated for Traumatic Brain Injury.

(Clin Res, Aggress-DV-Mil/Vets, Adult, M, Industrialized)

**Iverson, Katherine, PhD**[1]; Sayer, Nina, PhD[2]; Stolzmann, Kelly, BS, MS[3]; Meterko, Mark, PhD[4]; Pogoda, Terri K, PhD[5]
[1]*National Center for PTSD, Women's Health Sciences Division, VA Boston Healthcare System and Boston University School of Medicine, Jamaica Plain, Massachusetts, USA*
[2]*Minneapolis VA Health Care System, Minneapolis, Minnesota, USA*
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[5]*VA Boston Health Care System/Boston University, Jamaica Plain, Massachusetts, USA*

Traumatic brain injury (TBI) and behavioral health conditions may increase intimate partner violence (IPV) perpetration and victimization risk. The extent to which common deployment-related health conditions increase risk for IPV perpetration and victimization is unknown and could inform the planning of interventions to reduce IPV among Veterans. We investigated the prospective associations between TBI diagnosis status, behavioral health diagnoses and IPV among 962 partnered post-

9/11Veterans (6.4% women) who completed a VHA TBI evaluation and participated in a national survey approximately 3.5 years later. Health and sociodemographic characteristics were extracted from VHA administrative records. The survey assessed past 6-month IPV (CTS-2). IPV perpetration (87%) and victimization (78%) were common. The majority of the entire sample had a TBI (84%) or PTSD (68%) diagnosis. Baseline factors predictive of IPV perpetration were PTSD diagnosis, younger age, married/partnered, minority race, and unemployed/not looking for work (*p*'s < .05); moderate/severe TBI versus no TBI was associated with lower risk of IPV perpetration. IPV victimization was associated with younger age, single/never married, minority race, and unemployed/not looking for work (*p*'s < .05). Findings can inform the tailoring of assessment and interventions following a VHA TBI evaluation to address these outcomes, which may reduce or prevent IPV.

## Mental Health Burden of Recent Intimate Partner Violence Experience

(Clin Res, Anx-Depr-DV-Gender, Adult, M, N/A)

**Dichter, Melissa, PhD, MSW**[1]; Butler, Anneliese, MSS[1]; Bellamy, Scarlett, ScD[2]; Iverson, Katherine, PhD[3]
[1]*Department of Veterans Affairs Medical Center, Philadelphia, Pennsylvania, USA*
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Experience of intimate partner violence (IPV) can lead to mental health symptoms, including anxiety, depression, and unhealthy substance use. Women seen in the Veterans Health Administration (VHA) face high rates of both IPV and mental health morbidity. The objective of this study was to identify the association between recent IPV experience and mental health diagnosis among women VHA patients. Data were drawn from medical records data of 8,888 female VHA patients who had been screened for experience of past-year IPV. Women who screened positive for past-year IPV were more than twice as likely to have a mental health diagnosis compared to those who screened negative for past-year IPV, and had significantly higher odds of each mental health diagnosis category, other than psychoses. Each category of IPV exposure (psychological violence, physical violence, and sexual violence) was significantly associated with having any mental health diagnosis or two or more mental health diagnoses. Associations remained when further adjusting for exposure to military sexual trauma and combat trauma among the veteran sub-sample. Findings highlight the mental health burden associated with experience of past-year IPV for this patient population and emphasize the need to address psychological and sexual IPV, in addition to physical violence.

## Accuracy and Acceptability of a Screening Tool to Detect Intimate Partner Violence Perpetration among Women Veterans: A Pre-Implementation Evaluation

(Assess Dx, Aggress-Clinical Practice-DV-Fam/Int, Adult, M, N/A)

**Portnoy, Galina, PhD**[1]; Haskell, Sally, MD[1]; King, Matthew, PhD[2]; Maskin, Rachel, BA[3]; Gerber, Megan, MD, MPh[4]; Iverson, Katherine, PhD[5]
[1]*VA Connecticut Healthcare System and Yale University, West Haven, Connecticut, USA*
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[3]*National Center for PTSD and VA Boston Healthcare System, Boston, Massachusetts, USA*
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The Veterans Health Administration (VHA) recommends screening for intimate partner violence (IPV) to connect Veterans with appropriate services. Busy clinical settings, such as VHA, require IPV perpetration measures that are accurate yet brief and feasible. The 5-item Extended-Hurt/Insult/Threaten/Scream (E-HITS) has shown accuracy for detecting IPV *victimization* among women Veterans. The present study evaluated the accuracy and acceptability of a modified E-HITS to assess for *perpetration* among women Veterans. To modify the measure, we reversed the E-HITS items to inquire about IPV use and added behaviorally-specific examples. A total of 187 women Veterans completed an online survey that included the modified E-HITS (index test) and the Revised Conflict Tactics Scales (CTS-2; reference standard).

Items also assessed women's perceptions of the acceptability and appropriateness of the tool for use in healthcare settings. Approximately 18% of women reported past-6-month IPV perpetration. The modified E-HITS demonstrated good overall accuracy (AUC=.85, 95% CI [.76, .94]). At a cut-score of 7, the sensitivity and specificity of the tool was .70 and .87. In addition, the majority of women (>75%) perceived the tool to be acceptable and appropriate. Based on these findings, the modified E-HITS holds promise for facilitating detection of IPV use among women Veterans.

## National Implementation of a Trauma-informed Intervention for Intimate Partner Violence in the Department of Veterans Affairs: First Year Outcomes

(Clin Res, Aggress-Clin Res-Fam/Int, Adult, M, Industrialized)

**Creech, Suzannah, PhD**[1]; Benzer, Justin, PhD[2]; Ebalu, Tracie, BA/BS[3]; Murphy, Christopher, PhD[4]; Taft, Casey, PhD[5]
*[1]VA VISN 17 Center of Excellence for Research on Returning War Veterans, Waco, Texas, USA*
*[2]VA Boston Healthcare System, Bedford, Massachusetts, USA*
*[3]National Center for PTSD, Jamaica Plain, Massachusetts, USA*
*[4]University of Maryland Baltimore County, Baltimore, Maryland, USA*
*[5]National Center for PTSD at VA Boston Healthcare System and Boston University, Boston, Massachusetts, USA*

In response to evidence that the experience of trauma and trauma-related consequences such as PTSD may elevate risk for use of intimate partner violence (IPV), the Department of Veterans Affairs (VA) is implementing a comprehensive national program to address IPV. One treatment that has been implemented as part of these efforts is Strength at Home (SAH). SAH is a 12-week cognitive-behavioral and trauma-informed group treatment to end IPV among military and veteran populations. SAH has been associated with reductions in the use of physical and psychological IPV in pilot, efficacy, and effectiveness trials. The present study describes initial findings from implementing SAH at 10 VA medical centers using clinician training and external facilitation implementation strategies. Results from 51 veterans who completed both pre- and post-treatment assessments indicate SAH resulted in a significant decrease in types of IPV used, t (50) = 3.39, p <.0, and a significant reduction in the proportion of veterans who reported using physical IPV from baseline to the post-treatment phase (McNemar Chi Square: p < .01). Results also indicated a significant pre-post-treatment decrease in PTSD symptoms, t (49) = 3.29, p <.01. Overall, veterans reported high satisfaction with the treatment received. In addition, 70% of sites and 34% of the 79 clinicians trained were successful in launching the program in the first year. The mean number of days between receipt of the training and the first group session was 135.86 (SD = 63.16, range 72-252). Combined with the reductions in IPV and PTSD symptoms observed in veterans, evidence suggests that the training program was successful overall. However, average length of time between the in-person training and facilitating the first group was longer than desired and there were 3 sites that did not successfully implement the program within the first year, suggesting a need for improved attention to implementation and institutional support prior to receiving the training.

# Symposium
# Saturday, November 11
# 1:30 PM to 2:45 PM
# Monroe Room
# Child Trauma Track

## Clinical and Biological Outcome Studies in Traumatized Children and Adolescents with PTSD

(Clin Res, Bio Med, Child/Adol, M, Industrialized)

**Lindauer, Ramón, MA, MD, PhD**
*Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands*

In this symposium the treatment effects, and neuropsychological, cognitive and biological outcomes in traumatized children and adolescents will be presented. The first presentation is a meta-analysis about executive function and trauma exposure in children and adolescents. The second presentation will focus on cortisol reactivity before and after trauma treatment of children and adolescents with PTSD. In the third presentation, an RCT about the effects of a trauma-focused group intervention for young refugees in child welfare

institutions will be presented. The last presentation is about dysfunctional posttraumatic cognitions as a mediator of symptom reduction in trauma-focused cognitive behavioral therapy.

## The Association between Trauma Exposure and Executive Functions in Youth: A Multilevel Meta-analysis

(Clin Res, Chronic-Clin Res-Clinical Practice-Cog/Int, Child/Adol, M, Industrialized)

**op den Kelder, Rosanne, PhD Student**[1]; van den Akker, Alithe, PhD[1]; Lindauer, Ramón, MA, MD, PhD[2]; Geurts, Hilde, PhD[1]; Overbeek, Geertjan, PhD[1]
*[1]University of Amsterdam, Amsterdam, Netherlands*
*[2]Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands*

Besides development of posttraumatic stress symptoms, trauma exposure might be related to lower levels of executive functions in youth. We examined the association between trauma exposure and executive functions (specifically working memory, inhibition, and cognitive flexibility) through a multilevel meta-analysis. In addition, we examined whether the strength of this association was influenced by study, measurement, and trauma specific moderators (e.g., trauma onset, duration, and type). To study the main and moderated associations between trauma exposure and executive functions, we conducted a multilevel meta-analysis on 43 studies, with 137 effect sizes published between 1990 and 2016 that we retrieved from PubMed, EMBASE, and PsycINFO. Participants in selected studies were aged 2 to 25. Preliminary results indicated that young people with trauma histories had small to medium impairments in working memory ($d$ = -0.315), inhibition ($d$ = -0.470), and cognitive flexibility ($d$ = -0.430). In addition, preliminary results showed there was significant variance in effect sizes between studies – suggesting the importance of testing moderator effects of type of trauma and timing of trauma. Forthcoming analyses will show whether which of the hypothesized moderators explains variance in effect sizes. Our results indicate that clinical practice should focus on impairments in executive functions in trauma-exposed youth.

## HPA-axis Functioning before and after Trauma-focused Psychotherapy in Youth with Posttraumatic Stress Disorder

(Clin Res, Bio Med-Bio/Int, Child/Adol, M, Global)

**Ensink, Judith, PhD Candidate**[1]; **Zantvoord, Jasper, MD**[1]; op den Kelder, Rosanne, PhD Student[2]; Lindauer, Ramón, MA, MD, PhD[3]
*[1]Academic Medical Center, Amsterdam, Netherlands*
*[2]University of Amsterdam, Amsterdam, Netherlands*
*[3]Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands*

Several studies have shown disrupted hypothalamic pituitary adrenal (HPA) axis functioning in youth with posttraumatic stress disorder as compared with their healthy peers. Prolonged HPA axis disruption has been associated with increased risk of development depression, anxiety disorders and suicide later in life. Despite the crucial role of HPA axis dysfunction in shaping the risk of psychopathology later in life there is a remarkable lack of longitudinal studies investigating the effects of trauma-focused psychotherapies on HPA-axis functioning in youth. Against this background, we asked if HPA-axis disruption could be reversed by successful trauma-focused psychotherapy in youth aged 8-17 with PTSD. We included a total of 60 children with PTSD and 30 aged and sex matched traumatized children without PTSD. The Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA) was conducted to assess DSM-IV PTSD diagnosis. All children with PTSD were treated with either 8 sessions of EMDR or TF-CBT. Salivary cortisol levels were measured before, during and after a script driven imagery procedure. In youth with PTSD cortisol measures were repeated after treatment. In this symposium, we will present the outcomes of the cross-sectional comparison between youth with PTSD and matched trauma-exposed controls. Furthermore, we will present the treatment data for youth with PTSD in which we will focus on the longitudinal differences in HPA-axis functioning between treatment responders and non-responders. Findings will be discussed in a neurodevelopmental framework.

## Evaluation of a Trauma-focused Group Intervention for Young Refugees in Child Welfare Institutions: A Randomized Controlled Trial

(Clin Res, Cog/Int-Comm/Int-Prevent-Refugee, Child/Adol, M, Industrialized)

**Pfeiffer, Elisa, MSc**; Goldbeck, Lutz, PhD
*University Ulm, Department of Child and Adolescent Psychiatry/Psychotherapy, Ulm, Baden-Wuerttemberg, Germany*

Recent research describes a lack of treatment options for young refugees suffering from posttraumatic stress symptoms (PTSS), after having been exposed to various of traumatic events. Preliminary results of a pilot study indicate the effectiveness of the trauma-focused group intervention My Way in the child welfare setting. The aim of this study is to prove the superiority of the intervention, compared to an active control group. We conducted a parallel group RCT in seven German child welfare institutions. Main inclusion criteria were age 13-21 years, not undergoing alternative trauma-focused treatment, no acute suicidality, exposure to one or more traumatic event(s) and at least mild to moderate severity of PTSS (Child and Adolescent Trauma Screen (CATS) symptom score >19). Participants were randomly assigned to 6 intervention sessions (n=50) or to treatment as usual (n=49). The intervention comprises psychoeducation, relaxation, trauma narrative and cognitive restructuring. Outcome measures are assessed at baseline, after 2 months, and after 5 months. Primary outcome are PTSS (CATS) assessed at 2 months. Secondary measures are depressive symptoms (PHQ-9), trauma-related dysfunctional cognitions (CPTCIs), PTSS caregiver-report (CATS-C-D) and the functional level (CGAS). Data will be collected until July 2017. Hence, the results of the completed RCT will be presented.

## Change in Dysfunctional Posttraumatic Cognitions as a Mediator of Symptom Reduction in Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)

(Clin Res, Cog/Int, Child/Adol, M, Industrialized)

Pfeiffer, Elisa, MSc[1]; **Sachser, Cedric, MSc**[1]; de Haan, Anke, PhD Candidate[2]; Tutus, Dunja, MSc[3]; Goldbeck, Lutz, PhD[1]
[1]*University Ulm, Department of Child and Adolescent Psychiatry/Psychotherapy, Ulm, Baden Wuerttemberg, Germany*
[2]*University of Zurich, Zurich, Switzerland*
[3]*University Hospital Ulm, Ulm, Baden-Württemberg, Germany*

**Background:** Trauma-focused cognitive behavioral therapy (TF-CBT) is recommended as a first line treatment for children and adolescents with PTSD in several treatment guidelines. However, little is known about the actual mechanisms of change during treatment. Therefore the objective of the current study was to investigate whether the reduction in trauma-related dysfunctional cognitions represents a mechanism of change for posttraumatic stress symptoms (PTSS) in a randomized controlled trial on the effectiveness of TF-CBT. **Method:** Bootstrap mediation analysis was performed to test the possible indirect effect of dysfunctional cognitions in the completer sample of 123 children and adolescents (7-17 years old) exposed to various trauma types. **Results:** Mediation analyses revealed that the change in dysfunctional cognitions mediates the relationship between group (TF-CBT vs. Waitlist) and PTSS at the end of treatment. This mediation effect was of medium effect size ($\kappa 2 = .15$ (CI 95% = 0.08 – 0.259)). **Discussion:** Change in dysfunctional posttraumatic cognitions attributed to trauma-focused treatment might be an important mediator influencing the treatment outcome of children and adolescents with PTSS. However, more research is needed to investigate the temporal and causal associations between dysfunctional posttraumatic cognitions and PTSS during treatment.

**Panel Presentation**
**Saturday, November 11**
**1:30 PM to 2:45 PM**
**Crystal Room**
**Assessment and Diagnosis Track**

## Moral Injury Conceptualization and Recovery: Definitional Distinctions and Intervention Implementation

(Clin Res, Assess Dx-Clinical Practice-Mil/Vets-Theory, Adult, M, Industrialized)

Evans, Wyatt, PhD[1]; **Currier, Joseph, PhD**[2]; **Farnsworth, Jacob, PhD**[3]; **Frankfurt, Sheila, PhD**[4]; **Gray, Matt, PhD**[5]; **Yeterian, Julie, PhD**[6]; Drescher, Kent, PhD[7]
[1]*University of Texas Health Science Center at San Antonio, Fort Hood, Texas, USA*
[2]*University of South Alabama, Mobile, Alabama, USA*
[3]*Denver VA Medical Center, Denver, Colorado, USA*
[4]*VISN 17 Center of Excellence for Research on Returning War Veterans, Waco, Texas, USA*
[5]*University of Wyoming, Laramie, Wyoming, USA*
[6]*Massachusetts Veterans Epidemiology Research and Information Center, Boston, Massachusetts, USA*
[7]*National Center for PTSD, Menlo Park, California, USA*

This panel will review developments in the theoretical and empirical understanding of moral injury. Our objective is to address gaps in the literature impeding clear conceptualization, assessment, and intervention for moral injury. Recent empirical and review articles have sought to a) differentiate morally injurious events from the sequelae of moral injury, b) describe frameworks for understanding moral injury, and c) develop targeted assessments and approaches to recovery. Accordingly, this panel has three specific aims. First, strengths and limitations of current construct definitions in the moral injury literature will be discussed, focusing on extricating overlapping definitions (Frankfurt & Frazier, 2016). Literature addressing conceptual models of moral injury will be compared and contrasted (Jinkerson, 2016). Also, the utility of a moral injury construct apart from PTSD and challenges this may present to the field will be discussed. Second, authors of existing (Currier et al., 2015) and new measures relevant to moral injury will discuss how assessment may be targeted and improved. Third, panelists will provide data-driven and theoretical recommendations for intervention based on existing (Litz et al., 2015) and emerging treatments (Farnsworth et al., in review). Finally, panelists will provide their perspectives on the most important next steps regarding moral injury.

**Panel Presentation**
**Saturday, November 11**
**1:30 PM to 2:45 PM**
**Adams Room**
**Treatment Track**

## When (Not) Talking Gets Tough: Expert Trauma Therapists Reflect on Difficult Conversations

(Practice, Complex-Surv/Hist-Mil/Vets-Intergen, Adult, M, Industrialized)

Frankfurt, Sheila, PhD[1]; Danieli, Yael, PhD[2]; **Courtois, Christine, PhD**[3]; **Yellow Horse Brave Heart, Maria, PhD**[4]; **Nash, William, MD**[5]; Eichler, Eric, LCSW[6]
[1]*VISN 17 Center of Excellence for Research on Returning War Veterans, Waco, Texas, USA*
[2]*Director of the Group Project for Holocaust Survivors and their Children, New York, New York, USA*
[3]*Christine A. Courtois, PhD, PLLC, Washington, District of Columbia, USA*
[4]*University of New Mexico, Albuquerque, New Mexico, USA*
[5]*Marine Corps, Arlington, Virginia, USA*
[6]*VA San Diego Healthcare System, San Diego, California, USA*

Psychotherapy research shows that the therapist's contribution to the therapeutic relationship is an important predictor of clinical outcomes. Trauma-focused therapy in particular requires the therapist to be fully present and able to contain the powerful and often painful emotions that are generated in this work. However, therapists may respond to their own assumptions about their clients' traumas and its aftermaths in ways that can compromise the therapeutic relationship and work, thereby exacerbating the conspiracy of silence around the traumatic experiences ubiquitous in the lives of their clients. This common and important clinical issue is insufficiently addressed in theoretical, training, and supervisory contexts. This panel brings together leading expert clinician/researchers who have worked

with diverse traumatized populations (Holocaust survivors and their descendants, American Indians, survivors of sexual assault, Service members/Veterans) to describe how each has formulated and addressed personal, historical, and institutional barriers to trauma-focused therapy within the context of their respective practices. Clinical experience and research findings will be brought to bear. Led by an ISTSS founder and former president, the discussion will be followed by open exchange among panelists and audience members to stimulate a unique conversation about these key challenges in trauma psychotherapy that cross all theoretical lines.

## Workshop Presentation
## Saturday, November 11
## 1:30 PM to 2:45 PM
## Salon 2
## Treatment Track

## Improving Treatment for Clients with Trauma Symptoms and Addictive/Impulsive Behavior: Mindfulness and Modification Therapy

(Practice, Aggress-Clin Res-Clinical Practice-Sub/Abuse, Prof, M, N/A)

**Wupperman, Peggilee, PhD**
*John Jay College, CUNY, New York, New York, USA*

Clinicians treating clients with trauma and dysregulated (impulsive/addictive) behaviors are at risk for emotional exhaustion, lowered feelings of accomplishment, and doubts about their effectiveness. Conventional treatments are often stymied because dysregulated behaviors rarely occur alone. Clients with one dysregulated behavior are likely to have another (e.g., binge eating, problem drinking, and compulsive spending) and/or to segue to a "replacement" behavior once the previous has been treated (e.g., from drinking to smoking; from smoking to overeating). To address this co-occurrence, Mindfulness and Modification Therapy was developed as a transdiagnostic treatment that integrates evidence-backed methods from: Motivational Interviewing, Mindfulness-Based Relapse Prevention, Dialectical Behavior Therapy, and Acceptance and Commitment Therapy. In this workshop, participants will learn to improve case conceptualization, address diversity, and improve overall outcome in clients with trauma and dysregulated behaviors. Participants will master strategies for treating: (a) multiple dysregulated behaviors, (b) "replacement" dysregulated behaviors, and (c) constructs that underlie this spectrum of behaviors. Participants will also gain research-backed methods of addressing common clinical issues of low motivation, non-compliance, and frequent drop-out, as well as high relapse rates. Strategies will be demonstrated through descriptions of therapeutic procedures, discussions of case vignettes and clinical trials, and presentations of video clips. Templates for handouts and worksheets will also be provided.

# Concurrent Session Eleven

## Featured Presentations
## Flash Talks
## Saturday, November 11
## 3:00 PM to 4:15 PM
## Grand/State Ballroom

### Dissociation in Victims of Childhood Abuse and/or Neglect: A Meta-Analytic Review

(Assess Dx, CPA-CSA-Neglect, Lifespan, M, Industrialized)

Vonderlin, Ruben, BS[1]; Lyssenko, Lisa, PhD Candidate[1]; Kleindienst, Nikolaus, PhD[1]; Alpers, Georg, Professor[2]; Bohus, Martin, MD[1]; **Schmahl, Christian, MD**[3]
[1]*Central Institute of Mental Health, Mannheim, Baden-Wuerttemberg, Germany*
[2]*Mannheim University, Mannheim, Baden-Wuerttemberg, Germany*
[3]*Central Institute of Mental Health, Dept. of Psychosomatic Medicine, Mannheim, Germany, Mannheim, Baden-Württemberg, Germany*

**Objectives:** Childhood abuse and neglect are assumed to play a major role in the etiology of dissociative symptoms e.g. in PTSD. However, empirical studies show heterogeneous results depending on different types of childhood abuse/neglect and other trauma characteristics. This meta-analysis aims to clarify conflicting results in prior research and to systematically assess the impact of trauma type and other trauma characteristics on dissociation. **Methods:** A systematic literature search was conducted on studies using the Dissociative Experience Scale (DES). 65 studies, containing 7,352 abused/neglected individuals were included. Using a standardized coding sheet, DES scores for abused and non-abused populations, as well as information about type of abuse/neglect, age of onset, duration of abuse, perpetrator relation and psychopathology were extracted. Random-effects models were used for data synthesis and moderators were investigated using meta-regression. **Results:** Results revealed higher dissociation in victims of childhood abuse/neglect, compared to non-abused/neglected subgroups (MAbuse = 23.5, MNeglect = 18.8, MControl = 13.8). Sexual and physical abuse were related to higher dissociation scores than emotional abuse and neglect. Furthermore, an earlier age of onset, a longer duration of abuse, multiple abuse types, parental perpetration and diagnoses of dissociative or posttraumatic stress disorders significantly predicted higher dissociation scores. **Conclusions:** This meta-analysis underlines the importance of childhood abuse and neglect in the etiology of dissociation. The identified moderators might inform risk assessment and early intervention in the development of dissociative symptoms.

### Islamic Trauma Healing: Pilot Data and Feasibility

(Clin Res, Commun-Cul Div-Ethnic-Refugee, Adult, M, Industrialized)

**Feeny, Norah, PhD**[1]; Zoellner, Lori, PhD[2]; Graham, Belinda, DPsych(Clin)[2]; Marks, Elizabeth, MS[2]; Bentley, Jacob, PhD[3]; Lang, Duniya, PhD[4]
[1]*Case Western Reserve University, Cleveland, Ohio, USA*
[2]*University of Washington, Seattle, Washington, USA*
[3]*Seattle Pacific University, Seattle, Washington, USA*
[4]*Somali Reconciliation Institute, Seatac, Washington, USA*

Effective interventions for trauma-related psychopathology exist but there are considerable barriers for refugee groups. Somali refugees often arrive to the U.S. following significant trauma, but without access to culturally/religiously congruent interventions. In two studies, we examine feasibility and preliminary utility of a six-session group intervention for trauma healing within the Somali community. Islamic Trauma Healing (ITH) is a lay led, group intervention targeting mental wounds of trauma within mosques. ITH incorporates cognitive and exposure principles in an Islamic-based intervention, using Prophet stories and talking to Allah. In Study 1, following a community event describing ITH, 26 Somali participants completed a trauma screening and interest measure. In Study 2, pre- to post-group pilot data was collected for men's (n = 6) and women's (n = 7) groups, examining PTSD, related symptoms, and program satisfaction. Qualitative analysis of group and leader feedback was conducted. Results suggest a strong perceived need and match with the Islamic faith for the intervention, with large effects obtained for pre- to post-group across measures (g = 0.76 to 3.22). Qualitative analysis identified themes of community,

faith integration, healing, and growth. ITH was well-received and offers a promising model for delivery of trauma-focused intervention to Muslim refugee communities.

## Resiliency among Youth Following Exposure to Intimate Partner Violence: A Longitudinal Study

(Clin Res, CPA-Dev/Int-DV-Fam/Int, Child/Adol, M, Industrialized)

**Menon, Suvarna, PhD Candidate**[1]; Cohen, Joseph, PhD[1]; Thomsen, Kari, Candidate[1]; Shorey, Ryan, PhD[2]; Le, Vi Donna, PhD Candidate[3]; Temple, Jeff, PhD[3]
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Childhood exposure to parental intimate partner violence (IPV) is a widespread problem (National prevalence estimates suggest that 1 in 15 children or adolescents witnessed IPV in the past year; Hamby, Finkelhor, Turner, & Omrod, 2011). Early IPV exposure has been associated with a host of deleterious outcomes among children (Vu et al, 2016; Bourussa, 2007; Evans et al., 2008). Fewer studies have examined the prospective outcomes associated with IPV exposure in adolescence. Further, the role of resiliency factors that can buffer against prospective deleterious outcomes is still poorly understood for this vulnerable group. The present study examined the impact of IPV-exposure within the context of adolescence, a vulnerable developmental period, in a longitudinal, epidemiological based study. Specifically, we examined a) the prospective association between IPV and internalizing (anxiety, depression, PTSD), and externalizing psychopathology (alcohol and substance use), and b) the moderating role of resiliency factors on the attenuation of symptoms during adolescence. Resiliency factors were studied at the intrapersonal (i.e., coping, gender, race), interpersonal (i.e., conflict resolution), and familial (i.e. maternal warmth, parental supervision) levels. The resulting sample (N = 1042) was diverse (56% female; 32% Hispanic, 29% African American, 30% White), with a mean age of 15.1 years. Participants were followed over 4 years and completed measures of depression, anxiety, PTSD, substance use, conflict resolution, coping, and parenting styles. 31.2% of youth in our sample endorsed IPV exposure. Preliminary results suggest that IPV exposure was significantly associated with negative outcomes in adolescence, i.e. elevated symptoms of depression, anxiety, trauma, and increased alcohol and substance use. Intrapersonal variables (i.e. coping) moderated the association between IPV exposure and internalizing symptoms, and parental warmth emerged as a significant moderator across outcomes. The talk will focus on the implications of our findings for more targeted community and clinical preventative services for this vulnerable population.

## African-American Adolescents' Exposure to Violence across Contexts: Profiles of Witnessing and Victimization in Relation to Post-Traumatic Stress Symptoms

(Clin Res, Chronic-Comm/Vio, Child/Adol, I, Industrialized)

**Rice, Catherine, BA**; Ochoa, Nadia, BA; Onyeka, Ogechi, BA; Richards, Maryse, PhD
*Loyola University Chicago, Chicago, Illinois, USA*

African-American adolescents in low-income, urban neighborhoods report exposure to violence (ETV), including witnessing and victimization, across multiple contexts at higher rates than their peers, putting them at greater risk of experiencing post-traumatic stress symptoms and other deleterious effects. Nevertheless, many studies examining the effects of violence focus on ETV in a single setting instead of incorporating multiple relevant contexts. The current study examined frequency of ETV across family, school, and community environments in a sample of African-American urban adolescents, using person-oriented methods to illustrate patterns of co-occurrence in a way that conforms to adolescents' reality. Latent profile analysis (N=244) identified three distinct classes: low witnessing/victimization across all settings (Low Exposure; N=140); moderate community witnessing and low exposure in family/school settings, along with low community victimization (Moderate Exposure; N=84); and high community witnessing/victimization, moderate family victimization and school witnessing, and low family witnessing and school victimization (High Exposure; N=20). Comparison of trauma symptoms across classes showed significant differences, with the High Exposure class showing significantly higher levels of numbing, avoidance, intrusion, and hypervigilance compared to the Low and Moderate Exposure classes. Results support person-oriented methods as means to identify subgroups most in need of intervention within a high-risk context.

## Domestic Violence (DV) and Child Protective Services: An Investigation of Frequency, Evidence and Potential Caregiver Predictors

(Clin Res, Clinical Practice-DV-Fam/Int, Lifespan, M, Industrialized)

**Melita, Nicole, MA**[1]; **Grasso, Damion, PhD**[1]; Clough, Meghan, MA[2]; DiVietro, Susan, PhD[2]; Beebe, Rebecca, PhD[2]; Lapidus, Garry, PhD[2]
[1]*University of Connecticut Health Center, Farmington, Connecticut, USA*
[2]*Connecticut Children's Medical Center, Hartford, Connecticut, USA*

Witnessing domestic violence (DV) is not a standard maltreatment category for most child protective service (CPS) state agencies; however, rates among referred families are high (Flanagan, Sullivan & Connell, 2015). Often under-identified and addressed, DV overlaps heavily with other forms of adversity, and contributes to caregiving problems. The current study involves 100 CPS referred families randomly sampled during a 1-year period (i.e., index allegation). We used a chart review approach to identify and examine DV in the context of other forms of caregiver impairment. DV was documented as a problem in investigative reports of 26% of cases; however, was identified by chart review in 43% of cases. Cases with DV during the index allegation were more likely to have a new substantiated allegation within the following year, $X^2 = 5.49$, $p$=.019. Cases with any DV indicated in their CPS history (52%) were more likely to have a caregiver with documented mental health problems ($X^2 = 6.42$, $p$=.011), substance abuse ($X^2 = 4.06$, $p$=.044), a criminal history ($X^2 = 5.34$, $p$=.021), violent criminality ($X^2 = 5.08$, $p$=.024), and other legal problems ($X^2 = 11.97$, $p$=.001). Implications for case management and allegation outcomes for CPS involved families will be discussed.

## Past Year Treatment Utilization among Individuals Meeting DSM-5 PTSD Criteria: Results from a Nationally Representative Sample

(Pub Health, Pub Health, Adult, I, Industrialized)

**Hale, Andrew, PhD Candidate**[1]; Sripada, Rebecca, PhD[2]; Bohnert, Kipling, PhD[2]
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[2]*VA Ann Arbor Health Care System/University of Michigan Medical School, Ann Arbor, Michigan, USA*

The present study aimed to identify factors related to treatment utilization among those with DSM-5 PTSD in a nationally-representative sample, the third wave of the National Epidemiologic Survey on Alcohol and Related Conditions. Unadjusted and adjusted weighted logistic regressions were used to identify factors related to odds of PTSD treatment utilization for individuals meeting diagnostic criteria (2,339 of 36,309, 6.1% weighted). Results suggested having a college education [odds ratio (OR) 2.40, 95% confidence interval (CI) 1.53-3.75], having health insurance (OR 2.98, 95% CI 2.06-4.31), having a comorbid phobia (OR 1.36, 95% CI 1.04-1.79) or anxiety disorder (OR 1.32, 95% CI 1.01-1.74), and greater PTSD symptom severity (OR 1.11, 95% CI 1.06-1.17) were associated with greater odds of treatment utilization. Older age (OR 0.45, 95% CI 0.24-0.82), identifying as Black or Asian (OR 0.72, 95% CI 0.53-0.98 and OR 0.27, 95% CI 0.08-0.93, respectively), and greater impairment in social functioning (OR 0.98, 95% CI 0.97-0.99) were associated with decreased odds of PTSD treatment utilization. Results highlight factors that may be useful in identifying subgroups with PTSD that are at risk for under-utilization of services, and may be helpful when assessing PTSD treatment needs, or developing, implementing, and evaluating treatment programs.

## Efficacy of Transcendental Meditation as an Adjunctive Treatment for PTSD in Military Veterans

(Clin Res, Anx-QoL-Mil/Vets, Adult, I, N/A)

Benkhoukha, Amina, MA, PhD Student[1]; **Bellehsen, Mayer, PhD**[2]
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[2]*NorthShore University HealthSystem, Bay Shore, New York, USA*

The current study randomly assigned United States military veterans (mean age; median age) diagnosed with PTSD to receive standardized training in Transcendental Meditation (TM) in addition to their established psychiatric treatment (n=20), or continue with treatment as usual (n=20). The primary outcome measure, Clinician Administered PTSD Scale (CAPS-5), as well as self-report measures of PTSD, depression, anxiety and quality of life (PCL-5, BDI-II, BAI, QLES) were administered pre- and post the 12-week structured intervention. Veterans were taught TM over five consecutive days, followed by weekly meditation sessions with a trained TM instructor. Paired sample t-tests displayed significant reductions in symptoms for the TM treatment group across all measures: CAPS-5 (mean change score, 10.8; p=0.001, df=18), PCL-5 (mean change score, 15.6; p<0.0001, df=18), BDI-II (mean change score, 11.9; p<0.0001, df=18), BAI (mean change score, 7.2; p=0.002, df=18), and a significant increase in perceived quality of life (QLES mean change score, -6.7; p=0.001, df=18). No significant changes were found for the veterans in the group that did not receive training in TM and only received treatment as usual. Augmenting existing clinical interventions provided to military veterans with PTSD could ameliorate treatment outcomes and improve overall quality of life.

## Early Responses and Long Term Posttraumatic Stress Reactions in Survivors of the 2011 Norway Shooting Massacre at Utøya: Is There a Critical Point for Recovery?

(Clin Res, Acute-Clinical Practice-Dev/Int-Terror, Child/Adol, M, Industrialized)

**Dyb, Grete, MD, PhD**[1]; Hafstad, Gertrud, PhD[1]; Jensen, Tine, PhD[2]; van de Schoot, Rens, PhD[3]; Thoresen, Siri, PhD[1]
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[3]*Utrecht University, Utrecht, Netherlands*

Across the world terrorist attacks directed towards children and youth have shown to have a worrisome impact on highly exposed populations. Levels of posttraumatic stress reactions have shown to be substantial in the first years following attacks and in survivors of the 2011 Norway shooting massacre at Utøya, PTSD levels were more than six times higher than in the general population 4-5 months after the event. Also, the need of long-term specialized health care services has been extensive years after shooting events involving children and youth. These research findings seem not to be consistent with current knowledge of trajectories for recovery of PTSD, but few longitudinal studies of terror survivors have been published. Conducting research after these attacks is challenging, especially on children and youth. The terrorist attack in Norway on 22 July 2011 included a shooting massacre on Utøya Island, on a summer camp for the Norwegian Labor Party's youth organization. At the time of the shooting, 564 people were on the island. The terrorist brutally shot and killed 69, and 59 were admitted to hospital for severe injuries. The event was extremely brutal, exposing survivors to immense experiences of life danger and terrifying witnessing of the suffering and killings of others. Most studies of disasters and terrorist attacks face sampling problems, and include participants whose levels of traumatic exposure vary greatly. In the current study of survivors of the Utøya shooting, the survivors were all exposed to a life-threatening situation and were hunted by a gunman on an isolated island for more than one hour. We therefore had the opportunity to investigate PTSD levels over time in a group of similarly exposed survivors and assess their levels of PTSD the first three years after the attack. Three data collection waves were conducted and this presentation includes participants below 40 years of age who took part in the third data collection wave (N= 258). To investigate development of posttraumatic stress symptoms over time, we conducted a latent growth model with mean level of posttraumatic stress 4-5 months, 14-15 months and 30-31 months after the terror attack. Latent growth models allow for estimating the rate of increase or decrease of posttraumatic stress reactions based on each individual participant's growth curve. Our preliminary results show that decrease of posttraumatic stress reactions the first year post-trauma is more rapid than in the following two years and levels of posttraumatic stress reactions three

years after the attack are substantially higher than expected. These results indicate that recovery the first year post-trauma might be critical for youth`s levels of functioning years after terror attacks.

## Adapting and Testing the Feasibility of Implementing Parenting Interventions with Populations Affected by War Trauma

(Clin Res, Fam/Int-Refugee-Civil/War, Lifespan, A, Global)

**Wieling, Elizabeth, PhD, LMFT**
*University of Minnesota-Twin Cities Campus, St. Paul, Minnesota, USA*

Despite of the tremendous need for systemic interventions to support parenting efforts in the aftermath of war trauma, there is currently no systematically recognized evidence-based treatment for parents and families exposed to mass trauma in post-conflict settings or with displaced and resettled refugees. Effective parenting interventions adapted to the contexts of culture and traumatic stress in post-conflict and resettlement settings could lead to improved health outcomes and family functioning for parent-child relationships by interrupting the documented intergenerational transmission of individual psychopathology and relational adversities. This presentation documents the scientific journey of a group of interdisciplinary scholars in engaging with families in Northern Uganda, a post-conflict setting, and with resettled Karen refugees in the United States, to adapt and test the feasibility of implementing an evidence-based parenting intervention (Parent Management Training - Oregon Model) in these two contexts. Parenting groups were conducted with Acholi families in Uganda in 2012 and with Karen refugees in 2016. Cultural adaptation processes, lessons from the field, feasibility results, and next septs for conducting larger scale implementation will be presented within a translational science framework outlining specific dissemination and implementation strategies.

## Tonic Immobility during Rape

(Bio Med, Rape, Adult, M, Industrialized)

**Möller, Anna, PhD, MD**; Sondergaard, Hans, MD, PhD; Helström, Lotti, Associate Professor
*Karolinska Institutet, Stockholm, Sweden*

*Introduction.* Active resistance is considered as the "normal" reaction during rape. However, studies have indicated that just as animals, humans exposed to extreme threat can react with a state of Tonic Immobility (TI). The aim of the present study was to assess the experience of TI during rape, and explore its association with the development of Posttraumatic stress disorder (PTSD). *Material and methods*. Tonic immobility was assessed in 298 women within 1 month of the assault using the Tonic Immobility Scale (TIS). Specific information about the rape was taken from the clinics structured data files. After 6 months 189 women were assessed regarding the development of PTSD and depression. *Results.* Results showed that 70% reported significant TI and 48% reported extreme TI during the assault. TI was associated with the development of PTSD[h1] (OR 2.75; 1.50-5.03, p = .001) and severe depression (OR 3.42; 1.51-7.72, p = .003) at 6 months. Further, prior trauma history (OR 2.36; 1.48-3.77, p <.001) and psychiatric treatment history (OR 2.00; 1.26-3.19, p = .003) was associated with the TI response. *Conclusions.* Our data suggest that TI during rape is more common than earlier described and because of its association with PTSD development it should be routinely assessed in sexual assault victims.

## Treatment Outcome of Posttraumatic Stress Disorder: A Functional Connectivity and White Matter Tract Analysis

(Clin Res, Affect/Int-Clin Res-Neuro, Adult, M, Industrialized)

**Graziano, Robert, BS**; Vuper, Tessa, MA; Bruce, Steven, PhD
*University of Missouri St. Louis, Saint Louis, Missouri, USA*

Few studies of posttraumatic stress disorder (PTSD) have used neuroimaging to examine symptom change following completed treatment. Neuroimaging can contribute unique insights into mechanisms that may inform treatment efficacy. Diffusion tensor imaging (DTI) and resting state functional connectivity (rs-

fcMRI) are methodologies that depict how brain regions work together in networks. To date, only one DTI study (Kennis et al., 2015) has examined PTSD treatment outcome (using EMDR), and none have combined both DTI and rs-fcMRI. The current study used within-group analyses to examine PTSD symptom reduction of 21 women who completed 12 weeks of Cognitive Processing Therapy (CPT) following DTI and rs-fcMRI imaging at baseline. After controlling for baseline PTSD severity, results from rs-fcMRI indicated connectivity between the affective network (amygdala, insula, anterior cingulate) and right occipital cortex was associated with PTSD symptom reduction (r=.84, p<.001). Further, DTI analysis found higher fractional anisotropy (FA) in the cingulum (B=.481, p=.034), an important tract within the affective network, and superior longitudinal fasciculus (B=.520, p=.022), a tract connecting the occipital cortex to the affective network, to predict symptom improvement. Clinical implications will be discussed examining neural connections, and how the affective network plays a central role in PTSD symptom reduction.

## Adding Military Sexual Assault to an Integrated Model of Risk and Protective Factors for Posttraumatic Stress Symptomatology in OEF/OIF/OND Women Veterans

(Clin Res, Prevent-Rape-Mil/Vets-Gender, Adult, M, Industrialized)

**Kurtz, Erin, PhD**[1]; Kelley, Michelle, PhD[2]; Montano, Hilary, PhD[3]; VA Mid-Atlantic MIRECC Workgroup[4]
[1]*McGuire VA Medical Center, Richmond, Virginia, USA*
[2]*Old Dominion University, Norfolk, Virginia, USA*
[3]*Hampton VA Medical Center, Hampton, Virginia, USA*
[4]*VA Mid-Atlantic Mental Illness Research, Education and Clinical Center (MIRECC), Durham, North Carolina, USA*

There have been few studies examining etiological models of risk and protective factors for posttraumatic stress disorder (PTSD) in OEF/OIF/OND women Veterans, and these models have not included military sexual trauma (MST). This study examined whether one form of MST, military sexual assault (MSA), predicted PTSD symptom severity (PTSS) in conjunction with other frequently examined risk and protective factors for PTSD (i.e., premilitary and postmilitary trauma, types of combat exposure, social support). Based on previous research, an integrated, etiological model for PTSS including MSA was proposed and explored for model fit. Data were examined from OEF/OIF/OND women Veterans and active duty service members participating in a multi-site study through the Department of Veterans Affairs. Results suggest premilitary trauma experiences increased women Veterans' likelihood of MSA and that MSA mediated the relationship between premilitary trauma and social support. Social support mediated the relationship between MSA and PTSS but not between premilitary trauma and PTSS. Social support partially mediated the relationship between aftermath of battle and PTSS, but not between combat experiences and PTSS; rather, combat experiences had a direct effect on PTSS. Results indicate that MSA is a key risk factor to include in models of PTSS in OEF/OIF/OND women Veterans.

## BDNF Val66Met Polymorphism Associated with Increased Risk of Complicated Grief Following Bereavement, Independent of its Effect on Depression

(Bio Med, Death-Depr-Genetic, Adult, M, Industrialized)

**Fisher, Joscelyn, PhD**; Zhang, Lei, MD; Zhou, Jing, MS; Hu, Xian-Zhang, MD; Ursano, Robert, MD; Cozza, Stephen, MD
*Center for the Study of Traumatic Stress, Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA*

Genetic composition may impact the development of complicated grief (CG) following bereavement. The BDNF gene is a promising candidate as BDNF regulates stress response, and Val66Met, a single-nucleotide polymorphism in the BDNF gene, has been linked to various psychological disorders, including depression. We hypothesized that Val66Met would be associated with CG, independent of depression. Bereaved participants (n=829) provided saliva samples and self-reported CG and depression symptoms. For each BDNF genotype (Met/Met, Met/Val and Val/Val), multinomial logistic regression predicted probabilities of individuals having both depression and CG, CG only and depression only compared to individuals indicating no depression or CG. In addition, Met carriers (Met/Met, Met/Val) were compared to

Val/Val. Met/Met was associated with 3.5 times (95% CI, 1.7-7.3) higher risk of combined depression and CG than Val/Val. There was no difference between Met/Val and Val/Val. Met/Met was also associated with 2.5 times (95% CI, 1.0-6.2) higher risk of CG than Val/Val in cases where depression was not present. These results are the first to indicate BDNF(Met/Met) contributes to risk of CG regardless of whether depression is comorbid or absent.

# Symposium
# Saturday, November 11
# 3:00 PM to 4:15 PM
# Salon 1
# Treatment Track

## Intensive Trauma-focused Treatments
(Clin Res, Complex, Adult, M, Industrialized)

**van Minnen, Agnes, PhD**
*University Nijmegen, Nijmegen, Gelderland, Netherlands*

To improve response rates for PTSD treatment, PTSD programs have begun to deliver trauma-focused therapies in intensive treatment formats. The therapy sessions that are usually provided on a weekly basis for one to three months, are now delivered over one or two weeks. In this symposium, four clinician researchers will present the treatment effects of several intensive outpatient treatment programs, including intensive prolonged exposure, EMDR and cognitive therapy. These intensive programs are being used with success with complex patients, such as patients with multiple trauma in childhood, and patients with rates of high co-morbidity. The researchers will present the content of their treatment program and their effects in terms of primary outcome measures and drop-out rates. Also, data about experiences with intensive treatments from patient and therapist perspective will be presented. Presenters: Chair: Agnes van Minnen; Ad de Jongh: Intensive treatment for (Complex) PTSD patients: Combining Prolonged Exposure, EMDR and Sports; Sheila A.M. Rauch: Healing the Invisible Wounds of War: Update on Emory Healthcare Veterans Program Intensive Outpatient Program For PTSD; Jennifer Wild: Intensive cognitive therapy for PTSD: Do patient sustain gains over time?; Agnes van Minnen: Therapist rotation during Intensive trauma-focused treatment: experiences from both patients and therapists; Discussant: Barbara Rothbaum

## Intensive Treatment for Severe PTSD: Combining Prolonged Exposure, EMDR and Sports
(Practice, Chronic-Clin Res-Complex, Adult, M, Industrialized)

**De Jongh, Ad, PhD, MRCPsych**[1]; van Minnen, Agnes, PhD[2]
[1]*University of Amsterdam, Amsterdam, Netherlands*
[2]*University Nijmegen, Nijmegen, Gelderland, Netherlands*

**Background:** There is mounting evidence suggesting that by increasing the frequency of treatment sessions PTSD treatment outcomes significantly improve. As part of an ongoing research project the present study examined the safety and effectiveness of an intensive therapy program in more than patients suffering from severe PTSD, and multiple comorbidities resulting from childhood sexual abuse, physical abuse, work or combat related trauma. Treatment was not preceded by a preparation phase, and consisted of 2 x 4 consecutive days of Prolonged Exposure and EMDR therapy administered in morning and afternoon sessions of 90 minutes each (total number of trauma-focused sessions was 16), interspersed with intensive physical activity and psycho-education. **Method:** Patients were evaluated using the Clinician-Administered PTSD Scale (CAPS), and the PTSD Symptom Scale Self-report questionnaire (PSS-SR) prior to treatment, at posttreatment and at three months follow-up. **Results:** Until January 2017, more than 200 patients underwent the intensive treatment program. During treatment no personal adverse events occurred, and the dropout rate was less than 5%. CAPS scores decreased significantly from pre- to post-treatment, and more than half of the patients lost their PTSD diagnosis as established with the CAPS. Large effect sizes (Cohen's d) were found on the CAPS and PSS-SR. The results were maintained at 3-month follow-up. **Conclusion:** The findings suggest that an intensive trauma-focused treatment program is a potentially safe and effective treatment alternative for patients with severe (or 'Complex') PTSD.

## Healing the Invisible Wounds of War: Update on Emory Healthcare Veterans Program Intensive Outpatient Program for PTSD

(Clin Res, Mil/Vets, Adult, M, N/A)

**Rauch, Sheila, PhD, ABPP**[1]; Post, Loren, PhD[2]; Yasinski, Carly, PhD[2]; Sherrill, Andrew, PhD[2]; Maples- Keller, Jessica, PhD[2]; Breazeale, Kathryn, BS[2]; Zwiebach, Liza, PhD[2]; Dunlop, Boadie, MD, MS[2]; Loucks, Laura, PhD[2]; Rothbaum, Barbara, PhD, ABPP[2]
[1]*Emory University School of Medicine/Atlanta Veteran's Administration, Atlanta, Georgia, USA*
[2]*Emory University School of Medicine, Atlanta, Georgia, USA*

**Background:** The Emory Healthcare Veterans Program (EHVP) intensive outpatient program (IOP) in the Wounded Warrior Project's Warrior Care Network provides collaborative care with focus on PTSD and TBI, rehabilitative medicine, wellness, and family services through individualized patient treatment plans. The EHVP IOP is a two-week PTSD program, including evidence-based trauma-focused therapy; skills training in family/relationship management; promotion of physical health and wellness through sleep skills, fitness, and recreational activities; and career/financial support. **Methods:** Intake data were examined for IOP diagnostic rates and treatment utilization. Patients complete measures assessing PTSD symptoms (PCL-5, Weathers 2013), TBI symptoms (NSI, Cicerone 1995), depression (PHQ-9, Kroenke 2001), alcohol use (AUDIT-C, Bush 1998), and quality of life (PROMIS 4A/8A, Cella 2007). **Results:** As of January 1 2017, 287 military service members have undergone a comprehensive initial assessment. PTSD was the primary diagnosis for 62% of patients. To date, 49 patients have completed the IOP. Patients have shown large and clinically significant reductions in PTSD and depressive symptoms post IOP. We will present primary outcomes as well as examination of predictors of magnitude of change in PTSD and depression. **Conclusion:** EHVP has demonstrated early success in intensive collaborative care for veterans and active duty service members.

## Intensive Cognitive Therapy for PTSD: Do Patients Sustain Gains over Time?

(Clin Res, Complex-Depr-QoL, Adult, M, Industrialized)

**Wild, Jennifer, DPsych(Clin)**[1]; Ehlers, Anke, PhD[1]; Hackmann, Ann, DPsych, Clin[1]; Grey, Nick, PhD[2]; Liness, Sheena, MA, MSc[3]; Albert, Idit, MA, MSc[3]; Deale, Alicia, PhD[3]; Stott, Richard, PhD[3]; Clark, David, PhD[1]
[1]*Oxford University, Oxford, United Kingdom*
[2]*King's College, London, United Kingdom*
[3]*King's College London, University of London, London, United Kingdom*

Psychological treatments for PTSD are usually delivered once or twice a week over several months. A recent trial (Ehlers et al., 2014) found that intensive cognitive therapy for PTSD delivered in one week was as effective as standard cognitive therapy delivered over three months and both were more effective than supportive emotion therapy. It is unclear whether or not patients who have received intensive cognitive therapy for PTSD sustain their gains over time. In this study, we analyse data of N=61 patients who had been randomly allocated to receive intensive cognitive therapy or standard cognitive therapy and who completed one year follow-up assessment. Results demonstrated that patients in both groups sustained their gains at one year follow-up. In this talk, one year follow-up data will be presented as well as details of intensive cognitive therapy for PTSD. Common obstacles and how best to address them when working in an intensive format will also be presented, such as working with patients with PTSD who are experiencing high levels of shame or comorbidity.

## Therapist Rotation during Intensive PTSD Treatment: Patient and Therapists' Experiences

(Clin Res, Train/Ed/Dis, Adult, M, Industrialized)

**van Minnen, Agnes, PhD**[1]; De Jongh, Ad, PhD, MRCPsych[2]
[1]*University Nijmegen, Nijmegen, Gelderland, Netherlands*
[2]*University of Amsterdam, Amsterdam, Netherlands*

Background: Due to practical reasons, when applying intensive treatment programs, patients will undergo

treatment sessions with more than one therapist. In our study, patients had 8-12 different therapists in 16 sessions. However, there is evidence that the quality of the therapeutic relationship is associated with a better outcome of treatment. The aim of our study was to determine whether a therapist rotation model is acceptable for PTSD-patients, especially for those who suffered interpersonal trauma in childhood. Methods: At post-treatment, both patients and therapists completed a questionnaire with questions (both open and closed) about the advantages and disadvantages of this therapist rotation model, including therapeutic relationship. Results: Most therapists (N=25) indicated mainly advantages in terms of better implementation of trauma-focused treatments and less burden. The majority of the 200 patients who underwent the intensive treatment program (until January 2017) preferred working with more than one therapist. Also, most patients indicated that they were able to establish a strong therapeutic relationship with the team of therapists as a whole. Conclusion: A therapist rotation system is feasible, was positively evaluated, and does not seem to be a limiting factor for the implementation of an intensive trauma-focused treatment of PTSD.

## Symposium
## Saturday, November 11
## 3:00 PM to 4:15 PM
## Salon 3
## Assessment and Diagnosis Track

## Examining the Complexity of Posttraumatic Stress Symptoms at the Individual Level: PTSD Subtypes

(Assess Dx, Cul Div-Depr, Adult, M, Global)

**Elhai, Jon, PhD**
*University of Toledo, Toledo, Ohio, USA*

Following the experience of potentially traumatic events, people can be categorized into heterogeneous and distinct latent subgroups (subtypes) based on their pattern of endorsement of posttraumatic stress symptoms including posttraumatic stress disorder (PTSD). This is not surprising given the heterogeneous nature of PTSD; and PTSD's comorbidity with several psychopathology constructs. Examples of PTSD subtypes include a subgroup characterized by predominant dissociative symptoms (dissociative subtype) (Wolf et al., 2012); a subgroup characterized by predominant depression symptoms in addition to PTSD severity (depression subtype of PTSD) (Armour et al., 2015); a group characterized by predominant externalizing symptoms such as addictive behaviors (externalizing subtype of PTSD) or internalizing symptoms such as anxiety (internalizing subtype of PTSD) (Miller & Resick, 2007). Further, such subgroupings are distinct in terms of psychopathology constructs and thus have construct validity (e.g., Contractor et al., 2017; Miller et al., 2007). Thus, the proposed symposium includes four empirical presentations on PTSD subtypes using diverse samples including college students in Northern Ireland, trauma-exposed U.S. military veterans, and adolescent disaster survivors in China. The studies have used person-centered approaches to examine the nature and construct validity of latent subgroupings based solely on PTSD symptoms, co-occurring PTSD and depression symptoms, and co-occurring PTSD symptoms and personality facets. The presented information will enhance our empirical and theoretical knowledge on the nature of PTSD subtypes, their assessment, and defining and distinguishing characteristics. We will highlight the importance of considering the interaction between PTSD symptoms and other co-occurring constructs to better understand the complexity and heterogeneity embedded in post-trauma stress responses.

## DSM-5 PTSD Profiles and their Relation to a Wide Array of Psychological Constructs: Results from the National Health and Resilience in Veterans Study

(Assess Dx, Assess Dx-Mil/Vets, Adult, M, Industrialized)

**Armour, Cherie, PhD**[1]; Contractor, Ateka, PhD[2]; Tsai, Jack, PhD[3]; Mota, Natalie, PhD[4]; Pietrzak, Robert, PhD, MPH[5]
[1]*University of Ulster, Coleraine, Northern Ireland, United Kingdom*
[2]*University of North Texas, Denton, Texas, USA*
[3]*Yale University School of Medicine; VA Connecticut Healthcare System, West Haven, Connecticut, USA*
[4]*Yale University School of Medicine, National Center for PTSD, New Haven, Connecticut, USA*
[5]*National Center for PTSD, West Haven, Connecticut, USA*

Existing research indicates the presence of differential typologies of posttraumatic stress

disorder (PTSD) using latent class and latent profile analyses. Although results have been mixed in terms of the best-fitting class solution and the nature of latent classes, they may have significant implications for clinical assessment and treatment planning. There have been few studies on PTSD typologies using the criteria set by the newly proposed Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5). The objective of this study is to identify DSM-5 PTSD profiles and their relation to a wide array of psychological constructs. Latent profile analysis was conducted on a nationally representative sample of 1,238 trauma-exposed U.S. military veterans who completed a 60-min web-based survey. The Posttraumatic Stress Disorder-Checklist version 5 (PCL-5) was used to assess DSM-5 PTSD symptoms and several other validated measures were used to assess physical and mental health functioning. A 5 class model was found to best represent the data: 1) Re-experiencing/avoidance class, 2) Low disturbance class, 3) Subsyndromal class, 4) Negative emotions class, and 5) High disturbance class. Classes could be differentiated by levels of anxiety, depression, hostility, somatic symptoms, cognitive functioning and quality of life. Our results indicate that U.S. war veterans can be categorized into five different groups differentiated by symptom severity and/or differential elevations in specific PTSD symptom groupings, such as re-experiencing /avoidance or negative emotions. The five profiles were also found to have differential relationships with external psychosocial constructs. These findings could inform clinical decisions regarding treatment planning and provision by providing rationale for tailor-made interventions that target specific symptom groupings causing the most impairment.

## Heterogeneity in Patterns of DSM-5 Posttraumatic Stress Disorder and Depression Symptoms: Latent Profile Analyses.

(Assess Dx, Depr, Adult, M, Industrialized)

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Objective. Posttraumatic stress disorder (PTSD) and depression co-occur frequently following the experience of potentially traumatizing events (PTE) (e.g., Morina et al., 2013). A person-centered approach to discern heterogeneous patterns of such co-occurring symptoms is recommended. We assessed heterogeneity in PTSD and depression symptomatology; and subsequently assessed relations between class membership with psychopathology constructs (alcohol use, distress tolerance, dissociative experiences). Methods. The sample consisted of 268 students who had experienced a PTE and subsequently endorsed clinical levels of PTSD or depression. Latent profile analyses (LPA) was used to identify the best-fitting class solution accounting to recommended fit indices; and the effects of covariates was analyzed using a 3-step approach. Results. Results of the LPA indicated an optimal 3-class solutions: high severity (Class 2), lower PTSD-higher depression (Class 1), and higher PTSD-lower depression (Class 3). Covariates of distress tolerance, and different kinds of dissociative experiences differentiated the latent classes. Conclusions. We found evidence for a depressive subtype of PTSD differentiated from other classes in terms of lower distress tolerance and greater dissociative experiences. Transdiagnostic treatment protocols may be most beneficial for these latent class members. Results supported the distinctiveness of PTSD and depression at lower levels of PTSD severity (mainly in distress tolerance abilities) and hereby the current classification system. Further, our results highlight the importance of addressing the complexity in co-occuring posttraumatic stress symptoms.

## Relation of PTSD-Personality Subtypes to Internalizing and Externalizing Outcomes.

(Assess Dx, Anx-Depr-Theory, Adult, M, Industrialized)

**Frankfurt, Sheila, PhD**[1]; Meyer, Eric, PhD[2]; Kimbrel, Nathan, PhD[3]; DeBeer, Bryann, PhD[2]; Gulliver, Suzy, PhD[4]; Morissette, Sandra, PhD[5]
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Internalizing, externalizing, and simple personality-based subtypes of PTSD indicate the significant inter-individual heterogeneity of symptom presentations (Miller et al., 2004). The current study extends research on the relationship between PTSD and personality traits by examining the construct validity of PTSD-personality latent profiles. Profiles of PTSD symptoms and Big Five personality traits were created using Latent Profile Analysis (LPA) in a community sample of combat-exposed Iraq and Afghanistan Veterans (N = 309). The relationship between PTSD-personality profiles and internalizing outcomes (depression, anxiety) and externalizing outcomes (alcohol and drug problems) were assessed using multiple logistic regression at baseline and one-year follow-up time points. Consistent with previous research (Contractor et al., 2016), a 5-class model best fit our sample: high neuroticism-low extraversion/moderate PTSD (Class 1, 18%), low neuroticism/low PTSD (Class 2, 38%), high conscientiousness/low PTSD-high detachment (Class 3, 18%), high conscientiousness/moderate PTSD-high detachment-arousal (Class 4, 9%), and high neuroticism/high PTSD (Class 5, 17%). At baseline, class membership predicted internalizing but not externalizing behaviors. At one year follow-up, class membership predicted both internalizing and externalizing behaviors. Most participants displayed internalizing PTSD, which may be due to characteristics of Veteran study volunteers. Implications include recommending the use of personality assessments to improve PTSD case conceptualization.

## Latent Classes of Posttraumatic Stress Disorder and Class Transitions Predicted by Distress and Fear Disorders in Disaster-exposed Adolescents

(Assess Dx, Anx-Depr-Nat/Dis, Child/Adol, M, E Asia & Pac)

**Wang, Li, PhD**
*Key Laboratory of Mental Health, Institute of Psychology, Chinese Academy of Sciences, Beijing, China*

Our understanding of the population-based typologies of posttraumatic stress disorder (PTSD) symptomatology, the longitudinal patterns of transitions across these typologies and the predictive effects of distress and fear disorder symptoms on these transitions is limited. This study aimed to address such issues in a frequently referred but scantly studied population of traumatized youth. A sample of 1,278 Chinese adolescent disaster survivors (54.0% girls) with a mean age of 13.4 years (SD = 0.8, range: 12-16) completed the 2-wave surveys spaced 1 year apart. Psychopathological symptoms were assessed with self-report measures including the UCLA PTSD Reaction Index for DSM-IV, the Depression Self-Rating Scale for Children, and the Screen for Child Anxiety Related Emotional Disorders. Latent class analyses identified four classes characterized by high, re-experiencing/hypervigilance, dysphoria, and low symptoms, respectively at each time point. Latent transition analyses revealed relatively high probabilities of migration out of the Re-experiencing/Hypervigilance and High Symptom classes but relatively high levels of temporal stability within the Low Symptom and Dysphoria classes. Multinomial logistic regression analyses found that some of the between-class movements during the year were predicted by baseline distress or fear disorders. These findings provide initial evidence of both quantitative and qualitative changes in youth's PTSD symptom patterns over time, and give a further elucidation of the aggravating impacts of other forms of post-trauma psychopathology on PTSD course. Considerable implications for ongoing evaluations, and adjustable interventions individually tailored to the evolving stages and comorbid conditions of PTSD among adolescent disaster victims are also discussed.

**Symposium**
**Saturday, November 11**
**3:00 PM to 4:15 PM**
**Salon 4/9**
**Assessment and Diagnosis Track**

## Population-based Research of Posttraumatic Stress: Taking Advantage of Nation-wide Registries

(Pub Health, Health-Res Meth-Mil/Vets, Adult, M, Industrialized)

**Andersen, Søren, PhD, Cpsych**
*Research and Knowledge Center, The Danish Veteran Center, Ringsted, Zealand, Denmark*

In Denmark, an extensive collection of medical and administrative registries and databases that often spans over several decades are available for research to pre-approved research environments. The presenters in the current symposium have worked intensively with registry data to study associations between working environment, cognitive abilities, post-traumatic stress disorder and mortality among the Danish population; three of the studies in military veterans and the fourth in the general population. The findings as well as a brief overview of the Danish registries are presented in four lectures indicating the power of registry-based research in elucidating complex associations between variables and temporal trends pertinent to the mental health of veterans and the general population.

## All Cause and Cause-specific Mortality among Danish Veterans – Exploring the Healthy Soldier Effect

(Pub Health, Res Meth-Mil/Vets, Other, M, Industrialized)

**Vedtofte, Mia, PhD**
*Research and Knowledge Center, The Danish Veteran Center, Ringsted, Denmark*

All cause and cause-specific mortality among Danish veterans – exploring the Healthy Soldier Effect.
Mia Sadowa Vedtofte1*, Trine Madsen2, Søren Andersen1
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Military personnel deployed in international missions have a higher mortality risk than the general population when deployed to conflict zones. Whether this higher mortality risk persists after deployment is debatable. In general there are conflicting findings of studies of all cause and cause-specific mortality among veterans in relation to control groups. This emphasizes the importance of using suitable control populations when analyzing mortality among veterans, because the choice of controls influences the conclusions of the study. It has been contended that military personnel almost always will have lower mortality than a comparable part of the general population because of the "healthy soldier effect" which is due to initial medical screening before military service, a requirement to maintain a certain standard of physical fitness, and better access to medical care during and after military service. This presentation provides results from a register-based study investigating the all cause and cause-specific mortality among Danish veterans (N ~ 31.000). Furthermore, by linking registries we explored the "healthy soldier effect" and created several non-deployed gender and age 5:1 matched control groups: 1) general population, 2) general population, who had been deemed fit at conscription and 3) general population, who are working within the Danish police.

## The Longitudinal Sequelae of Sub-syndromal Stress Disorders in the Population of Denmark

(Pub Health, Pub Health-Gender, Adult, M, Industrialized)

**Gradus, Jaimie, ScD**[1]; Körmendiné Farkas, Dóra, MSc[2]; Svensson, Elisabeth, PhD[2]; Lash, Timothy, Dsc[3]; Toft Sørensen, Henrik, MD, PhD[2]
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Sub-syndromal psychiatric disorders are receiving attention, yet longitudinal studies of outcomes are few. This study examined re-traumatization and incident comorbid psychiatric diagnoses following ICD10 unspecified stress disorder diagnoses, and

further examined associations between the disorders and longitudinal outcomes including all-cause mortality, suicide, cancer, cardiovascular events and gastrointestinal disorders. Data came from a cohort of all Danes who received a stress disorder diagnosis (ICD10 code: F43.x) from 1995-2011 (n = 101,663), and a general population comparison group (n =508,315). Cumulative incidence curves were potted for traumatic experiences and psychiatric diagnoses following sub-syndromal stress diagnoses. Proportional hazards regression was used to examine associations between the disorders, mortality and suicide. Standardized incidence ratios were calculated for associations between the disorders and physical health outcomes. Traumatic events and psychiatric diagnoses were common among those with sub-syndromal stress disorders, with a rate exceeding that in the comparison group. The disorders were associated with an increased rate of mortality, and strong associations with suicide were found. Varying associations with physical health outcomes were observed. These results show that sub-syndromal stress disorders have long-lasting and potentially severe consequences in multiple domains over a longitudinal time period, comparable to what is found among those meeting full diagnostic criteria.

## Labor Market Affiliation of Danish Military Personnel after International Operations

(Pub Health, Pub Health-Social-Mil/Vets, Other, M, Industrialized)

**Elrond, Andreas, PhD Student**[1]; Pedersen, Jacob, PhD[2]; Nielsen, Anni Brit Sternhagen, PhD, MSc, RN[1]; Vedtofte, Mia, PhD[1]
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*[2]National Research Centre for the Working Environment, Copenhagen, Capital region, Denmark*

Military personnel becoming unemployed after homecoming from international operations are faced with the challenges of adjusting to the civilian labor market, and may further struggle with mental and physical health problems. However, knowledge about how their labor market affiliations are, compared to the general population, remains scarce. Danish military personnel returning from international operation (1998-2010) were included in this study when having minimum one unemployment period within the five years' follow-up time. Each soldier was matched with up to 10 controls from the general population. We used register data containing weekly information about Danish social welfare payments to set up a multi-state model with the primary states: Work, Unemployment, Sick-listing, Disability pension. Analysis of labor market affiliation will be conducted by using Cox regression on transitions between states and presented with Hazard Ratios. Results will show 1) whether military personnel have increased/decreased risk of transitioning between labor market states, such as from employment to unemployment or back, compared to the general population, and 2) whether found differences will diminish over the five years' follow-up period. Information about specific problems with labor market affiliation, in the five years following a first military deployment, may aid decisions regarding supportive measures.

## Cognitive Ability Evaluated at Entry in the Military and Risk of PTSD after Military Deployment: A Study Based on Data from Several Registries

(Assess Dx, Assess Dx-Chronic-Cog/Int-Mil/Vets, Adult, M, Industrialized)

**Nissen, Lars, MD**; Karstoft, Karen-Inge, PhD, Cpsych; Nielsen, Anni Brit Sternhagen, PhD, MSc, RN; Vedtofte, Mia, PhD; Andersen, Søren, PhD, Cpsych
*Research and Knowledge Center, The Danish Veteran Center, Ringsted, Zealand, Denmark*

Studies examining the association between cognitive ability evaluated at entry in the military and PTSD after military deployment have shown mixed results; some studies indicate that high cognitive ability is protective against development of PTSD, whereas other doesn't find an association. The size of the study population in previous studies doesn't exceed 2,500. This presentation provides data from a study population of 9625 Danish Army military personnel deployed to different war zones between 1997 and 2013. The data was created by linking three registries; the Danish Conscription Database, the conscription registry in the Danish Defence Personnel Organisation and a database with questionnaire-based data with information on deployed soldiers mission experiences and psychological well-being 6-8 months after return from deployments. The association between cognitive abilities evaluated at time of conscription and a high level of PTSD symptoms postdeployment was analyzed by repeated measure logistic regression with adjustment for mission-related factors such as

combat exposure. The findings indicate that 1) low cognitive ability predeployment is a predictor of PTSD postdeployment 2) cognitive ability and educational level at the time of conscription are strongly correlated 3) When educational level is included in the analyses the association between cognitive ability and PTSD is attenuated.

## Symposium
## Saturday, November 11
## 3:00 PM to 4:15 PM
## Salon 5/8
## Biological/Medical Track

## Genetics of PTSD: Updates from the PGC-PTSD Working Group
(Bio Med, Bio Med-Genetic, Adult, M, Global)

**Sumner, Jennifer, PhD**
*Columbia University College of Physicians and Surgeons, New York, New York, USA*

There has been tremendous growth in the area of molecular genetic investigations of posttraumatic stress disorder (PTSD). The first genome-wide association study (GWAS) of PTSD was published in 2013, and since then, the field has grown with regard to other GWASs, epigenetic studies, imaging genetic studies, and genetic studies that address the link between PTSD and physical health outcomes. The Psychiatric Genomics Consortium for PTSD (PGC-PTSD) has brought together an impressive group of investigators with molecular genetic data in trauma-exposed samples. In the spirit of collaborative science, these investigators are working together and leveraging the power of increased sample sizes to characterize the genetic architecture of PTSD. This symposium, organized by the Genomics Special Interest Group of ISTSS and the PGC-PTSD, is bringing together one speaker from each of four working groups of the PGC-PTSD. Andrew Ratanatharathorn will be presenting the results from the group's GWAS meta-analysis. Dr. Monica Uddin will be presenting data from the Epigenetics working group, Dr. Rajendra Morey will be presenting on behalf of the Neuroimaging working group, and Dr. Jennifer Sumner will be presenting findings on behalf of the Physical Health working group.

## Epigenetic Biomarkers of PTSD: Updates from the EWAS Working Group of the PTSD PGC
(Bio Med, Gen/Int, Adult, M, N/A)

Ratanatharathorn, Andrew, MS, PhD Student[1]; Boks, Marco, MD, PhD[2]; Logue, Mark, PhD[3]; Maihofer, Adam, MS[4]; Kilaru, Varun, MS[5]; Stein, Murray, MD, MPH, FRCPC[4]; Vermetten, Eric, MD, PhD[6]; Koenen, Karestan, PhD[7]; Aiello, Allison, MS, PhD[8]; Baker, Dewleen, MD[9]; Hauser, Michael, PhD[10]; Kimbrel, Nathan, PhD[11]; Ashley-Koch, Allison, PhD[10]; Luft, Benjamin, MD[12]; Kuan, Pei-Fen, PhD[12]; Miller, Mark, PhD[3]; Ressler, Kerry, MD, PhD[13]; Nievergelt, Caroline, PhD[9]; Smith, Alicia, PhD[5]; **Uddin, Monica, PhD**[14]; Epigenetics Workgroup, PGC PTSD, PhD[5]
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[14]*University of Illinois, Champaign, Illinois, USA*

Trauma exposure is unfortunately quite common, yet only a minority of individuals develop PTSD following trauma. The Epigenome-Wide Association Study (EWAS) group of the PTSD PGC is working to identify DNA methylation-based epigenetic biomarkers of PTSD that can serve as important

indicators of the disorder, and to characterize which of these biomarkers identify individuals who may be most at risk following trauma. Existing, blood-derived DNA methylation microarray data from three civilian and seven military cohorts was subjected to a standardized pre-processing and QC pipeline at each study site. Primary analyses tested for association with PTSD, controlling for age, genomic-derived ancestry estimates, leuckocyte cell proportions as well as study-specific covariates if applicable (i.e. gender, plate, or bisulfite conversion). Meta-analysis was subsequently conducted to identify robust biomarkers of PTSD. Results from primary analyses in 1,896 samples revealed that the top four CpG sites fell within the AHRR locus (FDR for all sites <0.0003) and were all associated with reduced DNA methylation in PTSD. However, results for all four sites were substantially attenuated (FDR for all sites >0.69) in additional analyses that controlled for smoking. In contrast, the fifth ranked CpG site in primary analyses, within RNF6 (FDR=0.007), became the top-ranked CpG site associated with PTSD in our additional analyses that controlled for smoking, although results did not reach statistical significance (FDR=0.09). RNF6 is active in immune system function and other biological processes, and has previously been implicated in cancer. Longitudinal analyses are ongoing to assess whether these DNA methylation differences pre-date trauma exposure that precipitates PTSD, or whether they associate with PTSD onset.

## Multi-site Study of DTI Associated with PTSD from the Worldwide ENIGMA-PGC Consortium

(Bio Med, Mil/Vets-Neuro, Adult, M, Industrialized)

**Morey, Rajendra, MD**[1]; Logue, Mark, PhD[2]; Dennis, Emily, PhD[3]; Salminen, Lauren, PhD[4]
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*[4]University of Southern California, Marina Del Ray, California, USA*

Results from diffusion MRI (dMRI) studies of PTSD (post-traumatic stress disorder) have been inconsistent, with some reporting higher fractional anisotropy (FA) while others report lower FA in patients compared to controls. We present preliminary results from the PGC-ENIGMA PTSD working group. Participants were scanned and assessed at 12 different sites, for a total of 813 patients and 1077 controls. Sites processed dMRI brain scans locally with a standard protocol (http://enigma.usc.edu). FA, mean diffusivity (MD), radial diffusivity (RD), and axial diffusivity (AD) were calculated. Measures were averaged within the entire skeleton, 5 midline, and 19 bilaterally averaged white matter (WM) ROIs from the JHU atlas. Case/control effect sizes were calculated within each site, and statistical results were pooled across sites for meta-analysis on the regressions testing for group differences in 4 dMRI measures. Our model included age, sex, and childhood trauma. Our analyses were conducted on FA measures, with MD, RD, and AD as post hoc tests. Results were corrected for multiple comparisons using a Bonferroni correction ($p<0.05/25 = 0.002$). Childhood trauma was associated with lower FA in PTSD in the anterior limb of the internal capsule (ALIC), with borderline statistical significance ($0.05>p>0.002$) in the cingulum, corona radiata, internal capsule, and superior fronto-occipital fasciculus. These regions are part of the limbic-thalamo-cortical pathways involved in emotional regulation. Future longitudinal studies will be important to elucidate the role of white matter alterations on patterns of attention, learning and memory in PTSD, particularly, attentional control, associative fear learning, and extinction.

## Investigating Genetic Overlap between Posttraumatic Stress Disorder and Cardiometabolic Traits

(Bio Med, Health-Genetic, Adult, M, Global)

**Sumner, Jennifer, PhD**[1]; Duncan, Laramie, PhD[2]; Wolf, Erika, PhD[3]; Amstadter, Ananda, PhD[4]; Baker, Dewleen, MD[5]; Beckham, Jean, PhD[6]; Gelaye, Bizu, PhD, MPH[7]; Hemmings, Sian, PhD[8]; Kimbrel, Nathan, PhD[9]; Logue, Mark, PhD[10]; Michopoulos, Vasiliki, PhD, MSc[11]; Mitchell, Karen, PhD[12]; Nievergelt, Caroline, PhD[5]; Rothbaum, Alex, MA[13]; Seedat, Soraya, MD, PhD[14]; Shinozaki, Gen, MD[15]; Vermetten, Eric, MD, PhD[16]
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**Background:** Growing research links posttraumatic stress disorder (PTSD) to various cardiometabolic conditions, and overlapping genetic factors may predispose individuals to both PTSD and cardiometabolic disease. We used summary statistics from the Psychiatric Genomics Consortium (PGC)-PTSD meta-analysis of Duncan and colleagues (2017) to conduct the first genome-wide association study (GWAS)-based investigation of genetic overlap between PTSD and cardiometabolic traits. **Methods:** Cross-trait LD score regression (LDSR) was used to estimate genetic correlations between PTSD and coronary artery disease (CAD), anthropometric traits, glycemic traits, type 2 diabetes, and lipids. Analyses were conducted on LD Hub, a database of GWAS summary statistics that automates the LDSR pipeline. The PGC-PTSD GWAS meta-analysis summary statistics were based on 9,542 European ancestry (EA) participants collected across 9 studies. **Results:** Small to moderate positive correlations were observed between PTSD with CAD and anthropometric and glycemic traits. The correlation of PTSD with CAD was significant (r=.41, p=.01); correlations with body mass index (r=.21, p=.08) and fasting insulin (r=.39, p=.09) were nominally significant. **Conclusions:** In EA individuals, there is potential for shared genetic contributions to PTSD and several cardiometabolic traits. Results indicative of shared genetic risk are consistent with epidemiologic evidence linking PTSD to elevated obesity, cardiovascular, and metabolic risk.

## Large-scale Genome-Wide Association Studies (GWAS) in PTSD across Gender, Ancestry and Trauma-type

(Bio Med, Bio Med-Genetic, Adult, M, Global)

Maihofer, Adam, MS[1]; **Ratanatharathorn, Andrew, MS, PhD Student**[2]; Dalvie, Shareefa, PhD[3]; Duncan, Laramie, PhD[4]; Daly, Mark, PGDip Psych[5]; Ressler, Kerry, MD, PhD[6]; Liberzon, Israel, MD[7]; Koenen, Karestan, PhD[8]; Nievergelt, Caroline, PhD[9]; PGC PTSD Workgroup[10]
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*[8]Harvard School of Public Health, Boston, Massachusetts, USA*
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*[10]PGC PTSD Workgroup, San Diego, California, USA*

**Background:** The development of post-traumatic stress disorder is influenced by both genetic and environmental factors. The Psychiatric Genomics Consortium (PGC) PTSD group expanded to include >35 cohorts with genomic data from 20,000 PTSD cases and 50,000 trauma-exposed controls. Here we present our current findings across ancestry groups, trauma-type, and gender. **Methods:** Genotypes were processed with a modified PGC-pipeline for ancestry assessment. Each subject's ancestry was determined and Genome-Wide Association Studies (GWAS) were performed for each study and ancestry group and meta-analyzed across studies. Meta-analyses for each gender were also conducted. Standard methods were used to estimate SNP-based heritability and genetic correlations with other psychiatric traits and disorders in European-ancestry subsets and for males and females separately. **Results:** To date, no genome-wide significant hits were found in trans-ethnic or gender-stratified meta-analyses. Similar effects were observed between studies of civilian and military trauma. We found that PTSD liability was

significantly influenced by genetics ($p<0.05$), with SNP-based heritability being higher in European American women (29%, $p<0.05$) than in men (7%, NS). The point estimate for heritability among American Americans (-0.005) was not significant. Polygenic methods showed a significant overlap of PTSD with other psychiatric disorders. Interpolations from other PGC disorders suggest that we may be reaching the inflection point for first GWAS hits with ~20,000 PTSD cases, results that will be presented. **Conclusions:** Our current findings show that PTSD is significantly influenced by genetic factors, which vary between females and males and overlap with other psychiatric disorders. Very large sample sizes are needed to investigate the genetic architecture of PTSD.

## Symposium
## Saturday, November 11
## 3:00 PM to 4:15 PM
## Salon 6/7
## Assessment and Diagnosis Track

## Understanding the Impact of Trauma: A Look beyond PTSD

(Assess Dx, Anx-Rape-Sub/Abuse-Mil/Vets, Adult, I, Industrialized)

**Raines, Amanda, PhD**[1]; Weathers, Frank, PhD[2]
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Posttraumatic stress disorder (PTSD) was first introduced in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; American Psychiatric Association, 1980). As opposed to other disorders classified within the DSM, PTSD was the first to be diagnosed as a result of an etiological agent outside of the individual. Since its initial inception, the diagnosis of PTSD has received considerable empirical attention. This includes recently being reclassified into its own section of the DSM-5 within the Trauma- and Stressor-Related Disorders chapter (APA, 2013). Regardless of this classification, research has shown that the aftermath of trauma can extend well beyond symptoms codified in the diagnosis of PTSD. As such, the current symposium will explore the relationships between trauma/PTSD and other psychiatric symptoms/conditions in an effort to better understand a full array of trauma reactions. Presentations include an examination of the associations between trauma and obsessive-compulsive disorder, social anxiety disorder, eating disorders, and substance use disorders. Samples utilized include an outpatient sample of veterans, military sexual trauma patients, and firefighters. Following these presentations, findings will be synthesized by Dr. Weathers, an expert on assessment and treatment of PTSD, to help inform the optimization of psychosocial treatments for trauma reactions.

## Posttraumatic Stress and Obsessive-compulsive Symptoms: An Investigation within a Military Sexual Trauma Sample

(Assess Dx, Anx-Rape-Mil/Vets, Adult, I, Industrialized)

**Raines, Amanda, PhD**; Cuccurullo, Lisa-Ann, PsyD; Durham, Casey, PhD; Walton, Jessica, PhD; Franklin, C, PhD
*Southeast Louisiana Veterans Health Care System, New Orleans, Louisiana, USA*

Stressful life events have been identified as a catalyst for the abrupt onset of both obsessive-compulsive disorder (OCD) and posttraumatic stress disorder (PTSD). Indeed, several clinical and empirical based studies have documented the co-occurrence of these disorders following exposure to a traumatic life event. Despite these suggested associations, little research has examined the phenotypic expression of OCD after such an experience. Using a military sexual trauma (MST) sample (N = 32; Mage = 46.25; 72% African-American), the current study explored the associations between DSM-5 PTSD symptom severity and specific OCD symptom dimensions using the Dimensional Obsessive Compulsive Scale (DOCS), a redesigned measure that more reliably assesses the four most commonly replicated OCD symptom dimensions. Results revealed that after controlling for relevant demographic information (e.g., participant sex and race), PTSD symptom severity was significantly associated with unacceptable thoughts/neutralizing domain of OCD ($\beta = .64$, $p = .002$), but not the contamination obsessions/washing compulsions domain ($\beta = .24$, $p = .258$), harm obsessions/checking compulsions domain ($\beta = .27$, $p = .196$), or the symmetry obsessions/arranging compulsions domain ($\beta = .31$, $p = .117$). Findings will be discussed with regard to treatment implications and future directions.

## Evaluating the Relations between Social Anxiety and Posttraumatic Stress in an Outpatient Treatment Seeking Veteran Sample

(Assess Dx, Anx-Mil/Vets, Adult, I, Industrialized)

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Herman (1992) posited that social detachment is one of the most notable outcomes of trauma with interpersonal events potentially threatening ones connectedness of others/their environment. Indeed there is evidence to suggest that individuals with PTSD experience difficulties in interpersonal domains, but research is limited into the relationship between PTSD and social anxiety. Thus, the current study examined DSM-5 PTSD and social anxiety symptoms using an outpatient sample of veterans. Sixty veterans (Mage = 46.03; 75% male; proposed N = 100) presenting to an outpatient Veterans Administration clinic for psychological services. At intake, all individuals completed a diagnostic assessment and a brief battery of self-report questionnaires to assist with diagnostics and treatment planning. Results revealed associations between social anxiety and PTSD symptom severity ($\beta$ = .36, p = .004) as well as all four symptom clusters: intrusion ($\beta$ = .40, p = .001), avoidance ($\beta$ = .30, p = .016), negative cognitions/mood ($\beta$ = .31, p = .013), and arousal ($\beta$ = .30, p = .020), even after accounting for mood psychopathology. Findings will be discussed in light of clinical implications and future directions.

## PTSD and Eating Disorder Pathology: What Maintains the Comorbidity and Why

(Clin Res, Affect/Int-Assess Dx-Mil/Vets, Adult, I, N/A)

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While PTSD, depression and distress, have been reported as mediators for trauma and eating disorders (Dubosc et al., 2012; Lucea, 2012; Capitaine et al., 2011), the literature remains scarce as to why these two disorders continue to present comorbidly. It is likely due to the fact that there is no definitive way to understand the onset or relationship of these disorders in the absence of a naturalistic, longitudinal study. A recent suggestion has been to focus on maintenance factors associated with this comorbidity to better address these disorders in treatment (Trottier et al., 2016). This study seeks to understand the maintenance of PTSD and eating disorder comorbidity in a sample of trauma-exposed individuals. Three hundred Veterans completed self-report questionnaires asking about demographics, PTSD (PCL-5; Weathers et al., 2013), depression (BDI; Beck et al., 1996), eating disorders (EDDS; Stice et al., 2000), and shame (ESS; Andrews et al., 2002). Findings revealed a direct association between PTSD symptoms and increased eating disorder symptoms even after accounting for participant gender ($\beta$ = .22, p = .001). Moreover, depression rather than shame mediated this association (B = 4.71, 95% CI [2.15, 7.78]). Results will be discussed with regard to future research and treatment implications.

## PTSD Symptom Severity and Alcohol Use among Firefighters: The Moderating Role of Impulsivity

(Clin Res, Chronic-Prevent-Sub/Abuse, Adult, I, Industrialized)

**Bartlett, Brooke, MA**[1]; Smith, Lia, BA[1]; Tran, Jana, PhD[2]; Vujanovic, Anka, PhD[1]
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Firefighters represent a unique population at high risk for trauma exposure, alcohol misuse, and posttraumatic stress disorder (PTSD). This study explored the main and interactive effects of PTSD symptom severity and impulsivity, defined as the tendency to act rapidly without adequate thought, with regard to alcohol use in firefighters. We hypothesized that higher levels of PTSD symptom severity and impulsivity would be related to greater alcohol misuse, dependence, and alcohol-related problems. Covariates included trauma load, depressive symptom severity, and smoking status. The sample included 554 male firefighters (Mage = 38.63, SD = 8.51) who endorsed past-month alcohol use. Firefighters completed a questionnaire battery. PTSD symptom severity and impulsivity were significantly, incrementally associated with alcohol

misuse (β's = 0.27, 0.18, respectively), alcohol dependence (β's=0.27, 0.17, respectively), and adverse alcohol-related consequences (β's= 0.28, 0.11, respectively) (all p's < .01). Significant interactive effects of PTSD symptom severity and impulsivity in relation to alcohol misuse (β = 0.79;p < 0.01), alcohol dependence (β = 1.15;p < 0.001), and adverse alcohol-related consequences (β = 0.84;p<0.01) were noted. This is the first study to simultaneously examine these variables in firefighters. This line of inquiry has great potential to inform intervention efforts for this vulnerable population.

## Panel Presentation
## Saturday, November 11
## 3:00 PM to 4:15 PM
## Crystal Room
## Treatment Track

## Using and Expanding Evidence Based Treatments to Address Moral Injury among Veterans

(Practice, Assess Dx-Clin Res-Cog/Int-Mil/Vets, Adult, M, Industrialized)

**Burkman, Kristine, PhD**[1]; **Russ, Eric, PhD**[2]; **Pratchett, Laura, PsyD**[3]; Lehrner, Amy, PhD[3]
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[2]*University Of Louisville, Louisville, Kentucky, USA*
[3]*James J Peters VAMC/Mount Sinai School of Medicine, Bronx, New York, USA*

This panel will review empirical and clinical approaches for understanding and treating moral injury (Litz et al., 2009) in the context of war stress. Premorbid factors (i.e., childhood trauma, shame-proneness, spiritual beliefs), and veterans' concerns about the legitimacy of clinical attention for acts of perceived transgression, complicate the clinical picture for therapists working with individuals who identify morally injurious events as core areas of distress and dysfunction. We will examine the strengths and limitations of existing evidence-based treatments (EBTs) for PTSD in addressing moral injury. Since moral injury is not explicitly addressed in EBTs for PTSD, interventions such as Impact of Killing (Maguen et al., 2017) and Adaptive Disclosure (Litz et al., 2015) are being tested to more explicitly address sequelae of morally injurious events. Panelists will share strategies for assessment of moral injury, intervention selection, and discuss elements that underlie various approaches, such as a need to address chronic existential and interpersonal conflicts. Panelists will use de-identified case material to highlight how we incorporate EBTs with these promising new approaches in developing evidence-based, best practices. Discussion will include recommendations for future research and clinical practice, with the goal of engaging attendees in an interactive discussion.

## Panel Presentation
## Saturday, November 11
## 3:00 PM to 4:15 PM
## Adams Room

## Hate on the Rise: Trends and Treatment of Identity-Based Violence

(Practice, Comm/Vio-Cul Div-Global, Lifespan, I, Global)

Minshew, Reese, PhD[1]; **Khedari, Vivian, MA, PhD Student**[1]; **Erazo, Tanya, PhD Student**[2]; Ruhlmann, Lauren, MS, PhD Student[3]; **Katsonga-Phiri, Tiamo, BA**[4]; Wills, Sharon, PhD[5]
[1]*New School for Social Research, New York, New York, USA*
[2]*City University of New York, New York, New York, USA*
[3]*Kansas State University, Manhattan, Kansas, USA*
[4]*DePaul University, Chicago, Illinois, USA*
[5]*VA Central Texas Health Care System, Austin, Texas, USA*

This panel is intended to serve: 1.) as a forum for members to share expertise in treating symptoms related to identity-based violence, and 2.) to bring together the membership of different Special Interest Groups (SIG) by highlighting trauma that impacts individuals across different aspects of identity. Hate crimes are a global epidemic, and rates of identity-based violence in the United State spiked in the wake of the 2016 election and have not returned to pre-election levels (Southern Poverty Law Center). However, while studies indicate that surviving identity-based violence can have a particularly harmful effect (e.g., Herek, Cogan, & Gillis, 2002), these studies typically focus on specific populations (e.g., LGBT individuals) rather than on hate crimes or identity-based violence as a category. This

approach, then, focuses on a single category of identity rather than recognizing intersecting identities. Moreover, this approach is mirrored in our society's SIGs, which emphasize the specific needs of groups from one particular lens of identity. However, members recognize that there are multiple aspects of identity contributing to exposure to and recovery from traumatic stress: while 20% of ISTSS members belong to 1 or more SIG, of that 20% the majority belong to 3 or more SIGs. Thus, the goal of this panel is to draw on expertise about hate crimes and identity-based violence (and the treatment of symptoms related to hate crimes and identity-based violence) from several different SIGs to both broaden our perspective and bring together individuals with multiple interests. This panel is co-sponsored by five Special Interest Groups.

## Featured Panel
## Saturday, November 11
## 3:00 p.m. – 4:15 p.m.
## Monroe

### What I Have Changed my Mind About
(Pub Health, Pub Health, Lifespan, M, Industrialized)

**Olff, Miranda, PhD[1]; Turner, Stuart, MD MA FRCP FRCPsych[2]; de Jong, Joop, MD, PhD[3]; Schnyder, Ulrich, MD[4]; Rothbaum, Barbara, PhD[5]**
*[1]Academic Medical Center at the University of Amsterdam and Arq Psychotrauma Expert Group, Amsterdam, Netherlands*
*[2]Trauma Clinic, London, United Kingdom*
*[3]Vrije Universiteit, Amsterdam, Netherlands*
*[4]Zurich University, Zurich, Switzerland*
*[5]Emory University School of Medicine, Atlanta, Georgia, USA*

Our understanding of the complexity of traumatic stress responses continues to grow. In this featured panel, ISTSS lifetime achievement award recipient Dr. Joop de Jong and ISTSS past presidents Doctors Ulrich Schnyder, Stuart Turner, Miranda Olff, and Barbara Rothbaum discuss how their own ideas concerning how to understand, assess, and intervene in traumatic stress responses has matured over the course of their collective clinical and research careers, and will share their best predictions and impressions regarding what are the next most urgent steps for the clinical and research fields. The audience is encouraged to participate in what is sure to be a lively discussion about what we all have learned through our studies into the complexity of traumatic stress responses, from disorder to recovery.

## Workshop Presentation
## Saturday, November 11
## 3:00 PM to 4:15 PM
## Salon 2
## Child Trauma Track

### Treatment of Complex Trauma in Children and their Families: An Evidence-Based, Integrative Approach
(Practice, Chronic-Complex-Fam/Int-Train/Ed/Dis, Child/Adol, M, Industrialized)

**Lanktree, Cheryl, PhD**
*University of Southern California, Torrance, California, USA*

This workshop describes the evidence-based treatment model, *Integrative Treatment of Complex Trauma for Children (ITCT-C)* that has been implemented nation-wide in the U.S., and will focus on play/expressive and cognitive-behavioral approaches for trauma and relational/attachment processing, mindfulness techniques for affect regulation, and systemic approaches for caretakers. Treatment interventions for complex trauma in children experiencing a range of trauma exposures (e.g., sexual abuse, physical abuse, emotional neglect and abuse, domestic violence, community violence) often overlook the integration of interventions for both children and their caretakers to address not only the multiple trauma exposures but also the relational/attachment history and current attachment issues that compound the impact of complex trauma exposures. This workshop will present specific interventions for six to twelve year olds, included in the recently published, *Treating Complex Trauma in Children and their Families: An Integrative Approach* (Lanktree & Briere, 2016). *ITCT-C* allows for the customization of treatment based on the needs of the child and his/her family, and incorporates collaborations with other relevant systems: Child welfare, juvenile justice, criminal justice, schools, and medical. Interventions for child clients and caretakers will focus on the *ITCT-C* components: Relational/Attachment Processing and Cognitive/Emotional Processing using play and

expressive therapy activities, Affect Regulation/Distress Reduction using mindfulness and play/expressive techniques, and Caretaker/Family System Interventions, with particular emphasis on cultural factors associated with both urban and rural environments, and ways to provide advocacy and support for families with limited resources. This workshop will also include interactive practice of techniques, using ITCT-C-specific tools, as well as discussion of supervision and self-care strategies for clinicians confronting the significant challenges of working with children and families experiencing complex trauma. Participants will also have an opportunity to discuss adaptations of *ITCT-C* for their particular community.

## Closing Keynote Panel
## Saturday, November 11
## 4:30 p.m. – 5:45 p.m.
## State Ballroom

# Modern Warrior Live

(Multi-Media, QoL-Mil/Vets, Adult, M, Industrialized)

**Palmieri, Patrick A., PhD[1]; Kudler, Harold, MD[2]; Vermetten, Eric, MD, PhD[3]; Phelps, Andrea, PhD[4]; Poling, Jaymes[5]; Farinacci, Dominick[5]**
*[1]Summa Health System, Akron, OH, USA*
*[2]United States Department of Veterans Affairs, Washington, DC, USA*
*[3]Centrum '45 Arq / Leiden University Medical Center, Lieden, Netherlands*
*[4]Australian Centre for Posttraumatic Mental Health, University of Melbourne, Carlton, Victoria, Australia*
*[5]Modern Warriors Live, Cleveland, OH, USA*

Modern Warrior is a live music drama co-created by veteran Jaymes Poling & jazz artist Dominick Farinacci. Narrated by Staff Sergeant Jaymes Poling, who spent three years in Afghanistan as an infantryman with the 82nd Airborne Division, he details his time spent in the military and transition home to civilian life, surrounded by a live musical performance lead by Dominick Farinacci (former Global Ambassador to Jazz at Lincoln Center NYC). Exploring the psychological weights of war, challenges reintegrating as a civilian, and the potential for positive growth, Modern Warrior seeks to build bridges and understanding between civilian and veteran communities through music and stories, and puts forward a lesser-known term in American culture: posttraumatic growth. The live performance will be followed by a panel discussion.