

Massed vs Intensive Outpatient Prolonged Exposure for Combat-Related Posttraumatic Stress Disorder



Alan Peterson, PhD, APBB, Professor and Chief, Division of Behavioral Medicine
UT Health San Antonio, South Texas Veterans Health Care System, and UTSA

Conflict of Interest, Disclosures, and Disclaimers

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- Commercial support was not received for this activity.
- Some of the content of this presentation may be distressing. Viewer discretion is advised.

Brief Bio, Alan Peterson, PhD

- **Retired USAF Clinical Health Psychologist (1980-2005)**
 - Dept Chair and Fellowship Director, Wilford Hall
 - Completed 3 post-9/11 deployments
- **UT Health San Antonio (2005-present)**
 - Professor and Chief, Division of Behavioral Medicine
 - Director, STRONG STAR Consortium
 - Associate Director of Research, Military Health Institute
- **UTSA Dept of Psychology (2012-present)**
 - Professor, Military Health Psychology PhD Program
- **South Texas Veterans Health Care System (2014-2021)**
 - Supervisory Research Health Scientist

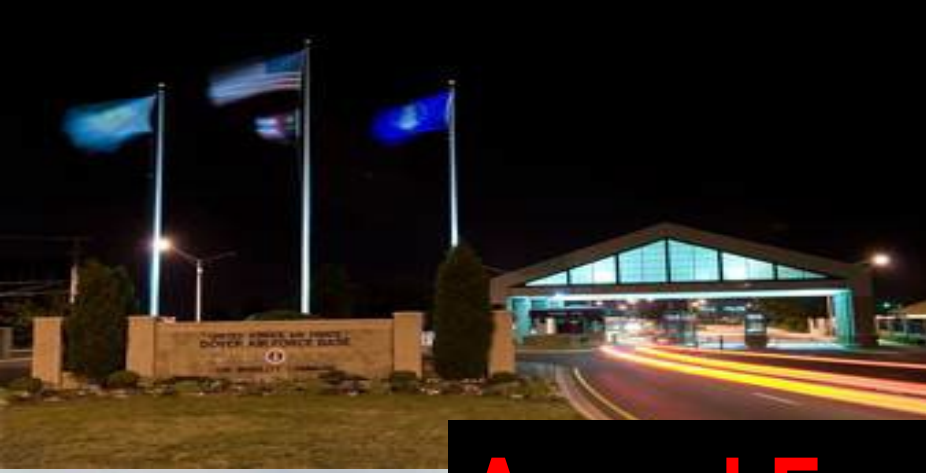


**Where were
you?**



9-11-2001





Armed Forces Mortuary





Operation Enduring Freedom





Operation Iraqi Freedom





The Air Force Theater Hospital





GULF WAR and HEALTH

*Long-Term Effects of
Blast Exposures*

Committee on Gulf War and Health:
Long-Term Effects of Blast Exposures

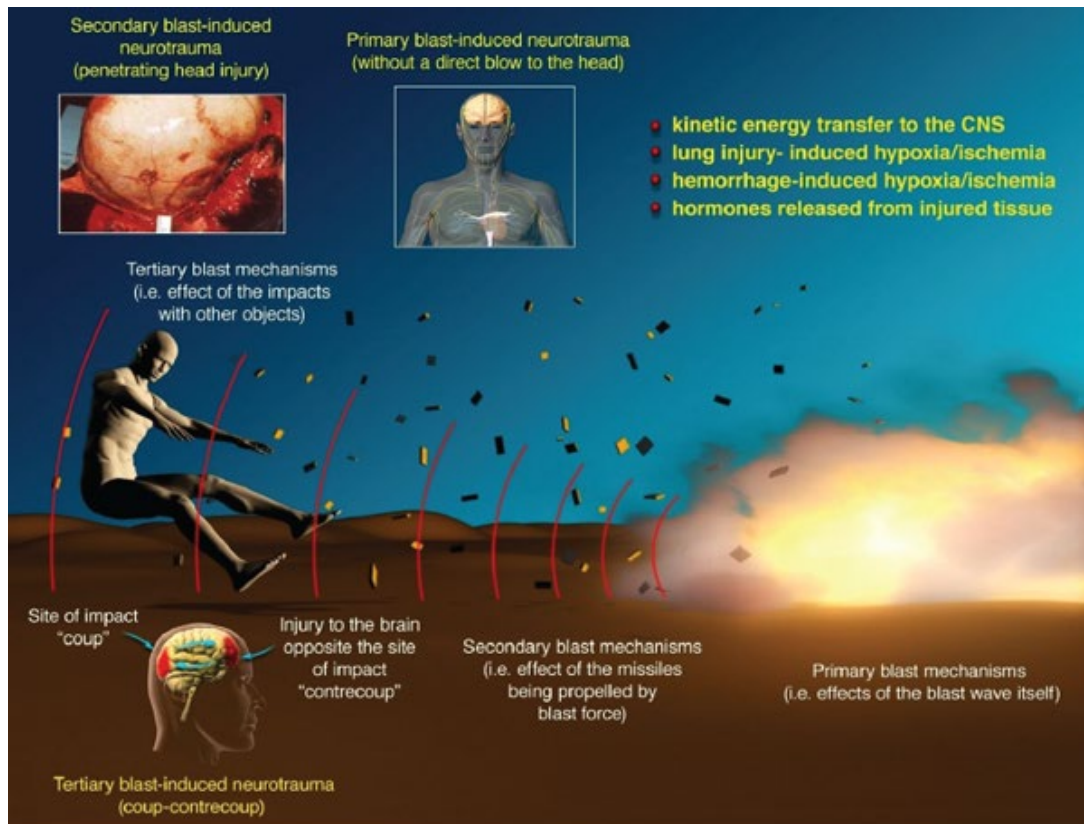
Board on the Health of Select Populations

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www.nap.edu

Complex Injurious Environment Due to Blast

Institute of Medicine Committee on Long-Term Consequences of Blast Exposures (2014)



The Multi-System Response to Blast

Institute of Medicine Committee on Long-Term Consequences of Blast Exposures (2014)

Acute Blast: Vulnerable Organs/Systems



Long-term Secondary Effects



Modified from www.readengage.com

TBI and PTSD Symptom Overlap

<h2>TBI</h2>	<h2>PTSD</h2>
Insomnia	Insomnia
Memory Problems	Memory problems
Poor concentration	Poor concentration
Depression	Depression
Anxiety	Anxiety
Irritability	Irritability
Headache	Re-experiencing
Dizziness	Avoidance
Fatigue	Emotional numbing
Noise/light intolerance	



The First Patient



Three American Troops in Iraq: Evaluation of a Brief Exposure Therapy Treatment
J.A. Cigrang, A.L. Peterson, R.P. Schobitz
Pragmatic Case Studies in Psychotherapy, <http://pcsp.libraries.rutgers.edu>
Volume 1, Module 2, Article 1, pp. 1-25, 07-27-2005 [copyright by authors]

Three American Troops in Iraq: Evaluation of a Brief Exposure Therapy Treatment for the Secondary Prevention of Combat-Related PTSD*

JEFFREY A. CIGRANG^{a,d}, ALAN L. PETERSON^b, & RICHARD P. SCHOBITZ^c

^a Wright-Patterson Medical Center, Dayton, Ohio

^b Wilford Hall Medical Center, San Antonio, Texas

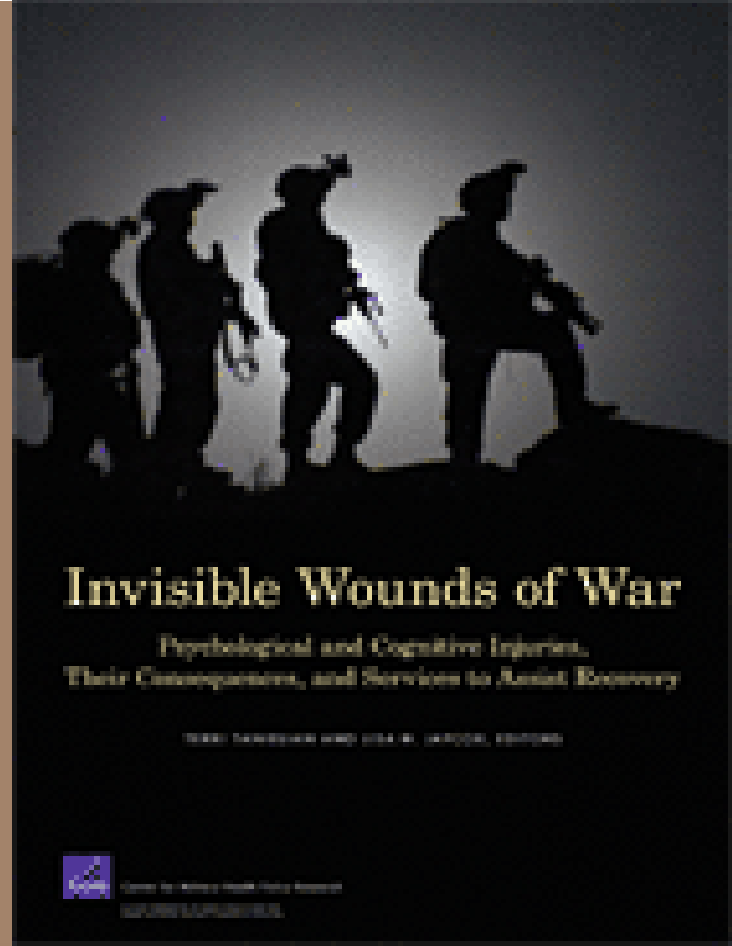
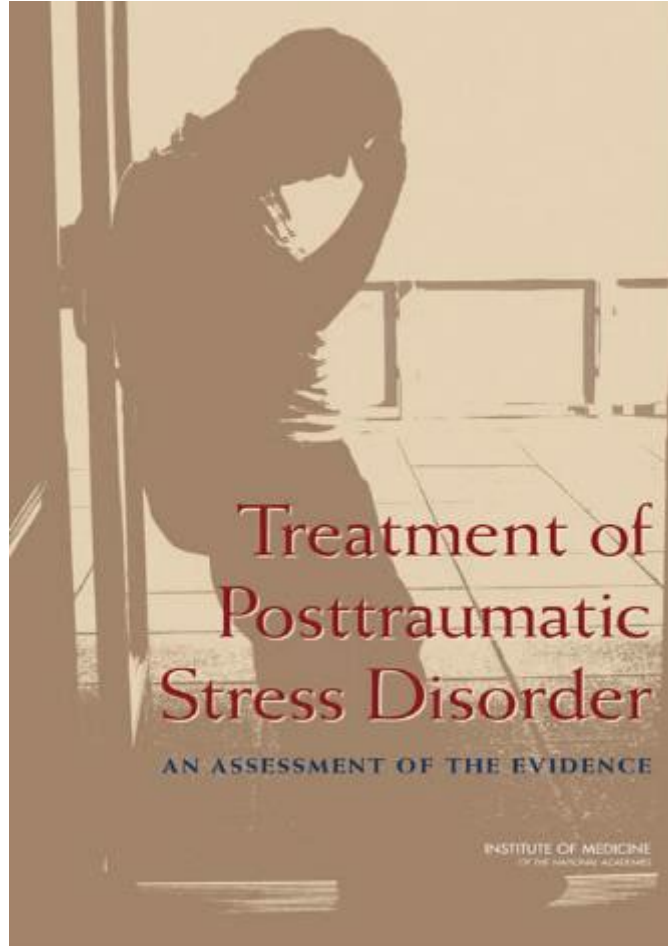
^c Tripler Army Medical Center, Honolulu, Hawaii

^d Correspondence concerning this article should be addressed to Jeff A. Cigrang, 88th Medical Operations Squadron/SGOH, 4881 Sugar Maple Drive, Wright-Patterson Air Force Base Ohio 45433-5529.

Email: jeff.cigrang@wpafb.af.mil

*Note: The views expressed in this article are those of the authors and are not the official policy of the Department of Defense or the United States Air Force.

National Needs Assessment Institute of Medicine and RAND Reports



Treating Combat-Related PTSD after 9/11

- At the start of Operation Enduring Freedom in 2001, no randomized clinical trials had been conducted on the treatment of PTSD in active duty military personnel
- Most previous clinical trials focused on treating PTSD in female assault victims
- A few studies had been done with veterans
- As of 2001, it was evident that:
 - Treatments that work for civilians may not work for veterans or military personnel
 - Treatments that work for veterans may not work for military personnel
 - Treatments that work for civilians and veterans may need to be adapted for the unique needs of military personnel

2007 Defense Appropriation to Support PTSD and TBI

- \$900M appropriation
 - \$600M clinical; \$300M research
 - \$150M PTSD research; \$150M TBI research
- STRONG STAR
 - Consortium Director: Alan Peterson, PhD
- Mission Connect (TBI Research Consortium)
 - Consortium Director: Alex Valadka, MD
- INTRUST (Injury and Traumatic Stress) Consortium
 - Consortium Director: Murry Stein, MD

STRONG STAR PTSD Research Consortium

- **South Texas Research Organizational Network Guiding Studies on Trauma And Resilience**
 - Acronym written as two words, all caps: STRONG STAR
- Headquartered at UT Health San Antonio
- **Vision:** To reduce or eliminate combat-related PTSD in active-duty military and recently discharged veterans
- **Mission:** To support multi-disciplinary & multi-institutional research collaboration with the synergy to develop new PTSD prevention & treatment programs that could not be achieved independently





National Research Action Plan

Responding to the Executive Order
*Improving Access to Mental Health
Services for Veterans, Service Members,
and Military Families (August 31, 2012)*

Department of Defense
Department of Veterans Affairs
Department of Health and Human Services
Department of Education

August 2013



- In August 2013, President Obama issued Executive Order directing the DoD, VA, HHS, and Education to develop a National Research Action Plan on PTSD, other mental health conditions, and TBI
- Consortium to Alleviate PTSD (CAP) specifically highlighted as the group to lead the nation's action plan for combat-related PTSD





STRONG STAR: South Texas Research Organizational Network Guiding Studies on Trauma And Resilience
CAP: Consortium to Alleviate PTSD



- World's leading peer-reviewed research consortia for the diagnosis, prevention, and treatment of combat posttraumatic stress disorder (PTSD) and related conditions (sleep disorders, chronic pain, traumatic brain injury, substance use disorders, suicide, tinnitus, etc.)
- Additional focus on enhancing resiliency in military service members
- Over 40 collaborating universities, hospitals, & institutions
- Over 150 collaborating investigators and clinicians
- Over 85 projects funded for over \$200 million
- Completed many of the largest randomized clinical trials in DoD history



STRONG STAR: South Texas Research Organizational Network Guiding Studies on Trauma And Resilience
CAP: Consortium to Alleviate PTSD



Peterson, Young-McCaughan, Roache, ... & Keane, for the STRONG STAR Consortium and the Consortium to Alleviate PTSD. (2021). **STRONG STAR and the Consortium to Alleviate PTSD: Shaping the future of combat PTSD and related conditions in military and veteran populations.**

Contemporary Clinical Trials, 110, 106583.

<https://doi.org/10.1016/j.cct.2021.106583>

Can PE and CPT be Prospectively Delivered to Treat PTSD in a Combat Environment?





A Nonrandomized Trial of Prolonged Exposure and Cognitive Processing Therapy for Combat-Related Posttraumatic Stress Disorder in a Deployed Setting

Alan L. Peterson

University of Texas Health Science Center at San Antonio
South Texas Veterans Health Care System, San Antonio
University of Texas at San Antonio

Edna B. Foa

University of Pennsylvania

Patricia A. Resick

Duke University

Timothy V. Hoyt

Defense Health Agency, Tacoma, WA

Casey L. Straud

Brian A. Moore

University of Texas Health Science Center at San Antonio
University of Texas at San Antonio

James V. Favret

United States Air Force

Willie J. Hale

University of Texas Health Science Center at San Antonio
University of Texas at San Antonio

Brett T. Litz

VA Boston Healthcare System
Boston University

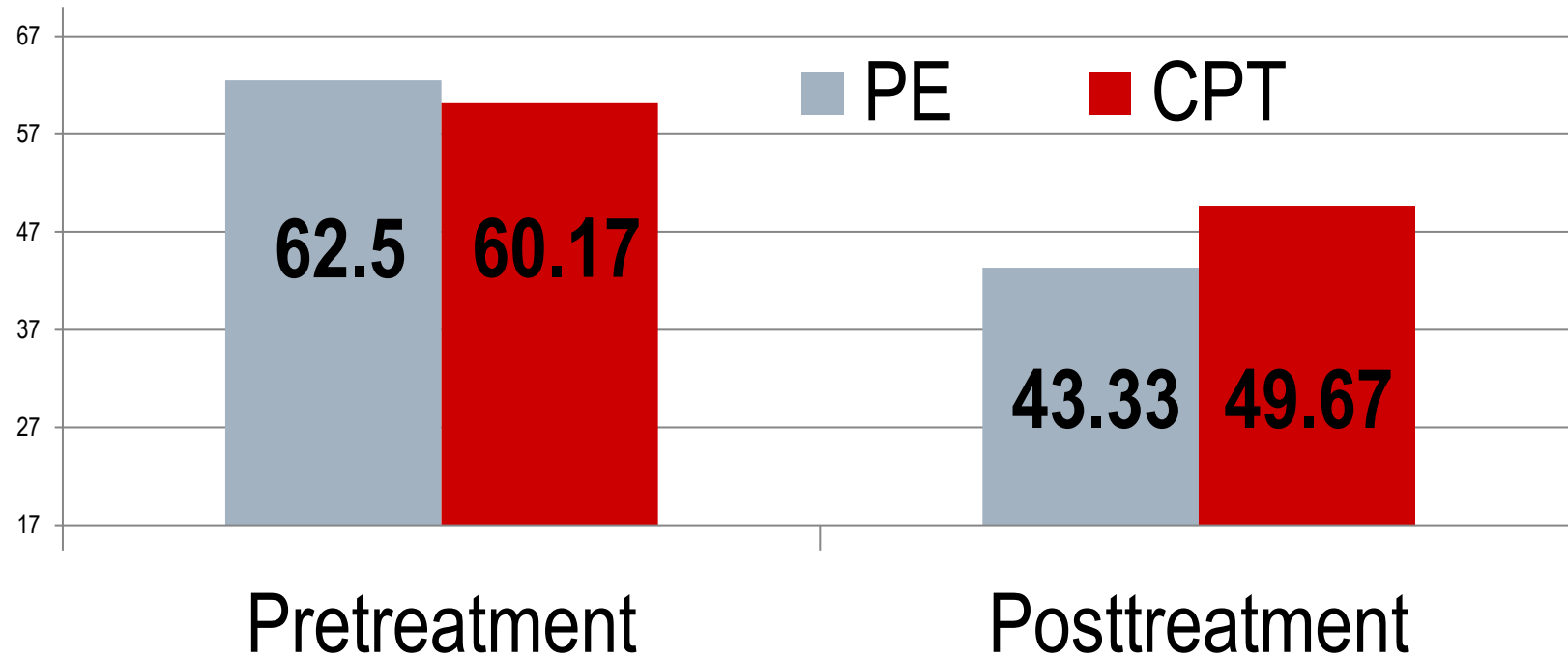
Timothy E. Rogers

Uniformed Services University of the Health Sciences
Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio-Lackland, TX

Participants

- ($N = 12$) received either PE ($n = 6$) or CPT ($n = 6$) by deployed military behavioral health providers who had been trained in PE or CPT prior to deployment.
- Participants not randomized to conditions, but received treatment based on the clinical judgment of the provider.
- Treatment sessions were scheduled and conducted flexibly to allow for adaptations needed to meet the work demands in the deployed location.

Results of PCL-M



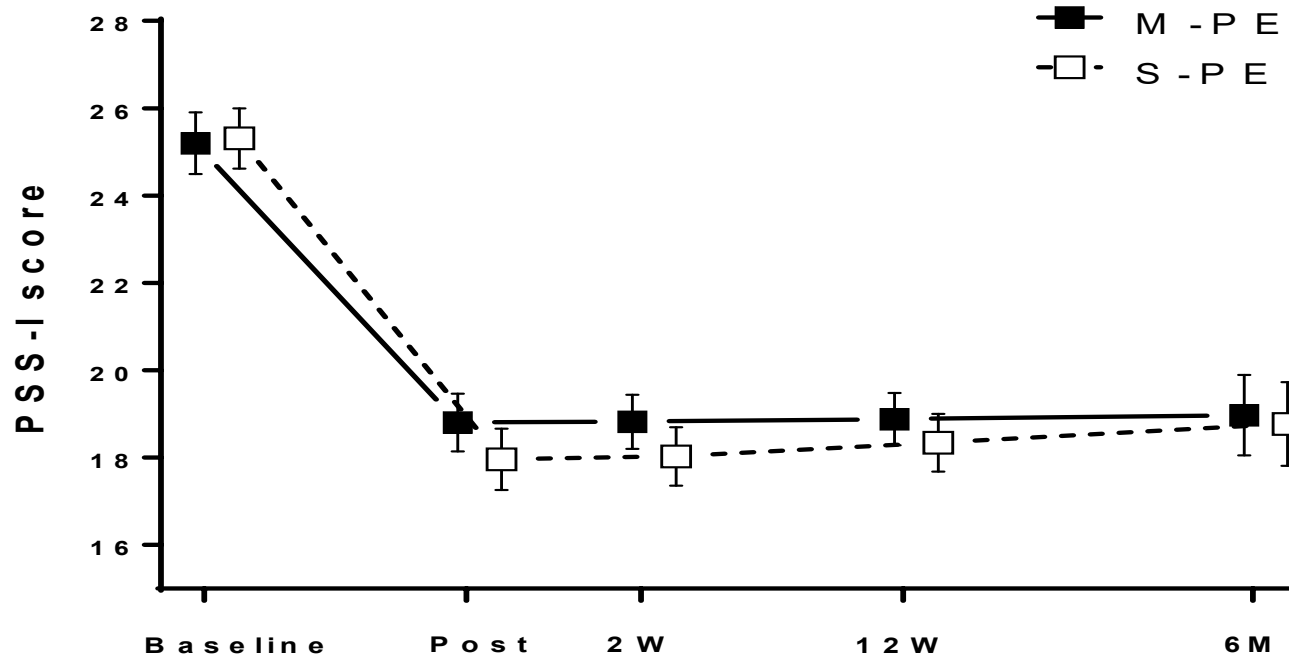
JAMA | Original Investigation

Effect of Prolonged Exposure Therapy Delivered Over 2 Weeks vs 8 Weeks vs Present-Centered Therapy on PTSD Symptom Severity in Military Personnel A Randomized Clinical Trial

Edna B. Foa, PhD; Carmen P. McLean, PhD; Yinyin Zang, PhD; David Rosenfield, PhD; Elna Yadin, PhD; Jeffrey S. Yarvis, PhD; Jim Mintz, PhD; Stacey Young-McCaughan, RN, PhD; Elisa V. Borah, PhD; Katherine A. Dondarville, PsyD; Brooke A. Fina, MSW; Brittany N. Hall-Clark, PhD; Tracey Lichner, PhD; Brett T. Litz, PhD; John Roache, PhD; Edward C. Wright, PhD; Alan L. Peterson, PhD; for the STRONG STAR Consortium

- 366 participants at Ft Hood, Texas were randomized to:
 - **M-PE**: 10 PE sessions delivered in 2 weeks (“massed”); (n = 110)
 - **S-PE**: 10 PE sessions delivered in 8 weeks (“spaced”); (n = 109)
 - **PCT**: 10 PCT sessions delivered in 8 weeks; (n = 107)
 - **MCC**: 2 weeks of twice weekly minimal contact phone calls;(n = 40)

Daily treatment with Prolonged Exposure



Foa et. al (2018) Effect of PE therapy delivered over 2 weeks vs 8 weeks vs present-centered Therapy on PTSD symptom severity in military personnel: A RCT. *JAMA*

Limitations of Foa et al. (2018)

- Only about 50% of patients were has clinically significant reductions in symptoms or lost PTSD diagnosis
- Compared to about 80% in previous studies with civilian female assault victims
- Massed-PE patients returned to duty after each 90-minute PE session and did not have adequate time to complete daily out-of-session homework activities (i., listed to audio recording of session, complete in-vivo exercises)
- Many patients had multiple traumas in addition to the Criterion A event
- Although standard 10-session PE protocol is not limited to addressing just one trauma, it is difficult to treat more than 1 in 10 sessions
- The standard PE protocol may benefit from some enhancements

Can the Efficacy of PE be Enhanced when Delivered as Part of an Intensive Outpatient Program (IOP)?



Intensive prolonged exposure therapy for combat-related posttraumatic stress disorder: Design and methodology of a randomized clinical trial

Alan L. Peterson^{a,b,c,*}, Edna B. Foa^d, Tabatha H. Blount^a, Carmen P. McLean^{e,k}, Dhiya V. Shah^a, Stacey Young-McCaughan^a, Brett T. Litz^{f,g}, Richard P. Schobitz^h, Diane T. Castilloⁱ, Timothy O. Rentz^b, Jeffrey S. Yarvis^j, Katherine A. Dondanville^h, Brooke A. Fina^a, Brittany N. Hall-Clark^a, Lily A. Brown^a, Bryann R. DeBeer^l, Vanessa M. Jacoby^m, Allison K. Hancock^a, Douglas E. Williamson^{l,m}, Wyatt R. Evans^a, Samantha Synettⁱ, Casey Straud^a, Hunter R. Hansenⁿ, Eric C. Meyer^l, Martin A. Javors^o, Allah-Fard M. Sharrieff^l, Jose Lara-Ruiz^{a,f}, Lauren M. Koch^a, John D. Roache^a, Jim Mintz^a, Terence M. Keane^{f,g}, for the Consortium to Alleviate PTSD

Peterson, A. L., Blount, T. H., Foa, E. B., Brown, L. A., McLean, C. P., Mintz, J., Schobitz, R. P., DeBeer, B. R., Mignogna, J., Fina, B. A., Evans, W. R., Synett, S., Hall-Clark, B. N., Rentz, T. O., Schrader, C., Yarvis, J. S., Dondanville, K. A., Hansen, H., Jacoby, V. M., Lara-Ruiz, J., Straud, C. L., Hale, W. J., Shah, D., Koch, L. M., Gerwell, K. M., Young-McCaughan, S., Litz, B. T., E. C., Meyer, Blankenship, A. E., Williamson, D. E., Roache, J. D., Javors, M. A., Sharrieff, A.-F. M., Niles, B. L., & Keane, T. M., for the Consortium to Alleviate PTSD. (in press). Massed Versus Intensive Outpatient Prolonged Exposure for Combat-Related Posttraumatic Stress Disorder: A Randomized Clinical Trial. *JAMA Network Open*.

Project Remission

Maximizing Outcomes with Intensive Treatments for Combat-Related PTSD

Principal Investigator: Alan Peterson, PhD

Performance Sites: UT Health San Antonio, Brooke Army Medical Center, South Texas Veterans Healthcare Organization, Carl R. Darnall Army Medical Center

Study Aims

Aim 1: Conduct a two-group randomized clinical trial to evaluate the efficacy of Massed-Prolonged Exposure (Massed PE) vs Intensive Outpatient Program -Prolonged Exposure (IOP-PE) for the treatment of combat-related PTSD in active duty service members and veterans who deployed following 9-11-2001.

Aim 2: To evaluate changes in disability and functional outcomes after Massed-PE and IOP-PE.

Approach

Post-9/11 service members ($n = 115$) and veterans ($n = 115$) will be randomly assigned to either the Massed PE or IOP-PE treatment condition. Assessments are conducted at baseline as well as at posttreatment, 3-month, and 6-month follow-up points.



Treatment Conditions

- **Massed-PE (M-PE):** 15 daily, individual, 90-minute PE treatment sessions over 3 weeks
 - Released from duty for 3 weeks to complete daily PE out-of-office homework exercises
- **Intensive Outpatient-PE (IOP-PE):** 15 daily, individual, 90-minute PE treatment sessions over 3 weeks
 - Released from duty for 3 weeks to complete daily PE out-of-office homework exercises
 - 8 additional treatment augmentations

IOP-PE Augmentations

- | |
|---|
| 1. Team-Based Treatment |
| 2. Clinic-Based Completion of Homework |
| 3. Brief Therapist Feedback Sessions |
| 4. Enhanced Social Support |
| 5. Top Three Traumas |
| 6. Graduated Imaginal Exposure |
| 7. Brief Timeline Review of all Traumas |
| 8. Posttreatment Booster Sessions |

4 Texas Recruitment Sites

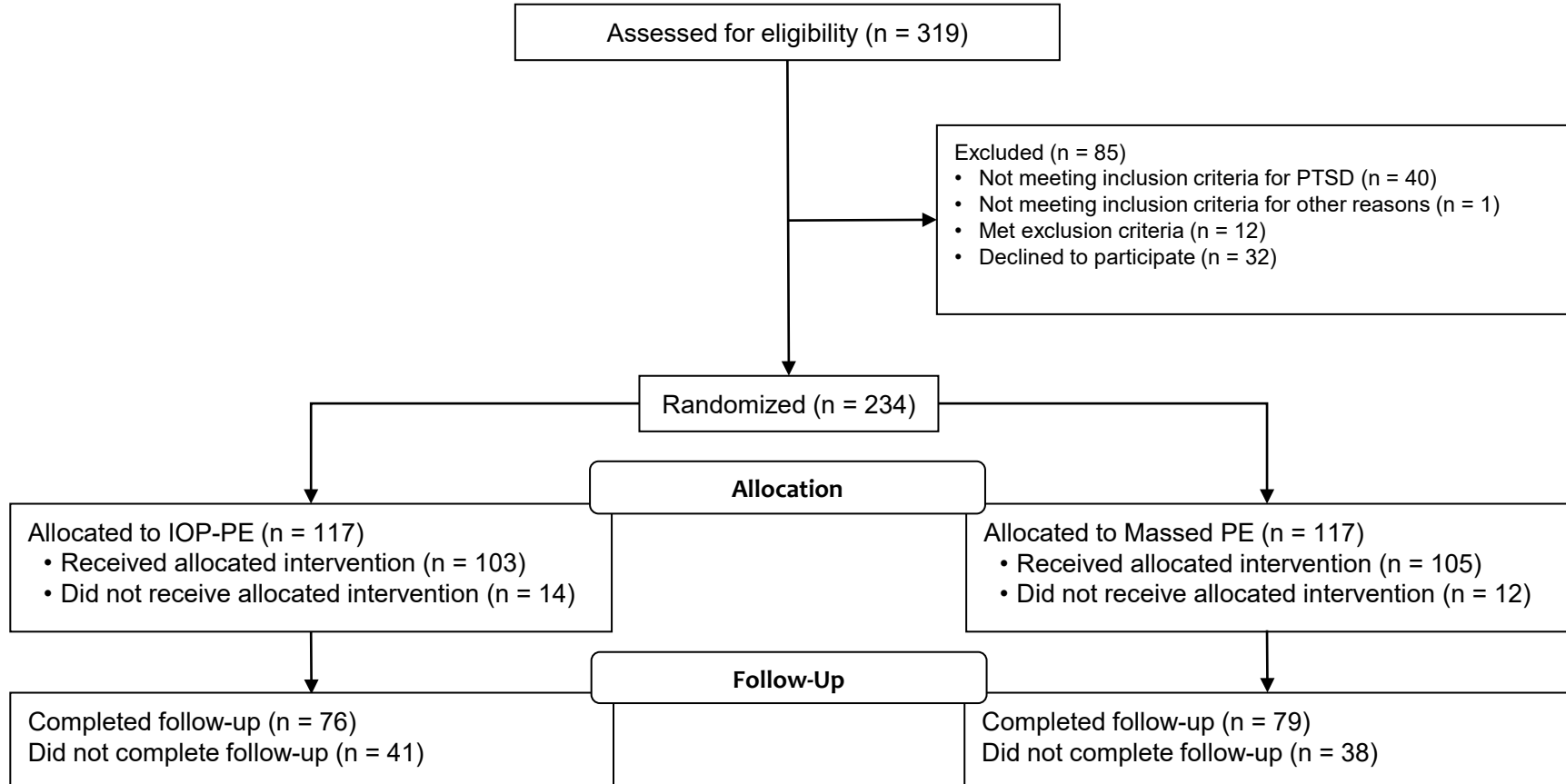
2 Active Duty Military Sites
2 Veterans Administration Sites

BAMC	Brooke Army Medical Center Joint Base San Antonio-Fort Sam Houston, San Antonio, TX
STVHCS	South Texas Veterans Health Care System, San Antonio, TX
CRDAMC	Carl R. Darnall Army Medical Center, Fort Hood, Killeen, TX
CTVHCS	Central Texas Veterans HealthCare System, Waco, TX

Site Recruitment

Site	Consented	Randomized
BAMC	74	62
STVHCS	73	46
CRDAMC	117	87
CTVHCS	55	39
TOTAL	319	234

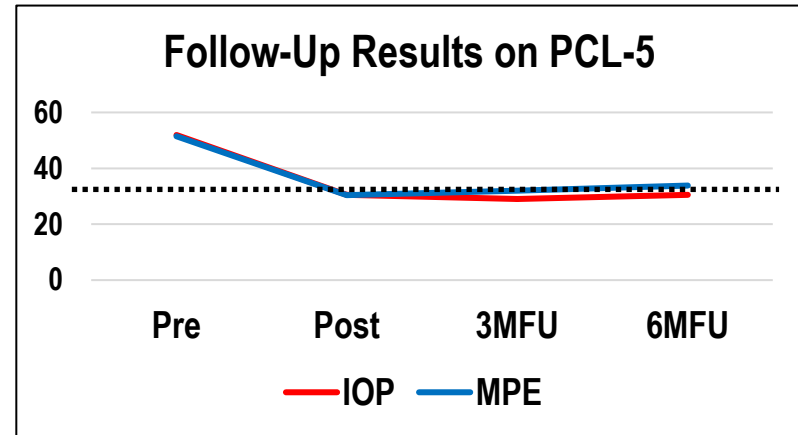
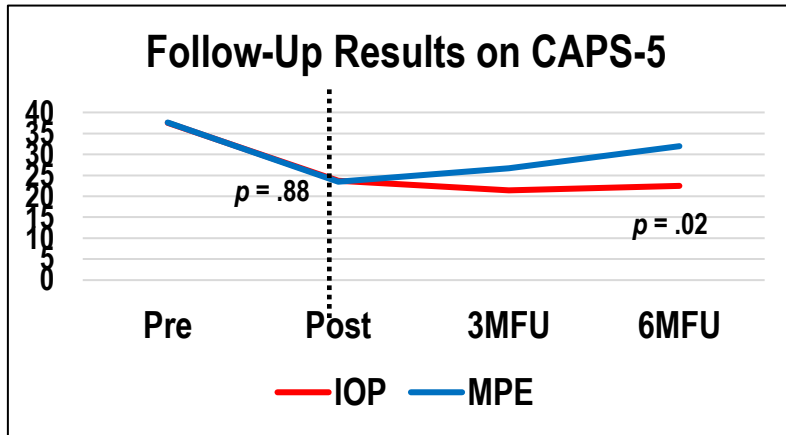
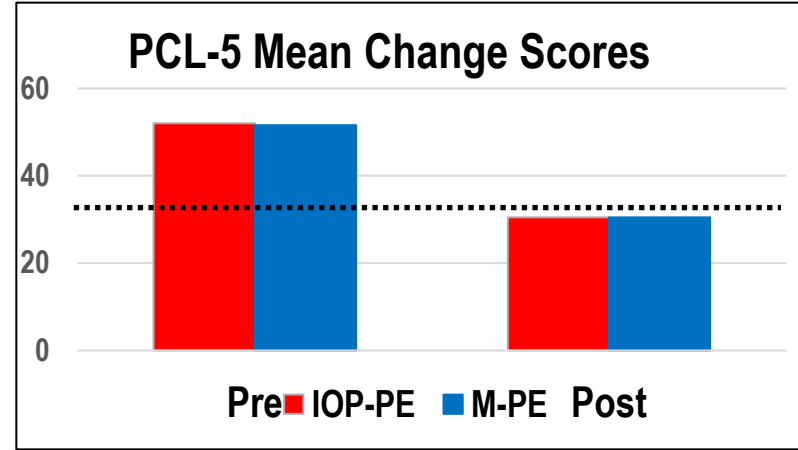
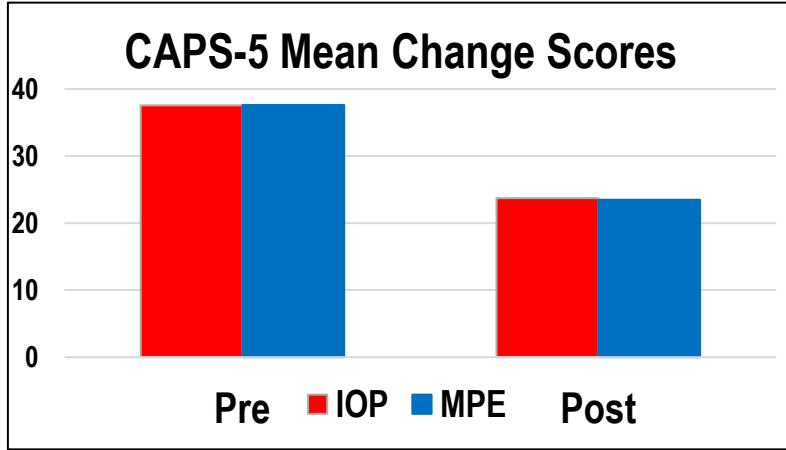
CONSORT Diagram



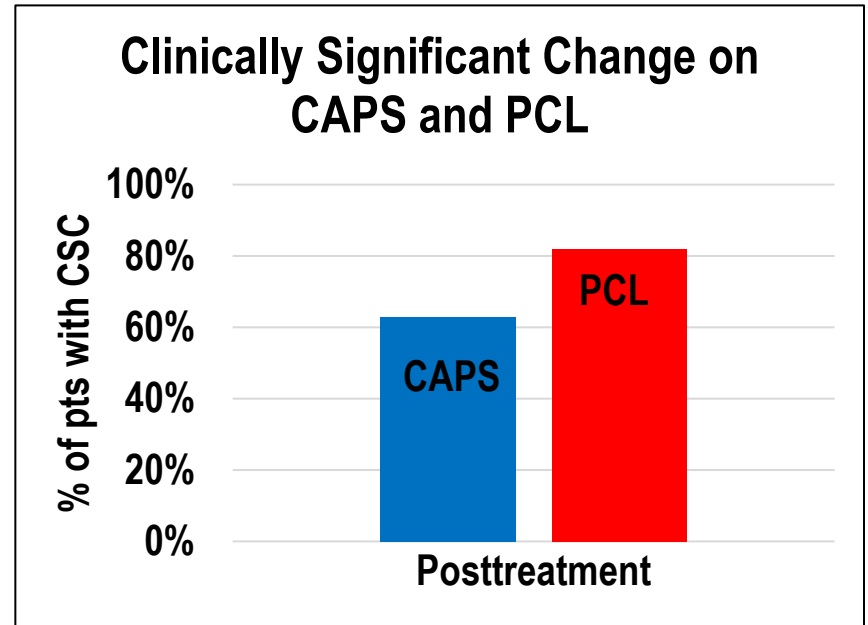
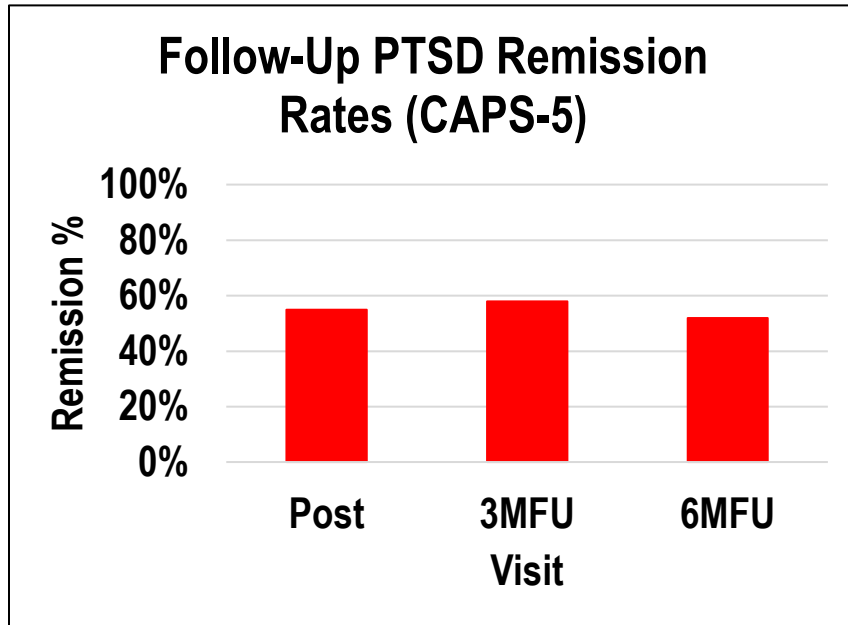
Demographics

Demographics at Baseline	% or (mean \pm SD)
Age in years (mean \pm SD)	39
Gender: percent male	78%
Military Status	
Active Duty	65%
Veteran	35%
CAPS-5 total score (mean \pm SD)	37.57

Findings: CAPS-5 and PCL-5

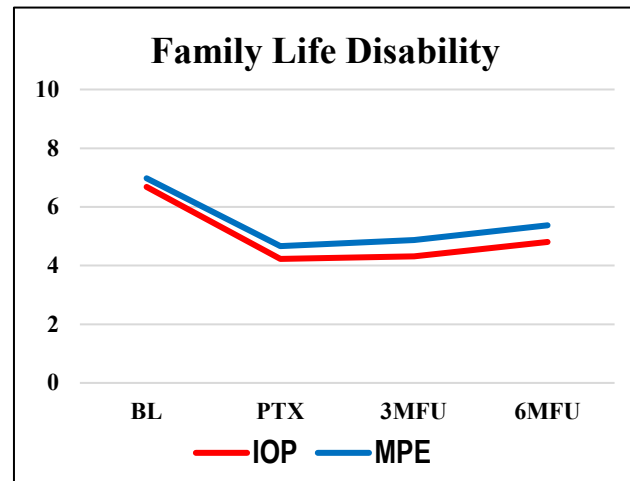
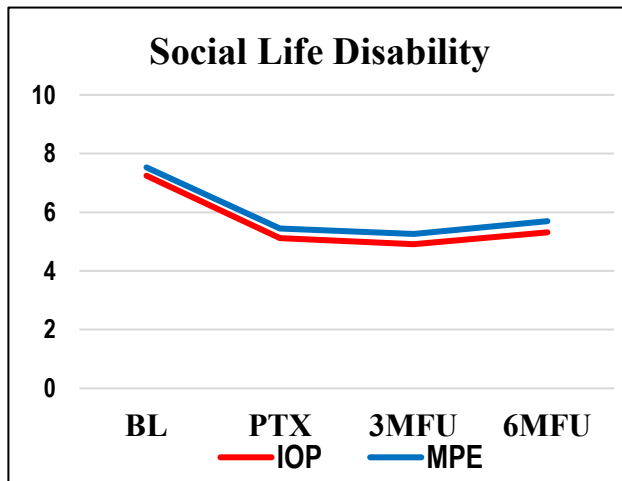
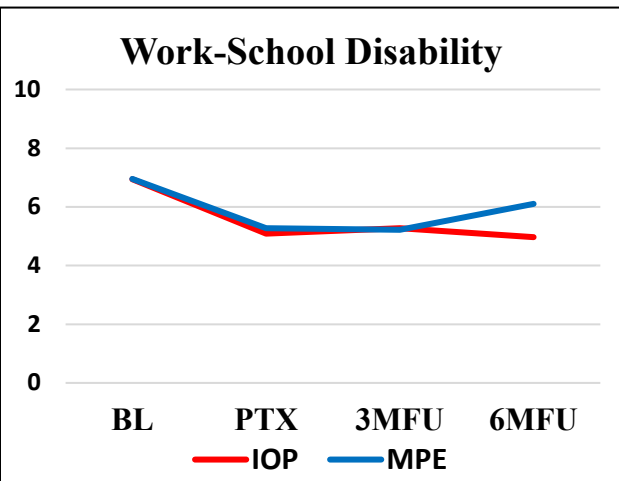


Combined IOP-PE and Massed-PE Groups



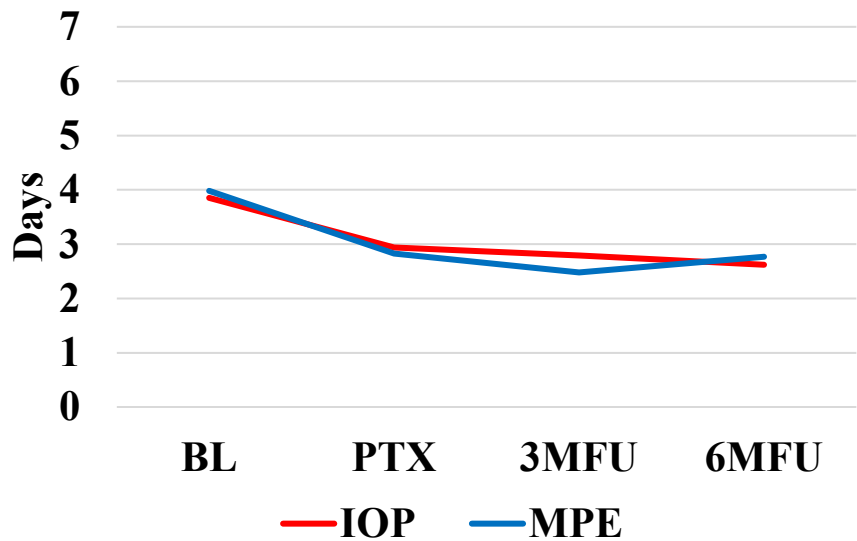
Hypothesis 3: SDS Results

- There was not a significant interaction effect across the five **Sheehan Disability Scale (SDS)** items, $p > .05$, but there was a significant main effect of time across the five SDS items, $p < .001$.
- SDS range = 1-10 (higher scores = greater disability)

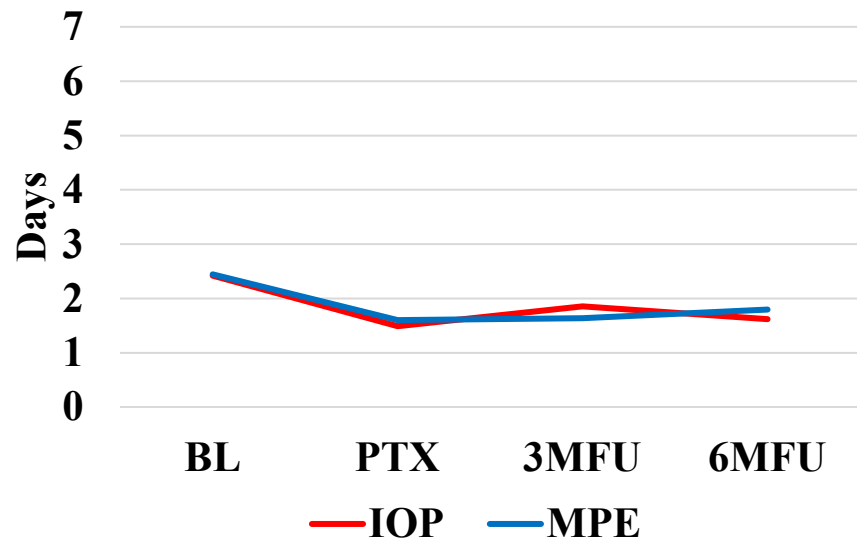


Hypothesis 3: SDS Results

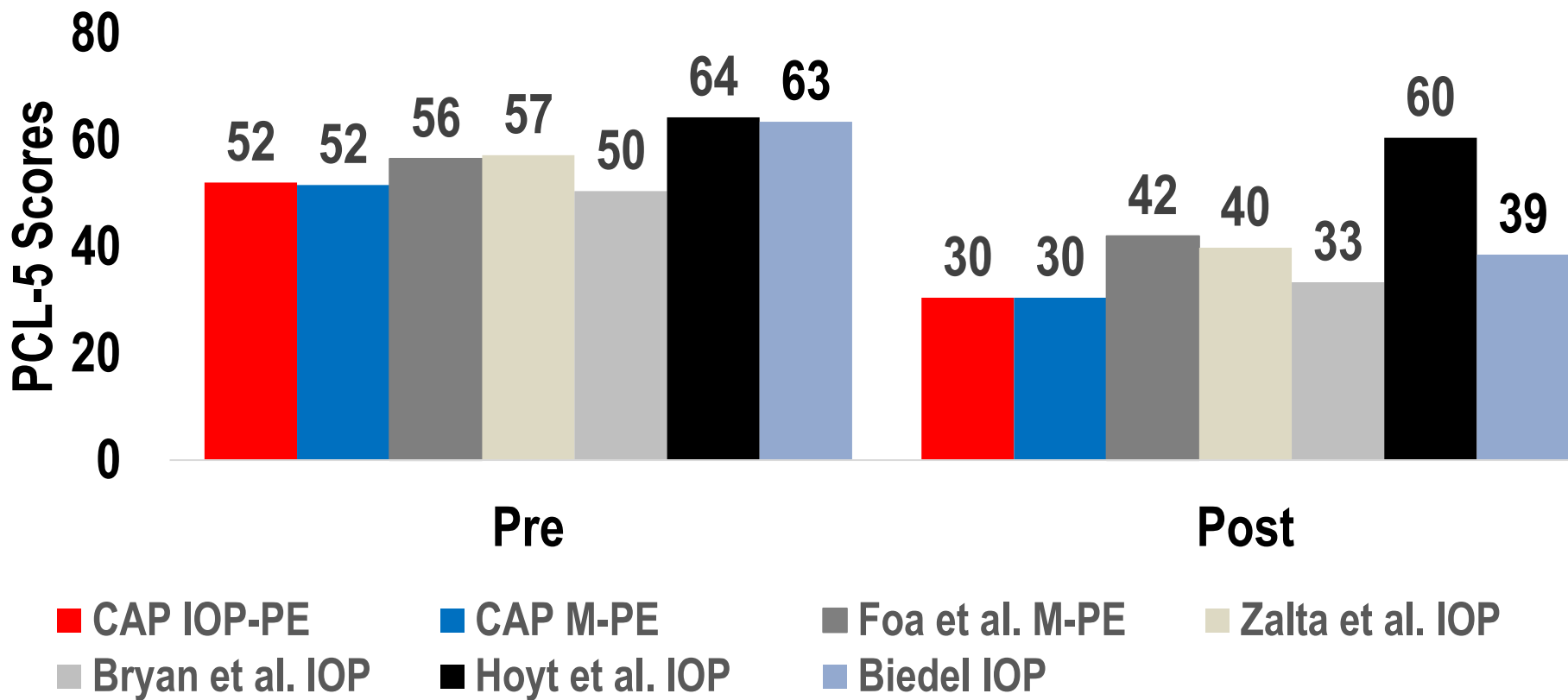
Days Unproductive Last Week



Days Lost Last Week



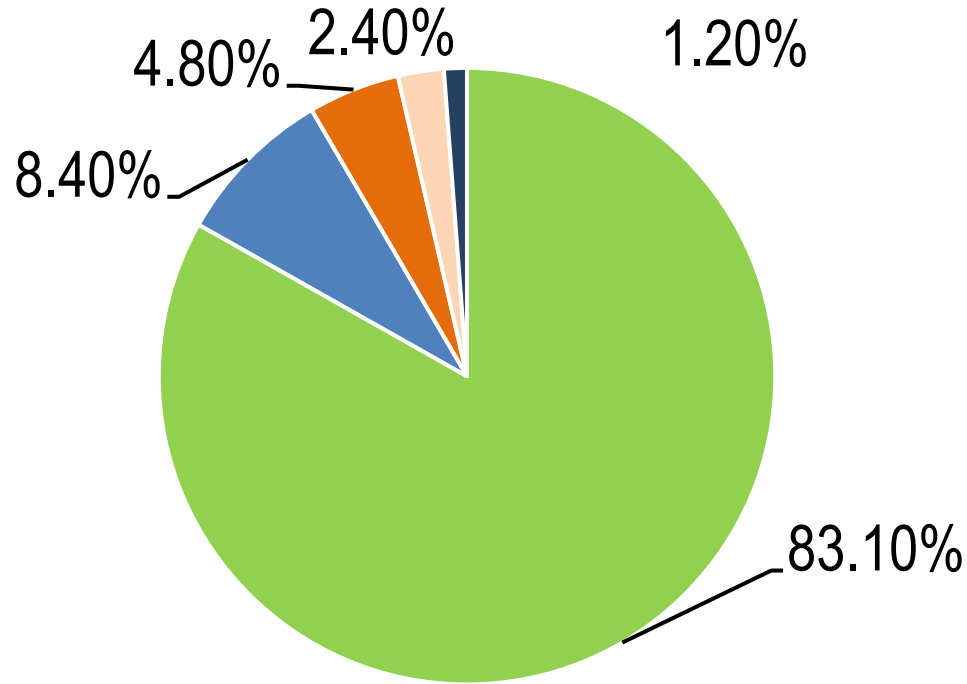
PCL-5: Project Remission vs. Prior Research



Analyzing the Top Three Trauma Types in Individual Service Members and Veterans with PTSD

- **Participants**
 - N = 83 service members & veterans recruited from South Central Texas randomized to the IOP-PE arm of Project Remission
 - Age range 20-50
- **Military Grade**
 - 87.3% enlisted
 - 12.2% officers
- **Gender**
 - 79.5% males
 - 20.5% females

Military Branches



■ Army ■ Air Force ■ Navy ■ Marines ■ Coast Guard

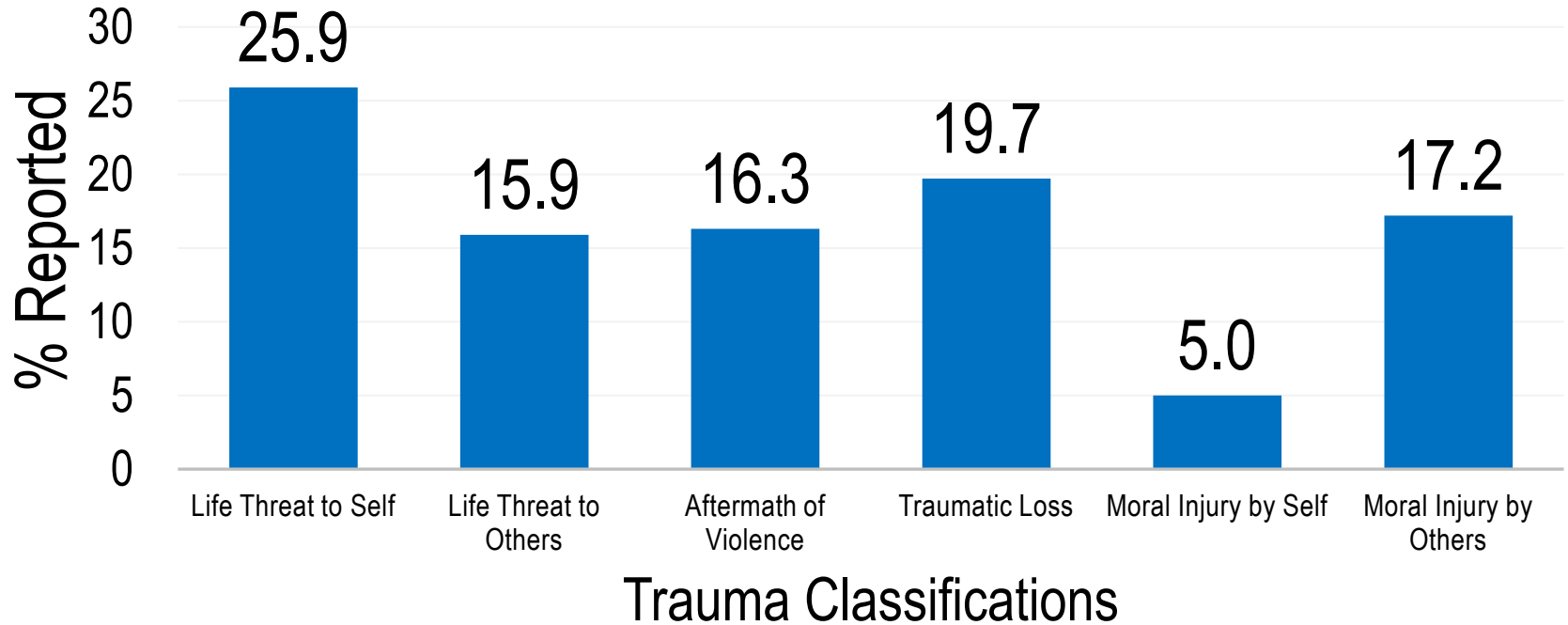
Trauma Categories Operationally Defined

Category	Definition
Life Threat to Self	Personal exposure to the threat of death or serious injury
Life Threat to Others	Personal exposure to the death or threatened death of others
Aftermath of Violence	Personal exposure to the haunting images or sight, smell, sounds of the injured
Traumatic Loss	Witnessing or learning about the death of a loved one
Moral Injury by Self	Committing an immoral act
Moral Injury by Others	Witnessing or being the victim of an immoral act

Note. Two coders extrapolated data from participant files into an Excel spreadsheet. Following data collection, coders classified each trauma according to the Litz Trauma Classification Scale operationally defined above.

Classifications Across all 239 Traumatic Events Reported

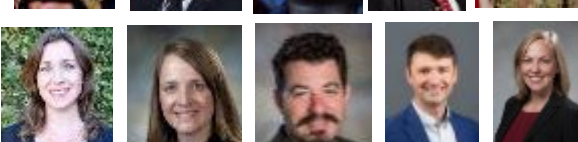
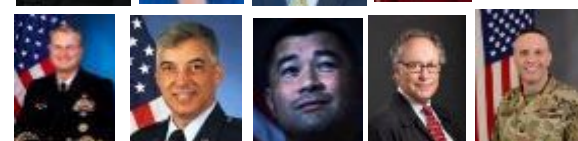
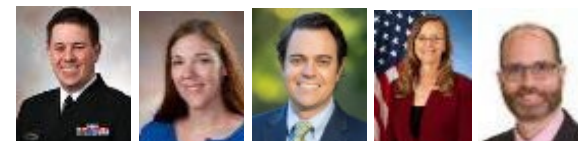
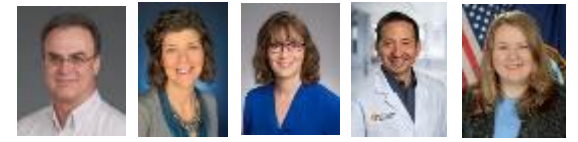
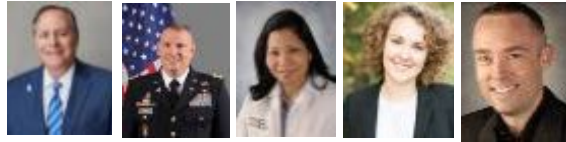
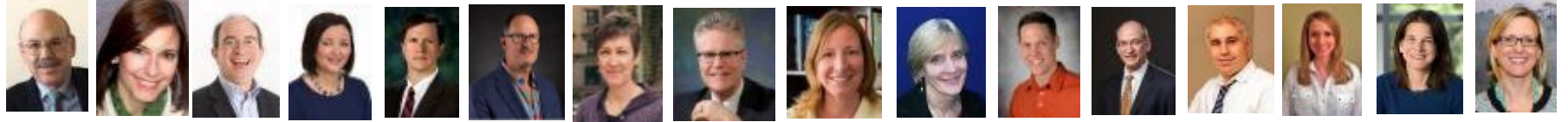
Percentages Across All Traumas Reported



Summary

- **Life Threat to Others** was the most often reported Criterion A event when assessing only the most distressing trauma (20/83)
- **Life Threat to Self** was the most frequently reported among all traumas assessed as one of the top three traumas (62/239)
- **Life Threat to Self** was the most reported for the **secondary** (19/79) and **tertiary** (27/77) traumas.
- Most PTSD therapies primarily focus on the index event, which in this case would be the **Life Threat to Others**.
- This suggests that the Criterion A event alone does not depict the full trauma history
- Future research should
 - Evaluate additional trauma categorizations to evaluate patterns found from analyzing the top three traumas
 - Determine the potential benefits across PTSD symptom clusters of assessing and treating the top three traumas in service members and veterans

2022 Team Award for Academia Military Health System Research Symposium



**Outstanding
Research
Accomplishments**



Presented by the STRONG STAR Consortium and The University of Texas Health Science Center at San Antonio, this premier scientific meeting focuses on the psychological needs of the warfighter. Come hear the state-of-the-science on the assessment and treatment of posttraumatic stress disorder and related psychological health conditions affecting our military service members and veterans.



**Source: SAVE THE DATE
October 17-18, 2023**

**Briscoe Western Art Museum, San Antonio, TX
Stay informed and sign up for e-mail notifications at
www.combatPTSDconference.com**

Questions

