



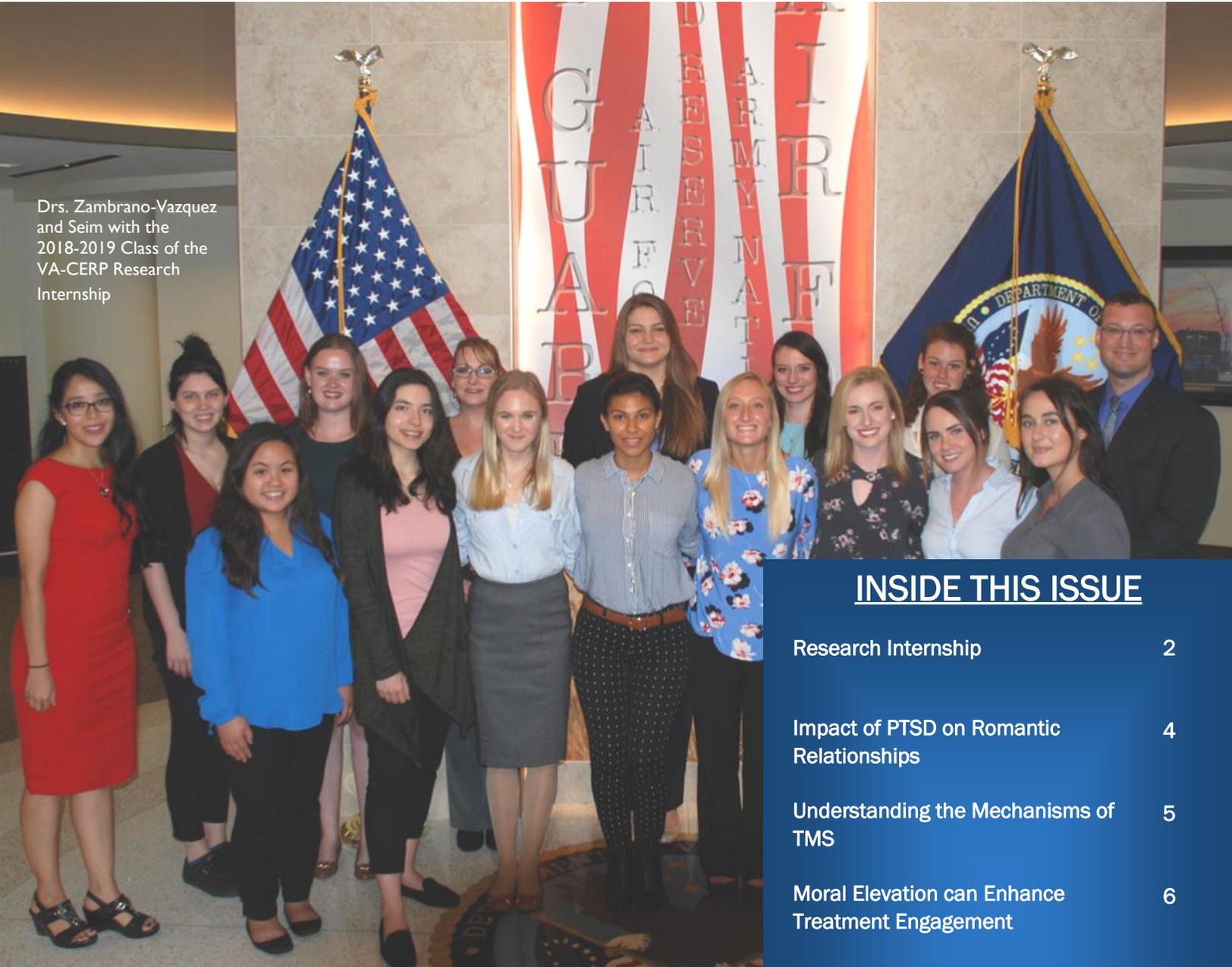
# Points of Excellence

The Newsletter of the VISN 17 Center of Excellence for Research on Returning War Veterans

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Drs. Zambrano-Vazquez and Seim with the 2018-2019 Class of the VA-CERP Research Internship



The VA VISN 17 Center of Excellence for Research on Returning War Veterans is dedicated to conducting research that serves to improve the quality of life of our nations Veterans and foster the wellbeing of their families.

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## INSIDE THIS ISSUE

Research Internship	2
Impact of PTSD on Romantic Relationships	4
Understanding the Mechanisms of TMS	5
Moral Elevation can Enhance Treatment Engagement	6
Welcome New Staff	6
PTSD Study Reaches Final Phase	7
Recent Articles	8

## Success of the VA Center of Excellence Undergraduate Research Program

This May, the VA Center of Excellence Research Program (VA-CERP) graduated 13 college interns from Baylor University and Tarleton State University. For 10 years, the CoE has sought to provide quality experience for future health professionals through hands on experience in a clinical research setting. Graduating more than 110 students since its inception, our program is the largest undergraduate training programs within the VA system.



Kristen Sosa-Yanez at her invited research poster presentation to the 13th Annual Community Health Research Forum



Nicole D'Aoust and Meredith Hayes received Outstanding Poster Presentation Awards from Baylor University

In April, our undergraduate interns presented the culmination of their research projects at local conferences including the Baylor University Undergraduate Research and Scholarly Achievement (URSA) Scholars week and the McLennan Community College/Tarleton State University Scholar Day. Two of our students, Nicole D'Aoust and Meredith Hayes, were selected to receive Poster Presentation Awards for their stellar work. Additionally, for the first time in the history of our program,

three of our interns were invited to present their work at the 13th Annual Community Health Research Forum at the Family Health Center.



Allie Williams presents her poster at the MCC/Tarleton State University Scholars Day

This was a banner year for VA-CERP, as a record number of graduates from our program were accepted to graduate and medical schools. The CoE is proud to present the nine VA-CERP graduates that are advancing their education at prominent programs this Fall.



L-R: Shawnelle Pollock graduates from VA-CERP; Alyssa Kaser presents her poster at URSA; VA-CERP Baylor University (Top) and Tarleton State University (Bottom) interns present at local conferences.

## VA-CERP Graduates



**Krupa George** graduated from the VA-CERP program in 2017. This summer she will begin her journey to become a physician at the Texas Tech University Paul L. Foster School of Medicine in El Paso, TX.



**Mollie Shin** is a former VA-CERP graduate who has been working as a Psychology Technician for Dr. Creech. She is starting a doctoral program in clinical psychology at the University of Colorado at Denver this fall.



**Viviana Gonzalez** is headed to the University of North Texas in Denton, TX to complete an MBA in Business Management. She plans to apply to Medical School and work with underserved populations.



**Jessica Tinker** is starting a Master's of Science program in Communication Disorders at University of Texas at Dallas to work towards becoming a Certified Speech Language Pathologist (SLP).



**Shaylee Gutierrez** is starting a Master's of Science in Clinical Mental Health Counseling at Tarleton State University. This program represents the first step in obtaining licensure as a professional counselor.



**Chynna Usrey** is starting a Master's of Science in Social Work program the University of Texas at Austin. This prestigious and competitive program is ranked among the top 10 Social Work programs in the nation.



**Binh An Nguyen** will work towards becoming a Licensed Professional Counselor (LPC). This fall she starts a Master's of Science program in Clinical Mental Health Counseling at Tarleton State University.



**Amanda Wright** is headed to Washington University in St. Louis to complete a doctoral program in social psychology, where she plans to pursue her interests on personality and personality disorders.



**Mary Roberts** is headed to Pennsylvania State University to complete a doctoral program in sociology. She plans to use social network analysis to study how social support affects Veterans' mental health outcomes .



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## Going Beyond the Individual: Impact of PTSD on Romantic Relationships



Veterans often rely on spouses and romantic partners as a source of support after returning from deployment

Romantic relationships can be a crucial source of support for Veterans returning from deployment, helping them cope with readjustment. However, mental health issues like PTSD and depression often negatively impact social relationships. Considering the key role that support from an intimate partner could play in facilitating recovery, a team of investigators from the Center of Excellence and their colleagues closely examined how relationship impairment and PTSD symptoms are associated over time.

Veterans with PTSD commonly report decreased satisfaction in their romantic relationships, poor adjustment and family reintegration, and even increased levels of intimate partner violence. Although research suggests that relationship problems can affect how well an individual responds to treatment, the exact nature of how relationships impact PTSD and vice versa is still not thoroughly understood. Additionally, despite the increasing numbers of women serving in the military, research has largely failed to consider the ways in which gender role norms may differentially influence how PTSD and relationship struggles interrelate. Therefore, to provide comprehensive care for those struggling with PTSD, additional clinical attention that selectively focuses on relationship impairment may be warranted.

Data from a longitudinal study was used by CoE Investigators, Drs. Creech, Benzer, Meyer, and DeBeer, and their colleagues to test two theoretical models. Post 9/11 military US Veterans provided information on romantic relationship functioning and PTSD symptoms to determine the impact of gender. The results showed that while increases in PTSD symptoms predicted higher levels of interpersonal impairment over time, relationship difficulties alone did not predict changes in PTSD symptoms. Furthermore, their study found that for women Veterans, but not for men, noncombat life stress was linked to PTSD symptom change. This suggests that over and above PTSD symptoms, treatment should also pay close attention to the influence of general stress and how they may be exacerbating PTSD symptoms. Taken together, the findings highlight that interventions aimed to improve relationship impairment in the context of PTSD symptoms have the potential to be of further benefit for Veterans regardless of gender.

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## Dr. Seim speaks at Vietnam Memorial Event

In April, Dr. Richard Seim was invited to speak at the Vietnam Veterans' Recognition Ceremony in Groesbeck, Texas. The event was sponsored by the 288 Post of the American Legion and the Veterans Partners Association.



## Understanding the Mechanisms of Transcranial Magnetic Stimulation



Dr. Crystal Lantrip

Depression affects more than 16 million Americans every year, yet it is estimated that between 15% and 33% of those seeking pharmacological treatment will not respond to medications. Fortunately, alternative treatments have

emerged that show promise in reducing depressive symptoms in those considered “treatment-resistant.” Dr. Crystal Lantrip, CoE Investigator in the Neuroimaging Core, and her colleagues sought to better understand the mechanisms of action through which a novel brain-stimulation treatment may successfully lead to symptom relief.

Transcranial magnetic stimulation (TMS) is an innovative, safe, and noninvasive FDA-approved treatment for depression. TMS uses electromagnetic induction to stimulate brain regions implicated in emotion regulation, such as the left dorsolateral prefrontal cortex (DLPFC). Because individuals with depression have difficulty with emotional regulation, or the ability to effectively manage and modulate response to emotional experiences, it is plausible to alleviate depression symptoms if emotion dysregulation is targeted. Therefore, one potential mechanism for TMS treatment of depression is that when cognitive control of negative emotion is enhanced via modulation in activity of the DLPFC and network-connected brain regions, depression symptoms may be reduced. However, additional research is needed to further elucidate the specific mechanisms underlying TMS success, allowing us to expand on the applications of TMS.

In their study, Dr. Lantrip and her colleagues tested whether emotion regulation could indeed be part of an underlying mechanism through which TMS leads to symptom reduction by comparing the effects of TMS to the left versus right DLPFC. Healthy women completed a task assessing their degree of emotion regulation following one session of TMS to each the left and right DLPFC. Consistent with their hypothesis, the results showed that participants were better at refocusing their attention away from negative stimuli -a sign of healthy emotion regulation- following a session of left TMS stimulation, but not after right stimulation. Dr. Lantrip and her colleagues suggest that although their findings are preliminary, they are consistent with the theory that left DLPFC TMS treats depression by increasing the cognitive control of emotion. These promising findings have transdiagnostic implications and represent an early first step in understanding the mechanisms of TMS so we can enhance our ability to further improve its success.

### Kudos

- **Dr. Eric Meyer** was granted funding for a DoD Translational Research Award in collaboration with Dr. Alan Peterson studying how to enhance resilience in military special forces trainees.
- **Dr. Yvette Szabo**, postdoctoral fellow in the Biomarkers Core, has been awarded a Career Development Award (CDA-1) to fund her research on the genetic association between combat-related trauma and cognition.

## Witnessing Virtuous Behavior can Enhance Treatment Engagement



Witnessing a random act of kindness, a good deed, and compassionate behavior often leads to a warm, uplifting feeling that inspires us to emulate those behaviors and become better people. In a recent study, Dr. Adam McGuire, CoE postdoctoral fellow, and his colleagues investigated whether this inspiration, known as moral elevation, can help Veterans improve their psychological health and social functioning in treatment.

Research on moral elevation has established a link with emotional resilience, personal growth, and better psychological well-being. Moral elevation encourages social engagement through increased urges for affiliation, enhanced responsiveness to others' needs, greater compassion, and more prosocial behavior. Unfortunately, research to date has been limited to healthy civilian populations. Dr. McGuire and colleagues propose that moral elevation represents an exceptional opportunity to target the negative and social effects of trauma related distress by promoting positive social behaviors that could improve well-being. Given that PTSD symptoms often lead to social difficulties, including isolation, emotions of guilt and shame, and poor self-esteem, this represents a particularly promising area for helping Veterans. For example, witnessing morally elevating events could challenge a Veteran's negative thoughts and emotions so that they may instead be aware of positive behaviors and engage in social interactions. Ultimately, this could facilitate connection to others and reintegration into civilian life.

In their pilot study, moral elevation was measured in a 12-week residential PTSD treatment program to examine if witnessing fellow Veterans' virtuous acts during group therapy would improve treatment engagement. Results showed that when Veterans experienced higher moral elevation they reported higher levels of engagement in group, which carried over to subsequent weeks in treatment. The study also found that higher levels of moral elevation throughout treatment correlated with lower PTSD symptoms and moral injury distress at the end of treatment. The findings of this study represent an important step in understanding how moral elevation can be used to increase effectiveness of treatment and foster psychosocial growth in Veterans experiencing PTSD and moral injury.

### Welcome Our New Staff

**Brian Kim, B.S.** is a psychology technician working on Project SERVE in the Behavioral Science Core where he performs diagnostic interviews. Prior to joining the CoE, he worked as a research assistant at STRONG STAR in Fort Hood, Texas where he found a passion working with Active Duty Service members and Veterans. In his spare time, Mr. Kim volunteers as a counselor on the new Crisis Text Line.



## Multisite Study Testing PTSD Treatment Efficacy Reaches Final Phase

Since the fall of 2017, the Center of Excellence has served as a site for a large study testing the efficiency of a modified empirically supported PTSD treatment. The study, headed by renowned researchers Drs. Alan Peterson and Edna Foa, provided treatment through four sites across Texas. After over two years, the study has reached the last phase of this major enterprise serving post-9/11 active duty service members and Veterans.



PE is widely used as an effective PTSD treatment

Prolonged exposure is a trauma-focused cognitive behavioral therapy that emphasizes the role of avoidance in maintaining PTSD symptoms and teaches individuals to gradually approach trauma-related memories, feelings and situations and thus actively learn that trauma-related memories and cues are not dangerous. PE typically consists of 8-15 weekly individual sessions provided over a period of about three months. Although there is strong research support for PE, the duration of treatment acts as a barrier to many. Therefore, modifications of PE and alternative versions have been recently tested with preliminary support indicating that PE is still efficacious when delivered over a short period of time; this is known as massed-PE.

To contribute to the growing research on massed-PE, this study randomly assigned Veterans into one of two versions of massed-PE. In one condition, PE was delivered daily over the course of three weeks (massed-PE). In the other, massed-PE was delivered with the addition of enhancements such as same-day feedback sessions. Dr. Bryann DeBeer, CoE investigator and site supervisor, and her team contacted over 3,000 Veterans in the Texas area, screened over 200 people, and enrolled nearly 60 Veterans. The study is now at the follow-up phase monitoring Veterans on their progress through the end of this year.

Although no unequivocal conclusions can be drawn at this time, given that data is currently being analyzed across the four sites, positive changes were observed in the lives of many of the Veterans that completed the study. In some cases, Veterans saw partial remission of symptoms in as little as six sessions. Study investigators reported that faster-paced PE can be helpful for soldiers that are in between deployments, recently returning Veterans who would like to process through their combat-related difficulties to more successfully re-integrate to civilian life, and for Veterans who would struggle committing to a trauma-based treatment over an extended period of time. Samantha Synett, a CoE study therapist, said that Veterans reported thinking they benefitted from the structure of treatment, which at times reminded them of the structure in their lives during deployment. Taken together, continuing this line of research can help broaden options available to help Veterans and soldiers with PTSD, and ultimately help clinicians determine what form of treatment may be a better fit for each individual Veteran.



PTSD contributes to Veterans' struggles to re-adjust to civilian life

## Recent CoE Publications

Here is a sample of some of the recent articles published by our researchers:

Garcia, H. A., DeBeer, B. B., Mignogna, J., & Finley, E. P. (in press). Treatments Veterans Health Administration PTSD Specialty Program Providers Report Their Patients Prefer: The Role of Training and Theoretical Orientation. *Psychological Trauma: Theory, Research, Practice, and Policy*.

Lantrip, C., Delaloye, S., Brady, R., Oren-Dreyer, S., Roth, R., Gunning, F., & Holtzheimer, P. (in press). Effects of Left versus Right Dorsolateral Prefrontal Cortical Transcranial Magnetic Stimulation on Affective Flexibility in Healthy Women. *Cognitive and Behavioral Neurology*.

Meyer, E. C., Szabo, Y. Z., Frankfurt, S. B., Kimbrel, N. A., DeBeer, B. B., & Morissette, S. B. (2019). Predictors of recovery from post-deployment posttraumatic stress disorder symptoms in war veterans: The contributions of psychological flexibility, mindfulness, and self-compassion. *Behaviour Research and Therapy*, 114, 7-14.

Ryan-Gonzalez, C., Kimbrel, N. A., Meyer, E. C., Gordon, E. M., DeBeer, B. B., Gulliver, S. B., Elliott, T. R., & Morissette, S. B. (in press). Differences in PTSD Symptoms among Post-9/11 Veterans with Blast- and Non-blast Mild TBI. *Journal of Neurotrauma*.

**VISN 17**

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