

WRIISC Advantage

WINTER 2010

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Learn about the
HEROES Project

Welcome to the Winter 2010 Edition of WRIISC Advantage. We present this quarterly newsletter to tell you about recent WRIISC news and events and to share information about health topics important for Veterans.

Healthy Resilience after Operational and Environmental Stressors (HEROES) Project

Our WRIISC mission is to develop and provide expertise for Veterans and their health care providers. One way we do this is through clinically focused research. This type of research is an important focus for us, as it ideally leads to improving the care Veterans receive. Our research efforts are dedicated to focusing on understanding, treating, and ultimately preventing war related health problems. In this issue of WRIISC Advantage, we highlight a research study being conducted by Dr. Karen Quigley, NJ WRIISC Associate Director of Research, known as the Healthy Resilience after Operational and Environmental Stressors (HEROES) project. The HEROES project is a longitudinal study, or study that takes place over a period of time rather than at a single point in time. The project aims to understand factors (causes that contribute to a result) before and after deployment that are related to symptoms that develop after deployment for Army National Guard and Reserve troops. Understanding such factors can lead to the development of better treatment strategies and care for Veterans. This article provides an overview of the study and some of the findings thus far. The project represents an important collaboration between the VA and Department of Defense (DoD).

The goals of the HEROES Project are to:

- Determine the pre-deployment and post-deployment factors that predict post-deployment physical symptoms, physical and mental function, and health care utilization.
- Relate pre-deployment risk factors (e.g., exposure history and personality) and resilience factors (e.g., coping style and social support) to a Veteran's ability to function in their daily life after a hazardous deployment.

As a longitudinal study - it takes place in phases.



PHASE 1 – This phase starts prior to a soldier's deployment overseas. After being enrolled in the study, participants are given computerized questionnaires which cover a number of topics, such as: prior stressors to which they have been exposed, how he or she copes with stress, and the strength of their social support network, along with three challenge tasks: a role-played confrontation task, a math task, and a cold water task. The purpose of these tasks is to assess how subjects handle stressful situations. Their heart rate and blood pressure are measured throughout. Saliva samples are also collected to test for a stress hormone called cortisol.

PHASE 2 – After participants return from their deployments, they fill out another set of questionnaires that cover deployment experiences, combat exposure, and unit cohesion. They also provide additional saliva samples.

PHASE 3 & PHASE 4 – Phase 3 comes three months after the subject returns home and Phase 4 comes one year after their return. For each phase, participants are sent a packet of questionnaires that cover how they handle stressful situations, what physical or mental symptoms they have been experiencing, and the strength of their social support network.

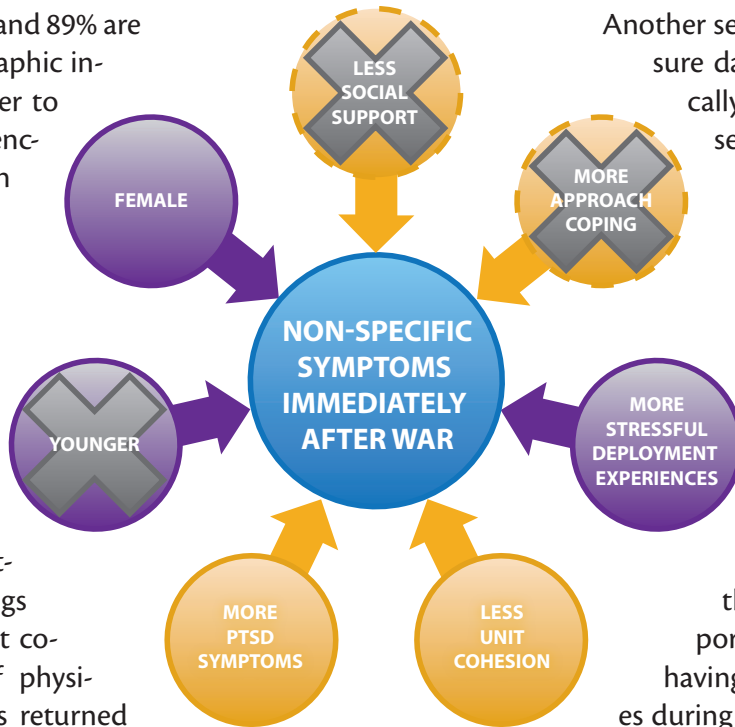
Where We Are Now

The final total of subjects recruited for Phase 1 is 790. As of November 1, 2009, 427 soldiers have completed Phase 2 of the project, 195 have completed Phase 3 (3 months after return), and 174 have completed Phase 4 (1 year after return). Of the original 790 enrolled, 72% are Army National Guard, 27% are Reserve, and 1% other. All were ages 18-57

at the beginning of the study and 89% are male. This and other demographic information are tracked in order to perform analyses on differences between sub-groups within the overall participant group.

Now that all participants have been recruited for Phase 1 of the HEROES Project and more than half of Phase 2 data have also been collected, Dr. Quigley and her research team have begun to see some interesting results. One set of findings is related to the effect of unit cohesion on the reporting of physical symptoms when subjects returned from deployment. The research question was, *if a soldier believed that their unit did not work together well (poor unit cohesion), would that result in more reports of physical health problems?* The results thus far showed that participants with lower ratings of unit cohesion had higher reports of physical symptoms like pain or trouble sleeping.

In addition, having had more stressful post-battle experiences such as seeing injured individuals and seeing civilians or other soldiers who had been harmed by the war also was related to having more post-deployment physical symptoms immediately after their deployment.



Analysis models using only pre-deployment variables showed that soldiers who were younger, had less social support, and who used a more approach-related coping style (e.g., tending to approach rather than avoid stressful events) also had more symptoms immediately after deployment. However, these three factors were less important (and were no longer predictive of non-specific symptoms) after deployment-related variables were added to the models (and therefore are crossed out). Deployment and other factors that were related to having more non-specific symptoms included being female, having more PTSD symptoms, having had more stressful deployment experiences (i.e., like seeing injured people), and reporting less unit cohesion. Therefore, the most modifiable factor that was related to symptoms immediately after deployment was lower unit cohesion.

Another set of findings utilized blood pressure data collected at Phase 1, specifically blood pressure reactivity to a set of reactivity tasks (for example, how your blood pressure changes when you perform an activity- such as sticking your hand in a bucket of cold water). The research team analyzed whether blood pressure reactivity had an effect on post-deployment physical health. Findings show that the change in a participant's blood pressure during these tasks was related to reports of physical health with those having greater blood pressure changes during the stressor tasks having better physical health immediately after deployment.

Dr. Quigley and her team continue to analyze data with great hope that the findings will make a long-term difference in health outcomes and health care for our Veterans. In future WRIISC newsletters, we will update you on additional findings of the HEROES project. Stay tuned! 📧

Improving care and quality of life for Veterans through research is a top priority for us!

About the WRIISC

THE WRIISC IS A NATIONAL VA PROGRAM devoted to post-deployment Veterans and their unique health care needs. We develop and provide expertise for Veterans and their health care providers through clinical evaluation, research, education, and risk communication. There are three WRIISCs located at Department of Veterans Affairs (VA) Medical Centers in: East Orange, NJ, Washington, DC, and Palo Alto, CA.



For a referral or more information, call our National Referral Program Coordinator at 1-202-461-1013 or one of our locations: East Orange, NJ: 1-800-248-8005, Washington, DC: 1-800-722-8340, or Palo Alto, CA: 1-888-482-4376 or visit us online at: www.warrelatedillness.va.gov.

Excellence in Service: OEF/OIF Care Management Team

Department of Veterans Affairs New Jersey Health Care System (VANJHCS)

The VA's goal nationally is to ensure that all recently returned service members receive top-notch, well-coordinated health care and are transitioned seamlessly from military to VA services. Several appointed staff members at each VA serve as health care providers specifically for Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) Veterans to assist them with their health care needs and readjustment to civilian life.



Dr. Michelle Stefanelli,
OEF/OIF Program
Manager

When Veterans take initiative to come to the Transition Unit, they receive a warm welcome from a caring, committed team and have an opportunity to get help with their medical and psychological conditions, readjustment to civilian life, and connecting to community resources. Transition Unit staff members are a linkage to other medical services at the VA including primary medical care, mental health care, readjustment counseling, employment assistance, - and many times - the WRIISC. They also help to coordinate a plan for a Veteran and "supervise" the next steps.



The Transition Unit's reception area at the 7th floor, East Orange campus of the VA New Jersey Health Care System

Over the years, NJ WRIISC staff has worked closely with the Transition Unit under the leadership of Dr. Stefanelli. We receive referrals through the Transition Unit for our clinical program and also make sure all of the OEF/OIF Veterans we evaluate at our facility visit with the Transition Unit. The Transition Unit has also played an important role in helping us spread the word about our program and services through outreach events, such as the OEF/OIF homecoming event they coordinate each year. We are grateful to be working together to make a difference in the lives of this generation of Veterans and appreciate the constant support! 📞



For more information on the OEF/OIF Transition Unit, contact Michelle Stefanelli at 1-973-676-1000, extension 1727.

What is Seamless Transition?

It is honoring and welcoming home all Veterans and service members who have recently returned home from deployment and being committed to help with a smooth transition from military to civilian life. It is the VA providing support for diminished functioning in physical health, work, family, relationships, social activity, moods, and emotions.

Thank you to the OEF/OIF Care Management Team at the VA New Jersey Health Care System for championing this effort.

Evolving Paradigms

The WRIISC was honored this past September to participate in the OEF/OEF Evolving Paradigms II: The Journey Home Conference held in Las Vegas, Nevada.

This conference highlighted the VA's transformation in delivering care to meet the challenges facing Veterans, families, and their caregivers. In furthering our mission to help educate providers on deployment health issues, the WRIISC organized three breakout sessions for VA Providers. The first focused on Environmental Exposures: Dr. Kelley Brix, program director for DoD-VA Transition for the DoD's Office of the Assistant Secretary of Defense for Health Affairs, provided information on the common

environmental and occupational exposures in OEF/OIF theaters of operation. Dr. Ronald Teichman, associate director for Clinical, Educational, and Risk Communication Services at the NJ WRIISC presented a guide for medical providers on how to conduct an environmental exposure assessment. Dr. Victoria Cassano, acting director of the Environmental Agents Service and director of Radiation and Physical Exposures, spoke on issues with and progress made toward the VA establishing medical surveillance programs designed to assess individuals who have either been directly or potentially exposed to harmful substances. Dr. Susan Santos, Head of Education and Risk Communication at the WRIISC in NJ moderated the session.

The second Breakout session was an update on deployment health research. Dr. Karen Quigley, associate director of Research at the NJ WRIISC, spoke about her VA/DoD study Health Resilience after Environmental and Operation Stressors (See article on page 2). Dr. Aaron Schneiderman, Acting Director of Environmental Epidemiology Service, VA Central Office, gave an introduction to the "National Health Study for a New Generation of U.S. Veterans" which will follow 60,000 Veterans—deployed and non-deployed—for 10 years. It will assess a variety of health conditions, including TBI and post-traumatic stress disorder (PTSD). Dr. Schneiderman reported that the response to the online survey has been very strong so far, which may provide evidence for VA researchers to expand the use of

computer mediated based surveys in the future.

Elizabeth Yano, PhD, MSPH, an Assistant Adjunct Professor of Health Services and Senior Social Scientist of the VA Center for the Study of Health Care Provider Behavior at the VA Greater Los Angeles Health Care System, highlighted post-deployment health research on women. Some of the studies presented included "Health and Safety of Women in the Reserves, National Guard and Active Duty Military" (Anne Sadler, PhD, RN, Principal Investigator) and "Reintegration and Service Needs of Women Veteran Mothers" (Gudrun Lange, PhD, Principal Investigator &

Karen Quigley, PhD, and Susan Santos, PhD., Co-Principal Investigators).

The final WRIISC session covered alternative therapies including acupuncture and yoga. Dr. An-Fu Hsiao, MD, PhD, Director of Integrative Medicine Clinic at VA Long Beach, presented an integrative medicine approach for treatment of headaches in Veterans and soldiers. He reviewed different research studies that looked at treating headaches with acupuncture. Dr. Hsiao ended his talk with an acupuncture demonstration on a member of the audience. The second speaker was Liliás Folan, known as the "First Lady of Yoga" since her groundbreaking 1972 PBS series, *Liliás, Yoga and You*. Her talk was titled "Compassion for the Compassionate Care Giver." Mrs. Folan led the class in a session of chair yoga which was both fun and informative. Our participation in the EPII was a great success. We continue to look for ways to update and educate providers, as they play the most vital role in caring for Veterans. 🐉



Conference attendees strike a pose, called *hands and knees balance*. This yoga position's benefits include improved balance and core strength.



Dr. An-Fu Hsiao, Director of Integrative Medicine Clinic, VA Long Beach, Liliás Folan, "First Lady of Yoga", and Dr. Stephen Ezeji-Ooyi, Deputy Chief of Staff, VA Palo Alto Health Care System

Around the WRIISC *News*

WE PRESENT THIS SECTION of our newsletter to inform you about something new or exciting happening at each of our three National WRIISC locations.

Palo Alto, CA WRIISC

How PTSD, Sleep Disordered Breathing, and Genetics Effect Learning and Memory

a research project by Lisa Kinoshita, PhD and Timothy Kimball, PhD

Clinicians and researchers at the Palo Alto WRIISC have a long history of research in cognitive function and memory in aging Veterans. Regardless of age, individuals with PTSD often complain about problems with memory, attention, and executive functioning. Similar but milder cognitive impairments are found in individuals with Sleep Disordered Breathing (SDB). Palo Alto WRIISC investigators Lisa Kinoshita, PhD, and Timothy Kimball, PhD are studying the relationship between sleep disordered breathing, PTSD, age, and genetics and the impact on cognitive performance in a group of older Veterans.

The study involves a group of Vietnam-era Veterans with PTSD. These Veterans participate in an overnight sleep evaluation, a battery of cognitive tests using the Rey Auditory Verbal Learning Test (RAVLT), and genetic testing. They are looking for the presence of the apolipoprotein $\epsilon 4$ (APOE $\epsilon 4$) genetic marker, a gene that has been widely studied for its significance in Alzheimer's Disease. Preliminary results indicate a significant relationship between obesity and an elevated Apnea Hypopnea Index, a measure of oxygen deprivation during sleep. Results also show that the type of cognitive impairments seen in Veterans with PTSD and SDB are very similar to the impairments seen in Veterans with PTSD alone. Both groups have difficulty in acquiring and retaining new verbal information. There is a less significant but interesting relationship between APOE $\epsilon 4$ status and performance on the RAVLT which will be looked at in more detail later in this study. We are hopeful that the results of this study will move us closer to understanding PTSD and its impact on learning and memory.

Washington, DC WRIISC

Social Cognition Rehabilitation for TBI and PTSD

One of the things that determines how well Veterans adjust to life after deployment is the quality of their social relationships. For Veterans with TBI and PTSD, social support plays an especially important role in recovery and satisfaction with life. However, Veterans with TBI and PTSD are also more likely to have difficulty with aspects of thinking called "social cognition," which makes it challenging to building strong relationships.

Social cognition refers to the mental functions that people use to take in, understand, store, remember, and apply social information. Social cognition includes skills like being able to read another person's facial expression and tone of voice, see a situation through another person's eyes, determine whether someone is being sincere or sarcastic, understand the social context, and a variety of other skills that are important to building strong relationships. For example, Veterans with TBI and PTSD may mistake happiness for anger or become confused by someone who smiles while reporting bad news.

The Washington, DC WRIISC has partnered with the DC Polytrauma Program to create a social cognition rehabilitation group for Veterans with TBI and PTSD. This group focuses on improving Veterans' social cognition and the quality of their relationships. Group exercises include activities such as: learning to read facial expressions and body language, learning to express emotions more effectively, and learning how to deal with misunderstandings in social situations. The group uses videotaping, audiotaping, role plays, and real examples from Veterans' lives. So far, participants report that the group has helped to improve the quality of their social interactions, whether it's dealing with a stranger or connecting with a loved one.



For further information, call Timothy Kimball, PhD at 1-650-493-5000, extension 67109 or email Timothy.Kimball2@va.gov.



For more information, please contact Dr. Kelly McCoy at 1-202-745-8000, extension 5475 or email Kelly.McCoy2@va.gov.



Acupuncture Research Study

The Washington, DC VA Medical Center is doing a study to explore if acupuncture may help Veterans who have sleep problems that are related to PTSD. We are looking for Veterans to participate in this study. If you served for Veterans to participate in this study. If you served in either Operation Iraqi Freedom and/or Operation Enduring Freedom and are experiencing sleep problems as a result of PTSD, you may be eligible for this study.



For more information, please contact Michelle Prisco at 1-202-745-8000, extension 6235 or email Michelle.Prisco@va.gov.

East Orange, NJ WRIISC

Reaching Out to Help Our Newest Veterans

The WRIISC continues to work hard at “spreading the word” about our programs and services in both the broad VA community and other settings that serve Veterans. Over the past year, we have been visiting local colleges throughout the State of New Jersey in hopes of reaching returning Veterans on campus. Many Veterans choose to continue their education after return from deployment, and many may not yet be connected to Veteran services. This past September we participated in the Operation College Promise “Keeping the Promise, Meeting the Needs of New Jersey’s Service Members” Statewide Conference. Administrators, college educators, Veterans student groups, and student affairs personnel were all in attendance. Mr. William Keyes, our Outreach Coordinator, gave an overview of the WRIISC program and also participated in a Q&A panel which addressed the challenges Veterans often face when returning to college. The WRIISC staff has also given presentations at Jersey City Community College and the New Jersey Community College Counselors Association. Our staff has spoken on some of the neuropsychological and psychological problems our Veterans are dealing with as well as common readjustment issues. We hope to continue outreaching to college campuses in our area. Our ultimate goal is to reach as many educators, students, and staff to let them know the resources available for our returning Veterans.

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