

Improving Military Resilience through Mindfulness Training

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The strength of the U.S. military has always been dependent upon the strength of the Soldiers within its ranks. The strength of individual Soldiers--the cognitive functioning and physical capability of Soldiers--these are the most critical elements to overall military health and resiliency.

Mindfulness, a state of mind where the brain is considered to be attentive of the present moment without judgement, has proven to be a promising mental health intervention for

Soldiers post-deployment, helping them to deal with the psychological toll that deployment can take on mental health, according to experts. However, the period before a Soldier is deployed is just as demanding and stressful. Psychologically preparing to face dangerous, high-performance, high-stress situations, while also having to leave loved ones and the familiarity of home behind, can be an overwhelming and anxiety-plagued time in any Soldier's life. It is not enough for a Soldier's physical body to be trained, it is also vital that the mind be fit and ready, equipped with a "mental armor" of sorts.

A University of Miami-led research study, led by principal investigator and neuroscientist Dr. Amishi Jha, and funded by the U.S. Army Medical Research and Materiel Command, has shown that mindfulness meditation exercises positively support active-duty Soldiers in protecting and training their own minds and helping better prepare Soldiers for high-stress combat situations while also improving overall cognitive resilience and performance. Coined the STRONG Project, standing for Schofield Barracks Training and Research on Neurobehavioral Growth, Jha and her team are using computer-based testing and brainwave recording to investigate if and how resilience training may improve the ways in which the brain can pay attention, be situationally aware and be better able to manage and recover from stress.

"My research focuses on the basic mechanisms of attention, how stress depletes it and if and how mindfulness training can strengthen it," explained Jha. "We have a tool that might benefit and protect Soldiers' minds/brains in the same way physical training intends to protect and prepare their bodies."

Jha is not only the principal investigator for the study, charged with overseeing all aspects of the research and training on the project, but she is also an associate professor in the Department of Psychology at the University of Miami College of Arts and Sciences, with primary expertise in understanding how the brain pays attention.

For this research, Jha studied three groups of military Service Members, with two groups receiving mindfulness training and one group not receiving the training. The study group included 75 Soldiers stationed at Schofield Barracks in Hawaii, all between

eight and 10 months away from deployment to Afghanistan. One of the two groups to receive MT received a specific type of Mindfulness-based Mind Fitness Training, also known as MMFT, which emphasized engagement during class meetings. The other group received a different type of MMFT comprised of more didactic information and discussions that revolved around resilience and stress. Both groups receiving MMFT training reported being more aware of their attention; proving MT during pre-deployment to be effective in preventing both attentional lapses and "mind wandering."

"We've been able to learn a great deal about how to best offer mindfulness training in active-duty cohorts, that the time demands can be lowered to 8 hours and that the content emphasis on mindfulness practice produced the most beneficial results," said Jha.

According to Jha's research, experience-sampling studies suggest that off-task thinking happens anywhere between 30-50 percent of waking hours. With growing evidence suggesting that this type of off-task mind wandering can result in attentional performance lapses, training to promote a mind "at attention" have jumped up on the priority list in regards to resiliency training. "Soldiers are experts at standing at attention," according to Jha; however, maintaining this type of mindful attention under the intense physical and emotional demands of deployment is a far more difficult task. Jha's previous studies showed 24 hours of mindfulness training for Service Members lead to improvements in both mood and cognitive function.

"Our prior study in active-duty Marines suggested mindfulness training was beneficial for attention and working memory, as well as mood after 24 hours of training," explained Jha. "With the STRONG project, we wanted to test if the time demands could be lowered, and if the delivery structure and content could be manipulated to result in similar benefits in a larger redeployment Army sample."

Just as daily physical fitness is important for overall bodily health, neuroscientists like Jha are realizing that regularly engaging in mental exercises like MT is just as important for overall brain-fitness. Research has shown that the more mentally "fit" a person's brain is, the quicker that person is able to recover from stress, to solve complex problems and to better handle high-demanding environments.

"I would like to emphasize that these practices are powerful, but that they only work if they are exercised daily," said Jha. "This is why the paper was critical in finding that taking a mindfulness course that does not have a practice emphasis has essentially no benefits on attention. Similar to physical exercise, you have to do it to benefit. Only with active engagement in mindfulness exercise can attentional benefits be gained."

The full study, titled "Minds 'At Attention': Mindfulness Training Curbs Attentional Lapses in Military Cohorts, was published online earlier this year by PLOS ONE. The article can be found online at:

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0116889>.

The STRONG Project has been awarded a \$1.7M grant to continue their research for the next four years, aimed at tracking the impact of pre-deployment resilience training over the deployment cycle.

For more information on the STRONG Project, visit:

<http://www.amishi.com/lab/strongproject/>.