Marines expanding use of meditation training

Mind Fitness Training found to help troops improve mental performance under stress of war

By Patrick Hruby - The Washington Times - Wednesday, December 5, 2012

While preparing for overseas deployment with the U.S. Marines late last year, Staff Sgt. Nathan Hampton participated in a series of training exercises held at Camp Pendleton, Calif., designed to make him a more effective serviceman.

There were weapons qualifications. Grueling physical workouts. High-stress squad counterinsurgency drills, held in an elaborate ersatz village designed to mirror the sights, sounds and smells of a remote mountain settlement in Afghanistan.

There also were weekly meditation classes — including one in which Sgt. Hampton and his squad mates were asked to sit motionless in a chair and focus on the point of contact between their feet and the floor.

“A lot of people thought it would be a waste of time,” he said. “Why are we sitting around a classroom doing their weird meditative stu?”

“But over time, I felt more relaxed. I slept better. Physically, I noticed that I wasn't tense all the time. It helps you think more clearly and decisively in stressful situations. There was a benefit.”

That benefit is the impetus behind Mindfulness-based Mind Fitness Training (“M-Fit”), a fledgling military initiative that teaches service members the secular meditative practice of mindfulness in order to bolster their emotional health and improve their mental performance under the stress and strain of war.

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Designed by former U.S. Army captain and current Georgetown University professor Elizabeth Stanley, M-Fit draws on a growing body of scientific research indicating that regular meditation alleviates depression, boosts memory and the immune system, shrinks the part of the brain that controls fear and grows the areas of the brain responsible for memory and emotional regulation.

Four years ago, a small group of Marine reservists training at the Marine Corps base in Quantico, Va., for deployment to Iraq participated in the M-Fit pilot program, taking an eight-week mindfulness course and meditating for an average of 12 minutes a day.

A study of those Marines subsequently published in the research journal Emotions found that they slept better, had improved athletic performance and scored higher on emotional and cognitive evaluations than Marines who did not participate in the program, which centers on training the mind to focus on the current moment and to be aware of one's physical state.
The Army and Marines have since commissioned separate studies of larger groups of troops receiving variations of M-Fit training, the results of which currently are under scientific review and likely will be published in the next few months.

“The findings in general reinforce and extend what we saw in the pilot study,” said Ms. Stanley, an associate professor of security studies at the Georgetown School of Foreign Service. “These techniques can be very effective in increasing situational awareness on the battlefield, in not having emotions drive behavior, in bolstering performance and resilience in high-stress environments. I’ve seen effects in my own life.”

**Military meditation**

A former Army intelligence officer, Ms. Stanley served in Korea, Macedonia and Bosnia. Subsequently diagnosed with post-traumatic stress disorder (PTSD), she struggled after leaving the military and enrolling in graduate programs at Harvard and the Massachusetts Institute of Technology.

Frustrated by the ineffectiveness of prescription medication, she began to research mindfulness and quickly became convinced that the mental and emotional health benefits of meditation could help not only her, but also other service members.

Ms. Stanley wrote a paper for the Defense Advanced Research Projects Agency (DARPA), essentially arguing that meditative techniques similar to those used by Buddhist monks were both necessary and appropriate for today’s military — from drone pilots coping with information overload to infantrymen conducting dangerous and stressful counterterrorism and counterinsurgency operations.

“The initial concerns form the military were, ‘Is this going to be a waste of time, and is this going to interrupt my finely honed rapid-action drills?’” Ms. Stanley said. “The concerns coming from the mindfulness side were, ‘If you teach them these skills, and they become more open people, will it undermine their ability to armor up psychologically? A few people even wondered if I was trying to make, quote, ‘better baby-killers.’”

Undaunted, Ms. Stanley sought support for a pilot program through her connections in the Army — the same Army that in the mid-1980s conducted a Trojan Warrior Project, in which 25 Special Forces soldiers nicknamed the “Jedi Knights” received six months of meditative and martial-arts training that helped them perform better than their peers on psychological and biofeedback tests.

She found an advocate in Maj. Jason Spitaletta, a then-Marine reservist who was a psychology graduate student in non-military life. Mr. Spitaletta read Ms. Stanley’s DARPA paper and brought it to the attention of his superiors, who agreed to participate in the 2008 study.

Over eight weeks of 12-hour days otherwise devoted to mock firefights and exhausting field exercises, 31 Marine reservists were taught breathing exercises and yoga poses, how to focus their attention and how to prevent their minds from wandering. More than once, they could be seen outdoors, sitting cross-legged and practicing meditation.

Amishi Jha, the researcher who evaluated the troops, found that the service members in the program ended up with improved moods and greater attentiveness — and that the individuals who spent additional time meditating on their own saw the biggest improvements.

“It’s like working out in the gym,” said Ms. Jha, the director of contemplative neuroscience for the University of Miami’s Mindfulness Research and Practice Initiative. “Right now, the military has daily physical training. Every day, they get together and exercise. But the equivalent is not given to the mind. The more [these troops] practiced, the more they benefited.”

**Brain training**

Why the cognitive boost? The answer lies in neuroscience. Previous studies have shown that habitual meditation:

• Changes the way blood and oxygen flow through the brain;

• Strengthens the neural circuits responsible for concentration and empathy;

• Shrinks the amygdala, an area of the brain that controls the fear response;

• Enlarges the hippocampus, an area of the brain that controls memory

• In a recent, incomplete study of Marines taking an M-Fit course — the one Sgt. Hampton participated in — University of California at San Diego and Navy researcher Chris Johnson took blood and saliva samples from the participating service members and used functional magnetic resonance imaging (fMRI) to scan their brains.

• According to a report in Pacific Standard, the troops recovered better from stressful training, while their brain scans showed similarities to those taken of elite Special Forces soldiers and Olympic athletes.

"Basically, there are parts of the brain that work differently in high performers," said Robert Skidmore, director of operations for the Alexandria, Va.-based Mind Fitness Training Institute. "It's possible to train our minds to process things differently. With eight weeks of training, working memory capacity increases."

Essentially the short-term, scratch-pad system we use to manage relevant information, solve real-time problems and regulate our current emotional state, working memory is roughly equivalent to random access memory in a computer and functions on a daily basis like money in a bank account: Use it, and it depletes until it can be replenished.

Heavy cognitive tasks, such as scanning an alley for armed insurgents, require working memory. So do emotional challenges, like dealing with the stress of leaving one's family for an overseas deployment.

According to Ms. Jha, depleted working memory has been linked to emotional impulsivity, prejudiced behavior, domestic violence and alcoholism.

"It's the core resource for regulating your own behavior," she said. "It's not like your psychological state or mood is separate."

In the M-Fit study, troops who meditated regularly increased their working memory capacity; moreover, they were more aware of their physical responses to combat stress.

In a fight-or-flight situation — for instance, a firefight — the pupils dilate to take in more information. Blood flows away from the stomach and into the muscles, producing the familiar “butterfly” sensation. Heart and breathing rates rise. Stress hormones course through the body.

More importantly, blood flow in the brain is redirected away from the areas that control rational thought and toward the areas associated with instinct and survival.

"It's really hard to access rational thought during high-intensity stress situations," said Jared Smyser, 28, a former Marine who lives in Richmond, Va., and is training to become an M-Fit instructor. "All this stuff happens in your body because we've evolved to get away from predators. But it's not really relevant in today's warfare. You need to be calm, collected, making better decisions."

According to Ms. Stanley, meditative training can help troops do so by increasing efficiency in the insular cortex, which allows people to rapidly switch between thinking and unthinking states of mind.

"It can be exercised when we are attending to sensations in the body," she said. "So a whole lot of our course is teaching the ability to track those sensations. People come into the course thinking it will ruin their ability to respond fast in combat, but actually, we're enhancing their ability."

In the future, Ms. Stanley said, meditation may become as standard in the military as rifle practice, another way of making troops more effective and resilient. Next year, the Marines will incorporate M-Fit classes into an infantry school at Camp Pendleton, making the program a tentative part of its regular training cycle.

Mr. Smyser, who served in Iraq in 2005, said military mental training is overdue.

"It absolutely would have beneficial to me [in Iraq],” he said. “I was very skeptical at first, but I’ve seen benefits in my own life. I'm interested in working with veterans with PTSD. And if we teach this upfront, we might be able to prevent some of the problems we have to fix afterwards.”

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