Using mindfulness training as a cognitive enhancement tool, two new studies from University of Miami researchers show that firefighters and soldiers who participated in short-form mindfulness training programs tailored for their respective professional contexts, benefited from improved attention and resilience. These benefits, the researchers argue, better equip these professionals to manage stressors on the frontlines of their high-demand occupations.

Acknowledging the similarities faced by first responders and active-duty military service personnel in high-stress, high-demand environments, Amishi Jha, a cognitive neuroscientist and associate professor of psychology in the University’s College of Arts and Sciences, built upon previous research utilizing Mindfulness-based Attention Training (MBAT)—an innovative program co-developed in 2013 by Jha and Scott L. Rogers, director of the Mindfulness in Law Program at the University of Miami School of Law.

The MBAT program was developed by Jha and Rogers for delivery to psychologically and physically healthy individuals in high-demand, time-pressed workplace environments and comprises four central themes: concentration, body awareness, open monitoring and connection.
"For firefighters, soldiers, as well as medical professionals, business leaders and many others--success matters, not only for themselves but for all they serve and lead," Jha said. "Many of our participants are highly motivated to learn how to gain a 'mental edge' so they can succeed in very demanding circumstances. In these projects, we contextualized our training to highlight why and how mindfulness training offered in the MBAT program provides tools and skills to succeed, even under Volatile, Uncertain, Complex, and Ambiguous (VUCA) circumstances."

"Is Resilience Trainable? An Initial Study Comparing Mindfulness and Relaxation Training in Firefighters," published in the journal *Psychiatry Research*, investigated the effectiveness of offering short-form mindfulness training to bolster firefighters' resilience--an important factor known to mitigate the damaging effects of occupational stress on the mental health of first responders.

Ekaterina Denkova, the first author on the firefighter study and research assistant professor in the Department of Psychology, together with Jha, Rogers, and post-doctoral researcher Anthony Zanesco, wanted to know if resilience is trainable. And if so, how mindfulness training, which emphasizes present moment attention and nonreactivity, might compare to a well-matched comparison program involving relaxation (i.e., visualization and progressive muscle relaxation).

Partnering with the Miami-Dade Fire Rescue Department, the researchers examined resilience, mood, and attention in 121 Miami-Dade firefighters who were assigned to one of three groups. Two groups received either mindfulness training or relaxation training, respectively, while the third received no training and served as a control group. For both training programs, Jha and Rogers consulted with Gary Gonzalez, a retired Battalion Chief from Miami-Dade Fire Rescue Department, to ensure that the programs would resonate with firefighters.

Findings from the firefighter study include:

- Psychological resilience showed a greater increase over time in firefighters who received a four-week mindfulness training compared to those who received relaxation training, or no training at all.
- Self-reported positive mood and objective attentional performance also showed a greater increase over the 4-week study interval in participants from the mindfulness group who spent more days per week engaging in guided mindfulness exercises.

"We have recently experienced fires in Australia unlike any we have ever encountered," said Dennis Smith, senior station officer for the Country Fire Authority in South Warrandyte, Victoria, Australia. "It has been a dangerous and exhausting season for our firefighters. Since the intensity and frequency of fires is unlikely to abate, we need better training for our readiness and recovery. The results from Dr. Jha's study give us hope. As firefighters, we can train our minds to be more attentive, positive, and resilient with mindfulness training. We can practice a proven method that will help our first responders with the unrelenting demands of this job, so we can operate at our best and focus on rebuilding our damaged communities."

A second study, "Bolstering Cognitive Resilience via Train-the-Trainer Delivery of Mindfulness Training in Applied High-Demand Settings," published in the journal Mindfulness, investigated train-the-trainer delivery of MBAT by trainers who were highly experienced in mindfulness or novices. The novice trainers were military trainers and thus, highly familiar with soldiers' professional challenges. A total of 180 active-duty soldiers from
the U.S. Army were recruited to participate in the study and assigned to be in one of three groups. Two of the groups received training from the experienced or novice trainers, respectively, and the third received no training.

Jha and her team wanted to test whether mindfulness-naïve, context-familiar military trainers could successfully deliver MBAT to soldiers after being trained for just 12 weeks.

Findings include:

- Intensive military field training designed to prepare soldiers for deployment can degrade cognitive capacities, such as their attention skills.
- Soldiers who received MBAT from military trainers had less cognitive decline than those in the other two groups.
- These results provide a cost-effective and time-efficient strategy for rapid dissemination of short-form mindfulness training to military cohorts.

"While mindfulness training is growing in popularity, accessibility to training is limited, especially for groups where the professional climate is time pressured with its own unique culture, challenges, and demands," Jha said of the train-the-trainer research approach.

The findings from both studies suggest that it is possible to improve accessibility of mindfulness training programs for such high-demand professionals.

"What we learned here is that in addition to ensuring that mindfulness training is contextualized for participants' professional lives, trainers' context familiarity is key, perhaps even more so than having extensive mindfulness expertise. We also learned that trainers can be 'trained up' to effectively deliver mindfulness training in as little as 12 weeks. Knowing this should help empower those who wish to make mindfulness training more accessible for specialized professions."

In their ongoing work, Jha, Rogers, and the university-based research team are working with military spouses who have been trained in peer-to-peer delivery of MBAT with encouraging results, Jha said.

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Other groups who may benefit from this method of mindfulness training include medical students, human resources professionals, and business leaders. Jha and Rogers recently partnered with medical school faculty at the Warren Alpert Medical School of Brown University to offer MBAT to medical students, and HR professionals at Lennar Corporation to deliver MBAT in their offices nationwide.

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