

# well-being at work

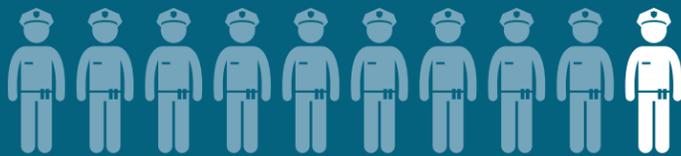
**88%** of employees with high well-being are also highly engaged in their work. They stay longer, enjoy their job and are more likely to recommend their organization to others.



Recent studies show that close to one third of teachers leave the profession within the first 3 years – with nearly **half** calling it quits within **5** years due to job-related stress.



Within their first year on the job, **9** out of **10** police officers experience an acute traumatic event, and that number grows to nearly **97%** by their third year.



**Positive** workplace perceptions and feelings are associated with higher customer loyalty, profitability and productivity as well as lower rates of turnover.



How do we keep good teachers in the classroom given the high burnout and turnover of the profession? That's the aim of another Center team looking at whether mindfulness training during undergraduate studies could help buffer teacher stress once they settle into classrooms.

# engineering a creative mind

Popular culture tells story after story of artists from Vincent van Gogh to Edgar Allan Poe who only find true creativity in the depths of their despair — but what if positive emotions can also boost creativity?

That's the question an interdisciplinary team at the Center for Healthy Minds and the College of Engineering at the University of Wisconsin–Madison has begun to explore, specifically in the context of graduate engineering education.

“Even though people think that creative people are miserable or unhappy, there is a lot of research that shows that's not true,” says Pelin Kesebir, an assistant scientist at the Center. “Actually, positive emotions help creativity. They open up our minds — we see more possibilities when we are happy or when we are experiencing positive feelings.”

The team was curious to look at how mindfulness training could help engineering graduate students. “These students are working on research problems that have the potential to address a variety of societal needs and challenges,” says Susan Hagness, the Philip Dunham Reed Professor of Electrical and Computer Engineering who led the study. “Enhancing the creative capacity of these students would benefit society through the innovations they produce both in the short-term and over the course of their careers.”

Kesebir, Hagness and Wendy Crone, the Karen Thompson Mehdi Professor of Engineering Physics, received a grant from the National Science Foundation for the exploratory study, hypothesizing that mindfulness techniques would boost the students' well-being, creativity, altruism and empathy, and potentially enhance their ability to conduct high-impact transformative research in engineering.

Students were split into a treatment group and a wait listed control group. The treatment group met once a week

for eight weeks and learned mindfulness skills, including breathing techniques, silver lining meditation (bringing to mind a difficult situation while exploring multiple sides and approaching the situation as a learning opportunity), and loving-kindness meditation (cultivating feelings of love and empathy towards loved ones, others and oneself). They also learned other well-being tools, like gratitude journaling and compassion practice.

The team found that participants who received the treatment had increased healthy emotions and well-being over the semester, whereas those in the waitlisted control did not experience such an increase. Students who received the treatment reported a significantly higher ability to bounce back from negative emotions and ability to sustain positive emotions than those who did not receive the training. They also reported a modest reduction in physical symptoms — like headache, back pain, sleep problems — while no such change occurred for the control group.

Students who participated in mindfulness reported increased endorsement of personal qualities associated with creativity, such as being good at dealing with uncertainty or finding the world to be a very interesting place. The training also seemed to increase their satisfaction with their research as students, whereas those in the waitlisted control group did not display any such increase. Due to the small sample size, further research is needed, but the results are encouraging. The team is now applying for funding to study the impact of mindfulness training on creativity with engineering graduate students, not only at UW–Madison, but also at partnering universities.

## on patrol to understand police well-being

Assistant Scientist Dan Grupe didn't know what to expect when he launched a pilot study with the Madison Police Department to understand the unique stressors police officers face on the job and whether mindfulness-based approaches could be useful for them. Almost two years in, he's formed deep friendships and gathered insights that have expanded his approaches on conducting research.

Now that you've finished the first wave of the study, what results surprise you?

What's most stressful to officers is not necessarily high-speed car chases, domestic disputes and shootings, but rather the organizational grind of policing. Shift work is a stressor — most officers work six days on and three days off, often at odds with their family schedule. Another stressor is the reality that anytime an officer gets called, their MO is often opposed to the person they're responding to. The impact of day-to-day organizational stressors made me think differently about the training we deliver and how we could provide officers something to deal with chronic, low-level stressors.

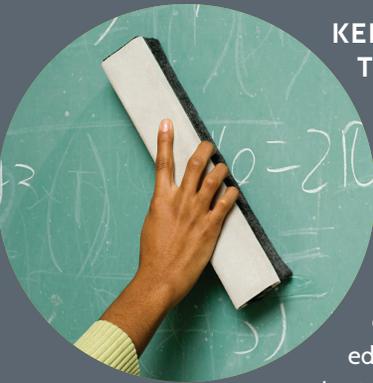
How does this stress affect police officers?

Disrupted sleep was an especially common pattern. We need to do more careful analysis of the data, but after the intervention, we've seen positive movement on sleep quality. People are saying they're sleeping better than they have in years and they're not having to use sleep medications. Participants wear Fitbits so we can get an objective sleep measure. We're also noticing changes in self-report measures, including perceived stress and less burnout. We're not changing anything about their environment, work requirements or exposure to these incidents, but they are reporting less stress. We think this may be because they're viewing events they're up against as not as severe or having more resources to cope.

Does this influence your approach to science and the greater work you're doing for the Center with other groups of people?

Doing this work has really forced me to get out of the lab and my comfort zone. It motivates me to be more engaged with the community and the research I'm doing, and how that ends up taking shape. Our relationship with MPD has brought about mutual admiration and respect, which I find really humbling. It really has highlighted to me the importance of relationships — taking the time to establish them carefully before working around a sensitive topic.





### KEEPING GOOD TEACHERS IN THE CLASSROOM

An ongoing Center study is investigating the effects of mindfulness training on two dimensions of pre-service teacher education: whether it reduces the stress and mental health concerns that are often part of teaching and teacher education as well as whether pre-service teachers trained in mindfulness demonstrate qualitatively and quantitatively better classroom management behaviors.

### GROWING PRESENCE IN THE CORPORATE REALM

Healthy Minds Innovations, Inc., a non-profit dedicated to supporting the mission of the Center, is in the process of raising funds to build a program designed to train and measure well-being. The program will be first implemented in global corporate settings and will address the qualities of a healthy mind, including awareness, connection, insight and purpose.

Richard Davidson was recently featured in an article about workplace habits from Inc.com. See [go.wisc.edu/incworkplacehabits](http://go.wisc.edu/incworkplacehabits) to learn more.

### BUILDING A WORKPLACE COLLECTIVE

The Well-Being and Neuroscience Collective brings together neuroscientists and industry leaders who are committed to learning about and integrating well-being into their organizations' mission, leadership, values and practices. Members provide an annual gift in exchange for insights on the latest neuroscience research and cross-collaboration among other Collective members.

### CAN MINDFULNESS SACK OFF-FIELD HURDLES FOR FORMER FOOTBALL PLAYERS?

After years of training and demanding workouts, a small group of former football players is transitioning to mastering a new playing field – the inner workings of their minds.

An eight-week workshop, offered by Healthy Minds Innovations, Inc., has begun to understand whether mindfulness-based practices such as meditation, mindful movements and mindful breathing may be useful and beneficial to former NFL and college football players. So far, the workshop has showed promise in being useful to former players.

## what world will you make?

We now know that well-being is achievable for each of us, and thanks to you, we're able to move our work forward. This is why we invite you to celebrate your support of the Center.

*All donors giving a lead contribution of \$1,000 will receive a special invitation to a Center Celebration Oct. 25, 2017 in Madison, featuring longtime friend, Buddhist monk, and author Matthieu Ricard and Center founder Richard Davidson, who will tackle new intersections between their work and our science, and how we can all shape the world for the better.*

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