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COMPASSION MAY BOOST RESILIENCE IN THE FACE OF SUFFERING

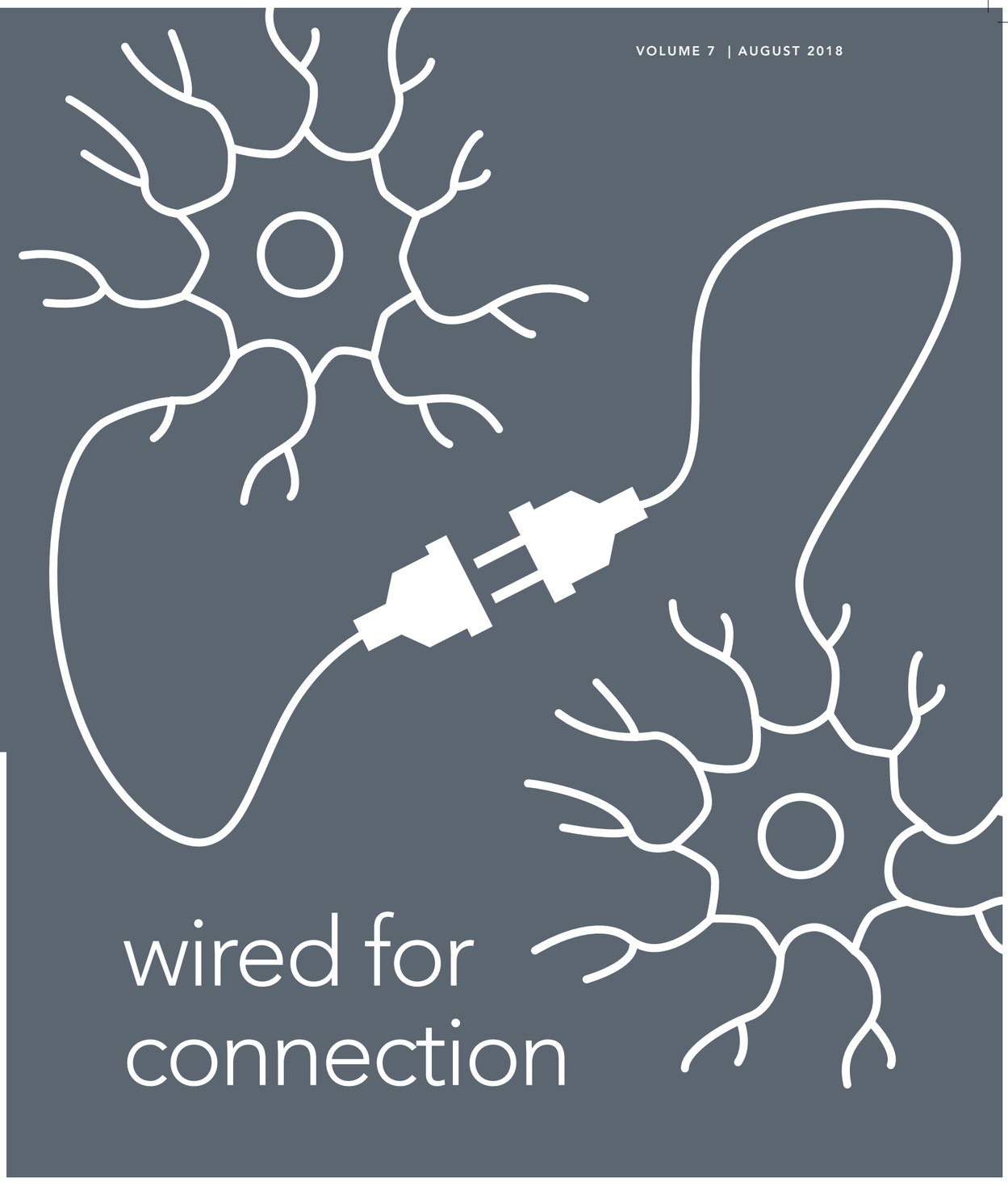
A new Center study suggests that as little as two weeks of compassion training — intentionally cultivating positive wishes to understand and relieve the suffering of others — may reduce the distress a person feels when witnessing another's suffering. It may also improve their ability and likelihood to respond with compassion. The findings may have implications for professions in which people routinely work with others who are suffering, like doctors, law enforcement officers and first responders who experience high levels of distress or empathic burnout.

CONNECTED AT WORK

Connection is a significant focus area for the Healthy Minds Initiative, a workplace-centered program inspired by the Center's research. The program, offered through Healthy Minds Innovations, translates previous research into tools to train kindness, empathy and a positive outlook. Learn more about the program and Healthy Minds Innovations — the external, affiliated non-profit associated with the Center for Healthy Minds — at **hmatwork.org.**

NEW RESEARCH ON WELL-BEING OF KIDS WITH INCARCERATED PARENTS

In the United States, roughly one in 25 children has a parent behind bars. With parent-child visits potentially contributing to increased behavior problems and anxiety in children, an interdisciplinary team of experts including Center for Healthy Minds faculty member Julie Poehlmann-Tynan is setting out to change that. The group has received a grant through UW–Madison to learn how technology can improve parent-child visits and improve kids' well-being.



wired for connection

the world we make

2018 CELEBRATION EVENT
OCT. 22, 2018 – MADISON, WIS.

Join Center Director and Founder Richard Davidson, John Wallis, former Chief Marketing Officer of Hyatt Hotels Corporation, Kristen Roman, UWPD Police Chief, and other special guests for an insider's view of the latest science and why well-being research matters now more than ever in today's workplaces and communities.

All donors giving a lead contribution of $1,000 or more this year will receive two complimentary registrations. Please join us.

For more information or assistance with your 2018 Center gift, please contact Lorri Houston, Director of Donor Engagement, at **LHouston2@wisc.edu** or (608) 263-3672.

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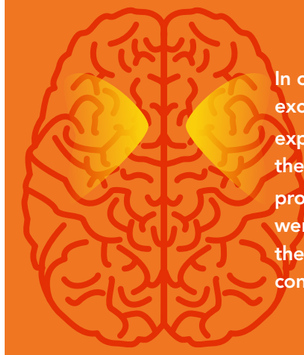
Studies suggest that **strong social relationships** — much like factors such as a healthy diet and exercise — play a considerable role in reducing the risk for mortality in adults.

Scientists are learning about areas of the brain containing **mirror neurons** that fire not only when we perform a specific behavior, but also when we witness someone else perform that behavior. Individuals who are more empathetic may have more active mirror neurons, which may allow them to better take in the emotions and behaviors of others.



In one study, when people were excluded from a game and experienced **social pain,** the same areas of the brain that process **physical pain** were activated, confirming the importance of social connection in our biology.

Patients with the common cold who were randomly assigned to an "enhanced" physician visit where the doctor displayed more empathetic behavior — listening and showing concern as patients told their full story — had **less severe symptoms** that lasted for a shorter period of time.

NEW VIDEO GAME CHANGES THE BRAIN AND MAY IMPROVE EMPATHY IN MIDDLE SCHOOL CHILDREN

game changer

A space-exploring robot crashes on a distant planet, and in order to gather the pieces of its damaged spaceship, it needs to build emotional rapport with the local alien inhabitants, who happen to speak a different language but whose facial expressions are remarkably human-like. This fantastical scenario is the premise of a video game developed for middle schoolers by Center researchers to study whether video games can boost kids' empathy, and how learning such skills can change neural connections in the brain.

Recently published research on the game reveals for the first time that in as little as two weeks, kids who played a video game designed to train empathy showed greater connectivity in brain networks related to empathy and perspective taking. Researchers found this change in middle schoolers who played the empathy training game in comparison to middle schoolers who played a commercially-available video game with a similar style, but without built-in empathy training exercises. Kids who improved their empathy after playing the empathy training game also showed altered neural networks commonly linked to emotion regulation, a crucial skill that kids in this age group are beginning to develop.

"The realization that brain networks supporting these skills are actually trainable with video games is important because they are predictors of emotional well-being and health throughout life, and can be practiced anytime — with or without video games," says Tammi Kral, a graduate student in psychology at the Center who worked on the project.

On average, youth between the ages of 8 and 18 years rack up more than 70 minutes of gameplay daily, according to data from the Kaiser Family Foundation. This spike in gameplay during adolescence coincides with an explosion in brain growth as well as a time when kids are susceptible to first encounters with depression, anxiety and bullying.

In the study, researchers randomly assigned 150 middle schoolers to two groups. One played the experimental game — in this case, a game intended to teach empathy created for research purposes called "Crystals of Kaydor"— and the second group played a commercially-available and entertaining control game called "Bastion" that does not target empathy. Researchers obtained functional magnetic resonance imaging scans in the laboratory from both groups before and after two weeks of gameplay, looking at brain connectivity, including areas associated with empathy and emotion regulation. Participants in the study also completed tests during the brain scans that measured how accurately they empathize with others.

Center Director Richard Davidson explains that empathy is the first step in a sequence that can lead to prosocial behavior, such as helping others in need.

"If we can't empathize with another's difficulty or problem, the motivation for helping will not arise," says Davidson. "Our long-term aspiration for this work is that video games may be harnessed for good and if the gaming industry and consumers took this message to heart, they could potentially create video games that change the brain in ways that support virtuous qualities rather than destructive qualities."

The research was funded by a grant from the Bill & Melinda Gates Foundation.

3 tips for empathy-building in teens

There are plenty of ways to instill empathy in kids of all ages, and the vast majority can be done with no additional resources or cost. Well-being expert Chad McGehee offers some tips.

1. Recognizing the rise and fall of our thoughts and emotions

Paying attention to the ever-changing nature of their own thoughts and emotions may help teens to understand the same in others. One way to describe this to teens is with "Mind-Body Jars." These are hand-sized globes comprising a liquid solution and glitter that provide a tangible lesson on the nature of thoughts and emotions. We can shake the globes to see the glitter circulate and swirl in commotion, which may be how teens are feeling when they experience strong emotions. Then, we allow the jar to be still and witness the particles falling and settling to the bottom of the globe. We may experience a flurry of thoughts, emotions and sensations, but with a little time, space and awareness, the commotion often settles all on its own.

2. Acting out emotions together

Emotion charades can be fun and also grow empathy in this age group. In a Center study with 5th graders, experts asked students to act out an emotion and others had to guess what that emotion was. It's fascinating to see similarities yet distinct differences between students. What might look angry to one person might actually be the actor expressing a completely different emotion. We typically understand others' emotions based on our own histories and how we experience them ourselves. This practice underscores the reality that we may think we know what others are feeling when in fact we don't. When we focus on how emotions feel in our own bodies, it is often a helpful way to get at what another person might be feeling.

3. Fostering supportive attitudes during teamwork

We've discovered that people's responses to their own mistakes and the mistakes of others is just as — if not more — important than succeeding in the task at hand. Children of various ages are asked to stand in a circle and pass a bell without allowing it to ring. They are not only instructed to be present with their own bodies and sensations, but they also get to experience firsthand how quickly their own turn handling the bell shifts into someone else's turn. This awareness allows a student to immediately identify what another student may be experiencing. If someone doesn't succeed in the task at hand, sharing words of encouragement and validating that it's OK and could have happened to anyone is important.

Sources: Holt-Lunstad, J., Smith, T.B., Layton, J.B. (2010) Social Relationships and Mortality Risk: A Meta-Analytic Review. PLOS Medicine 7(7): e1000316; Gazzola, V., Aziz-Zadeh, L., Keysers, C. (2006). Empathy and the Somatotopic Auditory Mirror System in Humans. Current Biology. 16(18):1824-9; Eisenberger, N.I. & Lieberman, M.D. (2004). Why Rejection Hurts: A Common Neural Alarm System for Physical and Social Pain. Trends in Cognitive Sciences 8(7) 294-300; Rakel, D. P., Hoeft, T. J., Barrett, B. P., Chewning, B. A., Craig, B. M., & Niu, M. (2009). Practitioner Empathy and the Duration of the Common Cold. Family Medicine, 41(7), 494–501.