

Why positive emotions may be the next big predictor of health

NOV 20, 2015

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What if joy or amusement could improve your health—would you smile more today? That’s precisely the question psychology researcher, Jennifer Stellar, PhD, has explored in her work. The University of Toronto postdoctoral fellow recently presented her research at TEDMED 2015. Learn about her evidence-based approach to exploring human emotions and why our feelings may have a greater impact on our well-being than we expect.

Measuring positive emotions and health



To determine whether emotions impact health, Stellar launched two studies in which she measured students’ levels of proinflammatory cytokines, which if chronically elevated for long periods of time, can have harmful health effects contributing to diabetes, cardiovascular disease and depression.

In her research, Stellar specifically measured students' levels of Interleukin-6 (IL-6), a common proinflammatory cytokine, based on the emotions they exhibited.

Stellar noted that she and her research staff had an important hypothesis to test. "Our idea was that people who experience more positive emotions will have lower levels of IL-6 circulating in their body," she said. "Why did we think this? Certain negative emotions have been associated with increases in IL-6, so we thought perhaps positive emotions would have an opposite effect leading to lower levels of this damaging biomarker."

Stellar had students come to a lab where she measured how many positive emotions they experienced in the previous month, then collected a saliva sample to measure each student's level of IL-6. "It turns out, our hypothesis was correct. Positive emotions predicted lower levels of proinflammatory cytokines in our student population."

Challenging her own research

This was a great discovery, but Stellar still felt compelled to approach her hypothesis differently. Not only did she want to confirm that human emotions impact IL-6 levels but she also wanted to know which specific emotions were key drivers to higher IL-6 levels, so she launched an additional survey that measured the frequency and intensity in which students experienced a core set of emotions.

The survey measured seven key emotions: amusement, awe, contentment, compassion, pride, love and joy. Stellar found that four specific emotions—joy, pride, contentment and awe—predicted lower levels of IL-6.

Interestingly, awe had the strongest negative relationship to IL-6, even when researchers controlled for the other six positive emotions, personality measures and a third method of measuring emotions.

An awe-inspiring discovery

Awe is such a powerful emotion because it signifies wonder and amazement in the world, and you don't have to travel abroad or pursue a daring adventure to find it. "In fact, participants report feeling awe about twice a week on average, making it a more common emotion than we might expect," she said, noting that everyday experiences—glancing up at the stars or watching athletes achieve a seemingly impossible physical feat—can inspire awe.

While researchers don't entirely know why awe topped the list of emotions as a positive predictor of health, Stellar said she's certain that her own studies have changed her way of thinking about awe in

the world.

“I used to see a walk in nature or a trip to the museum as a luxury I could barely afford in my busy life. Now I see it as essential to my mental and physician health.”

She said her studies also remind her that as a field, psychology is transforming, and her colleagues are shifting how they think about positive emotions. “We now recognize that they’re not simply the absence of negative emotions but that they’re colorful and varied in their own right We still have a lot to learn about the emotion of awe, but it’s fascinating to think that in seeking out the beauty, mystery and vastness our world has to offer, we might actually find the key to our physical health.”