Worrywarts Are Less Able to Control Their Negative Emotions

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If you're among the 18 percent of Americans who have a generalized anxiety disorder (GAD), your brain may have problems controlling your reaction to negative emotions, according to findings from a Stanford University School of Medicine study published in the *American Journal of Psychiatry*.

In general, anxiety is a coping mechanism that's a normal response to stress. When it becomes excessive in reaction to routine, daily life experiences, however, mental health experts classify it as a disorder.

GAD is one of five major kinds of anxiety disorders. People who have it are chronically anxious and can't stop worrying even about minor concerns. In addition, they experience physical symptoms such as fatigue, headaches, muscle tension, muscle aches, difficulty swallowing, trembling, twitching, irritability, sweating and hot flashes.

"Patients experience anxiety and worry, and [they] respond excessively to emotionally negative stimuli, but it's never been clear really why," said Amit Etkin, MD, PhD, an acting assistant professor of psychiatry and behavioral sciences, and the study's first author.

For the study, researchers examined brain scans of 17 people with GAD and 24 people without the disorder.

The study's findings suggested that there were differences in how the participants' brains responded in certain situations.

In particular, Etkin cited a difference in the two groups' reaction time in an emotion-based task. Researchers showed participants images of people with fearful or happy expressions. The word "fear" or "happy" was printed over the image, but not all of the words matched the image—for example, a happy face overlaid with the word "fear." This juxtaposition, according to the Stanford team, created an emotional conflict for the participants. To measure the conflict, researchers asked participants to identify the emotion on the faces by pushing a corresponding button.

By just looking at reaction times in pushing the buttons, Etkin said, researchers could classify who had the GAD disorder.

Researchers said that the part of the brain used to perform this activity—the prefrontal cortex—exhibited abnormalities in those who had GAD compared with those who didn't.

In the future, the study's findings may help mental health professionals better understand the biology of psychopathology and how people react to psychotherapy, said Alan Schatzberg, MD, chair of psychiatry and behavioral sciences at Stanford University, and the study's senior author.

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