Impact of pandemic: Increase in depression, less social anxiety among young adults

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Autumn Kujawa. Credit: Vanderbilt University

Autumn Kujawa, assistant professor of psychology and human development, has been conducting one of the first studies tracking people's response to stress exposure before and during the pandemic. Kujawa's team set out to determine the mental health effects of the

pandemic on young adults and how differences in neurophysiological reactivity may make some more vulnerable to depression and anxiety after stressful events brought on, in this case, by the pandemic.

"We started this study in 2018 to test out new tasks and measures of social and emotional processing by measuring electrical activity in the brain that we thought would be relevant to depression and anxiety. We didn't initially plan for the study to be longitudinal, but when the pandemic began, we recognized it as a unique way to look at individual differences in how people respond to major stressors," Kujawa said. "In May 2020 we recontacted participants to complete a follow-up questionnaire. This allowed us to use baseline data collected prior to the pandemic to predict changes in symptoms during the pandemic."

Before the pandemic, researchers measured electrical activity in the brain while young adults viewed positive and threatening interpersonal images. During the pandemic, participants were asked to report on interpersonal pandemic-related stressors and changes in depression and anxiety. Their findings suggest that young adults dealt with many stressors during the pandemic, which resulted in an overall increase in depression and trauma-related anxiety symptoms. It also resulted, surprisingly, in a decrease in symptoms of social anxiety. People who were less reactive to pleasant images before the pandemic reported more depression when exposed to greater stress. On the other hand, people who were more reactive to threatening images reported increases in trauma-related anxiety symptoms when exposed to greater stress, Kujawa said.

As a result, they hypothesize that individual differences in reactivity to emotional content in the context of interpersonal interactions can shape responses to later interpersonal stressors.

"We think this gets at risk and resilience processes that are relevant

beyond the current pandemic," said Kujawa, also director of the Mood, Emotion & Development Lab. The work demonstrates that differences in reactivity to emotional images may play a role in individual cases of depression and traumatic intrusions.

The study's findings underscore neural measures of emotion as a promising tool to distinguish risk for depression and trauma-related anxiety, which can inform tailored prevention efforts by clinicians.

The MED lab is developing a preventative intervention to upregulate positive emotions and responses to pleasant stimuli. A pilot will be launched to test the intervention in fall 2021.

Kujawa is also leveraging this research to examine individual differences in the ability to regulate emotional responses as predictors of responses to COVID-19-related stressors in adolescents.

The article, "Neurophysiological Responses to Interpersonal Emotional Images Prospectively Predict the Impact of COVID-19 Pandemic–Related Stress on Internalizing Symptoms," was published online in the journal *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* on May 13.

More information: Lindsay Dickey et al, Neurophysiological Responses to Interpersonal Emotional Images Prospectively Predict the Impact of COVID-19 Pandemic–Related Stress on Internalizing Symptoms, *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (2021). DOI: 10.1016/j.bpsc.2021.03.004

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