

# Grad students suffer high levels of mental health stress, but pandemic provides opportunity for change

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Graduate students suffer high rates of depression, anxiety and mental stress, studies show—a situation made worse by the COVID-19 pandemic. But as campuses reopen and students return to their labs, now is the time to implement changes that can turn this around, say researchers at the University of Michigan.

In a study published online Sept. 21 in the journal *Neuron*, the researchers say four kinds of changes can be made to reduce mental health stress and potentially boost productivity in academic scientists.

The changes include creating structure in the lab with deadlines, well-defined [work hours](#) and short-term goals. Students should be encouraged to set personal boundaries, such as creating time to exercise or care for their needs. Mentoring and developing strong relationships is also important and must be nurtured. And it is important to cultivate a safe and collaborative lab culture, the researchers say.

"Every person in a lab environment can be doing something to support [graduate student](#) mental health. You do not have to be a mental health professional to improve things," said study lead author Meghan Duffy, a professor in the U-M Department of Ecology and Evolutionary Biology.

Duffy is a disease ecologist who runs a 16-person lab that includes a lab manager, a technician, four postdoctoral scientists, four [graduate](#) students and six undergraduates.

She led U-M's Task Force on Graduate Student Mental Health, which was charged with finding ways to improve students' mental [health](#) in the summer of 2019. The task force's work became all the more timely when COVID-19 struck.

About 24% of doctoral students have significant depression symptoms, and 17% have significant symptoms of anxiety—levels similar to that of [medical students](#) and resident physicians and higher than the [general population](#), recent studies have shown. Then when the pandemic struck, like so many parts of society, graduate students saw these rates of [mental health](#) stress grow even higher.

This is one reason why it is important that good systems of communication and structure are put in place now as labs reopen, says co-author Natalie Tronson, associate professor in U-M's Department of Psychology.

Tronson, who has a long-held interest in the effect of stress-induced depression on the brain, says sometimes when students move from a very structured undergraduate life to the independence and self-structure of graduate research, the adjustment is hard.

"People need structure, and they need to know: What should I be doing? What needs to be done? What are my deadlines?" she said. "But on the other hand, lab-based work does not fit in a tight structure. Science is not a 9-to-5 job, so mentors and students need to find that balance."

Matching students with mentors, sometimes more than one mentor, and communicating are important, Duffy and Tronson say: Students need to know it is OK if an experiment fails. They need to know when they have gathered enough information. And they need to get feedback and set small deadlines to help them meet the larger ones.

**More information:** Meghan A. Duffy et al, Supporting mental health and productivity within labs, *Neuron* (2021). DOI: [10.1016/j.neuron.2021.08.021](https://doi.org/10.1016/j.neuron.2021.08.021)

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