

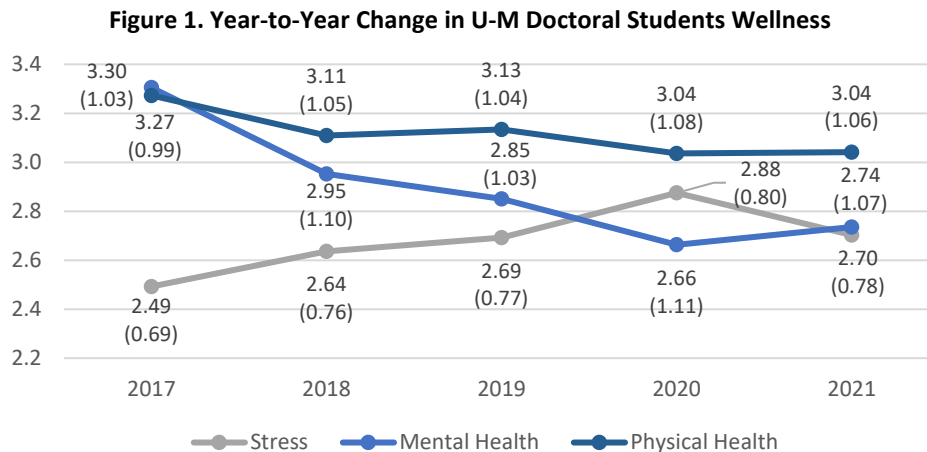
Student Stress and Well-Being: The First Five Years of Doctoral Studies

Mental health and well-being among doctoral students are a growing concern among higher education scholars and administrators. Several studies suggest that graduate students are at greater risk for mental health issues than those in the general population. Further, the COVID-19 pandemic became an added stressor to doctoral students’ already heightened stress levels.

In this report, we draw on data from the *Michigan Doctoral Experience Study* (MDES), an ongoing longitudinal study of PhD students at the University of Michigan. In fall 2017, incoming PhD students were surveyed to learn about their stress levels and overall mental and physical health, among other topics. Students were re-surveyed about these topics yearly every fall. The findings of this report cover Fall 2017 through Fall 2021 responses from the cohort beginning doctoral studies in Fall 2017. From this population, 78.5% (N=808) of students responded at least once for the series of surveys over five years.

Student Stress and Well-Being over Time

Students were asked to assess their stress levels using the Perceived Stress Scale (PSS-4), which captures the degree to which individuals believe their life has been unpredictable, uncontrollable, and overloaded during the previous month on a scale from 1 (never) to 5 (very often).

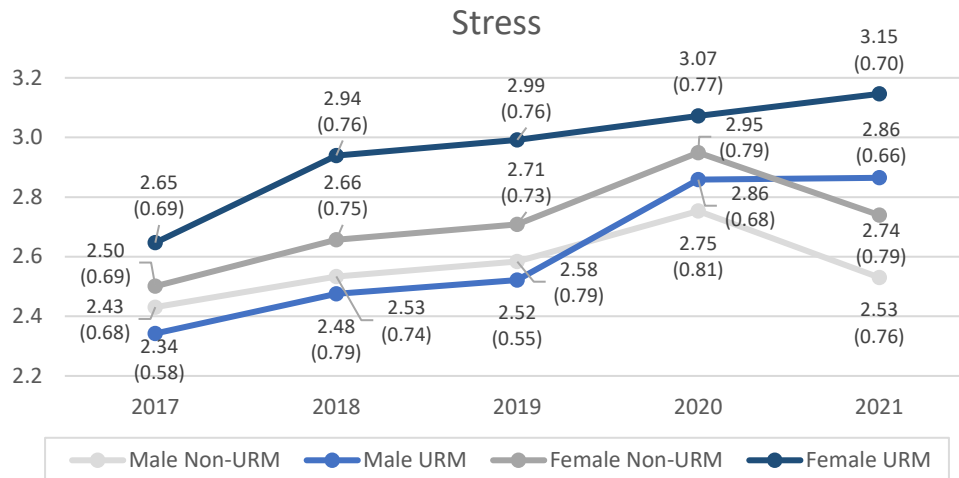


Note: Standard deviations in parentheses.

First-year doctoral students in cohort 2017 began their programs with, on average, medium stress levels (2.49), as shown in Figure 1. Over time, stress scores significantly increased until their fourth year in the program, reaching an average of 2.88. A year later, the stress rating decreased by 0.18 and set back to the level of year 3. Respondents were also asked to assess their mental well-being on a scale from 1 (poor) to 5 (excellent) in all five years of the survey. The average mental health rating among first-year students was 3.27, which falls between “good” and “very good” in term of responses. An overall declining pattern can be seen with mental health ratings falling to an average of 2.70 by 2021. This coincides with rising stress levels moving in an upward direction at the same time.

Differences by Student Characteristics

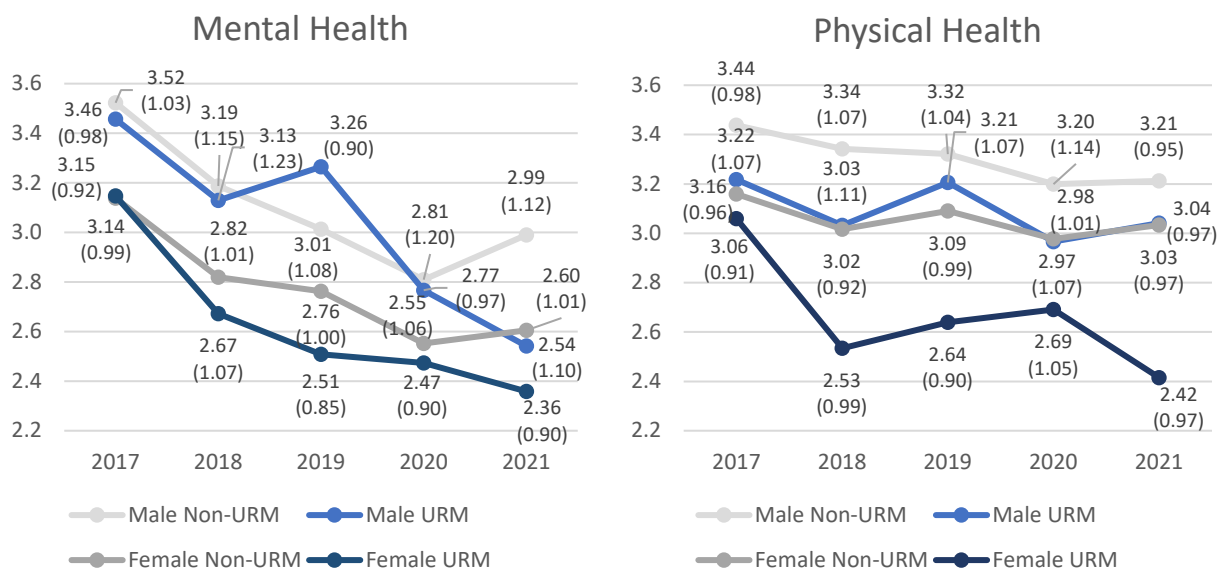
Figure 2. Stress Level by Sex and URM



Note: Standard deviations in parentheses. This result is based on domestic student sample. The sample sizes are male URM (N=46), male NURM (N=336), female URM (N=70), female NURM (293).

As illustrated in Figure 2, in all years, female underrepresented minority (hereafter, URM) students reported the highest ratings of stress level than any other subgroups of respondents. Their stress level most increased from the first to second year, and consistently increased over time. Further, it is worthy to note that the ratings of URM students maintained or even increased from 2020 to 2021 while that of non-URM students went back to the pre-pandemic year’s level. Such gap in the stress ratings show that the URM students are still struggling with heightened stress levels potentially exacerbated by living amidst the pressures of a pandemic.

Figure 3. Well-Being by Sex and URM



Similarly, the self-rated mental and physical health were lowest in female and URM students. Female URM students in particular, declined the fastest in both physical and mental health across the first 5

years of doctoral study. Their well-being substantially dropped when they transitioned to the second year. Their ratings in mental health further decreased since then and physical health recorded the lowest in 2021 despite the slight rebound during 2018-2020.

Another finding to note is the prolonged negative impact of COVID-19 on URM students. There is a clear discrepancy in well-being ratings between URM and non-URM students. Contrary to the last year's responses, the self-rated mental and physical health of non-URM students recovered the pre-pandemic level. However, the ratings of URM students, particularly female, further dropped substantially in the 2021 survey. This finding points to a potentially disproportionate negative impact on this subgroup of students who still struggle with coping the stress and challenges intensified by the pandemic that last longer than their non-URM peers.

What Makes Michigan Doctoral Students Stressed?

The Negative Impacts of Pandemic on Every Aspect of Life

Most of the respondents indicated that the COVID-19 outbreak was the primary factor that substantially harmed their well-being. The pandemic has had serious negative impacts on almost every aspect of the students' lives. Some students were directly impacted by the COVID-19 as they lost their loved ones. These students had difficulties in meeting the program requirements and maintaining self-care to cope with illness and deaths of their loved ones.

"A lot of people experienced loss during this pandemic and I think it is important to explicitly learn about how we have managed program requirements, self-care, the pandemic, and the impact of covid-19 illness and other illnesses on loved ones."

The respondents also reported anxiety about lack of progress and change in research direction while also struggling with meeting academic expectations, and maintaining productivity levels. Furthermore, some students suffered from a more existential question about doing research amid the uncertainty of a pandemic

"I think everyone is doing their best, but it is unclear what stresses will pile up for students expected to complete everything on the same timeline as was expected before the pandemic."

"I can scarcely express how transformative the last year has been. I struggle with existential dread on a nearly constant basis. Seeing how we have responded, and failed to respond, to various overlapping crises has been both clarifying and incredibly depressing. Therapy has helped, but it feels like it's just papering over cracks that are growing. Doing research, learning new things, developing new technologies all used to be strong motivators for me. But at this point those things all seem completely inadequate."

The setbacks in research caused by the pandemic were especially difficult for students with caregiving responsibilities, who are more likely to be at the later stage of the doctoral program. Students felt the university failed to meet their needs as caregivers, and some students reported concerns over the long-term impact of delay in their research and career development. Some students highlighted the structural inequities derived from gender and caregiving responsibilities.



“When I near completion of my program and begin applying for jobs, I will be competing with childless men and women who spend the pandemic building their CVs while I spent the pandemic learning how to teach my children elementary school math. The pandemic creative massive inequalities and my career has and will continue to feel the effects. This is an unrecognized DEI issue. Without immediate action, pandemic setbacks will significantly harm the long-term career trajectory of a generation of mothers.”

Financial Stress

Students cited finances as another reason for worsening well-being. Traditionally, Michigan doctoral students have shared concerns about the lack of funding during Spring/Summer terms that added to their financial burdens. The economic impact of COVID has heightened financial risks. Students who did not have a stipend during the Spring/Summer terms struggled with paying bills or covering essential needs. Further, those who were required to stay in Ann Arbor for academic and research activities had to bear the high living expenses of the city.

“Summer funding across different doctoral disciplines is very different. It has been really challenging to ask about summer funding from my department. We are expected to live on our own - very mentally and financially challenging. “

“Financial struggles, especially during the summer, are a HUGE burden. The school should not expect students to complete milestones during this experience without financially supporting them; that is unpaid labor. (...) The current circumstances take a huge toll on all of us mentally, yet we are expecting to continue with our normal work pace. This is an unreasonable expectation from a mental health standpoint. (...) Additionally, some faculty members in my department expressed little to no empathy or desire to problem solve/support when the doctoral students communicated this. (...) Their conduct, as well as these demanding circumstances, have led MANY of my peers to consider quitting the program. This environment has also dissuaded some talented individuals from accepting offers to the doctoral program. “

Even with full funding, it was hard for the students to cover rising living expenses. Moreover, students with private loans accumulated from previously suffered from additional financial stress. The private loans were not deferrable during the doctoral study which made it harder for them to bear the cost of living in Ann Arbor area.

“For the duration of the covid-19 pandemic, graduate students in my field have been carrying on like business as usual while faculty and staff have largely worked from home. For graduate student appreciation week, we were given free coffee and an email thanking us for our hard work. Meanwhile, rent increases, our stipends were frozen, and we were charged more for parking (in otherwise empty parking garages) than the faculty pay. I do not feel that the university actually cares about me.”

“Private student loans are expensive and cannot be deferred during graduate study. It is difficult not having quality affordable housing in the Ann Arbor area, with the size of our stipends and other expenses like private loans.”

The Culture of Academia at UM

It is worth highlighting that students saw the current culture of academia as potentially harmful to their well-being. Further, the apprenticeship model of doctoral mentorship situated doctoral students in a vulnerable position which made them feel undervalued and treated unfairly depending on the quality of mentoring and relationship with advisors.

“Generally, the indoctrination and socialization as a doctoral student is very white and punitive for students of color. For example, ideas around merit and rigor of research is based on white ways of knowing. The current context of the world-- pandemic, the elections of 2020, performative action for orgs including UM to distance themselves from racist, sexist, homophobic, xenophobia, fatphobia, and disabilities oppression --- has all been too much and the university pretending this is not happening has been too much on mental health.”

“Academia needs to do a better job at ensuring we, the students, are treated fairly and humanely with respect, but also, that we do not encounter acts of retaliation if we speak up against oppression. It is indeed no wonder that people start to switch careers and resort to industry rather than academia, because good quality work and being critical and innovative come at a cost, in academia, to one's overall well-being, and it is indeed such a shame. I went into academia to pursue a passion for learning and seeking knowledge. I am now graduating this year and leaving academia with so much resentment to the environment I was in, the toxicity associated with being "critical" and workaholic in academia.”

Michigan Doctoral Students Call for:

Increased Supports for Students Experiencing Life Events

During doctoral study which requires extensive time and devotion, students experience various kinds of personal crises in their lives unexpectedly. Students called for accommodation for the situations that make it hard for them to effectively maintain their well-being and productivity. For instance, some students divorced their spouses and experienced extremely difficult emotions. Other students had health issues that required a long recovery process during an academic term. From these experiences, the respondents noted that many faculty members and students were not educated to deal with the issues and respond adequately.

“Health issues in graduate school. I underwent surgery in Fall 2020 with a long recovery process (2 months+), and it was extremely difficult to balance student teaching, undergraduate mentoring, research, and the care required to properly heal from surgery. Many graduate students experience unexpected health crises and there are no formal guidelines that prepare the students or faculty for dealing with this issue and setting realistic expectations.”

“Access to regular services for those navigating mental illness are difficult to find and place an overwhelming amount of burden on the student suffering. Also, navigating life changes (divorce) are difficult due to lack of flexibility within school, and it significantly impacts some students performance.”



Students with children at home highlighted the need for accommodation and increased support for balancing their family life and doctoral study. Those with newborn children, in particular, called for a more generous maternity leave policy to extend the paid leave time for parents. Student parents also pointed out

“I had a baby just before the start of the Fall 2020 term and did not feel supported in trying to figure out how to take maternity leave without losing my health insurance (related to my full-time student status).”

“Degree extension policies related to COVID should apply to all those families if needed, however in the school of (omitted) this "aid" only applied to those students who were already candidates. Our program is only 3 years long, meaning only third years who are candidates could benefit from such a program.”

Summary

The student voices reflected in this report showcase a complex picture of well-being with potentially challenging factors worsened by a continuing pandemic. Woven across these issues is a call for more flexible policies and more sympathetic approaches to accommodate life-changing events. While unique situations shape the experience of every student, these themes represent a meaningful slice of the issues and proposed solutions that shape the complex evolution of well-being over time for doctoral students.