

# Graduate Student Assembly

*Ensuring a vibrant graduate student life*

## Graduate Student Experience at Carnegie Mellon University During The COVID-19 Pandemic

Findings from the GSA COVID-19 experience survey

*September 7th, 2020*



**Carnegie Mellon University**

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# Executive Summary

To understand the early impact of the COVID-19 pandemic on graduate students, in late June 2020, the Carnegie Mellon University Graduate Student Assembly Executive Committee conducted a survey of Carnegie Mellon graduate students, with 345 graduate students responding.

On-campus facilities and resources that graduate students rely heavily on to study and make progress with regards to their academic and research goals have not been available. The impact on academic progress goes beyond access to academic facilities, with some students reporting that their academic advisor and/or departments have made little to no adjustment in expectations following the pandemic. Physical and mental wellness have been impacted by limited or no access to campus, isolation, and increased pressure for productivity.

Students experienced many financial concerns as a result of the pandemic. Loss of on-campus or part-time jobs created immediate financial concerns. Sub-minimum-wage student stipends did not change when their teaching workload doubled with the transition to an online model. A substantially increased workload means students will have less time for their research, potentially prolonging the path to their degree or even endangering their ability to finish. Many students do not feel online instruction provides the same value and have requested a tuition reduction. Employment and internship prospects have reduced substantially for many students as a result of responding to the pandemic. Despite this, some students do not have the financial resources to finish their degree, with no alternative but to enter the workforce.

A critical component of access to research and academic facilities is the ability to safely commute. Most students indicated concern with the safety of using mass transit systems. Students that own a car are more likely to prefer driving to campus, but cannot afford to park on-campus. Mass transit capacity has been reduced to encourage physical distancing, forcing students that are willing to use this mode of transportation to seek other modes. Carnegie Mellon has added an additional shuttle route to improve access but appears to lack the ability to fully support the student population.

Some students have experienced disproportionate impacts. A higher percentage of international students than domestic students felt pressure to return to campus before it was safe. Students with families have consistently reported difficulty in finding and affording adequate childcare to allow them to perform their coursework and conduct research. Financial concerns created by the pandemic are compounded by the need to take care of a family. Meanwhile, national reporting confirms a higher pandemic impact on BIPOC, and this trend is most likely reflected among Black and other underrepresented students at CMU, who have previously reported incidents of racism by faculty as well as by other students.

The pandemic caused a new array of challenges for Carnegie Mellon graduate students, including general quality of life impacts and specific difficulties in their work. We present this report as a summary of those impacts and as a means of sharing their stories with you.

# Background

Carnegie Mellon University (CMU) has a total student enrollment of approximately 14,800 students; the Graduate Student Assembly (GSA) is the student government body representing approximately 7,700 graduate students. As part of its mission, the GSA advocates for and supports the diverse needs of all CMU graduate students in their personal, professional, and public lives. The GSA Strategic Plan 2015-2025 lists holistic graduate student experience and professional development of graduate student areas as focus areas for growth.<sup>1</sup> The GSA has represented the graduate student voice and brought to the fore many conversations by advocating for CMU graduate students within the university and at all levels of government.

In late June 2020, GSA conducted a survey of graduate student needs. The survey took 5-10 minutes to complete, depending on how much the student decided to share, and students who completed the survey and provided an email address were entered into a drawing for 3 Amazon Fire tablets. Overall, 345 graduate students responded. This report, detailing the findings from that survey, was written by the GSA Executive Committee and members of the GSA External Affairs and Academic Affairs Committees.

Respondents listed their needs that were normally met by campus services, but were currently unfulfilled. They were also asked to identify new challenges that had arisen or increased in intensity since the start of the pandemic. Respondents rated how well their research or coursework had been adapted into an online format, and whether their internships, graduation timelines or funding had been disrupted. They were then given the opportunity to submit questions for GSA or the university, to share any parts of their experience that had not fit into preceding questions, and to note anything that the university had done in responding to the pandemic that had been helpful to them. Finally, respondents also provided basic demographics: degree type (Masters/Ph.D.), college (from among the seven at Carnegie Mellon University), and whether they were domestic or international students.

From students' answers on this survey, we gain an understanding of their experience over the first 14 weeks of the pandemic, from the way it affected their studies to the general impact on their quality of life. This report summarizes the findings from that survey. Prepared by members of the Graduate Student Assembly Executive Committee: Kristen Allen, Divyansh Kaushik, Gary Wilkins, Adam Stein, and Maggie McGrann, and GSA representatives from committees on External Affairs and Academic Affairs: Niles Guo, David Guirguis, Seyed-Arman Ghaffari-Zadeh, Sarah Hordern, Nandita Jaya, and Sachin Srivastava. **Questions may be addressed via e-mail to the GSA Vice President of Academic Affairs, Kristen Allen ([gsa-vpAA@andrew.cmu.edu](mailto:gsa-vpAA@andrew.cmu.edu)), or the Vice President of External Affairs, Divyansh Kaushik ([gsa-vpEA@andrew.cmu.edu](mailto:gsa-vpEA@andrew.cmu.edu)).** Any correspondence via physical mail must be addressed to "Graduate Student Assembly, University Center Box 113, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh PA 15213-3890".

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<sup>1</sup> Carnegie Mellon University Graduate Student Assembly (2015). Strategic Plan 2015 - 2025. Available at: [http://bit.ly/CMUGSA\\_SP2025](http://bit.ly/CMUGSA_SP2025)

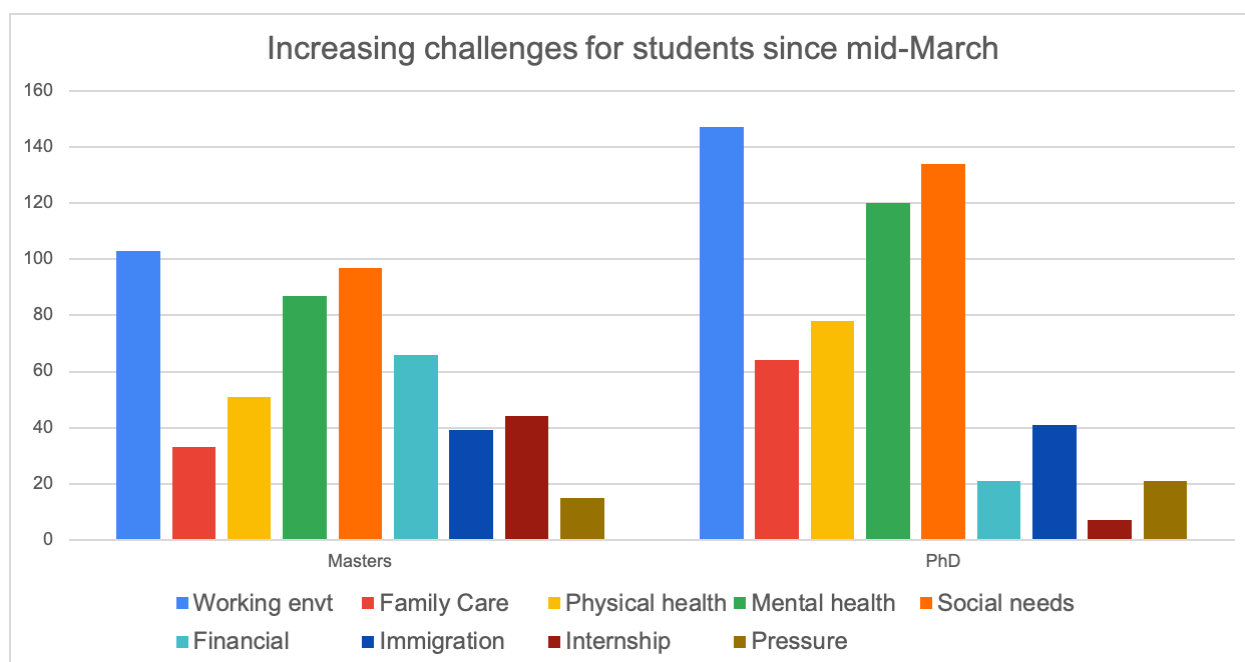
## Respondents

In total, 345 CMU graduate students responded to the survey. Ph.D. students were overrepresented, making up 27% of CMU graduate students but 59% of survey respondents. The seven colleges that comprise CMU were all represented, but a larger share of students from the College of Engineering and the College of Fine Arts responded, while smaller proportions of students responded from the Mellon College of Science, the Tepper School of Business, and the Heinz School of Information Systems and Public Policy. Responses from the School of Computer Science and the Dietrich College of Humanities and Social Sciences roughly mirrored those students' proportion of all CMU graduate students.

Students were also asked about domestic or international student status and their race. A higher proportion of respondents than of total students were domestic (52% of responses versus 37% of graduate students). Given low representation among CMU students in general, racially underrepresented students were a small number of total responses—5 responses from Black or African American students, 13 responses from Hispanic or Latinx students—so results are not presented by race.

Challenges that students faced shared similar themes, but varied somewhat by population: for instance, Masters students were more likely to have recently had financial difficulties or problems with an internship. Ph.D. students were more likely to be experiencing excessive pressure from faculty advisors to continue or increase their research output.

*Student stories shared in this report are accompanied by their college affiliation except in cases where such information is identifying.*



# Student Needs: Academic / Research

*“I split my time between teaching at a small New York State school and pursuing my dissertation at CMU. COVID-19 has thrown many aspects of my job into question and made it much harder for me to find the time and energy to continue with my research. My advisors have been very understanding but I worry about my ability to complete my dissertation in a timely manner while being so mentally exhausted.”*

- Ph.D. Student

## Access to Academic Facilities

Graduate students rely heavily on on-campus facilities to study and make progress with regards to their academic and research goals. These facilities include laboratories and other research facilities, computational facilities as well as technological resources (e.g., computers, specific hardware, internet connectivity, printing), libraries, and working environments (e.g., desks, rooms).

The closure of campus has academically impacted all students in one way or another. Overall, 45% of students in the survey expressed their needs to use laboratory facilities or machine shops and maker spaces, while 40% of the students have been affected by the inaccessibility of campus computational facilities and technology.

*“Half of my research work as a Ph.D. student is experimental and while I have been able to work on the computational part of my work, I need to run more experiments to move forward with my research. The experiments are not something I can outsource to an external company which has been the case for some other students in my lab.”*

- College of Engineering Ph.D. Student

*“As a chemistry student, I need my lab space not just to progress in my research but it was also a big part of my mental health. Together with fitness options being severely limited by the quarantine and not having random chats with my colleagues and peers that all results in a drop of productivity.”*

- Mellon College of Science Ph.D. Student

Graduate students go to campus not only to do their research work but also to find a suitable environment to study. Seventy seven percent of students have expressed their needs for an appropriate working environment. A student said, *“some professors do not know that many of us do not have desks or even a good place to help us focus and accomplish ...”*

Research labs have resumed work in phases, and the campus' facilities will be available to students starting in the Fall semester. Some students, however, expressed anxiety to go to campus, but they felt pressured to do so by their advisors or to complete their degrees on time. Many professors/PIs allowed students to take their labs' computing facilities, e.g., workstations to their homes. Some of the graduate students have limited access to computational facilities

and cannot afford to purchase tablets, printers, and headphones of good quality. Many others have expressed concerns about the inability to maintain appropriate social distancing.

*“My lab was one of [the] first to resume research at CMU, and it has been much more of a mental challenge than I expected. While it is nice to be able to make progress towards my thesis, working in such strict and isolating conditions isn't easy and I almost wish I was still working remotely. Under pandemic research conditions, all of the parts of grad school that make it fun/bearable are removed and you're left with the parts that are frustrating and emotionally taxing.”*

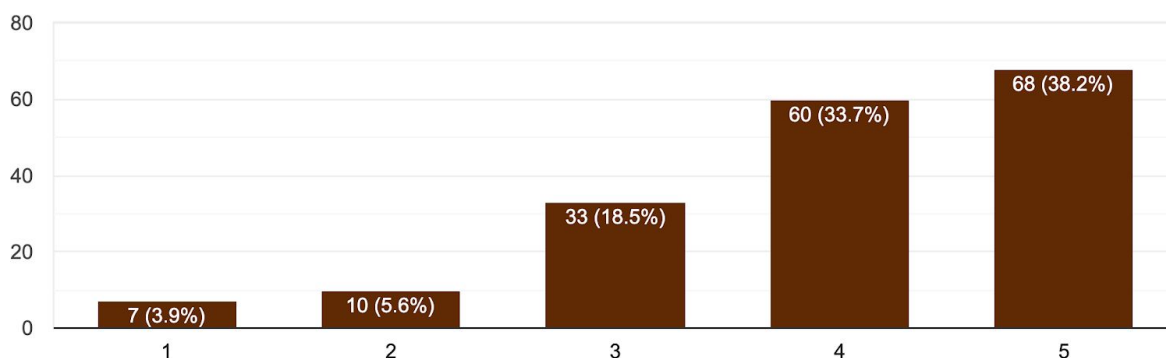
- College of Engineering Ph.D. Student

Forty-four percent of the respondents listed lack of access to specific laboratory hardware as an unmet need, whereas 43% of the respondents said the same about software access. Implications of these unmet needs are far-reaching, often stalling students' academic progress.

During the Spring semester, the university offered a pass/fail grading option; some students have asked to extend this option to the Fall semester given the ongoing state of national emergency due to the COVID-19 pandemic. As another accommodation to the difficult situation, some departments provided flexibility in offering the Ph.D. qualification exams with the possibility to postpone it for one more semester.

How well did your research advisor help you transition to doing research remotely when campus operations moved online?

178 responses



*Students working on coursework and research rate how well their research work adapted to an online format.*

Thirty percent of respondents instructors adapted course material “very well (5/5)” to an online format after spring break, with another 42% rating them 4/5 and 19% finding it average. Similarly, most students (72%) rated their research advisors' help in transitioning them to do their research remotely at a 4/5 or 5/5. However, about 10% of students being dissatisfied with course and research adaptation represents a meaningful minority whose education or work was not just negatively impacted, but essentially interrupted.

In summary, for students, while there are different challenges associated with closing off access to campus facilities vs. providing restricted access, both scenarios are demanding. Creative solutions are needed to facilitate the transition to reopening, while maintaining safety precautions. Worries about access to campus resources after Thanksgiving are coming up in context of the university's announcement of transitioning to remote-only instruction after the holiday. For some students, lack of access to on-campus facilities meant not being able to do their research. Recognizing this, GSA has endorsed the RISE Act, a bipartisan, bicameral bill (H.R. 7308/S. 4286) that would authorize \$26 Billion to various federal research funding agencies to provide an extension on existing projects.

## Excessive Productivity Demands

The impact of COVID-19 on student academic progress goes beyond access to academic facilities, and some students have reported that their academic advisor and/or departments have made little-to-no adjustment in student expectations as a result of this pandemic.

Thirty-six (10.4%) respondents indicated that they faced excessive pressure from advisors to maintain output since the beginning of the pandemic. This has negatively contributed to the already high mental health toll for some students. As one Ph.D. student from the College of Engineering wrote:

*"The mental pressure is huge. Especially the not-decreased or even increasing research pressure from the advisor vs. the actual things happening and the unknown future."*

*- College of Engineering Ph.D. Student*

There are other stories where academic advisors dismissed the negative impact of COVID-19 on students. One Ph.D. student from the College of Engineering related a conversation where their advisor felt student productivity could actually increase "since they no longer had to commute to and from campus". This lack of consideration is especially troubling as some advisors maintained this productivity expectation even as their productivity decreased during COVID-19. One Ph.D. student from the School of Computer Science wrote:

*"I consider myself a pretty focused person and not a procrastinator. But I've had to battle through severe anxiety and brain fog to try to focus on a daily basis. I feel like every day's a crap shoot...my output feels out of my control. However, my advisors made no adjustment to my semester plans after the pandemic (even though one took 4 months to return paper edits to me, because he was so stressed with the shift)."*

*- School of Computer Science Ph.D. Student*

Even more, we have some evidence that this lack of consideration goes beyond individual advisors. There was anecdotal evidence that some departments had little recognition of the impact of COVID-19 had on students and faculty, including both personal health and work environment disruptions. One Masters' student from the School of Computer Science mentioned, *"There is minimal recognition that productivity and work environments were impacted on the part of [my department]"*. The same student goes on to write:



*"[My department] has neglected to respond suitably to requests for increased support due to both COVID and BLM and the sum total experience is miserable. We are paying full price tuition to zoom call our teammates from our homes with ~6 hours of formal instruction per week with an expected 34 hours of work to be done on our own. Add on top of this their pitiful response to BLM and calls for any number of diversity improvements, I've never been less motivated to work on anything in my entire life.*

*- School of Computer Science Masters Student*

Another Ph.D. student from the School of Computer Science, while appreciating the support their advisor provided to them, expressed their concern that *"I worry the department will pressure [my advisor]"*.

In conclusion, there is a significant number of students who have felt that their department and / or academic advisors have not adequately recognized the impact of COVID-19, and the excessive productivity demands have negatively impacted student wellbeing. When combined with other COVID-19 impacts such as facility closures, 36% of respondents stated that they have concerns surrounding their timeline to graduation. Only 53% of students felt they had no concerns surrounding their funding or their graduation timeline.

## Missed Career Opportunities

Students are reporting uncertainty as to what they are supposed to do when an internship no longer proves viable, i.e., the organization withdraws as a result of responding to the pandemic

*"For the school year leading up to March 2020, I was preparing material samples for measurements at Lawrence Berkeley National Laboratory (LBNL) in California to use the angle resolved photoemission spectrometer with nanometer x-ray spotsize (nano-ARPES) endstation at the Maestro beamline, a DoE funded facility within LBNL. This style of instrument can only be found at a handful of facilities worldwide. In order to operate it, one needs to learn from the staff scientists at LBNL by attending multiple measurement runs. The work I do year-round is in preparation for in-person operation of this instrument ... My ultimate goal is to work in a facility such as LBNL for an extended period of time, either as a graduate student or postdoctoral researcher. Without attending in-person measurement sessions, my chances of attaining such a position are low."*

*- Mellon College of Science Ph.D. Student*

*"My advisor emphasizes that safety is her top priority and that she's excited about our return to campus when the time is right. We're okay on funding, but my defense has been pushed back from the end of this summer to the end of the fall semester. This is a bit of a frustration, but at least it offers some job security. The possible employers that I'm considering for my next step are all currently on a hiring freeze, so it's probably best to stay at CMU until things settle down."*

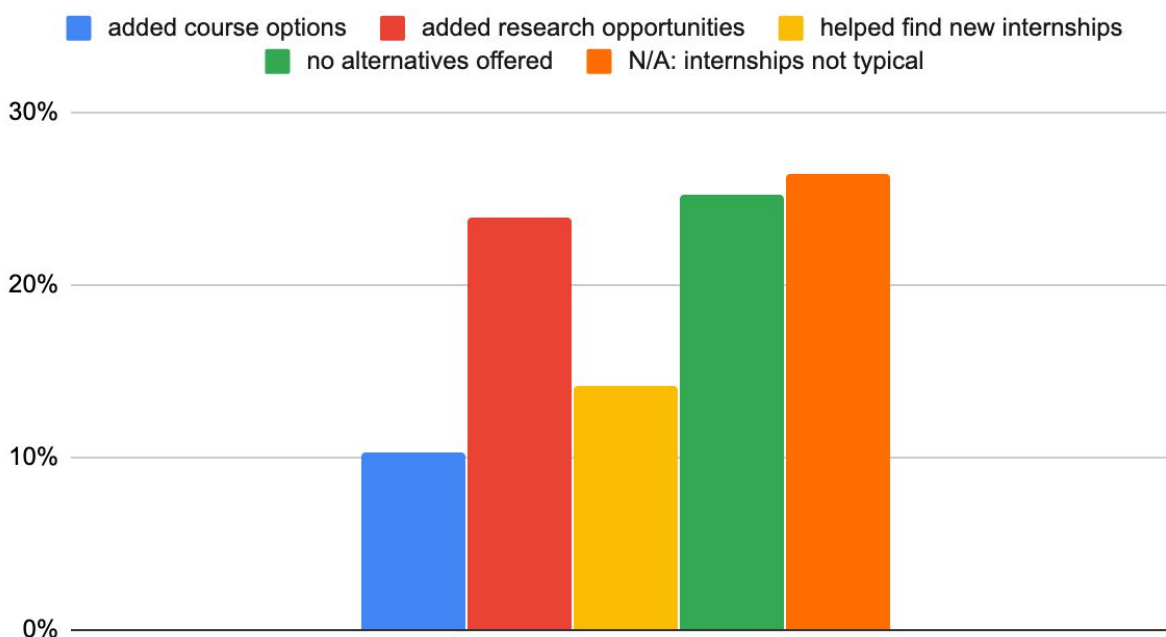
*- College of Engineering Ph.D. Student*

*"I was in the process of interviewing for jobs after graduation. Several companies canceled interviews abruptly and other positions are drying up. I am doing ok with CMU stuff but very worried about my prospects after graduation."*

*- School of Computer Science Ph.D. Student*

We have already been hearing from students and departments that the internship positions have been impacted heavily by the pandemic. Many were canceled, some changed to online, and some were postponed.

## Departments' offered alternatives for lost internships



Out of the 329 students (95% of total respondents) who responded to questions about the internship opportunities, 105 students (30%) indicated that it is not typical for students in their programs to have an internship. Another 100 students (29%) were not contacted by their departments regarding alternative opportunities as uncertainty loomed over their summer internships. 95 students (27%) mentioned that their department provided a research opportunity to replace compromised internships whereas 56 students (16%) said their department helped students to find new internships. 41 students (12%) said their department added new course options. 52 students (17%) said their career and professional development needs were not being met because of closures. In some cases, students expressed frustration with their departments continuing to charge tuition to maintain enrollment in an "internship" course that enabled students to pursue internships over the Summer despite internships starting late with reduced pay.

*"We still had to pay 3 units for [the] internship even though our internships started late and our pay went down."*

*- College of Engineering Masters Student*

In conclusion, many students lost internship or job opportunities due to the pandemic, the responses to deal with such situations varied across departments and often advisors and PIs following lack of a unified university response. To address disruptions to the academic job market, the House Science Committee proposed the Supporting Early Career Researchers Act (H.R. 8044) in August 2020. The bill would establish a \$250 million postdoctoral fellowship program at the NSF. While this bill does not address concerns of non-STEM graduates, this is currently the only legislative solution proposed. GSA endorsed this bill a few days following its release, and also helped Reps. Doyle, Lamb, Houlahan, and Moulton get on board as co-sponsors.

# Student Needs: Holistic

## Student Well-being and Resources

A staggering 63% of respondents reported new or increased challenges to their mental health since the start of the pandemic, while 40% said the same for their physical health. Seventy-one percent of respondents discussed challenges with social needs or isolation; for students whose outside support networks are in far-distant time zones, on-campus socialization generally provided the majority of social support.

### Health

One major determinant of physical and mental well-being is adequate exercise, and many students were thrown off of their fitness routines by pandemic-induced gym closures. Of the 306 students listing any unmet needs that would usually be satisfied by campus resources, 73% (223) identified the **fitness centers**, indicating that the strong majority of those feeling they lost something from campus closing were harmed by losing access to the campus gyms. Particularly for students living in apartment buildings, concern about contagion among neighbors may prevent them from leaving home except when absolutely necessary: one said,

*“Inability to access fitness centers has taken a toll on health and I do not feel very safe going out and exercising due to the pandemic.”*

*- School of Computer Science Masters student*

Many students noted that they had taken to outdoor exercising, but others cited chronic injuries precluding low- or no-equipment exercise routines. Meanwhile, some students indicated that losing access to fitness facilities was less of a problem in the summer, but would become one again in cold weather.

After the top three, the most listed unmet need was **health services**, at 32% (98 respondents). While health services were nominally available via telehealth during the closure, numerous students told specific stories about delayed care because of the closure:

*“I have been putting off see[k]ing attention for non-emergency injuries.”*

*- College of Engineering Ph.D. student*

*“As someone with a disability who sees many doctors, it's been difficult that my PCP at the health services has not been available to help coordinate care. We had 1 video call when I had a cold, but emails that I sent to her were often answered by a nurse who had no record of my particular issues.”*

*- School of Computer Science Ph.D. student*

One student, however, reported better access to care than before:

*“Access to campus mental health and academic advising services, and off-campus services, has actually been BETTER for me, as more are now available online. Before the lockdown, I was in lab so often that I could not schedule appointments to see a doctor or therapist.”*

*- Mellon College of Science Ph.D. student*

Sixteen percent of students (49 respondents) noted **mental healthcare** was an unmet need. While counseling and psychological services continued to be available, many students had left the area to live with family; of those remaining, most did not have access to safe and affordable transportation to campus (see [Transportation](#)), and as a result most did not pursue or continue in-person counseling. Virtual services were made available, but the majority of students share living spaces with other students or, especially after closures, with family members: these students likely could not find a private enough space in their residence to comfortably talk about personal issues with a counselor. In addition, missing the in-person presence and reassurance from the counselor may make the process less helpful for some seeking mental healthcare. Finally, because of licensing restrictions, in most states students were barred from receiving virtual counseling services from out-of-state providers—meaning that students who left campus to live with family were no longer legally allowed to continue receiving treatment from the counselors they had been working with. Instead, if they wished to receive mental healthcare, they needed to pursue treatment by in-state providers. While the University assisted students in finding new providers, they still needed to forfeit their existing relationships with counselors and start with new providers. Finally, students who had left the country to be with family were no longer covered for mental health treatment by the Student Health Insurance Plan in the area where they lived, and were not given clear options to access remote treatment. These findings are in line with recent nationwide surveys. In one survey of roughly 4000 U.S.-based STEM Ph.D. students conducted from May to July of this year, 40% reported symptoms consistent with generalized anxiety disorder and 37% with major depressive disorder—jumps of 13 and 19 percentage points, respectively, compared with 2019.<sup>2</sup> Identifying mental health needs of CMU students as we enter the Fall semester should be a priority for the university.

## Additional Resources

Other resources students missed were:

- studios and music practice rooms (20%)
- support services for international students (17%)
- CMU shuttles and escorts (15%)
- academic support and coaching (9%)
- support for teaching practices (5%)
- and support in equity and inclusion (2%)

Write-in responses included:

- office, office equipment, or study space (12 respondents)
- print services (11 respondents)
- library facilities or books and inter-library loan (8 respondents)

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<sup>2</sup> Chirikov, I., Soria, K. M, Horgos, B., & Jones-White, D. (2020). *Undergraduate and Graduate Students' Mental Health During the COVID-19 Pandemic*. UC Berkeley: Center for Studies in Higher Education. <https://escholarship.org/uc/item/80k5d5hw>

- drop-in access to collaborate with peers and faculty (6 respondents)
- invited speakers and training programs (2 respondents)
- on-campus food (1 respondent)
- and childcare (1 respondent).

Overall, by far the most students missed access to health, mental health, and fitness facilities. By the fact that these were not adequately replaced, or their replacements were not adequately communicated, likely thousands of students were underserved compared to their health needs. Other results are also concerning: international student support services, for instance, often make the difference between whether a student may see their family or not, and are critical in securing job placements after graduation. Seeing such needs go unfulfilled indicates that the university, while perhaps nominally functioning as normal in its remote status, did not fully provide the services to students that are typically available.

## Financial Concerns

Eighty-eight students (27%) reported increased financial challenges during the pandemic. At the same time, students paying their own tuition costs were not all satisfied that the value proposition for remote coursework was the same as when they matriculated. At the end of the survey, students were prompted about their personal and professional experience and whether they had questions for GSA or for the university. Of 73 Masters students who wrote in responses, 26 students spontaneously asked for reduced tuition or disagreed with the tuition cost in the context of attending courses solely online.

Another 14 students brought up other financial concerns, including four students who lost on-campus jobs. For instance, one student previously relied on private classes and performances to support themselves:

*"I have lost about \$15k so far from canceled gigs and dropped students, and anticipate more losses this fall. [...] I may not be able to return in the fall, because of our financial status."*

*- College of Fine Arts Masters student*

From the number of students who expressed concerns about their financial status, we expect that this student was not alone in questioning the likelihood of returning to finish a degree.

While we do not have comparable pre-COVID-19 statistics, and are aware that plenty of students were frustrated with tuition costs before the pandemic forced instruction online, we find it alarming that 55% of Masters students writing in questions brought up financial concerns.

Some Ph.D. students also raised problems with their financial condition. Multiple students, for instance, commented that their sub-minimum-wage stipends—presuming a 40-hour work week, which is less than many students spend—had not changed when their teaching workload doubled with the transition to an online model, nor with the transition to a hybrid model this fall. A substantially increased workload means students will have less time for their research, potentially prolonging path to degree or even endangering their ability to finish.

## Aid For Students Experiencing Financial Difficulties

Some new resources have been made available to students: the CARES Act allowed universities to provide support to domestic students, most of whom also received supplemental funds from the financial stimulus in April. CARES funding supported 363 CMU Masters students and 93 doctoral students during June and July.

For international students, fewer resources were available, but the Tartan Emergency Support Fund (made possible by donations from GSA, the Undergraduate Student Senate, other student organizations, CMU alumni, and “friends of the university” like CMU staff) provided supplemental funding to students with specific unmet needs. The CMU Graduate Student Assembly contributed over \$60,000 of its budget in late spring 2020 to the Tartan Emergency Support Fund, which as of the end of July had been used to provide aid to 271 CMU Masters students and 41 doctoral students.

In addition, the CMU Food Pantry, supported by GSA and the University, remained open for pick-up appointments for any students throughout the pandemic. Pantry visits in March 2020 were more than eight times higher than in the same period the previous year, while visits dropped slightly over the summer to about 250 a month, or around five times higher than during the summer of 2019. Seventy-eight percent of Pantry visits were by graduate students, and 88% of those were Masters students.

## Transportation

A critical component of access to research and academic facilities is the ability to safely commute. Pre-pandemic, a large majority of CMU students relied on the buses run by the Port Authority of Allegheny County (PAT) to travel to and from school. However, on March 25th, the Allegheny County Port Authority decreased bus frequencies by 25% until further notice.

Given both a reduction in bus frequency and existing limitations on bus occupancy, compounded by the difficulty or impossibility of social distancing while on the bus, many students are wary of using public transportation for their work commutes and access to necessities such as groceries and doctor appointments. However, most graduate students at Carnegie Mellon do not own a car, and for those who do, frequently parking on campus is outside most of their means. This puts students in a position where they have to choose between taking a riskier transportation option or foregoing access to certain essential services.

Most students indicated that they intended to commute to campus either by walking, ridesharing, etc. (50.7%), or by public transit (PAT; 45.2%). Only 6% of students indicated that they owned a car and would drive to campus with the current parking prices.

Respondents expressed trepidation and frustration about their commute to campus due to COVID-19:

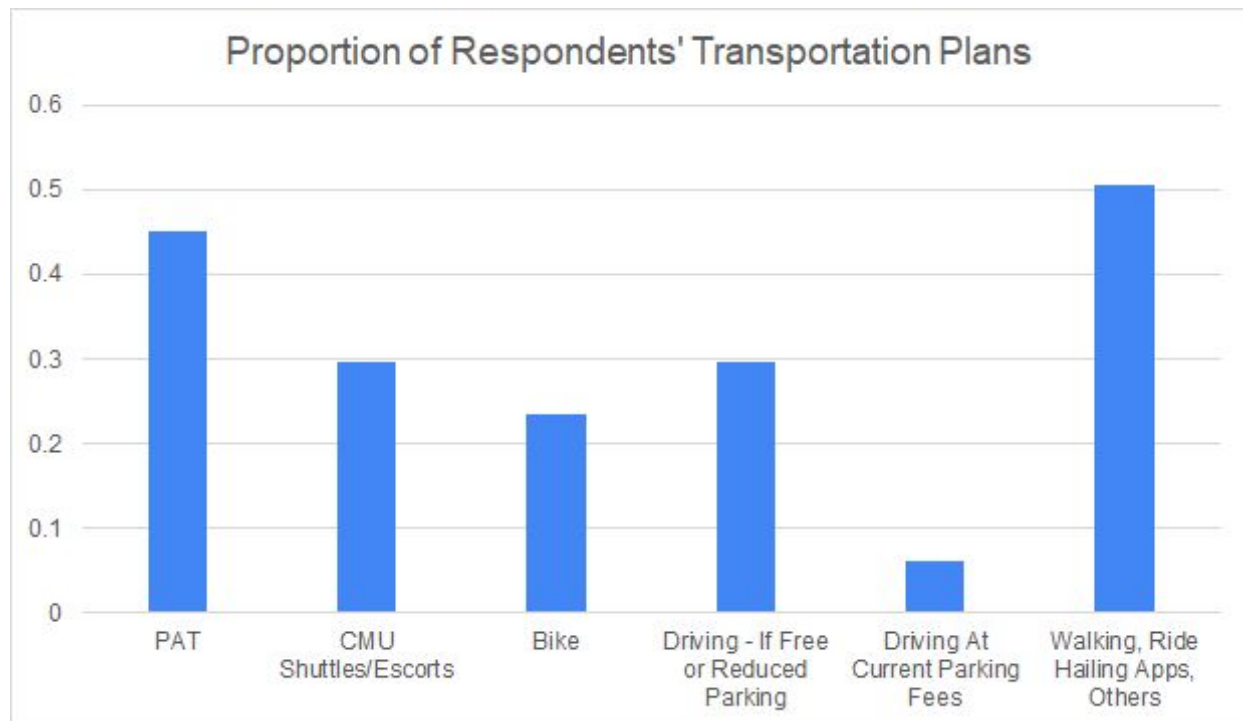
*“I’m nervous about returning to campus. Not my lab or office, since I can be isolated there. I’m nervous about using the bus to get to and from campus. My commute was an*

*hour each way on crowded buses. That's probably not feasible for me going forward. It would be nice if free parking was opened up."*

*-College of Engineering, Ph.D. Student*

*"It was inconvenient to get groceries if you don't have a car! Shopping online is an option, but the availability of products is limited. The service fee, delivery fee are also high, which adds additional burden."*

*-College of Engineering, Ph.D. Student*



Even for students who have access to vehicles, driving to campus still represents a challenge due to the price of on-campus parking. Only 6% of respondents stated they were willing to drive to campus at current parking prices. Multiple students stated that the cost of parking was a barrier for them to choose a safer commuting option.

*"I am currently wary of public transportation, but I cannot afford parking. Making parking free or, at the very least, more affordable for students is a tangible step that can be taken by the university to protect its student population in the midst of a pandemic. Please consider this."*

*-College of Fine Arts, Masters Student*

Given the survey responses, there is an opportunity for the university to increase the CMU Shuttles/Escort services in order to offset the number of students who still planned to take PAT to campus. If PAT maintains current bus frequency through the fall, it could lead to substantially more overcrowding as students return to Pittsburgh. We appreciate the university's addition of a shuttle route between campus and the popular residential area of Squirrel Hill, but believe it will



be insufficient to address an almost universal need. In addition, producing and releasing a comprehensive guide for how students, staff, and faculty can commute safely and physically distanced would help the CMU community to keep themselves safe while accessing both the campus and other needed services.

## Additional Concerns

In addition to the concerns above, 124 (36%) respondents took the opportunity to provide feedback on issues that the survey did not ask them about. Out of the students who provided additional feedback, over 14% of students were confused or dissatisfied with the safety changes and measures put in place by CMU due to COVID-19. One Ph.D. student from the College of Engineering wrote:

*“My department asked the dean of our school to allow doctoral students to pick up items from their desks they now need because of the prolonged closure of campus. There were only 6 of us that requested access to campus to pick something up. The university decided that they were only comfortable letting one of us students in the office area. So that person now has to wait outside the office space on campus for a 2 hour period for the rest of us 5 people to come in 20-30min increments to pick up our things from her. So instead of allowing us to go into the office separately on different days to get our OWN stuff, which is far safer because we now know that surface transmission of COVID is extremely rare. We instead have to put another student at risk who will have to physically hand the stuff to each of the 5 people who show up to collect their things.”*

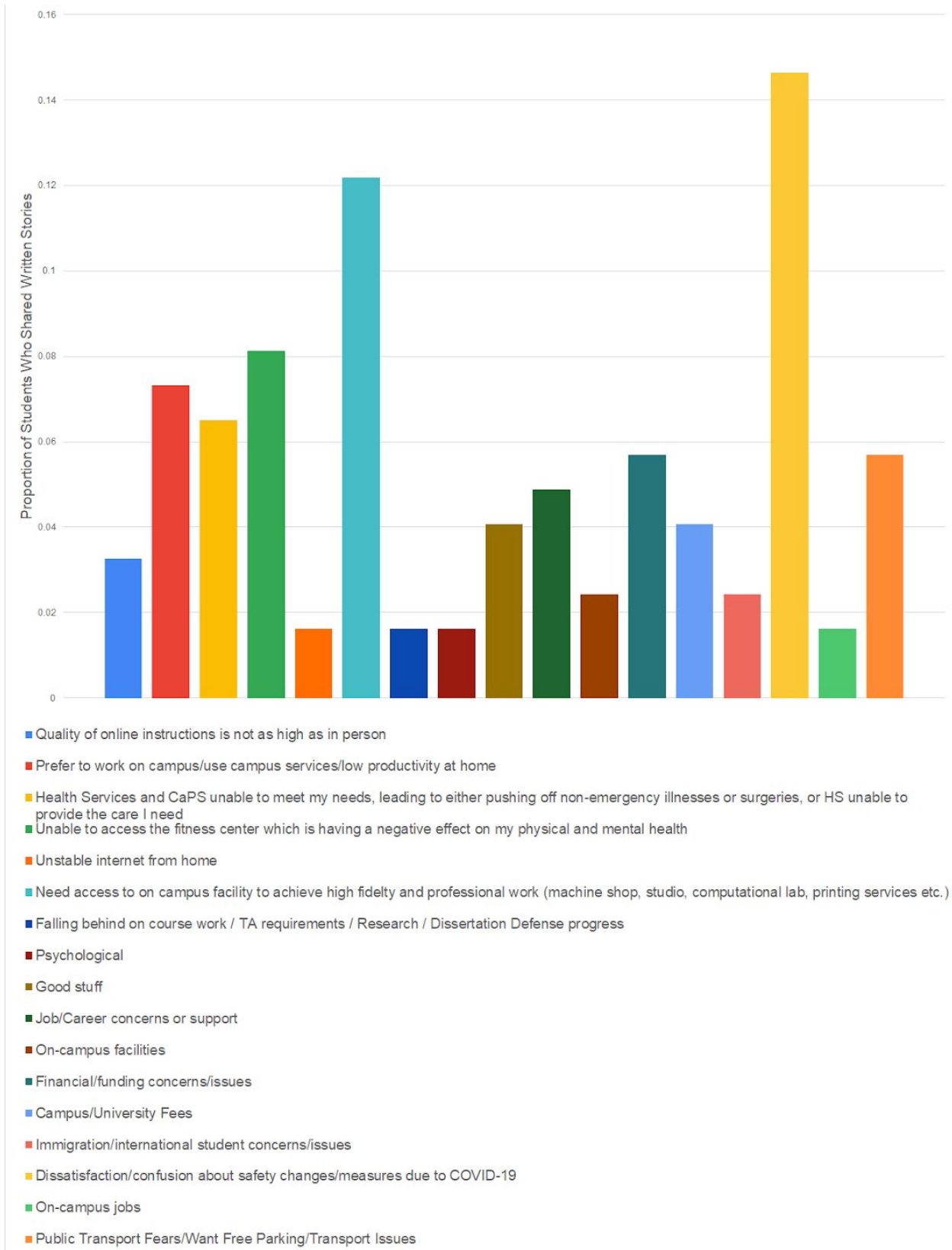
*- College of Engineering Ph.D. Student*

In addition, some students felt communication from the university was slow, especially regarding fall semester course plans.

*“A more detailed plan for the fall - releasing the schedule of classes, having people re-register for classes if they need to, etc. I'm really stressed about how the fall semester is going to look, and I don't have a clear idea cause the university has not released anything yet.”*

*- College of Engineering Masters Student*

Finally, students also voiced additional concerns on the quality of online education, financial support, and on campus employment opportunities.



*Additional concerns (not otherwise asked about in the survey) shared by students in free-form text responses.*

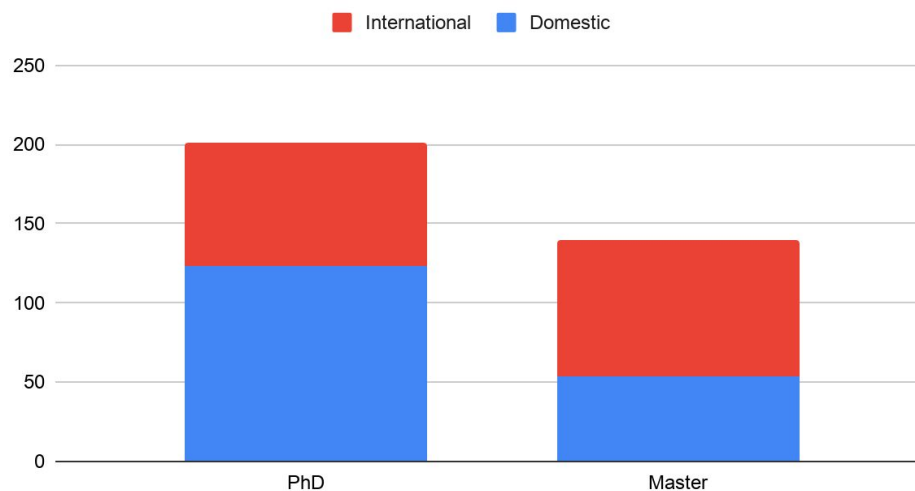
# Disproportionate Impacts

Among the general difficulties for graduate students, certain populations have been disproportionately impacted.

## International Students

In this survey, 178 (52%) participants indicated their status as a domestic student and 165 (48%) as an international student. This represents a lower proportion of international respondents than in the general graduate student body, where they make up about 63% of graduate students at CMU. Twenty-four percent of respondents, or about half of all international student respondents, reported new challenges with immigration or international travel during this time.

Degree type and status

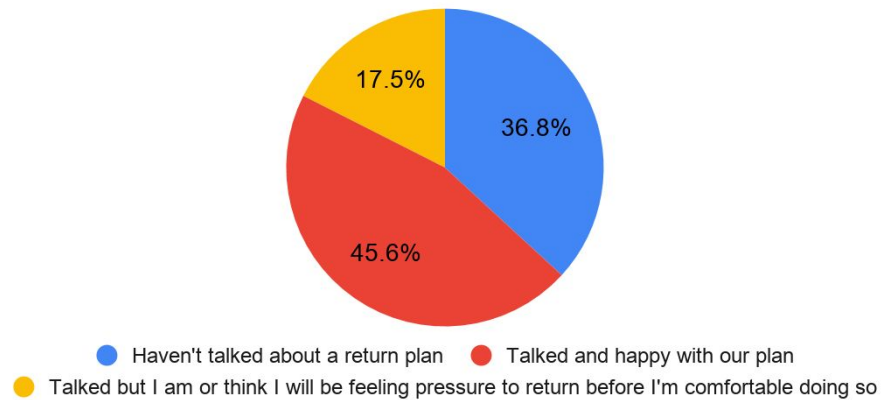


An important concern for international students is to make sure that their course of study is not disrupted as a result of this pandemic, as that may result in the cancellation of their visa. Our findings suggest that a similar or slightly higher percentage of international students may be concerned regarding the timeline of their program or their funding, with 40% of those asked concerned about timeline, funding, or both, compared with 38% of domestic students.

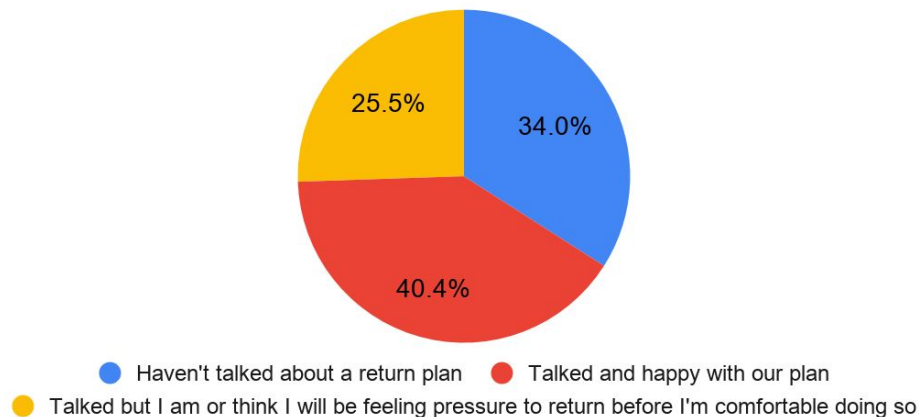
As the campus goes through a series of re-opening stages, it is important to ensure that administrators, faculty, and students are all involved in constructing a plan. We note that barriers such as cultural, language, and power differences may prevent international students from expressing their concerns and needs. The figures below indicate the ratio of research students in each category and whether they have discussed return plans with their advisors. As of late June, slightly more domestic students had not had a discussion with their research advisors about their return to campus—perhaps reflecting fields where research can be done remotely; however, we find that international students felt more pressure to return, with more

than a quarter expecting to experience pressure to return to campus before they felt comfortable doing so.

### Domestic students



### International students



Another important disparity is that international students are not eligible for many governmental and institutional financial aid programs. As expressed by a Masters student in CIT, “*I was heavily relying on my campus job to support my living expenses.*” This student went on to suggest that the university offer opportunities for working remotely. While GSA, other student organizations, CMU alumni, and individual university staff members enabled the Tartan Emergency Support Fund to help students with new expenses related to the pandemic, these funds could not be used towards tuition, meaning that if students were previously using an

on-campus job to pay part of their tuition expenses, they would need to find different sources of funding and potentially take on debt in order to continue.

Overall, while most or all students have felt their quality of life change during the pandemic, international students have borne the brunt of the uncertainty and negative impact.

*“A lot of fear, uncertainty and doubt has set in as we have friends/family who are also experiencing immigration delays and uncertainties with future academic plans in the US. That, coupled with the legitimate questions surrounding an oncoming/current recession and a post-COVID weakened economy changes the calculation for international students who come over to the US while assuming all kinds of risks”*

*- College of Engineering Masters Student*

*“I lost my father and grandmother in this pandemic. The last time I saw them was in 2016...”*

*- Ph.D. Student*

## Students With Partners and Families

Thirty percent of students (98 respondents) reported new challenges with family or family care obligations since the pandemic began. While these span various kinds of challenges, it is clear that responsibilities to their families were an important part of many students' COVID-19 experience.

Students with children have consistently reported difficulty in finding and affording adequate childcare to allow them to perform their coursework and conduct research. Financial concerns created by the pandemic are compounded by the need to take care of a family. While many students have been able to procure some childcare, it has been predominantly accessible through pre-existing networks of friends and family and is most likely temporary; a consequence of high levels of unemployment. Though there are currently some accommodations such as our GSA-funded childcare grants and the CARES subsidy covering 10 days of backup emergency care for domestic students, CMU students with families are still struggling to meet the difference in full-time care. The following data and stories were generated through the survey but also through individual connections by the GSA Vice President of Campus Affairs.

*“Studios or practice rooms: as you can imagine, working from a home full of kids is hard. I think my productivity is at ~10% of its normal. I am missing my office.”*

*- School of Computer Science Ph.D. student*

*“I am a graduate student at Carnegie Mellon University, and mother to an amazing 23-month-old daughter. I knew that parenting while in graduate school would be challenging and endeavored to plan to ensure this was a viable path for our family. I deferred my graduate studies for 1 year to build up extra savings and start my program*

*with a baby rather than while pregnant. I carefully calculated our budget – accounting for my tuition, family health insurance (which runs \$7k per year), and daycare (another \$1,300 per month). We sold our home and moved to Pittsburgh in the spring of 2019 with most of these details worked out. My husband's income would cover our regular expenses (rent, utilities, groceries, daycare), and our savings would pay for overflows such as my tuition and our health insurance.*

*Until March of 2020, this was going reasonably well. There had been some surprise expenses (high heating bills, car repairs, etc.), but mostly things had gone according to plan. In late March, everything changed. Daycares closed, leaving me to choose between trying to figure out how to juggle a full course load while parenting a toddler at least half-time, or find an extra \$10 per hour to pay for a babysitter/nanny. I am an exceptional student. I took additional credits every term until COVID hit and maintained a GPA above 4.0. That semester – I dropped down to four courses and found myself part-time childcare (20 hours per week), so that I could try to keep up. In April, my husband was informed that the project he was working on had been postponed until further notice. I was able to finish out the semester strong, but the costs to our family, both financially and psychologically were steep.*

*These difficulties are ongoing. Our daycare plan costs \$400 per month more than it did in our pre-pandemic plan, and I do not know when my husband's income will return. Furthermore, with rising food prices, our grocery bills have significantly increased. I have looked for cheaper housing options and other alternatives, but the cost of moving alone wipes out any potential savings for several years. I still plan to graduate in May, but I lament the courses I might have taken and the financial stability I had planned/hoped to graduate into. It seems like everything we scrimped and saved for over the last 10 years has been wiped away in a matter of months, and I am afraid to start over with nothing and a young child depending on me.”*

*- Masters Student*

*“Few students have escaped major disruptions due to the pandemic. Student parents, on average, experienced some of the most challenging disruptions. It is difficult to be an attentive parent and student at the same time, even with support. The pandemic essentially took all support away in a very short time. Schools and daycare centers closed. Supportive family members are often grandparents who are in high-risk groups. Many people lost their jobs, including the partners of many students. That loss of income put many student parents in a financial crisis. In my case, to support my family I was working as a consultant in addition to full-time courses and research. The consultancy was cancelled as many government agencies terminated open research grants due to the pandemic.*

*Early in the pandemic supply shortages extended way past toilet paper. It was nearly impossible to find the infant formula my children needed for almost 2 months. Everyday my partner and I would search online and call stores in hopes of finding the correct formula. Most parents have challenges working from home right now. I have 3 children 3 and under. When the pandemic started they were all 2 and under. I have a lot of experience working from home and wrote guides to help other students. Despite this*

*experience, only one strategy has worked for me to continue research and courses. During the day I switch between taking care of my children and then joining my video meetings and lectures I instruct. During this time it is too difficult to concentrate long enough to get Ph.D. level analysis or writing done. I stay up most nights to work from 9pm-3am after everyone else goes to sleep, then sleep 3am-7am and repeat. Weekends are sacrificed in an attempt to make progress on my degree; we cannot afford to add extra semesters before graduation. Even if childcare was readily available I would have to weigh the risk of introducing COVID-19 to our family through childcare. It would also have to be at no cost.”*

*- College of Engineering Ph.D. Student*

## Ongoing Anti-Racism Work

This survey was an insufficient mechanism to collect information on the disparate impact of the pandemic on underrepresented racial groups at CMU. We urge the university to consider the additional burden the pandemic has had on students who are black, indigenous, and people of color (BIPOC), as well as on Asian and Asian American students who are facing higher levels of hate crimes and discrimination due to politicized rhetoric about the pandemic's origins. We expect further efforts to measure the specific impacts of the pandemic, as well as the impact of the continuing dialogue around traumatic historical and recent events, on these students. Opt-in studies like this one are inadequate when representation of a population is very low, as it is for BIPOC at Carnegie Mellon among both faculty and students.

Some colleges within CMU have hosted diversity, equity, and inclusion town halls to further a much-needed dialogue. These community discussions acknowledge and amplify the needs of vulnerable communities and historically disenfranchised and marginalized BIPOC. This work at the college level is helping to develop actionable plans for addressing these needs within the unique capacities of committed individuals in attendance.

We acknowledge the university's multifaceted plan to expand and improve its efforts in anti-racism. We encourage CMU to hold itself accountable by **quantitatively measuring experiences of racism and inequity** among BIPOC community members and transparently reporting on the outcomes of its efforts on a regular basis, even—and especially—when it falls short of expectations.

# Conclusion

Carnegie Mellon graduate students are exceptional, diverse scholars who dedicate years of their lives to improving their own personal and professional skills and pushing the state of the art in their chosen fields. This report summarizes key findings from 345 of these graduate students' experiences during the first several months of the COVID-19 pandemic in the United States, as reported to us in late June 2020.

It is clear that graduate students at Carnegie Mellon are experiencing exceptional hardships, ranging from academic to personal and financial struggles. Some of these findings have been found to hold nationwide; it will be interesting to see what other findings can be extrapolated. With on-campus facilities and resources shut down, many different facets of a student's academic life were affected—including students' research progress, time to completion for their degrees, and the format of their coursework. Even so, some departments and research advisors made few to no adjustments in expectations. Furthermore, the pandemic altered job prospects. Employment and internship offers disappeared, forcing students to miss critical professional learning opportunities. Other students struggled to find the financial resources to complete their degrees, and were forced to enter the workforce prematurely.

While the graduate student community at CMU is diverse, different populations experienced disproportionate impacts across all of these hardships, especially students with families, BIPOC students, and students across other marginalized groups. In the midst of the pandemic, these hardships led to severe downstream effects including harming both physical and mental wellness, which were only exacerbated by the fears of the pandemic and feelings of isolation. We hope this report draws attention to our graduate student population's unmet needs, both those newly resulting from the pandemic and those long-standing yet further exacerbated by it.