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MAJOR ARTICLE

COVID-19, stress and mental health: What students expect from academic institutions during a pandemic

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ABSTRACT

Objectives: To learn about the mental health of students, the tools they use to cope with stress, and their perceptions toward the assistance they receive from their academic institutions during the COVID-19 pandemic. **Participants:** 593 students from two University of California campuses. **Methods:** The link to an anonymous survey was included in a mass email that was sent to students. **Results:** 87% of students expressed that their mental health has been negatively impacted by the pandemic, especially in students who already had diminished levels of self-reported mental health. Students articulated the need for increased financial, academic, and mental health support and that they want to have a voice in discussions that will lead to decisions that would impact them. **Conclusion:** Students reported that the pandemic has negatively impacted their mental health and that they wanted academic institutions to include them in the decision-making processes that would contribute to their health.

Introduction

We are in a global pandemic; to be precise, the COVID-19 pandemic. On March 20, 2020, after the California shelter-in-place order was imposed, all college and university education in California moved from classroom instruction to an entirely online format. The University of California system, the largest public university system worldwide, instructed its faculty to transition all of their courses online immediately. Numerous workshops were offered to professors and instructors on how to set up online courses, organize Zoom and Google hangout meetings, and administer online exams and office hours.

This survey was thereby developed to learn about the mental health and overall well-being of students, and their attitudes and perceptions toward the assistance they receive from their academic institutions during the early phase of the COVID-19 pandemic. A summary of the results of this survey, conducted in April and May of 2020, is presented in this paper.

The majority of current efforts by academic institutions have been directed toward protecting students against infection and providing medical care for those who have been infected by COVID-19. But the historical trend of soaring mental health needs among college students,[1,2] coupled with the inability of colleges and universities to meet these demands,[3–5] may especially impact students already facing financial and practical barriers to mental health treatment, such as low-income students and students who lack a safe place in which to quarantine.[6,7] The COVID-19 pandemic could be an unprecedented cause of stress among already stressed-out college students.

Several large epidemiological studies have been published detailing diminished levels of mental health and high rates of suicidal ideation among college students worldwide.[8–10] These data are compounded by the gap in mental health treatment for students within academia, even as stress management interventions have shown promise in reducing stress in college students.[11,12] A cross-national study of first-year college students from 24 universities in nine countries conducted by the World Health Organization's World Mental Health International College Student Initiative (2020) found that 93.7% of students experienced stress in at least one of six life areas (finances; health; love; familial relationships; school relationships; problems of loved ones). Multivariate analyses revealed that the extent of stress in *any* of these six areas significantly correlated ($F = 20.6–70.6$, $p < 0.001$) with an increased likelihood for a student to develop one of six mental disorders (major depressive disorder; bipolar disorder; generalized anxiety disorder; panic disorder; alcohol use disorder; drug use disorder). Population attributable risk proportions indicated that roughly 47–80% of 12-month mental disorder prevalence could be eliminated with a reduction in the stress experienced by vulnerable college students.[8]

A 2020 report of first-year Spanish university students found that one-third of students reported symptomatology consistent with a common mental disorder within the 12-month study period, and of those, one third reported

severe role impairment as a result. Findings revealed that only one out of every eight students with mental disorder symptomatology received mental health treatment.[9] These data are pertinent not only for those students with an onset of mental health issues during the course of the academic year, but also those students who enter the university with mental health issues. A 2019 longitudinal study of suicidal ideation among first-year Spanish university students over a 12-month period revealed a high proportion of suicidal ideation among the study sample, with 7.3% of respondent reporting suicidal ideation at the end of the 12-month study period, which represented an increase in new cases of 3.4% from the baseline condition. Of those students who expressed suicidal ideation at baseline, 21.2% also reported suicidal ideation at the end of the 12-month study period, illustrating a persistence in suicidal ideation over the course of the students' first year of university.[10]

Despite the increasing body of evidence illustrating an increase in mental health needs among student populations, there exists a gap in mental health treatment. A 2020 study of mental health treatment use in South Africa found that in total, 18.1% of first-year university students sampled received mental health treatment, and only 28.9% of first-year university students with diagnosed mental disorders received mental health treatment. The rates of treatment for students who expressed suicidal ideation, had a suicidal plan, or had attempted suicide were 25.4%, 41.6% and 52.9%, respectively. Results indicated that mental health treatment utilization was significantly lower for students from traditionally marginalized groups (Black students, first-generation college students, students with disabilites, and students with atypical sexual orientations).[11]

A number of studies in the U.S. have further documented the growing incidence rates of stress and anxiety in American college students, which contributes to declining emotional health and academic success.[13–17] A 2014 study by the American College Counseling Association found that 52% of college students seeking help had severe psychological problems compared to 44% in 2013, and 16% in 2000; further demonstrating the growing incidence rates of stress and anxiety in college students.[18] Similarly, in a 2014 survey administered by the UCLA Higher Education Research Institute, students were asked to rate their emotional health and the frequency with which they feel depressed; results showed that self-rated emotional health dropped to 50.7%; its lowest level ever.[19,20]

In a survey conducted in March 2020 by RISE, a college affordability advocacy group, 75% of college students reported dealing with higher levels of anxiety, depression and stress, and 52% had been laid off or had their work hours cut.[21] These data are reinforced by a recently published 2020 study assessing the weekly self-reported mental health of a sample of college students over a two-year longitudinal study that encompassed the Winter 2020 school term during the onset of the global coronavirus pandemic. Results indicated that students were significantly ($p < .001$) more anxious and depressed during the Winter 2020 term than in prior academic terms. This finding was especially pronounced during the weeks leading up to and during finals week,[22] and is consistent with two surveys of UCI undergraduates administered as part of the Next Generation Undergraduate Success Measurement Project (2020) in which 80% of students expressed concern that moving classes online would negatively affect their education.[23]

We expected these findings to increase with the stress brought on, and exacerbated, by the pandemic, consistent with the detrimental impact that prior large-scale disasters, from natural disasters (Hurricanes Sandy and Katrina; the 2004 Thailand tsunami) to man-made disasters (the Great Recession of 2007; 2016 Fort McMurray wildfire) had on mental health.[24–31] For this reason, a qualitative component was added to this survey instrument via open-ended questions to provide students the opportunity to detail the effects of the pandemic on their lives in a way that may not have been captured by the predominantly close-ended questions of the previous research.

Methods

There is no doubt that academic institutions made an orchestrated effort to facilitate online course instruction during the pandemic, yet, collectively, we believe that the professors and instructors were not trained on how to *teach* online during a pandemic since none of them had ever lived through a pandemic or taken online courses during a pandemic. It became clear from multiple points of contact with students, that the transition to online learning created and/or exacerbated hardships beyond the mode of academic instruction alone. In particular, the pandemic seemed to expose a discrepancy between what the university as a collective body saw as their role in meeting students' needs, and students' expectations of their universities. Thus, for the purposes of this study we took an ethnographic approach that combined survey data with researcher observations, and the content from personal conversations/email correspondence with students, to form a holistic understanding of students' needs during this unique and unprecedented learning environment to assess how teachers and administrators could better meet these needs.[32] Consistent with prior ethnographic studies, this research seeks to give voice to the subjective beliefs and behaviors of students, by both conceptualizing their experiences within the context of a distinct social group, and by incorporating their attitudes and perceptions into the study protocol.[33–35] Out of this process of active listening, we developed a survey to assess the scope of this problem.

Emails were sent to administrators involved in undergraduate education on two University of California campuses in Southern California (UC Los Angeles and UC Irvine) inviting them to share an online and anonymous Qualtrics survey with their undergraduate students. The survey consisted of closed (30 multiple choice) and open-ended (4 free response) questions, which was included as a link in a COVID-19 Daily Update mass email that was sent to undergraduate students in April and May 2020. The survey was approved by UC Irvine Institutional Review Board (IRB).

All English-speaking students 18 years of age and older were eligible to participate. Informed consent was obtained prior to administration of the survey. No participant identifiers were retained. The data obtained is maintained electronically and password-protected through UCI's encrypted research platform, such that the identity of any participant cannot be ascertained. All questions were voluntary, and students were given the option to opt-out of the survey at any time. This survey was reviewed by the UCI acting IRB Manager Minimal Risk Team prior to recruitment and administration and it was determined to be of minimal risk to adversely impact study participants.

Results

On the UC Irvine campus, finals week for Winter Quarter took place during the week of March 24, just a few days after the shelter-in-place order came from the governor's office and the same weekend that the majority of undergraduate students living in dorms were requested to immediately vacate their dorm rooms. Students took all of their final exams online. As educators, we asked ourselves how a student who lost his/her job and was worried about being able to pay for absolute necessities was able to focus while taking an online exam. Through private conversations we learned that some students feared that they would become homeless because they did not have a safe place to go to, some students were dealing with heightened mental health issues due to uncertainties in their lives, and other students were moved back to home situations that were not optimal environments for online education. In spite of all these hardships, students were required to take online final exams.

During the Spring Quarter of 2020, many faculty members offered research courses that they usually taught in laboratories, online with an ambitious syllabus and requirements that involved reviewing scientific literature and writing. Since these courses are not considered required courses, some students dropped these courses due to the added stress that it was creating for them. These students expressed that the pandemic has impacted their mental health negatively. We also received private correspondence from students sharing how sad, stressed out, confused, and scared they were, and how worried they were about their future. By listening to our students, it became obvious that this pandemic was impacting the mental health of our students, and we felt compelled to do everything in our power to understand the extent of it and identify strategies to help them. Our students also made us realize that teaching an online course during a pandemic is not the same as teaching an online course absent a pandemic.

In total, 593 students from UCI and UCLA responded to the survey: 360 students from UCI and 243 from UCLA. 72% of the students were female, 25% male, 2% non-binary, and <1% preferred not to disclose their gender. UC Irvine's undergraduate population is approximately 49% male and 51% female, while UCLA's is approximately 43% male and 57% female. The country of origin for 84% of students was the United States. The remaining 16% of students originated from Mexico, Iran, Afghanistan, Columbia and Russia. Besides the UC campus, gender, and country of origin, no other demographic data were collected. Since there were no statistically significant differences in answers to questions provided from the students from each campus, the survey results reflect their collective responses.

Quantitative (closed-ended) questions

Student responses to closed-ended questions were aggregated, and summary statistics for all measures were tabulated. These data were subsequently analyzed using descriptive statistics to calculate the total distribution of responses to each question. These data are reported as percentages of total responses in the sections that follow. To understand the extent of the negative impact of COVID-19 on the mental health of our students, students were asked to rank their mental health and physical health (from poor to excellent) pre- and during the COVID-19 pandemic. When describing their mental health pre-COVID-19 pandemic, 72% of respondents selected either "good," "very good," or "excellent." When asked the same question *during* the COVID-19 pandemic, only 40% of respondents reported having "good," "very good," or "excellent" mental health; a 32% decline in positive-standing mental health. The frequency of respondents who selected either "fair" or "poor" for their mental health increased from 28% pre-COVID-19 to 60% during COVID-19. Furthermore, when prompted by the statement, "I feel that my mental health has been negatively impacted by the COVID-19 pandemic," 88% of students responded with either "strongly agree," "agree," or "somewhat agree"; 35%, 31%, and 23% respectively.

In addition, 51% of respondents either "strongly disagreed," "disagreed," or "somewhat disagreed"; 7%, 30%, and 32% respectively, with the statement "My university is doing enough in assisting me with my mental health." Students were also asked how much they felt their university professors, staff, and leadership officials (chancellor, vice chancellors, provost, vice-provosts, and deans) cared about their mental health and overall well-being. The response options were categorized as a Likert-type scale of 1–5, with "1" representing the lowest level of agreement and "5" representing the highest level of agreement. The highest categories (4 and 5) were marked by 64% of students for professors, 57% for staff, and 35% for university leadership officials.

Students were also asked to share their coping methods for improving their mental health. The most selected categories were reaching out to friends (29%), reaching out to family members (20.3%), sleeping (9.6%), and exercising (8.8%). Other coping methods selected were posting on social media (5.2%), drinking alcohol (4.1%), practicing gratitude (3.9%), meditating (1.9%), helping others (3.2%), praying (3%), journaling (2.9%), smoking or consuming marijuana (3%), breathing exercises (2%), taking prescription drugs (1.5%), therapy (1%), and smoking cigarettes (0.3%). Of note, less than 10% of students chose smoking cigarettes, drinking alcohol, smoking or consuming marijuana as their coping mechanism, but 24% of the students who selected

these methods reported that their consumption has increased due to the pandemic. In a separate question, students were asked to share who they rely on the most (up to 3 categories) to cope with stress associated with the pandemic. The most selected categories were friends (29%), parents (21%), and family members (19%). The other categories that they selected were significant others (16%), pets (9%), spouses (3%), professors (1%), and therapists (1%). In the "other" category, <1% of students wrote "myself."

Students were asked to share the financial difficulties they were experiencing. Responses indicated that 42% of students surveyed were responsible for paying 50% or more for basic needs (rent, food, clothes, and gas) pre-pandemic. Of these students, 56% stated that the COVID-19 pandemic has made it more difficult to pay for those needs. Overall, 61% of respondents either "strongly disagreed," "disagreed," or "somewhat disagreed"; 22%, 18%, 21% respectively, with the following statement: "My college/university is doing enough in assisting me with the financial burden during the COVID-19 pandemic."

Qualitative (open-ended) questions

Student responses to four open-ended questions were collected, analyzed, and interpreted using a thematic analysis methodological approach.[36] Utilizing this approach, the most consistently given responses were culled from the data and used to establish the predominant themes of participants' espoused perceptions of their needs and experiences. These themes were then categorized using an iterative process by which categories were revised and updated as necessary until saturation was achieved. The questions were as follows: 1) "Please list three things that colleges and universities can do to assist students during this pandemic" 2) "In your opinion, what are some methods that college students can use to improve their mental health during this pandemic?" 3) "In your opinion, what are some methods that college students can use to improve their overall health during this pandemic?," and 4) "Do you have additional comments you would like to add to this survey?" Responses were categorized into three predominant themes that emerged from the data: 1) communication, 2) support, and 3) empathy.

Communication

The category of communication encapsulated the desire for information on a number of fronts (academic, financial, and administrative). Examples included how and when financial aid would be distributed, where students could go to ask questions about classes, how to access campus resources, and what resources were available. The overarching theme to these responses was a desire for "*clear communication; ensure that students are still connected to the university.*" Students expressed both a desire for the university to communicate **to** them, i.e., "*Offer more communication. My university was great at first but now we've heard nothing for weeks. Even a simple "hey I know this sucks" email every now and then would be better,*" to a desire for the university to communicate **with** them: "*Hold open meetings/workshops where anyone can join and make suggestions or listen, where future planning of protocol for pandemic and other disasters (e.g. heat waves and drastic drought due to climate change) is publicly discussed and shared; it'll help people who feel the need to do something and are tired of feeling useless and helpless.*"

Overwhelmingly, students' comments revealed their desire for administrators to communicate with them to come up with solutions to the problems faced during the pandemic. Students expressed this need in the form of a request for administration to "*have a conversation with students.*" This desire to be a part of the conversation with faculty and staff shifts the focus on students being at the receiving end of what will happen (*"listen to and respond to student's concerns and suggestions, especially with regard to rescheduled events"*) to them being active agents in the generation of ideas and solutions ("*ask students what they can do to help*"). It underscores a stated "*need to be heard*" that many students felt was not being acknowledged or supported by the university administration. Students expressed that being permitted to be a vocal part of decisions that would directly impact them was a way that the university could "*help students who feel the need to do something and are tired of feeling useless and helpless.*"

Support

This category can be further subdivided into three sections: 1) Mental health support; 2) Academic support; and 3) Financial support. Very few students addressed a need for only one of these support mechanisms; rather, students consistently expressed multiple, intersecting support needs as illustrated in the following quotes: "*Provide helpful ways to cope with stress, provide necessary financial aid to those in need, provide academic resources to make transition to remote instruction easier*"; and, "*even though I am sleeping, I have been having horrific nightmares every night since this pandemic began so I don't feel rested at all. This is affecting my mental and physical health, and also impairing my ability to function in class.*"

Of the three support categories, the primary unmet need identified by students was that of mental health services, i.e. "*I think poor mental health is the biggest issue affecting all students. Please help us with this!! The depression is real.*" Requests for mental health services were made directly, where students specifically acknowledged a singular need for "*providing counseling lines for people without access to therapy,*" and "*they should be hiring more mental health counselors and doing more to distribute resources and information on how to get remote counseling help.*" Others indirectly referenced the interplay between unmet needs in other avenues, such as a lack of perceived academic support, and their mental health, i.e. "*This pandemic was unprecedented, and my anxiety has reached a new high due to having to move back home. Since nearly all of my classes treat this as if everything is still the same, I haven't had time to manage my anxiety and complete assignments. I have incomplete homework and anxiety attacks, and I wish professors would take that more into account.*"

The most frequently cited unmet academic support included a need for flexibility, leniency, and a decrease in the expected workload in classes. Many students expressed increased anxiety in struggling to balance work with the new expectations and demands of the online learning environment, i.e., *"regulate the class work. The amount has increased at least 3-fold, and it's very overwhelming and anxiety-inducing,"* and, *"Professors claim they 'understand that this is a stressful situation' - that is great but what are they doing to change that in their courses? Not much."* Many students, especially those graduating in 2020, expressed fear and uncertainty regarding their job prospects post-graduation, i.e. *"I am graduating this quarter and I am terrified."*

Students cited a desire for their university to offer not only further academic guidance and direction, but also to acknowledge the compounding loss(es) that many students feel they are facing. Students specifically requested that their universities provide a *"space to grieve"* and express their *"bereavement."* Some students expressed this bereavement as a consequence of the direct loss of life of family or friends to the disease itself (*"my dad has COVID-19, my aunt does also, and my grandma just died due to it"*), whereas for other students this loss materialized in less obvious ways, such as the lack of graduation ceremonies for seniors (*"I know that all my senior friends, myself included, are extremely sad that we will not have a proper graduation ceremony in June"*; and, *"None of the methods of improving my mental health can adequately help me overcome the grief of losing my last quarter at UCLA and not getting a graduation. We are all experiencing a traumatic loss that extends beyond the bounds of regular mental health care, and universities need to be more considerate of that and boost their usual mental health response as a result."*

Finally, many students cited the need for increased financial resources, such as requesting that the school: *"provide more financial relief and resources to all students."* Specific types of financial relief requested by students ranged from tuition freezes or reductions, help in purchasing textbooks or computers with which to participate in on-line classes, and for the school to *"provide resources for affordable meal options."* Many students directly linked their financial anxiety and need for financial support to their ability to focus on academics and/or their mental health. For example, one student stated: *"In conversation with my friends, I know that coursework is definitely an added stressor to our mental health, which is already exacerbated by external, COVID-related factors."* Many students expressed an inability to focus on studies due to external stresses due to the pandemic, however because of financial reasons, they felt *"stuck"* with no other option. This was articulated by one student in stating: *"We shouldn't be in school. I have to worry about supporting my family even more so. School has been more difficult to focus on. I need this time to work, but if I drop my classes I will owe money to the school."*

Empathy

A common theme from the data that wove into the overwhelming majority of student responses was the desire for empathy: *"Be more understandingof the students. Some students are going through death of a family member, some do not have Internet, some do not live in a stable environment."* Students specifically asked for the school to begin *"showing empathyand understanding to students who are struggling."* Many of the requests for other services (i.e., financial and/or academic) underscored students' desire for the school to understand that not every student is, or will, experience the pandemic equally. This was articulated by two students as follows: *"Understand that being home means many people revert to a certain mindset that is very hard to come out of, or may be suffering severe forms of mental, emotional, and/or physical abuse"*; and, *"When the stay at home orders end, everyone needs to be understanding of the fact that not everyone will be able to live like they used to, some will still be having hardships due to the pandemic."*

Coping methods

When students were questioned as to what methods they felt could improve their mental and overall health during this pandemic, the most cited remedies proposed were exercising, maintaining social contact with others, and obtaining mental health services, such as access to therapy or wellness sessions. Of these three, maintaining social contact with others was the coping method most identified by students as integral to their mental health. Students overwhelmingly expressed difficulty adapting to the inability to connect with others in a social setting, *"I feel overall detached from my campus community,"* and, *"My mental health is suffering by doing online classes."* In addition, few students acknowledged having current access to mental health treatment and/or utilizing mental health services. This need could be addressed, according to many students, if the University were to *"make online therapy sessions free or more accessible. They can even set up calls for students if they cannot pay professional workers."*

Discussion

The data are overwhelmingly clear – the COVID-19 pandemic has caused a spike in stress levels and mental health issues among college students. Before the pandemic, students already were in the midst of a historically stressful time period and adding a pandemic to the mix has exponentially exacerbated their mental health issues. Students resoundingly used the platform of this survey to request mental health services that up to now have failed to generate the help so many students seek. Over the course of this project our positionality as educators shifted in accordance with knowledge production; from a top-down approach of examining students' needs to actively listening and responding to students' *own* articulation of their needs. This inductive approach, born out of initial conversations and interactions with students both in and out of the classroom, framed the subsequent survey formulation and research agenda. The reflexivity inherent in the intersecting relationship between researcher and respondent challenged our underlying assumptions, and informed our subsequent beliefs, regarding the role of universities in meeting students' needs.[37–39]

We believe that it is our duty as an institution of higher education to put the needs of our students first, as a hungry and stressed-out student cannot learn anything, whether in class or online. While budget deficits are certainly important measures, the most pressing needs for students often do not mirror those of the university administration. A focus on the health of the institution may invariably take precedent over that of the students.[40] The number of students who expressed that "*one of my biggest anxieties in quarantine and in context of the virus is my inability to imagine the future*" ought to be a startling revelation to those engaged in higher education.

Research on the relationship between hardships and mental health lends credence to the need for not only greater awareness of the inequitable distribution of negative outcomes for certain student populations, but also an increased focus on how the university can address these disparities, and foster empathy for those students who may be most disadvantaged as a result of this pandemic.[41–45] These disadvantages may be especially pronounced among traditionally underserved student populations without established social support networks at their institution to buffer the negative effects of the pandemic.[46,47]

A 2020 study on the coping methods of a sample of U.S. college students found that social activity was one of the healthiest coping methods utilized by the sample, whereas social isolation was categorized as an unhealthy coping strategy.[48] This underscores the devastating toll that the enforced quarantines and travel restrictions may have on students cut off from those relationships, and from the connections they have prioritized as most crucial to their health and well-being. While universities may not be in a position to address this with the current quarantine restrictions in place statewide, the administration could play a significant role in acknowledging that this lack of social connection is a significant deterrent for many students in terms of their ability to manage stress during this time, and ought to consider what resources might be utilized to address the disconnect many students are facing.

The most efficient way to learn about our students' needs is to get them involved in making decisions that impact them. This study clearly shows that our students want to have a voice in discussions and meetings that will lead to decisions that would impact them. This is especially significant when considered in light of findings that an individual's *perceived* sense of control in a given situation may serve as a buffer to psychological distress.[49–52] By finding ways to incorporate students' opinions, perspectives, and desires into targeted resolution strategies, schools could increase students' perceptions of control; potentially lowering their psychological distress.

Limitations

There are certain limitations inherent to the methods and the sample population obtained for this survey project. A major limitation to this survey, is the lack of information about the response rate. Since the link to the survey was included in a COVID-19 Update mass email, emails that were potentially sent by the UCI and UCLA faculty members to their students, or in other emails via snowball (referral) sampling, we are not able to report the rate of response. Snowball samples may be subject to numerous biases, but they may still be useful to collect data that can be used for future work. There is a total of 61,304 undergraduate students at UCI and UCLA campuses and it is very unlikely that all these students received the link to the survey and only 593 of them (less than 1%) responded to the survey.

Also due to the small sample size, there are questions regarding generalizability to the greater academic population. However, we believe that in a pandemic situation, those students who would respond to the survey without any monetary incentive were the ones who really wanted to be heard. Therefore, it was determined that a biased sample would still be an effective measure to ascertain those issues affecting a selective group of students; namely those most at risk of adverse effects from the pandemic.[11,15,25,27,46,47]

Conclusion and future direction

There has been a growing debate within the academic community regarding the ability of academic institutions to meet the mental health needs of its students.[3–5,53] Critiques of universities implementing a "therapeutic education" model not only question the role of institutions in addressing the mental health needs of its students, but go further in positing that the integration of mental health into academic models is harmful for students as it may cripple their ability to manage their own health needs.[54] This notion is based on the assumption that all students enter the university with equal agency to navigate the academic landscape, and minimizes the compounding effects of social inequalities that marginalized students face on their academic journey.[41–45]

Furthermore, there is a strong body of evidence linking mental health with academic success.[55–58] One could thus argue that academic institutions have a vested interest in meeting the mental health and academic needs of their students concurrently.

Students' responses to this survey present a compelling argument for academic institutions to do everything in their power to ensure that the pandemic does not derail student's academic goals or deteriorate their mental health. Therefore, we argue that every university that brings students to their campus has an ethical responsibility to not only educate those students once they arrive, but also to meet the financial, emotional, and physical needs of students throughout the course of their education. We must therefore all take an honest and thoughtful reflection on the actions thus far taken and ask ourselves, "Have we done enough to protect the lives society has entrusted to our care?" and if not, then what more can we do to foster the livelihood of students receiving a higher education? It is our hope that the knowledge gained by this survey project will assist in developing programs to help students succeed in both their academic and personal lives during this pandemic, and also provide a framework for addressing similar situations more effectively and efficiently in the future.

One such program could be an online course that teaches students valuable life skills that are not taught in regular academic courses such as how to recognize and manage stress or how to manage personal finances. At UCI, we offer an online course, annual enrollment of about 700 undergraduate students, titled "Life101" that teaches students how to improve their mental and physical well-being, by offering topics such as stress management, nutrition, mindfulness, exercise, and personal finances. Based on an anonymous retrospective analysis of the pre- and post-course survey results, we observed that after taking this course, our students were able to make more positive lifestyle choices.[14] Life101 will be offered to all UC undergraduate students on 10 campuses and on the Coursera platform (https://www.coursera.org/learn/life101) for free in 2021. We believe offering online wellness courses such as Life101 could be a method that academic institutions adopt to improve the mental and physical well-being of their students.

Conflict of interest disclosure

The authors have no conflicts of interest to report. The authors confirm that the research presented in this article met the ethical guidelines, including adherence to the legal requirements, of the United States and received approval from the IRB of The University of California, Irvine. The work presented in this article was not supported by any grants.

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