

Medical School Faculty and Staff Well-being in Fall 2020 during the COVID-19 Pandemic

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Abstract

The COVID-19 pandemic increased stress and worry among faculty and staff members at universities across the US. To assess the well-being of university faculty and staff, a survey was administered at a medical school in the state of Hawai'i during early fall 2020. The purpose of the exploratory study was to assess and gauge faculty and staff members' well-being regarding the school's response to COVID-19. Participants in this study represented a convenience sample of compensated teaching, research, and administrative faculty and staff members. A total of 80 faculty and 73 staff members participated. Overall, faculty and staff reported relatively low levels of worries and stress. Staff members reported greater levels of worry and stress than faculty members in 8 of the 11 questions. Statistical differences were detected in 3 questions, with staff reporting higher levels of worry and stress in their health and well-being of themselves ($P < .001$), paying bills ($P < .001$), and losing their jobs ($P < .001$). Both faculty and staff reported good overall satisfaction on the timeliness and clarity of messages that they received, support from leadership and the school, and support to adjust to changes in response to COVID-19. For both faculty and staff, the greatest worry or concern for the open-ended question on worry and stress was related to financial and economic issues. Data from this survey can contribute to an understanding of medical school employee well-being during a major operational disruption and may help develop policies and programs to assist employees in different employment categories during future disruptions.

Abbreviations

COVID-19 = coronavirus disease 2019
HI-EMA = Hawai'i Emergency Management Agency
JABSOM = John A. Burns School of Medicine
SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2
UH = University of Hawai'i

Introduction

The coronavirus disease 2019 (COVID-19) pandemic has had a profound effect on universities, impacting how education, research, and administration are conducted. Although each institution may have experienced different challenges and obstacles, the pandemic has impacted universities worldwide. Social distancing and shelter-in-place mandates forced the cancellation of events, gatherings, and in-person courses and meetings, requiring all to adopt and learn new ways to work, teach, and balance work-home activities. As a community-based medical school, the John A. Burns School of Medicine (JABSOM) dealt with additional challenges, as medical students not only have courses on campus but clerkships and electives which take place in non-university community clinics and hospitals, thus adding an additional layer of pandemic challenges. This report

summarizes the JABSOM response to the COVID-19 pandemic and shares the results of a JABSOM workforce well-being survey taken in the early stages of the COVID-19 pandemic.

As the pandemic initially emerged, the first communication from the University of Hawai'i (UH) President was sent out on February 27th, 2020, and addressed concerns and preparations for a possible COVID-19 outbreak in the state of Hawai'i. Travel advisories and Centers for Disease Control and Prevention guidelines were outlined during that time of uncertainty. Two weeks later, on March 12th, the UH President announced profound operational changes due to the virus: all courses would be conducted online after the spring break (starting March 23rd), all events with more than 100 individuals were suspended, and no new non-essential travel would be allowed. On March 20th, all 10 campuses of the UH system were closed to the public, and guidelines were developed for a work-at-home policy.¹ Starting on March 23rd, the governor of Hawai'i enacted a shelter-in-place order where all non-essential individuals were required to telework and remain in the home, except for essential activities.² By July, over 1000 confirmed cases of COVID-19 were identified throughout the state, and they were no longer confined to particular clusters, which confirmed community spread was occurring and was a greater concern than travel-related spread.³ Subsequently, several COVID-19 updates were sent to the UH community extending the mandate to conduct all courses online through summer 2020 and later through the 2020-2021 academic year.

At the medical school, all undergraduate and graduate courses complied with the UH remote learning policy. The clinical components for medical, communication sciences and disorders, and medical technology were suspended on March 16 through April 30, 2020, as preparations for alternate learning activities and experiences and online learning platforms were being prepared. Additionally, residency and fellowship programs were also being altered and/or postponed to accommodate social distancing and the shift to online learning. As learning experiences were being altered or suspended, university leadership continued to work with the accrediting organizations to ensure that curricular requirements continued to be met despite the significant shift and disruption caused by the pandemic.

On the clinical side, affiliated hospitals and clinics were preparing procedures and guidelines, which included restrictions for learners regarding the care of patients suspected or confirmed

with COVID-19 and requirements for personal protective equipment, proper sanitation, and preventative measures. During the early stages of the pandemic in the summer of 2020, it is noteworthy to mention that there was no vaccine yet available. At the time of the employee survey, early fall 2020, faculty, staff, and students did not have access to the COVID-19 vaccine.⁴ First doses of the Pfizer vaccine were administered to front-line health workers (including medical students and residents) in mid-December 2020. Thus, initial efforts to contain the spread of COVID-19 were focused on keeping the ill at home, mandatory face coverings, and social distancing.

In the community, the COVID-19 pandemic had exacerbated socioeconomic health disparities in the state of Hawai‘i for those with limited resources (eg, living in smaller residences with multigenerational families, doing essential service jobs in the community, and using public transportation) and constraints to lifestyle modifications, which further disproportionately affected Pacific Islander, Filipino, and Native Hawaiian populations.⁵ Those employees with school-aged children encountered additional pressures as primary and secondary schools were also included in the stay-at-home order. As schools converted to remote learning, additional stress was put on families as some school districts had more resources than others to accommodate online learning, access to the internet, and other technological needs such as laptops and computer supplies. Additionally, daycare centers and afterschool programs also halted operations. These changes put an additional burden on families, especially on women. Exacerbated by the pandemic, women, compared to men, tend to have a higher proportion of household duties while also facilitating the needs of children and aging family members, which can result in a greater negative impact on work and higher levels of worry and stress.⁶⁻⁹

To assess the well-being of the medical school’s faculty and staff, a survey was administered during early fall 2020, approximately 5 months into the pandemic. The purpose of this exploratory study was to gauge the stress and worries caused by the pandemic, as well as to obtain feedback on how JABSOM’s faculty and staff handled recent service changes and what the medical school could do to further support the employees. Results compare faculty members and staff members, as these job classifications are very different in nature. A faculty member position tends to be focused on academic programs, for example, teachers, researchers, and librarians. The work of a faculty member also tends to be autonomous and evaluated for productivity in areas such as research and scholarship, service (university, professional, and/or public), and professional activities. Whereas staff members are primarily in support roles under the direct guidance of academic or administrative leaders. They tend to have regular hours and job tasks, such as support for fiscal/accounting, personnel management, information technology, or academic program tasks. Staff members are typically evaluated by criteria according to their job descriptions and established expectations by the person to whom they directly report. Thus,

data from this survey and report can contribute to an understanding of medical school employee responses related to a major operational disruption by employee category. Understanding any differences between faculty and staff member responses can also help guide messaging and particular policies and procedures specific to these groups.

Methods

Participants in this study represented a convenience sample of JABSOM compensated teaching, research, and administrative faculty and staff members. Recruitment was conducted electronically by email, general school announcements, and presentations at faculty and staff meetings. No incentive was offered. The faculty and staff surveys were voluntary, self-administered, anonymous, and available via a website over the internet for 6 weeks, closing on October 31, 2020. Faculty and staff member categories were self-identified according to their university appointment. University of Hawai‘i Institutional Review Board approval was obtained (protocol number 2020-00284).

A modified version of the Higher Education Data Sharing Consortium COVID-19 Institutional Response Staff and Faculty survey instruments (© 2020 Higher Education Data Sharing Consortium) was used to measure how the pandemic affected the employees’ duties as faculty and staff members.¹⁰ These surveys were created to help gauge the university’s impact on its faculty and staff members in response to COVID-19. For this analysis, questions using 5-point Likert scales were categorized in 3 areas: worry and stress due to the pandemic (11 questions), experiencing lack of control in work duties (6 questions), and communication and support from the medical school (11 questions). The questions related to lack of control were adapted from the Perceived Stress Scale and Perceived Stress Questionnaire,¹¹ which measured the negative effects of one’s sense of control at the workplace due to the pandemic. The survey also included open-ended text response questions on what was appreciated at work, causes of stress/anxiety, and future worries and concerns.

The top 2 box score approach was used, combining the two most positive Likert items for descriptive purposes. In determining differences between faculty and staff independent variables, the Mann-Whitney U test (known also as the Wilcoxon Rank Sum test) was used to compare overall distribution differences. To address type 1 error risk due to multiple comparisons, the Bonferroni correction was applied for an adjusted *P* value of <.002 (corrected *P* = .05/28). Statistical tests were 2-tailed, and data analysis was performed using IBM SPSS, version 28 (IBM Corp, Armonk, NY).

Results

A total of 80 faculty members and 73 staff members participated in the surveys. Over half the faculty and staff identified

as Asian (51%), followed by White (23%), more than one race (16%), and Native Hawaiian or Pacific Islander (10%). For both faculty and staff, the majority of respondents were full-time employees (77%). Faculty member academic ranks included mostly the professor categories (30%), and staff members were predominately salaried (81%). See **Table 1** for the characteristics of survey participants.

Worries and Stress

Overall, JABSOM faculty and staff reported worries and stress as being *often* or *very often* in less than 50% of all participants for 9 out of the 11 questions in this category (**Figure 1**). Staff members generally reported greater levels of worry and stress than faculty members, with higher percentages of responses *often* or *very often* in 8 of the 11 questions. Statistical differences were detected in 3 questions, with staff reporting higher

levels of worry and stress in their health and well-being of themselves ($P < .001$), paying bills ($P < .001$), and losing their jobs ($P < .001$) compared to faculty. The 2 questions that reported the highest worry levels (*often* or *very often*) for both faculty and staff members were the health and well-being of friends and family and worrying about one's health and well-being. See **Table 2** for details.

Experiencing a Lack of Control

Though not statistically significant, in all 3 questions related to the sense of control, there was a general trend that faculty members tended to report greater negative effects than staff for being on top of things, having too many worries, and having difficulties pile up too high to overcome. Similarly, faculty reported more negative effects than staff in all 3 questions on feeling pushed: feeling under pressure from deadlines, feeling

Table 1. Characteristics of JABSOM Survey Respondents, Fall 2020			
	Faculty (n=80) No. (%)	Staff (n=73) No. (%)	Total (N=153) No. (%)
Faculty			80 (52)
Staff			73 (48)
Gender			
Male	37 (46)	22 (30)	59 (39)
Female	43 (54)	50 (69)	93 (61)
Non-binary ^a	0	1 (1)	1 (1)
Race identified			
American Indian or Alaska Native	1 (1)	0	1 (1)
Asian	35 (44)	43 (58.9)	78 (51)
Native Hawaiian or Pacific Islander	8 (10)	7 (9.6)	15 (10)
White	23 (29)	12 (1.4)	35 (23)
More than one race	13 (16)	11 (15.1)	24 (16)
Employment			
Part-time	28 (35)	7 (9.6)	35 (23)
Full-time	52 (65)	66 (90.4)	118 (77)
Academic Rank (faculty only)			
Professor	24 (30)		24 (16)
Associate Professor	19 (24)		19 (12)
Assistant Professor	25 (31)		25 (16)
Researcher	3 (4)		3 (2)
Specialist	5 (6)		5 (3)
Instructor	4 (5)		4 (3)
Employment Category (staff only)			
Hourly (non-exempt) without responsibility for supervising staff		13 (18)	13 (9)
Hourly (non-exempt) with responsibility for supervising staff		1 (1)	1 (1)
Salaried (exempt) without responsibility for supervising staff		43 (59)	43 (28)
Salaried (exempt) with responsibility for supervising staff		16 (22)	16 (11)

^a Non-binary refers to the self-reported sexual identity of the survey respondent.

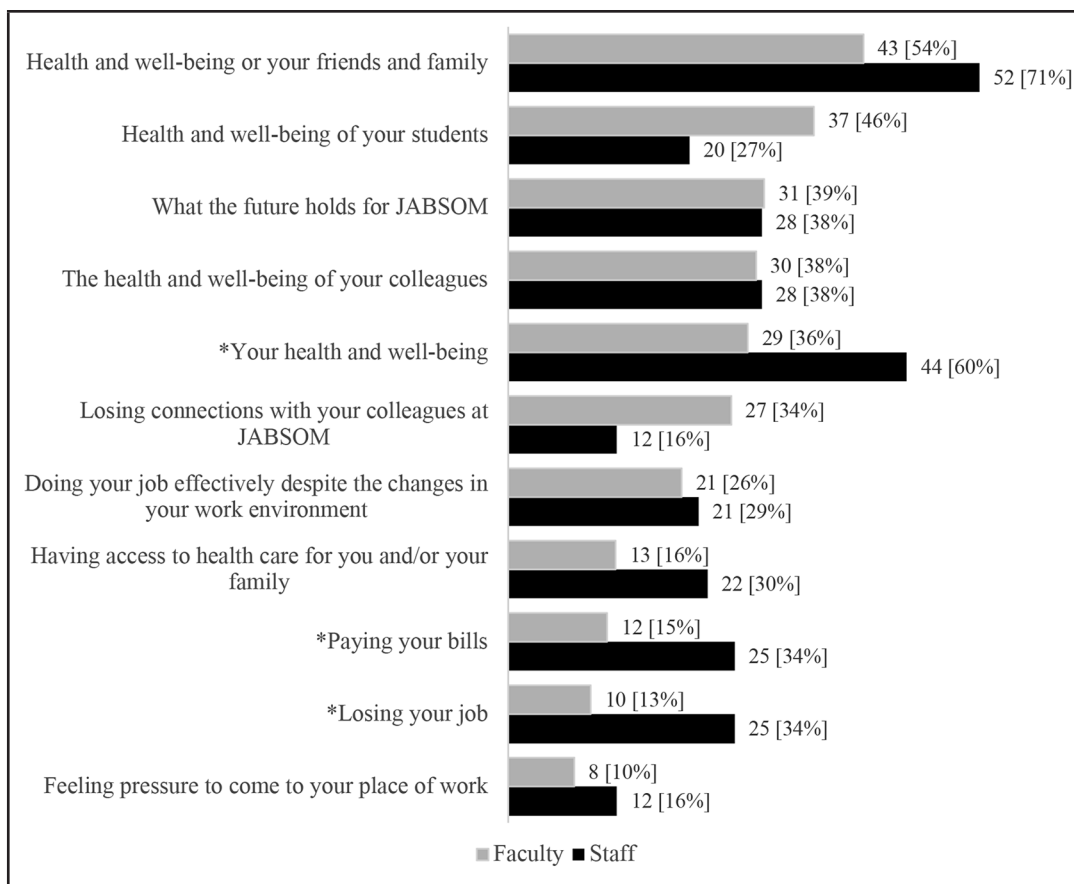


Figure 1. Faculty and Staff Reporting Often or Very Often for Questions on Stress and Worry^a

^a (n=80 faculty, n=73 staff)

* Asterisk notes statistically significant differences ($P < .001$)

Table 2. Faculty and Staff Member Worry and Stress Comparison Using the Mann-Whitney's U Test							
	Faculty (n=80)		Staff (n=73)		U	Z	P (two-tailed)
	Median	Mean (SD)	Median	Mean (SD)			
Worry and Stress 1 - Never 2 - Almost Never 3 - Sometimes 4 - Often 5 - Very often							
Given the changes caused by the spread of COVID-19:							
How often do you worry about your health and well-being?	3	3.10 (1.109)	4	3.75 (1.115)	1973.500	-3.569	< .0001
How often do you worry about paying your bills?	2	2.18 (1.220)	3	3.10 (1.345)	1776.000	-4.293	< .0001
How often do you worry about losing your job?	2	2.26 (1.076)	3	3.07 (1.305)	1916.500	-3.773	< .0001
How often do you worry about the health and well-being of your friends and family?	4	3.46 (1.169)	4	3.99 (1.124)	2139.000	-2.961	.003*

* Bonferroni correction was applied for an adjusted significance level P value of <.002

in a hurry, and having too many things to do. Overall, less than half of both faculty and staff members reported negatively in all questions on lack of control. See **Figure 2** for details.

Communication and Support

Though there was no statistical difference between faculty and staff on questions regarding communication support, both faculty and staff reported good overall satisfaction, with the majority reporting *satisfied or very satisfied* with the timeliness and clarity of messages that they received in response to COVID-19. Similarly, the majority of faculty and staff members reported being *generally satisfied or very satisfied* with support from

JABSOM leadership showing concern and support to adjust to changes. See **Figure 3** for details.

Open-ended Responses Related to Stress and Worry – Faculty and Staff

In response to the open-ended question, “What are your biggest worries or concerns (eg, administrative, educational, research) as you think about what’s coming up in the next few months?” the most common response theme was related to financial and economic issues. Twenty-nine faculty member responses included financial budget-related worries: furlough/pay cuts, administrative budget reductions, reduced staffing/layoffs, re-

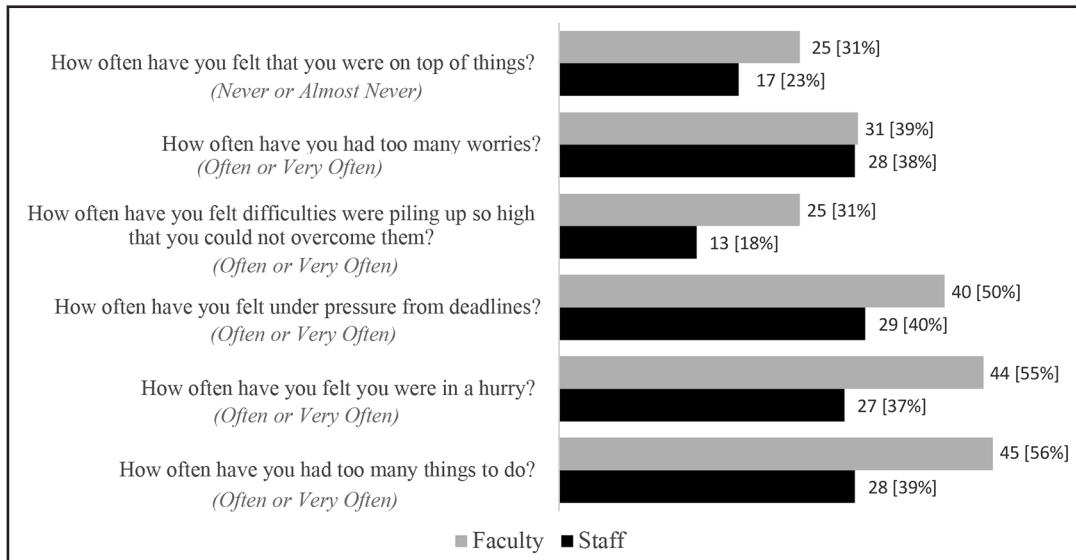


Figure 2. Faculty and Staff Questions on Experiencing Lack of Control^a

^a (n=80 faculty, n=73 staff)

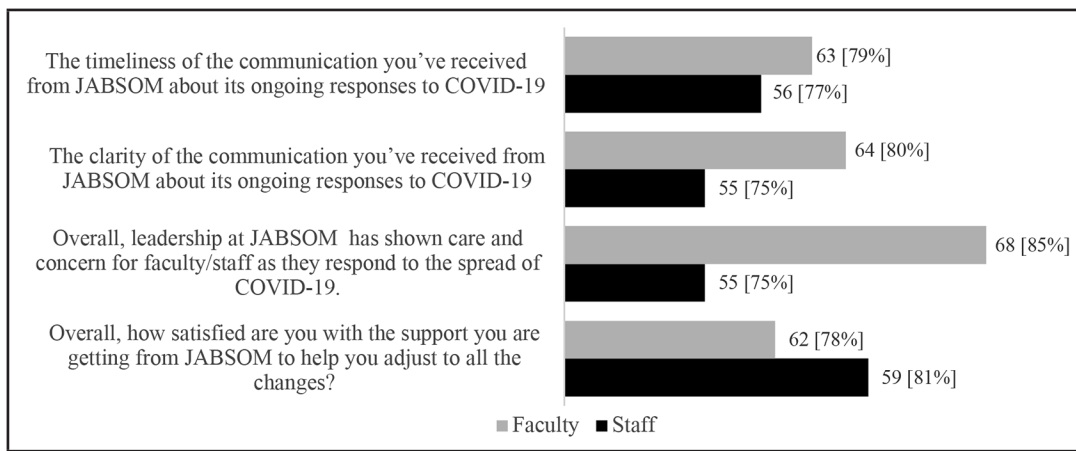


Figure 3. Faculty and Staff Reporting Generally Satisfied or Very Satisfied for Questions on Communication Support^a

^a (n=80 faculty, n=73 staff)

duced research funding, and budget issues with the state. The second most common theme for faculty members, 22 responses, related to worries regarding the impact that COVID-19 has on education.

Similarly, the most common theme in staff responses to the same question was also related to economic/financial issues. Thirty participants mentioned concerns regarding pay cuts, job security, furloughs, funding issues, and budget cuts. The second most common theme, 20 staff comments, was related to health and well-being due to infections and the spread of COVID-19: concerns about exposure to the virus, health and well-being of family if they become infected, and work disruptions caused by virus infections. The third theme with 10 staff member responses related to working at home and returning physically back to work.

Discussion

Due to pandemic challenges, as compared to other questions related to worries and stresses, employees reported higher concerns regarding the health and well-being of family and friends and the health and well-being of themselves. When comparing the responses between faculty and staff, significant differences were detected. Staff members reported proportionately higher worries that were personal or related to their health and well-being of themselves, paying bills, and losing their jobs. Though no statistical difference was detected, a higher percentage of faculty members reported that they felt less sense of control and had feelings of being pushed with job responsibilities compared to staff members in all questions. Over one-third of faculty respondents reported feeling less sense of control in the workplace, and 50% or more reported feeling pushed or under pressure with work duties due to the pandemic. These differences may be attributed to the nature of the positions.

Faculty members in general have more autonomy in the work structure. Additionally, part-time clinical faculty members may have outside medical practice responsibilities. Faculty-level work tends to be conducted independently regarding teaching, research, and administrative duties. Nonetheless, restrictions on clinical practice during the survey period may have increased worries and stress for clinical faculty members regarding their financial situation. Staff respondents were mostly full-time and in nonsupervisory roles, ie, under the direction of a supervisor. Staff respondents may have reported more personal and financial related stress due to fewer options if they were to lose their job. It has been reported that faculty members have demonstrated greater job satisfaction with greater autonomy; in contrast, staff members associate job satisfaction with their perceived level of supervisory support.¹³ Thus, there may be uncertainty for staff members working at home since supervision of work may be difficult to conduct remotely, and staff evaluations are primarily based on the performance of administrative tasks, whereas faculty evaluations are on teaching, scholarly activities, and

community engagement. Staff in nonsupervisory roles may also be in earlier stages of their career, adding more to uncertainty and job insecurity. There is a relationship between job insecurity and financial worry, and the greater the job insecurity, the higher the anxiety level.^{14,15} The finding that faculty members had less worry about their health may be due to a greater comfort level working with health threats and a better grasp on the true COVID-19 health risks that existed in the community.

Despite the worries and stress caused by COVID-19, both faculty and staff members at JABSOM reported overall good satisfaction with communication, information received, and support from leadership, with over 75% responding positively (*generally satisfied or very satisfied*). When stressed, information and knowledge of situations through effective communication can bring a sense of control and help alleviate uncertainty and stress.¹⁶ In efforts to facilitate communication, leadership from both the medical school and the parent university made great efforts to communicate often and clearly. Employees and students at JABSOM participated in town halls and received weekly messages via email (from March 2020 through July 2021), which were also posted on both the parent university and the medical school's websites. The information included the status of the pandemic and institutional, as well as statewide operational changes. As the only medical school in the state of Hawai'i, senior leadership was deeply involved with the Hawai'i State Department of Health's COVID-19 response, which included participation in the Hawai'i Emergency Management Agency (HI-EMA) Community Care Unit that was reactivated due to the pandemic. Additionally, the JABSOM Office of Medical Education Director served part-time as the Infectious Disease Officer for the City and County of Honolulu throughout the pandemic. Thus, information from the city and state was funneled directly to the medical school. When faculty and staff were asked what they appreciated most about JABSOM's COVID-19 response in open-ended questions, themes included timely information, email updates, online resources, and confidence in leadership.

Limitations

Generally, well-being surveys of this nature tend to be completed more often by employees with operational or support concerns. There may also have been a selection bias as recruitment was conducted via email and during faculty and staff meetings, which may have reached more full-time employees. This study examined the well-being of faculty and staff members at the school of medicine; future research may include students to give a more complete picture of the institution's response to COVID-19.

Conclusion

The COVID-19 pandemic has forced changes in educational and administrative methods, medical education curricula, and clinical practice. Such rapid change can cause additional worry

and stress. As the pandemic lingered on through summer 2021 and cases started to increase due to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) Delta variant, UH rescinded the planned employee return-to-campus announcement. However, all campus facilities were to be open for the fall semester 2021. Thus schools, departments, and programs within the UH System were to ensure that employee staffing was present on campus to facilitate normal operations.¹ As the fall 2021 semester prepared to start with in-person classes, a UH policy was established that required all employees and students to be fully vaccinated or to have a validated negative COVID-19 test (negative result valid for 3-7 days depending on the type of test), before entering a university site.¹

Potential solutions to help alleviate worry and stress for faculty and staff members may include continued opportunities to work remotely from home and flexibility in work schedule. Thus, developing more centralized instructional design programs facilitating blended learning, face-to-face, and remote/online learning methods, with a standardized approach may help faculty, staff, and students to better and more quickly adjust to remote learning activities in the event of future major disruptions.^{7,17,18} Moreover, better understanding, and acknowledgement by supervisors of employee work-home life challenges may help mitigate employee stress and worry.⁵

In addition to institutional policies, strategies and resources are also needed to address mental health; universities must develop clear policies on support options.⁷ Communication methods must be intentional, direct, and in a single voice to avoid over-communication and misinformation.¹⁹ Training in stress management, crisis management, open communication, and supportive culture can help alleviate workplace stress.^{16,17,19} Due to the rapidly changing nature of COVID-19, leadership communication and transparency are vital, keeping both faculty, staff, and students aware of the status of events and changes and allowing for questions and timely feedback. Leadership approaches should demonstrate flexibility and responsiveness, acknowledgment of employee and student vulnerabilities, and vigilance in infection control in the workplace.^{18,20} Moving forward, lessons learned from the COVID-19 pandemic can contribute to a more robust and flexible educational process that would help the university community to better adjust and implement change in response to possible future disruptions.

Conflict of Interest

None of the authors identify any conflict of interest.

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