A Reflection on the Relationship Between Place and Health:

Understanding Undergraduate Student Experiences and Priorities During the COVID-19 Pandemic

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Abstract

Environment and setting have a large influence on matters of population health, and college is a critical place for students, shaping both health and education. College students across the nation were impacted by the COVID-19 pandemic, and changes at universities left many anxious, isolated, and coping with social, emotional, and educational impacts. **Objective:** To perform a data analysis of the qualitative responses garnered through the Student Return to Campus Survey administered at the University of Delaware (UD) in Spring 2020, and to identify common themes of student experiences and priorities during the pandemic years to inform future recommendations for health crisis management. **Methods:** The study utilized secondary data analysis from an online student experience survey of 2,941 Freshman, Sophomore, and Junior students from the 2020-2021 academic year. **Results:** Qualitative analysis revealed a set of common outstanding themes influencing the college pandemic experience, including: Quality and Accessibility of Education in a Virtual Learning Environment; Quality of Student Life; Mental Health During the Pandemic; Thoughts and Attitudes About Vaccination Policies, Masking, Testing, and COVID Guidelines; Priorities and Considerations About the Return to Campus; and Overall Feelings About the Pandemic at UD. **Conclusions:** Student experiences were influenced by academic, social, emotional, and financial factors, which were often described with great intensity, and were at times contradictory. Students emphasized struggles with transitioning to and with virtual learning, the quality of campus resources, financial responsibilities, family health, and personal health. The results also shed light on the importance of communication with the campus community and the desire for students to express opinions during a crisis. **Health Policy Implications:** The results of this study have implications for crisis management for college campuses and planning for future responses to unanticipated events and ongoing COVID-19 mitigation efforts.

Introduction

The COVID-19 pandemic caused substantial disruptions to college students' experiences of place and health. On January 31st, 2020, the World Health Organization (WHO) declared the novel coronavirus outbreak, later officiated as COVID-19, as a Public Health Emergency of

International Concern.[1] By March 2020, public school systems and institutions of higher education began to declare emergency closures and shut down with the intent to bring infection spread under control. On March 15, 2020, the University of Delaware officially suspended in-person classes, non-essential research, and University-sponsored travel, as well as vacated residence halls to prepare to transition to fully remote teaching, working, and learning environments until further notice.[2] As was the case across the nation and the world, the sudden school closures had unique consequences for student populations and their families. Whether students were learning on campus, at home, or through hybrid modalities, the changing nature of academic environments during the pandemic impacted student health and well-being.

The shift in the University environment for many students was profound, and resulted in not only changes to their daily routines, learning remotely rather than in-person, but it also resulted in physical movement to their homes or to relatives' homes, isolation in dorms if students were unable to relocate, elimination of on-campus social activities, and drastic reduction in accessibility of mental health resources, including shifts in access to care when moving across state lines.

Prior studies of the COVID-19 impact on college students reveal many concerning effects resulting from the pandemic. Academically, students experienced challenges in adjusting to online learning, and often were unable to engage with and retain content at the same pace online, as had occurred in person.[3,4] Studies demonstrate that education is a critical determinant of health.[5] Prior research suggests that declines in academic achievement pertaining to reading, mathematics, and by GPA were likely.[6] However, it is also clear that measuring how much, and in what ways, academic outcomes were impacted by school closures and virtual learning is not straightforward and is complicated by the unique and ubiquitous nature of the pandemic.[6]

Evidence of impact on student mental health is also documented.[7,8] Studies considering the impact of online learning, quarantine, and the health fears associated with COVID-19 on student mental health report concerning outcomes. For example, a COVID-19 impact study conducted at Arizona State University revealed that students experienced delayed graduation, job losses, economic disparities, and health "shocks" such as hospitalization or fear of becoming sick.[9] In another example, the American College Health Association, in partnership with The Healthy Minds Network, explored students' experiences, attitudes, concerns, and perceived support of universities during the pandemic across 14 colleges and universities. Researchers found that mental health in college students was negatively impacted, and major associated factors included financial stress, race-based discrimination, and access to healthcare, which in turn affected their academic performance.[10]

Given the breadth of concern for the potential impacts of COVID-19 on the health of students in higher education environments, we sought to better understand the ways in which the University as a *place* impacted undergraduate student well-being in Delaware. Our analysis examines the thoughts, needs, concerns and experiences of undergraduate students in Delaware whose living and social environment was impacted by a global health pandemic.

Background

The spread of COVID-19, one of the largest health crises of our time, brought about an entirely new culture for living and learning. In college settings, adapting to this new way of experiencing college as a place had implications for students' immediate and long-term health, including their

educational attainment (an important social determinant of health),[5] mental health, and exposure to the COVID-19 virus.

The pandemic required a shift to online learning, resulting in drastic increases in the use of hybrid and fully virtual teaching since the invention of the platform.[4] On one hand, teaching and learning through virtual platforms can be more accessible as well as cost-effective, especially for those who might not otherwise be able to attend an in-person class.[11] On the other hand, while virtual learning has strengths, it also posed many challenges, including unanticipated consequences. For example, unlike in-person learning, which encourages physical activity and social interaction, both important components of strong mental health,[12–15] support for these areas are not easily able to be achieved in a virtual learning environment.[16] Virtual learning may also have implications for instructors' ability to accommodate differences in students' learning styles.[17] These implications include accommodating students with visual or auditory disabilities,[18,19] or those that require more varied support, from reading and writing assignments to hands-on experiences.[20]

Prior research to understand student needs during the pandemic has also focused on stressors experienced with regard to COVID-19.[21,22] These studies report that student worries about campus return varied widely, from vaccination statistics to classroom instruction and infrastructure. Students were also concerned about the safety of themselves and their families, especially where increased exposure to the virus was a risk.[23] A cross-sectional survey conducted among clinical students across six medical schools in the United States from April to May of 2020 asked students about pandemic-related stressors: 84% of respondents reported that they felt an increase in stress due to the pandemic; other symptoms experienced by students were severe anxiety and PTSD-risk symptoms.[24] Research shows that increased stress in these areas was related to significant negative effects on the perceived psychophysical health among students.[22] One study shows that one-third of students who were mandated to relocate during a semester reported higher levels of grief, loneliness, generalized anxiety, and PTSD related to the pandemic than those who did not have to move.[25] The disruption to academia and social life brought about issues with students' mental health, accessibility to mental health services, and outreach to students in special circumstances, such as those with pre-existing conditions, financial barriers, and international backgrounds.[8]

Methods

In Spring 2020, the Center for Research in Education and Social Policy (CRESP) at the University of Delaware, in concert with the University administration, formulated and launched several targeted surveys related to the impact of COVID-19. One survey was disseminated to full-time Freshmen, Sophomores, and Juniors in the 2020-2021 academic year via an email link through their university-affiliated email. Students were asked about their experiences during the pandemic, their opinions about how mandates were enforced at the institution, and their concerns and priorities regarding a full return to campus in Fall 2021. In total, 2,941 undergraduate students completed the survey, which reflects a 25% response rate. Of those, 1,858 responded to the open-ended question, "Is there anything else you want the administration to know about your experiences or feelings this past year?" The open-ended nature of this question, and its robust response, enabled a more in-depth understanding of the experiences of students during this time, and they are the focus of this article. Sixty-eight percent of the survey-takers identified as female, with 32% identifying as male. Seventy percent of respondents were White, 5.4% were

Asian, 4.6% were Black, and 7.6% were Hispanic. Our sample is similar to the actual demographic breakdown of full-time undergraduates at UD: 58% female, 43% male; 63.9% identify as White, 5.26% as Asian, 6.31% as Black, and 8.19% as Hispanic.

The responses from this question were uploaded to, and analyzed with, Dedoose Version 9.0.46 (SocioCultural Research Consultants, LLC; Los Angeles, CA, USA), a data analysis software that is programmed to code common themes of qualitative data. Responses were systematically examined using an inductive approach. The themes of the qualitative data were developed with a focus placed on understanding the student experience during the COVID years. Initially, a draft of codes was developed by the Principal Investigator (PI) of the study (the undergraduate student) and was refined alongside the Thesis Director. As the Principal Investigator is an undergraduate student, the coding process was vetted and discussed with the Thesis Director throughout the process, with discrepancies resolved collectively. However, primary coding activities were engaged by the PI. This study was designated exempt by the Institutional Review Board of the University of Delaware, and the research team has no conflicts of interest to declare.

Results

Findings emerged as six qualitative themes, with representative quotes summarized in Table 1, Table 2, and Table 3. In presenting these findings, and interpreting the data, we recognize that while students reported significant impacts attributable to specific issues (such as virtual learning), there were simultaneously profound shifts taking place in all environments due to the COVID-19 pandemic. It is likely that while respondents described isolated concerns, the thoughts and feelings reflected in the data were influenced by multiple contextual factors. We further recognize that the PI for this study is a former University of Delaware student, who identifies as female and a person of color, and who experienced COVID-19 as a college student, and that these lived experiences likely influenced the lenses through which the data was interpreted.

Theme 1. Quality and Accessibility of Education in a Virtual Learning Environment

One of the most frequently discussed influences of the pandemic on college students was the quality and accessibility of the education that they received following the transition to virtual learning platforms during the pandemic year. As a social determinant of health, the way that students experience education, and their likelihood to continue forward with college, is of critical health concern.[5] Students reported a wide range of virtual learning challenges, including their course infrastructure, technological issues (including utilizing the Zoom conferencing platform for class attendance and participation), networking opportunities, lack of diversity, equity, and inclusion across individual learning differences, and difficulties with managing academic lifestyles. Virtual learning benefits were also expressed, which involved more efficiency with workload, better time management, and the ability to focus on personal and family health while at home, which students believed contributed positively to mental health. Challenges experienced when transitioning between learning modalities and working with UD's modified grading policy were also noted. Exemplary quotes on these topics are presented in Table 1.

Theme 2. Quality of Student Life

Quality of life is a critical factor for mental and physical health. Students experiencing displacement from the college campus, or alienation from its resources, described impacts on their quality of life. Factors included financial burdens, social activities, fear for their safety, and the stress of family challenges and other external factors (factors away from school grounds that impacted students' pandemic experiences). Many quotes about campus services referenced the need for access to more local resources and for those resources to be open and available to them. These include spaces like the Center for Counseling and Student Development, Residence Life and Housing, and Career Services, Student Financial Services, funding for student organizations, COVID testing centers, parking expenses, interfaith prayer spaces on campus, and dining hall hours and services.

For instance, some students experienced a decline in on-campus housing security and affordability, which resulted in students having to arrange alternative housing plans at the last minute, translating to an additional stressor amidst the pandemic. Student quality of life was further impacted by financial difficulties during the pandemic. In particular students reported challenges related to having to financially support themselves in a particularly stressful and limited retail environment, having to face unexpected unemployment for themselves and their families, leaving hardships with regard to university tuition costs, and not qualifying for aid and grant money despite expressing a need. Furthermore, students faced difficulties with connecting to their peers while learning online, and were at times challenged to feel that there was a sense of safety and equality on campus. Students also had to provide care to loved ones at home and cope with having relatives who were suddenly very sick. Exemplary quotes supporting the categorization approaches for Themes on Quality and Accessibility of Education as well as Student Quality of Life and related sub-themes on these topics are presented in Table 1.

Table 1. Representative quotes related to Quality and Accessibility of Education in a Virtual Learning Environment and Quality of Student Life

Theme: Quality & Accessibility of Education	
Sub-Themes	**Representative Quotes**
Virtual Learning Challenges	I myself am very much a hands-on learner, and I learn best when I am able to talk to my peers and professors, which has been extremely difficult in the completely online format. All year, I have had trouble with my computer. When I use zoom and chrome at the same time my computer overheats and my mic stops working. It has been very difficult to actually absorb and have new information stick in this online environment.
Virtual Learning Benefits	I enjoy Zoom more than in-person class. It's easier, I can go to class off of my phone. It saves time from traveling to school and then to work. Working remotely allowed me to maximize my learning potential and focus more on my academics.

	I struggle with social anxiety, so the remote learning option is much better for me.
Transition Between Learning Modalities	Learning in a classroom versus at home is a completely different experience, and many students, including myself, will struggle. If the classes are mixed, I may need to find somewhere quiet to sit down for an hour to watch a lecture if it is in-between two in-person classes. Finding a place where I can work and won't be asked to leave has been an issue.
Modified Grading Policy	The modified grading and extra support to students has been beneficial. I was disappointed that they removed the modified pass option. We are still struggling in this pandemic, so it is not fair that we are being treated as if things are back to normal for us academically when they clearly are not.

Theme: Quality of Student Life

Sub-Themes	Representative Quotes
Challenges with Campus Services & Student Resources	Housing has been very stressful because the communication about the availability of on-campus housing came too late in the year to find affordable off-campus housing. There has been little help when it comes to advising and career advisement virtually. I have been utterly crushed by online classes and the removal of normal resources (library, library cafe, student centers, etc.). I went from a straight-A student to a B's and C's student.
Financial Burdens & Responsibilities	As a low-income student, I'm constantly worried about what happens if I can't work (due to COVID) and can't support myself. The financial burden you have placed on students of the university is astounding given the recession and job losses many families including mine are struggling with. I wish UD could give us more grant money for students with financial need.
Social Activities & Student Events	Allowing/encouraging socialization (in a safe manner) I think would significantly improve the overall state of student mental health. There was a lack of in-person opportunities that could have happened while still being safe. It was very difficult to connect with my peers outside of class or even to form new relationships with others in our community.
Campus Safety & Social Unrest	There are armed robberies, break-ins, and stalkers- and somehow the school/police force is more concerned with suspending kids for doing things every college kid does.

	Blue lights on Main Street would help make me feel more comfortable with the amount of violence that has been going on.
External Student Circumstances	My family is immunocompromised. I have to help my disabled mother. I do not want to risk exposing her to covid because a school opened too early. I am unemployed and so are my parents and this year has been incredibly frustrating and difficult.

Theme 3. Mental Health During the Pandemic

Students described how the intersection of being a student and displaced or isolated while at the same time struggling with many new stressors brought forth by the pandemic created heightened mental health needs. Examples of mental health concerns are shown in Table 2 and cover a variety of issues, including stress from academic workload, concerns about faculty accommodations for students, feelings about canceled school breaks, lack of motivation, and coping with personal health issues. Many students found that the amount of work assigned, despite the virtual landscape of classes, was overwhelming and presumptive that students had more time, though that was not the case. Students also reported feeling less motivated to put in effort on assignments since learning online brought about fatigue and modalities that were not inclusive of all learning styles.

Theme 4. Thoughts and Attitudes About Vaccination Policies, Masking, Testing, and COVID Guidelines

As a student, college policies had a strong influence on student's experiences of place and connection to others, and because policies were in direct relation to a health pandemic, had immediate impacts on student health, both mental and physical as well. A wide variety of student opinions and feelings were expressed about the mandates that UD put in place to prevent the spread of infection on campus, and no one perspective stood out above the rest. Most notable across all comments was the strength, or passion, behind the perspective. Table 2 articulates the variation in students' opinions about COVID regulations on campus. Moreover, the theme also encompasses student activities pertaining to adherence to university rules, and student responses show that the behavior of other people was a large, influential factor that shaped student attitudes about pandemic guidelines at the University and led to feelings of anxiety about eventually returning to campus.

Table 2. Representative quotes related to Mental Health During the Pandemic and Thoughts and Attitudes About Vaccination Policies, Masking, Testing, and COVID Guidelines

Theme: Mental Health During the Pandemic	
Sub-Themes	**Representative Quotes**
Academic Workload	Being online does not mean that learning becomes easier or faster. Personally, I have found that the lack of in-person classes makes it difficult to fully digest lecture material, and it takes more time to understand new concepts in such a stressful time.

	Professors should have been much more lenient when it comes to late work. Being online consumes my day from 4 AM – 7 PM with class and homework and I am in a constant cycle of waking up and then working until exhaustion.
Faculty Accommodations for Students	I love that my professors were willing to work with me and that we had the online classes [through] Zoom. I feel like although this pandemic has been hard, some teachers have not changed their teaching styles to accommodate the students as they've [the students] had to accommodate to remote learning.
School Breaks	I think replacing the spring break week with sporadic re-coop days was not the best option. We/I count a lot on this week to catch up on some assignments and the final papers, and most important issue is that this week can balance out stress and help to maintain mental health. This semester is the most stressed I have ever been and the fact that I wasn't allowed a spring break to mentally prepare myself for the remainder of the semester has severely impacted my academic performance, motivation, and mental health. The breaks that we have had this semester have not been enough. I still had assignments due that night and an exam at 8 AM the next morning.
Motivation	I used to love attending lectures and interacting with professors and classmates. Since things have gone online, I have lost all my enthusiasm for my work and it [has] reflected in my performance. It is harder to pay attention in virtual classes…it is particularly frustrating that most students will not engage or even turn on their cameras during the class. I sit for hours in my room on my laptop, and then I am supposed to do more and more hours of online homework…my life is standing still.
Additional Student Needs	My sleeping schedule has been a mess since the Fall 2020 semester. I usually sleep at 11:30 PM or 12:30 AM by the latest, but now it has become a habit for me to sleep at 3 AM or 4 AM. It affected my productivity throughout the day and I am having a hard time fixing my sleeping schedule. I ended up with a rotated hip from sitting in-front of my computer every day for months on end.
Theme: Thoughts & Attitudes About Vaccination Policies, Masking, Testing, and COVID Guidelines	
Sub-Themes	**Representative Quotes**

Mindsets About Pandemic Regulations	Students should be required to get vaccinated in order to attend in-person classes. We need to get vaccines to be on campus regardless, and these vaccines extremely important in the context of eliminating the spread of COVID-19. The pandemic response was way overreacted. I think the college implemented unnecessary rules and policies for something that, objectively, is not that dangerous.
Student Lack of Adherence to University Rules	I live in Newark and have a job on Main Street and the amount of people I see every day still not wearing masks, not social distancing, partying every single day, etc. is really worrisome and makes me very uncomfortable. In my in-person classes I often feel uncomfortable because kids choose not to sit where the socially distanced stickers are in the lecture hall.

Theme 5. Priorities and Considerations About the Return to Campus

The first section of Table 3 showcases student priorities and considerations when thinking about a full campus return during Fall of 2021. Thoughts and feelings reflect upon a significant shift in place and its relationship to their health. Students expressed a spectrum of concerns, thoughts and emotions regarding vaccine and masking policies, how UD administration policies should shift if an outbreak of COVID-19 resulted, the importance of University policy on impacts on the legacy of the institution and the way that students viewed their importance to the school, and the importance of streamlined and consistent health policy communication with the campus community.

Theme 6. Overall Feelings About the Pandemic

Some of the feedback provided by students expressed only generalized feelings about their experiences related to the health pandemic at the University of Delaware that did not fit into any other specific category. These are captured in Table 3 under the theme "Overall Feelings."

Table 3. Representative quotes related to Priorities and Considerations About the Return to Campus and Overall Feelings About the Pandemic at the University of Delaware

Theme: Priorities and Considerations About the Return to Campus	
Sub-Themes	**Representative Quotes**
Priorities for Campus Return	If mostly everyone is vaccinated and we do daily health checks, regular testing, and contact tracing, I think we will be okay to go back to school normally. I am uncomfortable in the idea of being back on campus. I feel pressured to be on campus because of the housing contract. I would just like to highly encourage the administration to return 100% back to normal in Fall 2021 semester and so on because we UD students need to be back in the

	classroom with proper learning and teaching and having the ability to ask professor questions.
Pandemic Planning	I think UD needs to be better and more cohesive in their decision-making process for similar situations to COVID. I think some more student input in the future can help make easier and better decisions for students on campus. This will likely not be the last global pandemic in our lifetime so focusing on what safety/disciplinary measures worked and what didn't will be needed for next time.
University Legacy & Retention	I know many people transferring because of what student life has looked like here. Many students plan to transfer because of the lack of care UD has shown toward its students.
Communication with Campus Community	I wish that the administration (particularly earlier in the pandemic) had been more forthcoming and transparent with information about changes to on campus guidelines. It often felt as if we were kept in the dark until the last minute of decisions regarding teaching and research. Despite so much of this virus being out of an individual's person's control, the University phrased many of its messages in ways that blamed the students." There was a lot of back and forth with reports of what the plan was as far as allowing research to continue, if it could be done socially distanced, when certain decisions would be made, etc.

Theme: Overall Feelings About the Pandemic at the University of Delaware

Representative Quotes
Everybody is trying to do their best in finding ways and making things work. We have to remain flexible and supportive of each other and keep the dialogue going. COVID-19 has sort of affected everyone in one way or the other. This year has been hard for everyone, and there is obviously no right answer or way to please everyone 100%.

Discussion

Our data suggest that University students attending school during the COVID-19 pandemic had experiences unique to a University context (place), both in-person and virtually, and that those experiences have important implications for their educational attainment, short-term health, and long-term health.

We found that many students struggled to feel that the quality and accessibility of the education that they were receiving across virtual formats was aligned with what they received when there was not a pandemic. Many students were frustrated with technological issues, lack of student social networking opportunities, and difficulty with managing academic workload. Such concerns are particularly alarming given the importance of education as a social determinant of

health. Our finding that students experienced challenges in meeting academic expectations aligns with prior research demonstrating that the online environment presents barriers to participation in group work activities, lack of certain technological competencies in students, and "one-size-fits-all approaches" to education that lacks inclusivity of different learning styles.[26] Such findings, while the first of their kind for Delaware, are well-aligned with other investigations about the social impacts of the pandemic on students in higher education, which showed that the interruption to daily routines led to lowered motivation, declines in mental health, and a lack of interpersonal connection.[27]

On the other hand, not all student experiences of University changes were negative. Students also reported educational benefits including greater efficiency, time management, and a sense of safety from the virus: "I feel like I would have struggled with completing much of my school work if I had to deal with commute times on top of attending classes." Especially for students who were holding down a full-time job, caring for family members at home, or had other demands on their time, remote work offered them more flexibility with their schedules: "I enjoy Zoom more than in-person class. It's easier, I can go to class off of my phone. It saves time from traveling to school and then to work." Such benefits have been identified in other studies.[28]

At the same time that technology and educational approaches concerned students, students craved more of a social student life, which again was moderated in part by their association with the University as a place, which historically was a foundation of social connectedness. In particular, the data reflects a need for greater availability, adaptability, and accessibility of campus and departmental resources. Communication about resources and support for students was often reported as vague and intermittent, leaving students without adequate information about the ways in which they could navigate University spaces (another aspect of place) while maintaining their health (i.e., reduced COVID exposure, testing on campus, mental health services, and visiting with friends and family.) Of particular note was students' need for more information about mental health counseling, financial, and career services: "There has been little help when it comes to advising and career advisement virtually." Major restrictions were placed on student activities after the campus reopen, so although students were returning back to campus, there were limited engagements to get involved and socialize, which impacted students' academics and mental health. Students expressed anger and frustration toward university fees and other costs that at the time required students to pay for resources and services that they were unable to access. While previous research also highlights the issue of students facing greater responsibilities with fewer campus resources and support,[29] there is a need for further exploration of the specific impact of the pandemic on financial challenges faced and personal lives of students.

Mental health issues related to academic stress and the changes in setting and social access were particularly heightened during the pandemic. Students expressed that many of their professors were reluctant to adapt their teaching styles, and that they often made assumptions about the time that students had to dedicate to schoolwork, which led to a major increase in the amount of workload and time commitment needed to complete assignments. As illustrated in this quote from the data: "Being online does not mean that learning becomes easier or faster. Personally, I have found that the lack of in-person classes makes it difficult to fully digest lecture material, and it takes more time to understand new concepts in such a stressful time." Prior research further supports this finding, and reports that academic workload and being away from a school environment lead to negative impacts on the level of stress experienced by college students.[21]

One pivotal mental health-related policy decision made by University administration which was critically described by students was the cancellation of a traditional spring break, replacing it with two weekdays in the middle of the semester on which no classes were to be held. Students were unhappy with the lack of a reprieve from the rigor of the semester, and that the two well-being days that were implemented in place of the spring break were neither effective in reducing stress nor useful in catching up on work, as many professors still administered exams and assigned homework: "I count a lot on this week to catch up on assignments and final papers, and most important…balance out stress and help to maintain mental health." Several studies in the literature also emphasize the importance of school breaks and their role in preventing build-up of anxiety, stress, and restlessness.[30] Moreover, students who attended schools that did not administer a spring break due to pandemic health experienced declines in mental health, creativity, and productivity, alongside a decrease in overall happiness.[31]

Another finding of our study was that policies around vaccinations, masking, testing, and general guidelines for COVID safety were very polarizing social health issues across the UD campus, and often, students that wanted more social interaction also wanted stricter pandemic guidelines; again these findings have important inferences for discussions of how we consider policy, and health behavior in a place and health context. Some felt that vaccinations should be required in order to return to campus ("Students should be required to get vaccinated in order to attend in-person classes. We need to get vaccines to be on campus regardless, and these vaccines are extremely important in the context of eliminating the spread of COVID-19."), while others felt strongly about personal choice with vaccines and masking. Some felt that the current campus regulations were overreacted ("I think the college implemented unnecessary rules and policies for something that, objectively, is not that dangerous."), while others believed they would help control the spread of infection. Regardless of the view, comments were often articulated with strong conviction. Political polarization regarding major public health issues was very prevalent across the nation as well, according to several other studies.[32,33] While there was a diverse array of perspectives about any topic surrounding mandates and policies, one major concern that was prevalent in the data was regarding other students and their lack of adherence to the rules. Our study shows that students felt anxious and unsafe returning to campus because of the potential for others' behavior to put them in danger: "The amount of people I see every day still not wearing masks, not social distancing, [and] partying every single day is really worrisome and makes me very uncomfortable." Of note, this finding has not been explicitly reported in other similar studies.

A fifth finding centered on what students' priorities and considerations were when thinking about a full campus reopening. Again, there was an assortment of viewpoints and perceptions expressed. Some comments conveyed that the University should perform a full evaluation of what worked and did not work, for administrators operationally and for students experientially, in order to determine what measures to put in place for the coming semester. A staggering perspective held by many students was the reluctance to advocate for the University of Delaware as a whole as a result of how they felt treated as students. In fact, many students at the time shared declarative views that they wanted to transfer schools: "I know many people transferring because of what student life has looked like here." Furthermore, communication between administration and the students about regulations and pandemic planning were two other areas of concern, with inconsistency and lack of clarity being the main issue noted. While other research confirms that navigating the pandemic did cause tensions for school leaders,[34,35] there is much

more to be explored regarding the specific relationships and perspectives between college students and administrations during the pandemic.

Finally, and perhaps most profoundly, the study revealed insight into the passionate and contradictory nature of perspectives during the COVID-19 pandemic. Student views often clashed with regard to how the University as an environment should protect health or enable social normalcy. For instance, although the sentiments expressed about the campus reopening were reluctant about returning (see Table 3), these thoughts are contradicted by Table 1, which outline students' thoughts on Quality of Education and Quality of Student Life, respectively; in these, there is more of an eagerness and urgency to return due to the detriment of online education and lack of access to student resources; for more elaboration, see Table 1. Additionally, there were several student responses that articulated a more over-arching point of view concerning the pandemic at the University of Delaware, as illustrated by this quote: "This year has been hard for everyone, and there is obviously no right answer or way to please everyone 100%." Times of health crises make way for various uncertainties, not just in the way that the crisis will evolve, but also in the needs that individuals determine for themselves. Therefore, it is important to include key stakeholders in data collection efforts and feedback in decisions regarding their own health and lifestyles as much as possible, being mindful to develop solutions that are intentional and individualized.

Future Directions

Based on the findings, several suggestions for future approaches to support students in University settings, during or in preparation for crises, emerged. University policy was recognized by students as a driving factor in their education, quality of life, and mental health. As a place, the University encompassed both immediate physical parameters, as well as virtual and logistical experiences which drove health outcomes. While these recommendations serve to inform future policy changes, we recognize that our findings are contextual and specific to a certain time, place, and population.

Student comments indicate that institutional communication strategies are important mechanisms that either enhance or detract from student experiences during crises, particularly with regard to health policy. As such, attention is needed to ensure messaging is consistent and provided across multiple platforms to the greatest extent possible. Students indicated experiencing some confusion understanding rapidly shifting policies with delays in updates across platforms (ie. email, social media, and university-affiliated websites). Further students cautioned that communications should err on the side of encouragement and positive tones rather than harsh, or fearful tones. Administrations of higher education may be well served to have mechanisms in place to ensure consistency and clarity across platforms, as well as enforce those regulations in a way that encourages students rather than creating additional anxiety and worry.

Because student educational experiences are often driven by faculty interaction and capacity, efforts to incentivize and increase resources to implement more specific opportunities for teaching faculty are recommended to prepare for times of crisis in a proactive way. Student comments also suggested future efforts to incorporate in-person and virtual flexibilities to allow for greater student agency with learning. Therefore, faculty training could include (but is not limited to) expanding resources for faculty to increase their awareness of how to accommodate a variety of student learning needs in virtual and in-person environments, as well as supporting student mental health during times of high stress.

Based on the study data, issues with communication of safety mandates, academic workload, and financial burdens all contributed to the quality of students' mental health during the pandemic years. Student comments highlighted gaps within the University's network of mental health resources (such as adequate on-campus counseling services) that heightened isolation and feeling a lack of support from college administrators. Moving forward, it may be a valuable step for administrators to solicit input from current students and maintain an ongoing mechanism for insight related to mental health service needs, such as a mental health advisory group. While every student has a unique set of needs, starting an open dialogue with students during more certain and stable times, may help to create a precedent for consistent feedback during less certain times, and perhaps a sense of unity when facing adversity as an institution. Student feedback suggests that while a central hub to support students is critical, spokes from that hub must also reach into other facets of the student environment, including but not limited to instructors, the classroom, and classroom policies.

Many student comments urged administration to balance student experiences with fiscal recovery in order to optimize the quality of student treatment and value. Students experienced a number of financial burdens during the pandemic and expressed sensitivities to additional fees and costs, especially when they were charged with expenses that they felt were unjustified. Taking the time to reflect on how and when Universities should approach student financial burdens during crises may be worthwhile to prevent future stressors. Conversations between administrators and the student body should be open and ongoing to identify effective strategies and areas for improvement such that measures are not reactive when a crisis arises and additional costs to students mitigated. An increase in the need for resources and funding may be unavoidable when forming crisis management plans, but universities should strive to recognize student needs and prepare to provide additional services and resources.

Conclusions

The Student Return to Campus Survey (Fall 2021) provided the opportunity for public health practitioners and educators alike to understand, with considerable detail, how students responded to drastic shifts in their experience of University life (place) resulting from a global pandemic (health).   Findings showed that students experienced both benefits and challenges in their transition to new learning modalities, influencing their quality and accessibility of education. They also experienced dramatic shifts in student life, including engagement with the University's resources and social milieu, underwent considerable financial challenges, had strong reactions and preferences regarding pandemic mandates and returning to campus, and ultimately experienced changes in quality of life and mental health as a result. As institutions reflect and plan for future unexpected health and environmental events, such data and recommendations as described here can support efforts related to communication strategies, faculty training efforts, mental health resources, and social service provisions.

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