# Education and Disaster:
# Experiences of College Students During the COVID-19 Pandemic

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*To gain insight into the ways crises impact college students, we examine the experiences of students during the COVID-19 pandemic. While COVID-19 was a complex event, other natural and man-made disasters occur with regularity and can similarly impact students' lives. What educators learn about student experiences during times of crisis will contribute to a holistic understanding of students' needs. Using survey results from 790 students who attended a midwestern university, the findings reveal substantial levels of student stress related to illness, family responsibilities, changes in work and school environments, access to technology, healthcare, housing, and the ability to pay bills.*

*Keywords: student stress, student experiences during the COVID-19, education and disaster*

## INTRODUCTION

The purpose of this study is to document the stresses that college students experienced during the COVID-19 pandemic. It is vital to explore these experiences, as doing so will provide enhanced insight into ways that the pandemic impacted a generation of college students. Of importance, learning what students experienced will allow us to help students now and moving forward. There are contextual considerations involving a student's health, the health of family and friends, a student's social and work life, that likely contribute to an overall level of stress that impacts student scholastic performance. These factors were potentially extensively impacted during the COVID-19 pandemic.

During the 2020-21 and 2021-22 academic years, the majority of U.S. college students experienced increases in stress and mental health decline (Mushquash & Grassia, 2020; Lee, et al., 2021; Haikalis, et al., 2022; Brown, et al., 2023; Doyle, et al., 2024;). For many students, the challenging life events experienced during the COVID-19 pandemic were correlated with increased perceived stress (Doyle et al.,

2024). A majority of students indicated an increase in anxiety, depression, and feelings of loneliness (Lee, et al, 2021). In addition, a majority of students revised their educational and life plans, while one-third of the students changed their career plans (Brown et al., 2023). The layers of stress significantly impacted students' mental health and educational opportunities and pathways.

There is literature on the efficacy of online learning, as well as on faculty experiences transitioning to online instruction during the pandemic; however, comparatively little is known about the experiences of students, particularly those not directly related to coursework. Research from the California Education Lab, conducted during the COVID-19 lockdown and remote teaching, provided a comprehensive snapshot of student lives. Over 60% of students reported unreliable internet, were worried about paying for technology and internet, had changed living situations, knew someone who had contracted COVID-19, experienced decreased work hours, and did not have a quiet place to study or access Zoom (Reed et al., 2021). Additional problems for these students included decreased or increased work hours, caring for family members, and difficulty navigating online courses. For 70% of the students, personal stress was the reason for missing class and homework assignments. Half of the students experienced increased monthly housing and weekly food costs. These predicaments touched all facets of college student life.

A crucial focus of this study is the human element, and the impact of stress on individuals. This study aims to gain a deeper understanding of the level of stress experienced by a generation of college students as they were affected by the pandemic. In addition to this important understanding, the COVID-19 experience can also be extrapolated to other events that may result in disruptions to the lives of college students. We can also highlight what has been done and what might be done in the future to mitigate, or at least accommodate, high levels of stress caused by external disruptions to the lives of large numbers of college students. Ultimately, we can gain insight into how an institution's actions, such as transitioning to an all-online learning environment, may impact students.

While the COVID-19 pandemic was a once-in-a-century event and perhaps somewhat unique in the degree of isolation and loneliness it may have produced, other disruptions, such as natural and man-made disasters, occur with some regularity. These can also have a pronounced effect on students' lives. The impact of hurricanes on students, for example, is well-documented. A study of Hurricane Katrina in August 2005, on over 3,000 Mississippi State University students found that students experienced significant trauma (Gill, et al., 2006) due to evacuation, loss of family, friends and property. Similar findings were observed regarding students in Houston, Texas, following Hurricane Harvey in August 2017 (Allaire, 2021). Hurricanes can cause trauma, and a common university response is to provide psychological support, extend exam deadlines, and provide basic student needs such as food, water, and toiletries to assist students with their essential needs (Monk, 2024; Sullivan, 2024; Vespa, 2024).

Beyond hurricanes, there are man-made disaster situations that can similarly disrupt students' lives and routines. For instance, in 2023 Michigan State suffered a mass shooting. In the aftermath, individuals with concerns about firearm safety on campus were particularly likely to report suicidal thoughts (Mournet, Kellerman & Kleiman, 2023). We have witnessed a plethora of catastrophic events in recent years that have caused widespread disruption. In addition to Hurricane's Katrina and Harvey in the Gulf Coast, these include Hurricanes Milton that hit Florida in 2024, and Helene, that devastated parts of Florida, the Carolinas and West Virginia also in 2024, the freeze that shut down the electric grid in Texas in 2021, the hazardous waste train derailment in Palestine, Ohio in 2023, the wildfires that devastated the island of Maui, Hawaii in that same year, and this year's wildfires in Southern California, and shootings at USF that resulted in two fatalities, to name a few. Therefore, what we learn about student experiences during the pandemic can have application to other disruptions.

Beyond the extrapolation from the pandemic to other disruptive events, we can increase our understanding of online learning – an ongoing process in higher education. During the pandemic, as educational institutions transitioned to online learning, allegations arose regarding the perceived poorer quality of education compared to the traditional face-to-face modality. This characterization of online education needs to be contextualized and understood within the framework of the numerous adversities that students faced during the COVID-19 pandemic. Over the past two decades, online learning has experienced significant growth (Allen & Seaman, 2016; Seaman, Allen & Seaman, 2018), with higher education

institutions dedicating substantial resources to the development and implementation of electronic learning technologies (Deng & Tavares, 2013; Moore, 2013). Student readiness for online learning, however, remains a prevalent concern (Arum & Stevens, 2020; Martin, Stamper & Flowers, 2020).

Readiness, broadly conceptualized, refers to the extent to which a community or individuals are prepared and inclined to utilize information and communication technologies effectively (Dada, 2006). Within the context of student success, scholars have concentrated on defining and assessing student readiness for online learning, including the competencies and attributes that facilitate effective learning. Early research predominantly emphasized technological skills, such as basic computer and internet proficiency (Miltiadou & Yu, 2000). The rapid advancement of technology and the expansion of online education have necessitated revisions in the assessment of online learning readiness. The COVID-19 pandemic and the subsequent abrupt transition to remote learning have further intensified discussions surrounding the efficacy of online learning, readiness for online education, and the factors contributing to student success.

Students who traditionally elected for online education and were successful in the "classroom" exhibited several key attributes. First, students had a high level of self-efficacy. As noted by Bandura (1997), self-efficacy is defined as the ability to organize a course of actions "to produce specific attainments. Researchers have also noted the importance of the student's capability for self-directed learning. Zimmerman (1989) noted that self-directed learners are individuals who possess both the aptitude and motivation to direct their own online learning. This self-directed learning is also identified through a student's ability to identify their specific learning needs, clearly define goals within the course, identify learning resources, and implement strategies for success in the online classroom. Another important factor is the student's time management skills. Poor time management skills or procrastination related to academic deadlines ultimately contribute to a student's underachievement academically (Balduf, 2009). Ultimately, a student's ability to be a self-directed learner can enhance their capacity to complete tasks on time, and it is a critical measure of success in online learning. The student must possess an internal locus of control.

Previous studies on online learning have focused on students' basic technological abilities in the classroom. Specifically, a student's basic understanding of a computer, internet access, sending and receiving email, and the ability to organize and save files within their computer system (Watkins, Leigh & Triner, 2004). Additional indicators of technical competency include installing software, and researching and downloading information (Boyd, 2004). As technology evolved within higher education, research has included measurements of self-efficacy related to course and learning management systems (LMS) (Shen, et al., 2013). While this initial research focused on student's basic technology skills, researchers have also assessed communication within an online learning community.

Several important factors contribute to a student's potential success in an online environment, including self-directed learning, self-efficacy, and locus of control. Research has shown that students who take personal responsibility for their learning and exhibit self-discipline in their studies are more likely to succeed in the online environment (Lin & Hsieh, 2001). Students' self-efficacy also influences their persistence, motivation and motivation in their studies (Gore, 2006). Due to the majority of online education being delivered in an asynchronous environment, students' self-discipline and time management are a key measure of their academic success (Smith, 2001). Technical competency refers to a student's ability to navigate the technical aspects of their educational pursuits. Technical competency can be as basic as basic computer skills, internet use, and skills focused on information seeking (McGhee, 2010).

Additional indicators of technical competency include sending/receiving emails, installing software, and researching and downloading information (Boyd, 2004).

Furthermore, students' comfort within an online learning environment will also be influenced by their ability to communicate effectively. Communication within an online environment can occur via email, discussion boards, embedded learning management system (LMS) tools, chat, and other tools (Smith, 2010). Research has also found that a student's willingness to engage in online discussions was crucial to their success in an online learning environment (McKavanagh, et al., 2002). Finally, the perceived quality of a student's online education is also influenced by the ease of access to school resources, which is considered a key factor for successful online learning (Park & Wentling, 2007).

## DATA AND METHODS

To document student experiences during the COVID-19 pandemic we review the results of a survey of Park University students conducted during the fall of 2020 regarding key areas of their lives. Park University is a private, nonprofit, liberal arts institution located in the Kansas City, Missouri area. At the time of the survey, the university offered 77 distinct degree programs and 31 certificates to more than 16,000 students across 41 campus centers in the United States (Adams & Vanderleeuw, 2020). While traditionally a liberal arts undergraduate institution, the university offers Master's degrees in various fields and, depending upon the area of study, offers both traditional face-to-face and online courses.

In response to the emerging pandemic, university officials committed significant resources to move courses online (except for offerings such as science labs, which could not be replicated in an online format). By the fall of 2020, 88% of undergraduate and 84% of graduate programs had at least one course offered online. Having introduced online courses at the undergraduate level in 1996 and at the graduate level in 2002, the university's familiarity with the online learning modality facilitated this transition (Beck, 2015).

University officials sought to gauge the effectiveness of the institution's efforts as well as to understand what students were experiencing more generally. In addition to a series of questions about student online experiences, the survey asked a series of questions related to students extracurricular experiences that included the general level of stress students were experiencing, whether students or someone they knew had become ill with the virus, how the pandemic impacted employment, and other facets of life such as housing.

The survey was sent to nearly 13,000 students via email, with two reminders to participate sent prior to the close of the survey. It is relevant to note that although Park University's main campus is located in the Kansas City, Missouri, area, at the time of the survey the university had 41 campus centers and, with an established online capacity by the time of the survey (online operations started in 1996), attracted students from numerous states across the nation. While survey results do not allow for the identification of respondents by state, given the university's long-standing online presence, it is highly likely that the survey captured students from well beyond the Kansas City, Missouri region.

The survey, conducted on the Campus Labs platform from September 24 to October 2, 2020, consisted of 47 questions and took an average of 14 minutes to complete. It generated 790 total respondents, yielding a margin of error of +/- 4 percentage points at a 95% confidence level. Institutional Review Board approval to release the survey results was obtained before the survey was opened. Appendix A reports the wording and response categories for the questions used in our study, along with the number and percent of responses in each category, in parentheses, and number of respondents who answered each question. Appendix B reports the demographic composition of survey respondents.

## FINDINGS

Students were asked to report their level of stress at the time of the survey. In addition, students were asked about various extracurricular experiences that included whether they had become ill with COVID, whether a family member, friend, or coworker had become ill, if they had been taking care of someone who was ill from the disease, and how the pandemic had impacted their work status and environment. In addition, students were asked to report their level of concern about several possible environmental influences, such as the possibility of losing friends as a result of moving to an online environment, and having access to appropriate technology to accommodate this transition, along with concerns about paying bills and accessing healthcare.

### Student Stress Level

Table 1 displays results for our key study variable, the self-reported stress level among students. As can be seen, students reported being stressed during this period of the pandemic. The overwhelming majority (84.2%) experienced some stress, and a plurality (42.4%) reported experiencing a great deal of stress. With these findings as the baseline, survey results reveal numerous experiences outside of the

classroom associated with high levels of stress. We report first, experiences with becoming ill, followed by how the pandemic influenced students' work status, and finally, a series of concerns students had regarding their personal living situation.

**TABLE 1**
**STRESS LEVEL AMONG STUDENTS**

| | |
|---|---|
| Little or None | 15.8<br>125 |
| Some | 41.8<br>330 |
| A Great Deal | 42.4<br>335 |
| N | 790 |

Note: Top number is %, bottom number is n

**Becoming Ill**

Table 2 reports on the relationship between students' stress levels and whether they had contracted COVID. The observed relationship is statistically significant. While the number who reported having become ill is small (38, or 4.8% of responses), those who did reported significantly more stress than those who did not (a great deal of stress, 63.2% v. 39.5%). Of interest, those who reported not knowing if they had contracted COVID were more highly stressed (a great deal of stress, 64.3%) than those who reported they did not become ill, and were at about the same level of stress as the those who reported they had become ill.

**TABLE 2**
**STUDENT STRESS LEVEL * IF BECAME ILL**

| | *Yes* | *No* | *Don't Know* | Total |
|---|---|---|---|---|
| Little or None | 5.3<br>2 | 17.1<br>119 | 7.1<br>4 | 15.8<br>125 |
| Some | 31.6<br>12 | 43.4<br>302 | 28.6<br>16 | 41.8<br>330 |
| A Great Deal | 63.2<br>24 | 39.5<br>275 | 64.3<br>36 | 42.4<br>335 |
| N | 38 | 696 | 56 | 790 |

Pearson Chi-Square Value=21.33, df=4, Asymptomatic Sig (2-tailed) = .000
Note: Top number is %, bottom number is n

Though relatively few students became ill, a larger number knew someone – a friend, family member or coworker – who did (334, or 42.4% of responses). As shown in Table 3, those who knew someone who had contracted the disease reported higher stress than those who did not (a great deal of stress, 48.3% v. 36.7%). This relationship is statistically significant, and as with the case of becoming ill, those who reported

not knowing if someone close to them had become ill also reported experiencing a great deal of stress (53.3%).

**TABLE 3**
**STUDENT STRESS LEVEL * HAS ANYONE CLOSE TO YOU BECOME ILL?**

| | *Yes* | *No* | *Don't Know* | Total |
|---|---|---|---|---|
| Little or None | 9.6 | 21.3 | 13.3 | 15.9 |
| | 33 | 88 | 4 | 125 |
| Some | 42.2 | 42.0 | 33.3 | 41.8 |
| | 145 | 174 | 10 | 329 |
| A Great Deal | 48.3 | 36.7 | 53.3 | 42.4 |
| | 166 | 152 | 16 | 334 |
| N | 334 | 414 | 30 | 788 |

Pearson Chi-Square Value=21.33, df=4, Asymptomatic Sig (2-tailed) = .000
Note: Top number is %, bottom number is n

As shown in Table 4, among those who had a friend, family member of coworker who became ill, the level of stress tended to climb as more time was spent taking care of or providing emotional support on a weekly basis, up to about 20 hours per week. These findings suggest that both getting ill with COVID and knowing someone who became ill and taking care of them had an influence on the level of stress college students were experiencing.

**TABLE 4**
**STUDENT STRESS LEVEL * HOW MANY HOURS PER WEEK TAKING CARE OF SOMEONE**

| | *Up to 1 Hour* | *Up to 10 Hours* | *Up to 20 Hours* | *Over 20 Hours* | Total |
|---|---|---|---|---|---|
| Little or None | 16.4 | 3.8 | 3.3 | 8.1 | 9.8 |
| | 22 | 4 | 1 | 3 | 30 |
| Some | 45.5 | 43.4 | 33.3 | 29.7 | 41.7 |
| | 61 | 46 | 10 | 11 | 128 |
| A Great Deal | 38.1 | 52.8 | 63.3 | 62.2 | 48.5 |
| | 51 | 56 | 19 | 23 | 149 |
| N | 134 | 106 | 30 | 37 | 307 |

Pearson Chi-Square Value=19.86, df=6, Asymptomatic Sig (2-tailed) = .003
Note: Top number is %, bottom number is n

**Employment**

Table 5 presents the association between student stress levels and the impact of the pandemic on their employment, among the 562 students who reported being employed at the start of the pandemic. Reported stress levels were highest among the several groups of students who lost their jobs due to the pandemic. While students who were laid off from their jobs due to the pandemic are not the majority (109, or 19.4%

of responses), they still represent a sizable portion of responses to this question. The level of stress was particularly high among students still looking for work at the time of the survey, with nearly 70% of these reporting a great deal of stress. According to findings reported in Table 6, stress levels were also reliably associated with the ability to social distance at work. Slightly over 11% of students reported that they were almost never able to maintain social distancing at work (69 of 604), and more than 60% of these reported experiencing a great deal of stress.

**TABLE 5**
**STUDENT STRESS LEVEL * HAS THE PANEMIC IMPACTED YOUR EMPLOYMENT?**

| | *Gained work during, not working before pandemic* | *Stayed in the same job, increased hours* | *Stayed in the same job, hours were cut* | *Exited job due to pandemic* | *Got let go due to pandemic, currently looking for work* | *Got let go due to pandemic, got rehired* | *Got let go due to pandemic, got a new job* | Row Total |
|---|---|---|---|---|---|---|---|---|
| Little or None | 26.7<br>12 | 19.4<br>47 | 15.5<br>20 | 13.5<br>5 | 4.0<br>2 | 8.6<br>3 | 8.3<br>2 | 16.2<br>91 |
| Some | 40.0<br>18 | 43.8<br>106 | 37.2<br>48 | 40.5<br>15 | 28.0<br>14 | 37.1<br>13 | 33.3<br>8 | 39.5<br>222 |
| A Great Deal | 33.3<br>15 | 36.8<br>89 | 47.3<br>61 | 45.9<br>17 | 68.0<br>34 | 54.3<br>19 | 58.3<br>14 | 44.3<br>249 |
| Column Total | 8.0<br>45 | 43.1<br>242 | 23.0<br>129 | 6.6<br>37 | 8.9<br>50 | 6.2<br>35 | 4.3<br>24 | <br>562 |

Note: Top number is %, bottom number is n

**TABLE 6**
**STUDENT STRESS LEVEL * WERE YOU ABLE TO SOCIAL DISTANCE AT WORK?**

| | *Almost always* | *Much of the time* | *Sometimes* | *Almost never* | *Not sure* | Row Total |
|---|---|---|---|---|---|---|
| Little or None | 19.6<br>46 | 15.7<br>20 | 13.1<br>13 | 11.6<br>8 | 9.5<br>7 | 15.6<br>94 |
| Some | 44.3<br>104 | 44.1<br>56 | 40.4<br>40 | 27.5<br>19 | 39.2<br>29 | 41.1<br>248 |
| A Great Deal | 36.2<br>85 | 40.2<br>51 | 46.5<br>46 | 60.9<br>42 | 51.4<br>38 | 43.4<br>262 |
| Column Total | 38.9<br>235 | 21.0<br>127 | 16.4<br>99 | 11.4<br>69 | 12.3<br>74 | <br>604 |

Pearson Chi-Square Value=18.58, df=8, Asymptomatic Sig (2-tailed) = .017
Note: Top number is %, bottom number is n

**Concerns**

In addition to inquiring about student health, the health of family, friends, and coworkers, and their work status and environment, students were asked about a range of other possible concerns. These concerns included whether students were worried about losing friends as a result of courses going online, the ability to pay bills, access to healthcare, and access to technology now that courses had gone online. As Table 7 shows, most students did not have these concerns, although nearly half were concerned about their ability to pay bills. Regarding this group of concerns, a greater level of reported stress is reliably associated with reported concern. This was particularly the case regarding concerns about the ability to pay bills and access to healthcare, where in both cases, the percentage reporting a great deal of stress was near or above 60%.

**TABLE 7**
**STUDENT CONCERNS**

| | *Concerned About:* | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *Losing Friends* | | *Ability to Pay Bills* | | *Having Access to Health Care* | | *Having Access to Technology* | |
| | No | Yes | No | Yes | No | Yes | No | Yes |
| Little or None | 18.4 | 9.3 | 21.0 | 5.7 | 17.0 | 6.0 | 18.0 | 7.8 |
| | 104 | 21 | 110 | 15 | 120 | 5 | 112 | 13 |
| Some | 43.0 | 38.7 | 46.9 | 31.7 | 42.4 | 36.1 | 43.0 | 37.1 |
| | 243 | 87 | 246 | 84 | 300 | 30 | 268 | 62 |
| A Great Deal | 38.6 | 52.0 | 32.2 | 62.6 | 40.6 | 57.8 | 39.0 | 55.1 |
| | 218 | 117 | 169 | 166 | 287 | 48 | 243 | 92 |
| | Pearson Chi-Square Value=15.93, df=2, Asymptomatic Sig (2-tailed) = .000 | | Pearson Chi-Square Value=15.93, df=2, Asymptomatic Sig (2-tailed) = .000 | | Pearson Chi-Square Value=15.93, df=2, Asymptomatic Sig (2-tailed) = .000 | | Pearson Chi-Square Value=15.93, df=2, Asymptomatic Sig (2-tailed) = .000 | |

## DISCUSSION

Human beings are creatures of habit, and particularly in the context of stress, they look for structure and control. During a disaster situation, students' fears of the unknown are heightened, especially concerns about living situations, social support from friends, access to technology, their ability to cope with online learning, and the availability of jobs. Students' needs and concerns beyond the classroom permeate their academic pursuits; therefore, higher education needs to consider its efforts from a holistic perspective. Preparing for the future, taking these fears into account, and finding ways to support students through crises will add to overall student success.

Findings from this study show that more than two in five students reported being under a great deal of stress during the COVID-19 pandemic, with over four in five experiencing at least some level of stress. This is the broad background against which these college students were attempting to continue with their educational goals. Regarding situations encountered outside the classroom, while most students had not contracted COVID-19 at the time of the survey, more than four-in-five knew someone who had, and in both

cases, the level of stress was heightened. In fact, many students had to care for someone who had become ill, some over 20 hours per week, and this was linked with a high level of stress as well. Further, the pandemic adversely influenced student employment. The majority of students who responded to the survey responded to the work-related questions. Nearly one-in-five students were let go from their job during this period, even if temporarily. These students were among those who reported the highest stress levels. Additionally, more than one in ten could not engage in social distancing at work, which is also associated with high stress levels. Overall, the work environment proved to be highly stressful for many students during the COVID-19 pandemic. In addition, those concerned about paying their bills and accessing healthcare, often a result of employment changes, were under stress.

The institution's response, well intended and appropriate as it may have been, also heightened student stress. As courses transitioned online in response to the pandemic, many students accustomed to traditional face-to-face learning environments had to quickly adjust to the online environment. As a result, some were concerned about losing friendships that had developed in the face-to-face environment, as well as about having reliable access to technology, such as a laptop and internet, necessary for the online environment.

In the midst of the COVID-19 pandemic, an emergency environment, it is worth noting that in some cases, not knowing one's situation was as stressful as knowing that one was in a bad situation. For example, those students who did not know if they had become ill with the virus reported a slightly higher level of stress compared to those who said they did come down with the disease. As another example, those who reported being unsure about whether they could engage in social distancing at work experienced a level of stress that was second only to those who reported being able to almost engage in social distancing. Some of these college students lacked full understanding of their particular situation, and for these, not knowing apparently proved highly stressful. Human beings are risk averse, and our study's findings support the reality that uncertainty can cause significant stress.

Future research involving students from other universities and colleges will help validate the findings presented here. However, given Park University's established online presence, the surveyed students were likely drawn from a geographically dispersed student population. Therefore, student stress levels reported here are not necessarily specific to one location; we have a level of confidence in concluding that our study supports the idea that the level of stress and types of experiences reported here can be generalized both to what students elsewhere experienced during the pandemic and to the impacts of other disaster events. Findings from this study may be relevant for colleges and universities as future life-changing disasters occur. For a variety of reasons, crises and disastrous situations appear inevitable. Whether natural or manmade, a student's physical, emotional, and technological needs must be addressed on a broad front. Disasters indicate what happens to people when they sense they are losing control over their health, lives, jobs, and relationships. Universities, in times of crises, can help students and communities in general, reestablish control and return to normalcy

As previously referenced, during times of crisis, universities deployed several strategies, and whether man-made or natural, the academic response to disaster was fairly consistent. Classes were moved online with reduced assignment loads and extended deadlines (Gill, et al., 2006). In many cases, a simple Credit/No Credit grading system was utilized (Brown, et al., 2024). For natural disasters, food, clothing, and shelter were provided to local communities as well as students. A key part of the recovery process was getting students involved by gathering and distributing supplies (Allaire, 2021; Vespa, 2024). Crises such as school shootings, for example, resulted in individual and group psychological recovery sessions along with service animals. Candlelight vigils and concerts used to rebuild a sense of community. Universities assemble response teams comprising faculty, administrators, psychologists, and law enforcement to identify potential at-risk students. Care was taken in regard to HIPPA and FERPA information. Universities were encouraged to develop an Emergency Response Plan that covered natural disasters, along with active shooter incidents and fires. As a result, universities implemented a mass notification and communication system, as well as provided training to students, faculty, and staff on their roles and responsibilities in an emergency (Fox & Savage, 2009). Raising awareness about potential natural disasters and evacuation plans has been deemed essential. Studies suggest that students with a higher awareness of risk from natural

disasters are better prepared. Students with knowledge of first aid and CERT are more confident in their ability to help others with recovery (Goddard, et al., 2018).

Unlike other disaster situations, COVID-19 posed an additional threat to student health, particularly in terms of isolation and loneliness. Psychological support for students became paramount. Universities employed more virtual social events for students and more interactive elements into online classrooms (Agbonlahor, at al., 2024). Universities provided sessions on time management, mindfulness and coping strategies for stress (Govenale, Mctighe & Cechova, 2024). The COVID-19 pandemic saw an increase in the use of social media, video games, and role-playing games to alleviate feelings of isolation and boredom. Students relied on support from family, friends, and peers. Covid-19 had a positive impact on students' feelings of confidence in their ability to handle crises and increased feelings of empathy through the shared experiences of Covid-19 (Govenale, McTighe, & Cechova, 2024).

Moving forward, universities can continue to standardize their response to crises. Food, clothing, shelter, toiletries, and health care need to be provided. Adjustments in scheduling and financial aid must be made. Extensive psychological support must be provided. Emphasis on building community and getting students involved in the recovery effort should be prioritized. Peer-to-peer counseling can be effective. The use of technology can be used to disseminate information and also to eliminate isolation. Of importance, more research can be done on identifying and working with those students most vulnerable to stress and depression during a critical event.

As our findings suggest, university leaders should also be cognizant of the potential that institutional actions to address a situation may lead to other problems. Case in point: Our findings suggest that rapid transition to the online format, while necessary in the context of the pandemic, increased students' levels of stress. Among the stressors, our findings highlighted the significance of social isolation, as a pronounced concern among college students during the pandemic was the fear of losing friends. This fear was tied to a transition to the online learning environment. It is evident that online learning has increased over time and has become a permanent part of the educational landscape. For many students, however, online learning is not the preferred modality. Being almost instantly thrust into this new learning modality was far from ideal for those who were not familiar with online learning and perhaps viewed it as an inferior learning experience. A lesson drawn here involves the relationship between the actions an educational institution takes to adjust to a disruptive event and how students themselves react to this adjustment. Fortunately for the educational institution that our surveyed students attended, Park University, the established online presence mitigated some of the adverse ramifications of a rapid transition to the online format, as many students were familiar with the online learning environment.

## CONCLUSION

The purpose of this study was to document stresses that college students experienced during the COVID-19 pandemic. Although we make no claim to have identified or examined every source of stress that college students may have experienced, we examined a series of potential sources of stress, including health, work, and social life. We drew from a survey of 790 students attending a midwestern university in the fall of 2020, which had a geographically dispersed student population due to its online history. Our findings paint a picture of a student cohort that proceeded with their college coursework despite substantial stress. Overall, it is fair to say that college students experienced a substantial amount of stress as a result of their experiences during COVID-19 pandemic.

The findings reported in this study contribute to a broad literature on how students respond to disasters and how higher education institutions can mitigate some of the worst effects. These findings offer further insight that may be relevant to higher education administrators, faculty, and staff regarding the influences students experience outside the classroom during times of disaster. In this way, colleges and universities adopt a more holistic orientation toward the learning experience.

An interesting future area of study may be the attitudes and behavior of a generation of students who experienced the COVID-19 pandemic. Some very intriguing questions include the extent to which college students who experienced high levels of stress during COVID-19 continue to experience traumatic effects.

In a similar vein, future research might investigate whether, among those who experienced the pandemic, their perception of themselves and how they reacted to the event changed. A generation of college students was impacted by COVID-19, in direct and indirect ways. This experience will leave an imprint – moving forward, the question is how.

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**APPENDIX 1**

Student stress level: *Overall, how much stress are you feeling about the potential consequences of the COVID-19 epidemic?*

*1=Little or none* (n=125, 15.8%)
*2=Some* (330, 41.8)
*3=A great deal* (335, 42.4)
N=790

Student became ill with COVID: *Have you become ill as a result of the Coronavirus?*

*1=Yes* (n=38, 4.8%)
*2=No* (696, 88.1)
*3=Don't Know* (56, 7.1)
N=790

Student knew someone who became Ill with COVID: *Has anyone close to you - friend, family member or coworker - become ill as a result of the Coronavirus?*

*1=Yes* (n=344, 43.7%)
*2=No* (414, 52.5)
*3=Don't Know* (30, 3.8)
N=788

Time spent with an ill person: *IF someone close to you became ill as a result of the Coronavirus, approximately how much time did you spend on a weekly basis taking care of and/or supporting emotionally your friend, family member or coworker?*

*1=Up to 1 hour* (n=134, 43.6%)
*2=Up to 10 hours* (106, 34.5)
*3=Up to 20 hours* (30, 9.8)
*4=Over 20 hours* (37, 12.1)
N=307

Employment Status: *If currently employed, are you able to engage in social distancing where you work?*

*1=Almost always* (n=235, 38.9%)
*2=Much of the time* (127, 21.0)
*3=Sometimes* (99, 16.4)
*4=Almost never* (69, 11.4)
*5= Not sure* (74, 12.3)
N=604

Impact of pandemic on employment: *Has the pandemic had an impact on your employment?*

*1=Gained employment during the pandemic but was not working prior to* (n=45, 5.9%)
*2=Stayed in the same job and increased hours worked during the pandemic* (242, 31.6)
*3=Stayed in the same job but hours were cut* (129, 16.9)
*4=Exited my job due to the pandemic* (37, 4.8)
*5=Got let go from my job and am currently looking for work* (50, 6.5)
*6=Got let go from my job but got rehired* (35, 4.6)
*7=Got let go from my job but got a new job* (24, 3.1)
*8=Was not working during the pandemic* (203, 26.5)
N=765

For the following items, students were asked to select all that applied from a list of possible concerns. They were instructed to respond Yes to an item that applied but otherwise not respond when an item did not apply:

Concerned about paying bills*: Concerned about paying my bills.*

*Yes* (n=265, 33.5% of total survey N=790)

Concerned about losing friendships and social connections*: Are you concerned about losing friendships and social connections now that classes are online?*

*Yes* (n=225, 28.5% of total survey N=790)

Concerned about access to technology: *Concerned about accessing the technology needed for my online classes now that classes have gone online.*

*Yes* (n=167, 21.1% of total survey N=790)

Concerned about access to healthcare*: Are you concerned about access to healthcare?*

*Yes* (n=83, 10.5% of total survey N=790)

**APPENDIX 2**

Percent female in the survey was somewhat higher, and percent male somewhat lower compared to the university's gender composition in the fall of 2020, that was 46% female and 54% male. Among respondents to the question on gender, 62.2% were female (442), 35.5% were male (241), and 2.2% preferred not to self-describe (15). While the age range was in the younger direction, the survey captured substantial variation in both age and grade status. Among respondents to the question on age, 48.8% were from 18 to 27 (329), 22.0% were from 28 to 37 (148), 16.9% were from 38-47 (114), and 12.3% were 48 or above (83). Among respondents to the question on grade status, 10.6% were freshman (72), 15.5% were sophomores (105), 23.4% were juniors (159), 29.3% were seniors (199) and 21.2% were graduate students. The questions were:

*What is your gender?*

*1=Female* (n=442, 62.2%)
*2=Male* (241, 35.5)
*3=Other/Prefer to self-describe* (15, 2.2)
N=678

*What is your age?*

*1=Under 18* (n=0, 0.0%)
*2=18-22* (227, 33.7)
*3=23-27* (102, 15.1)
*4=28-32* (70, 10.4)
*5=33-37* (78, 11.6)
*6=38-42* (63, 9.3)
*7=43-47* (51,7.6)
*8=48-52* (40, 5.9)
*9=53-57* (23, 3.4)
*10=Over 57* (20,3.0)
N=674

*Currently, are you a freshman, sophomore, junior, senior, or graduate student?*

*1=Freshman* (n=72, 10.6%)
*2=Sophomore* (105, 15.5)
*3=Junior* (159, 23.4)
*4=Senior* (199, 29.3)
*5=Graduate Student* (144, 21.2)
N=679