"My Entire World Stopped": College Students' Psychosocial and Academic Frustrations during the COVID-19 Pandemic

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Abstract

The COVID-19 pandemic disrupted normalcy for college attending young adults which resulted in a loss of the campus environment and classroom setting. This change in setting may interfere with a student's personal and academic wellbeing. This study used an online survey to evaluate college students' academic and psychosocial frustrations during the COVID-19 pandemic. Data were collected from March–April 2020 at a land-grant university in the Appalachian region. Data were available from 2643 undergraduate and graduate students. There was a 65.8% and 15.7% increase in the number of students who reported their learning and health as fair, poor, or very poor after the COVID-19 pandemic, respectively. Qualitative responses were coded and 8 themes and 24 subthemes emerged. College students expressed frustrations regarding technology, classwork, research, family, social, emotional, behavioral, and financial aspects of life. These results can be used by higher education administration, faculty, and staff when planning for online courses. Ensuring that student frustrations and barriers to success are recognized and considered may help prevent students departing from higher education during this time.

Keywords College student · COVID-19 · Academic · University · Psychosocial · Well-being

Introduction

The COVID-19 pandemic resulted in social-distancing and stay-at-home orders worldwide that influenced the lives of more than 1.7 billion students globally (Duong et al. 2020). In the US, the COVID-19 pandemic caused a dramatic change in the structure of

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higher education, with colleges and universities responding to the pandemic by cancelling on-campus operations (Duong et al. 2020). As a result, many students were forced to move out of campus housing and readjust their learning environments. Further, college professors were forced to make the hurried conversion from face-to-face to an online learning format (Murphy 2020), while maintaining their other obligations such as advising or research (Rapanta et al. 2020). As online learning requires different pedagogical approaches than face-to-face delivery, many professors were not prepared for this shift and course content was not developed with an online format in mind (Rapanta et al. 2020). Therefore, the drastic change in student learning environments and the course delivery likely impacted students' ability to thrive academically. This shift caused student life to be "unpredictable" and often resulted in the loss of campus resources such as mental health services (Perz et al. 2020).

Literature Review

Emerging research has shown that college students' mental and physical health have faltered in the wake of the COVID-19 pandemic. In fact, a survey by Active Minds (2020) found that 91% of US college students reported increased stress or anxiety (COVID-19 impact on college student mental health 2020). Increased rates of stress and anxiety in college students during the pandemic have been consistently found in studies on this topic (Conrad et al. 2021; Charles et al. 2021; Hoyt et al. 2021). Further, students report increased sedentary time and screentime during the pandemic (Huckins et al. 2020). Consequently, the personal well-being of college students is likely lacking during the COVID-19 pandemic.

Students were faced with an abrupt change in environment, with many having to move back home. This could potentially affect their quality of life and well-being (Shek 2020) as they may be moving back into either a functional or dysfunctional family unit, with or without social support. In addition, students had the potential for more freetime with the online shift in learning, and their well-being is affected by how they choose to spend their time (Shek 2020). There is also the issue of students' financial positions. An individual's ability to access high-quality internet and personal hygiene equipment depends on their financial status (Shek 2021) and therefore, students with lower socioeconomic status may be more adversely impacted by the transition to online learning and maintaining personal well-being.

Although previous research indicates that student academic and personal well-being are being impacted by the COVID-19 pandemic, little research has been completed that captures student voices on the issues. A 2020 analysis of Twitter accounts found that college students generally expressed more negative views towards the COVID-19 pandemic compared to the general population (Duong et al. 2020). In particular, college students indicated the negative impact of university closures and social-distance measures on their learning and work environments, with 81.3% of college students expressing dislike for remote learning (Duong et al. 2020). These findings show general disdain for their current situations, but point to the need to investigate the experience of college students during this time on a deeper level.

Theoretical Basis

In the United States (US), more than 17 million individuals were enrolled in higher education in Fall 2019 (Term Enrollment Estimates Fall 2019 2019). The psychosocial concept of "thriving" encompasses the intellectual, social, and emotional experiences of college students and are essential to the well-being and success of students (Schreiner 2010). Factors related to students' thriving include a sense of community, student-faculty interaction, and campus involvement (Cuevas et al. 2017). Thus, situations that take away from the campus environment and classroom setting may interfere with a student's personal and academic wellbeing or ability to "thrive" in college.

No research to the authors' knowledge has qualitatively assessed the barriers students are facing during the COVID-19 pandemic. During this critical time of emerging adulthood, the well-being of college students is of utmost importance to their academic and professional development. There is a need to understand what issues students are facing that may be contributing to the development of poor social, emotional, and behavioral outcomes during campus closure and how this impacts their ability to thrive. Therefore, the objective of this study was to evaluate the barriers and frustrations college students faced in their daily lives during the COVID-19 pandemic. The qualitative data presented in this study can provide insight to higher education administrators, faculty, and staff on the realisms of student lives during the pandemic. This is done with the goal to enable these individuals to better support students during times of unease, such as the COVID-19 pandemic.

Methods

Study Design and Participants

This study was approved by the university Institutional Review Board (#2003924134). This cross-sectional, online study was developed to evaluate college student well-being during the COVID-19 pandemic. All undergraduate and graduate students attending a large, land-grant university in Appalachia were recruited via email through the university listserv. The recruitment email included a description of the study and a link to the Qualtrics platform where the survey was housed. Prior to starting the survey, students were required to read and provide informed consent. To be eligible, students had to be at least 18 years of age and currently enrolled at the university. Students who completed the had the chance to provide their email to be entered for a random drawing of one of six $100 American Express gift cards. To ensure confidentiality, contact information remained separate from the results of the survey. The survey was open from early March to late April 2020, with students receiving three reminder emails if they had not completed the survey.

Survey Design and Measures

The full survey completed by students included 161-items developed by the authors using a mix of validated tools and previous literature on a range of health and well-being topics related to COVID-19. For this study, only 30 questions including demographic, health, and academic variables were assessed.

The survey asked participants to self-report their age, race, gender identity, year in school, health status, and employment status. Students were asked the number of hours they worked before and since COVID-19 to assess change in employment workload and their income before and since COVID to assess financial changes. Students also self-reported if they were a first-generation college student, had dependents, were from the Appalachian region, and if they had a disability.

Academic questions asked students to rate their productivity since COVID-19 and their internet access to complete work online. Students were also asked about the number of courses they were enrolled in and if COVID-19 caused them to have to drop any courses. Students were asked to report the amount of time they spent on course work before and since COVID-19 as well as how they would rate the quality of learning before and since COVID-19. Lastly, students were asked if they were planning to continue their education at their current institution. If not, the reason for not continuing their education was assessed.

Lastly, an open-ended question asked students to describe any issues, frustrations, or difficulties they experienced in transitioning to working and completing school from home.

Analysis

JMP (JMP®, Version Pro 13, SAS Institute Inc., Cary, NC, USA, 2015) was used to analyze descriptive statistics for all frequency calculations. Changes from before to since the COVID-19 pandemic were analyzed using McNemar's test for categorical variables and Student's t-test for continuous variables. The open-ended, qualitative question was analyzed using summative content analysis to compile the comments and quotes (Hsieh and Shannon 2005). The qualitative data analysis included the generation of initial codes that were used to develop overall themes and subthemes which generated summative content to support quantitative research findings. Coding for all responses was completed independently by two of the authors with experience in qualitative analysis. The researchers discussed themes post independent coding to identify discrepancies and to collectively agree upon themes and subthemes.

Results

Participant Characteristics

Two-thousand six-hundred forty-three students (6.6% response rate) completed the survey. Student characteristics are reported in Table 1. Respondents were predominately female (70.7%), white (84.6%), continuing generation students (71.7%), with an average age of 24.9 ± 5.54 years. Most students did not have dependents (94.9%), a disability (93.4%), or receive SNAP benefits (98.1%). Student respondents were spread across all academic years and close to half (45.2%) were from the Appalachian region. A majority of students (60.9%) were unemployed and of those unemployed students, 50.8% had lost employment due to COVID-19. Students reported being enrolled in an average of 4.75 ± 2.03 courses for an average of 13.9 ± 4.32 credits. Some students struggled with quality internet access as 21.6%, 6.9%, and 2.5% reported fair, poor, and

Table 1 Characteristics of student respondents during the COVID-19 pandemic

Variable	Frequency N(%)
Gender Identity	
Male	553 (27.6%)
Female	1416 (70.7%)
Transgender	22 (1.1%)
Nonbinary or Other	12 (0.6%)
Race	
White	1665 (84.6%)
Black or African American	52 (2.6%)
Asian	85 (4.3%)
Bi or Multiracial	112 (5.7%)
Other	55 (2.8%)
Class Standing	
Freshman	399 (15.2%)
Sophomore	425 (16.1%)
Junior	482 (18.3%)
Senior	557 (21.1%)
Graduate/Professional School	773 (29.3%)
First Generation College Student	
Yes	745 (28.3%)
No	1890 (71.7%)
Appalachian Identity	
Yes	1190 (45.2%)
No	1441 (54.8%)
Have a Disability	
Yes	173 (6.6%)
No	2454 (93.4%)
Have Dependents	
Yes	134 (5.1%)
No	2469 (94.9%)
Currently Employed	
Yes	946 (39.1%)
No	1471 (60.9%)
Lost Employment due to COVID-19	
Yes	709 (50.8%)
No	687 (49.2%)
Receive SNAP benefits	
Yes	50 (1.9%)
No	2529 (98.1%)
Dropped Course due to COVID-19	
Yes	118 (4.9%)
No	2265 (93.6%)
Continuing Education after Spring 2020 Semester	

Table 1 (continued)

Yes	1925 (79.5%)
No	497 (20.5%)
Reason for not Continuing Education	
I am graduating	427 (86.4%)
I am transferring to another school out of choice	14 (2.8%)
I am transferring to another school for financial reasons	8 (1.6%)
I am forgoing my education financial reasons	13 (2.6%)
Other	32 (6.5%)
Productivity Levels since COVID-19	
Very Good	113 (12.2%)
Good	256 (27.7%)
Fair	282 (30.6%)
Poor	179 (19.4%)
Very Poor	93 (10.1%)
Internet Access since COVID-19	
Very Good	754 (31.6%)
Good	893 (37.4%)
Fair	517 (21.6%)
Poor	165 (6.9%)
Very Poor	60 (2.5%)
Variable	Mean ± SD
Age (years)	24.9 ± 5.54
Courses Enrolled In	4.75 ± 2.03
Credits Enrolled in	13.9 ± 4.32

very poor internet quality, respectively. Over half of student respondents reported their productivity levels as fair (30.6%), poor (19.4%), or very poor (10.1%) since COVID-19 and roughly 5% of students reported having to drop a course due to COVID-19. Almost 500 students (20.5%) reported they would not be continuing their education at their current institutions after the spring 2020 semester. Of students who reported they would not be returning, 2.6% stated they were forgoing their education completely due to financial reasons.

Changes from before to since the COVID-19 Pandemic

Students reported changes (before COVID to since COVID) regarding their self-reported health and academic learning status, as well as changes in income, hours spent on coursework, and employment hours. Results are reported in Table 2. Student reported income was significantly lower ($p < 0.001$) since the pandemic, with average income report before COVID-19 of 1035.41 ± 1095.71 dollars per month and since COVID-19 of 911.27 ± 1176.1 dollars per month. Number of hours of employment declined for students ($p < 0.001$) from 22.61 ± 13.46 before COVID-19 to $20.22 \pm$

Table 2 Change in Health, Learning, Income, Employment Hours, and Time Spent on Classwork from Before to Since the COVID-19 Pandemic

Variable	Frequency N (%)		P value
	Before COVID-19	Since COVID-19	
Self-reported Health			
Very Good	1001 (38.4%)	762 (29.3%)	<.0001
Good	1280 (49.1%)	1108 (42.6%)	
Fair	295 (11.3%)	569 (21.9%)	
Poor	25 (1.0%)	134 (5.2%)	
Very Poor	5 (0.2%)	29 (1.1%)	
Self-reported Learning			
Very Good	1175 (49.0%)	171 (7.1%)	<.0001
Good	1063 (44.3%)	490 (20.5%)	
Fair	144 (6.0%)	850 (35.5%)	
Poor	14 (0.6%)	584 (24.4%)	
Very Poor	3 (0.1%)	301 (12.6%)	
Variable	Mean±SD		P value
	Before COVID-19	Since COVID-19	
Monthly Income (dollars)	1035.41±1095.71	911.27±1176.1	<.0001
Time Spent on Classwork (Hrs/Week)	21.07±15.56	21.91±17.23	<.0001
Employment Hours (Hrs/Week)	22.61±13.46	20.22±14.80	<.0001

McNemars test was run for categorical variables; health and learning. Student's t test was run for continuous variables; income, time spent on classwork, and employment hours.

14.80 since COVID-19. The number of hours spent on college classwork increased (p < 0.001) from 21.07 ± 15.56 before COVID-19 to 21.91 ± 17.23 since COVID-19. Before COVID-19, 12.5% of students reported their health as fair (11.3%), poor (1.0%), or very poor (0.2%) but since COVID-19 this increased to 28.2% of students reporting their health as fair (21.9%), poor (5.2%), or very poor (1.1%) indicating a significant decline in student self-reported health status ($p < 0.001$) after the start of the pandemic. Similarly, a significant decline was shown in student self-reported learning (p < 0.001) from before COVID-19 to since COVID-19. Before the COVID-19 pandemic, only 6.7% of students reported their learning as fair (6.0%), poor (0.6%), or very poor (0.1%). However, since the COVID-19 pandemic, 72.5% of students reported their learning as fair (35.5%), poor (24.4%), or very poor (12.6%).

Student Expressed Academic and Psychosocial Frustrations

From qualitative analysis regarding the topics of academic and psychosocial frustrations, 8 themes and 24 subthemes emerged as shown in Table 3.

Technology

Technology was seen as a factor that impeded on students' learning. Access to a reliable *connection and speed of internet* was a frustration felt by many students.

Table 3 Academic and Psychosocial Themes Experienced by College Students During the COVID-19 Pandemic

Topic	Themes	Subthemes
Academics	1. Technology	1a. Connection and Speed of Internet
		1b. Equipment Issues and Expenses
	2. Classwork	2a. Format and Quality
		2b. Schedules
		2c. Workload
		2d. Professor and University Communication
	3. Research	3a. Access to Lab and Equipment
		3b. Progress
	4. Family	4a. Environment
		4b. Parent Student Interactions
		4c. Caring for Others
Psychosocial	5. Social	5a. Work/Life Balance
		5b. Isolation
		5c. Alone Time
	6. Emotional	6a. Stress
		6b. Mental Health
		6c. Future Planning
		6d. Fear of Illness
	7. Behavioral	7a. Diet and Exercise
		7b. Sleep
		7d. Screen time
	8. Financial	8a. Loss of Income
		8b. Increased Expenses
		8c. Essential Workers

Students expressed that "with technology there are so many instances where things go wrong" and it is out of their control. One student provided the example that they "have tried to submit assignments by a deadline and e-campus (the required learning management system) will just fail to submit". Others struggled with video conferencing, stating that "Zoom is very finicky with the Wi-Fi it wants and would frequently stutter even with a good connection" which caused "some students to be unable present projects because they had slower Wi-Fi and it would freeze." Many students expressed living "in the mountains" or in "an area where the one internet provider available is not very high quality." These connection issues often resulted in students having to travel to receive a more reliable source of internet. One student stated, "I have no internet signal at home, so I must drive over 1 hour to a friend's place who has internet. Even then due to quarantine, I cannot go into their home so I must sit in my car for hours to do schoolwork on their internet, which at best is slow." Similarly, another student voiced a lack of "internet access at home or good cell service" resulted in having to "drive to town and sit in a parking lot of a business that has Wi-Fi I can connect to every day to complete my classwork. I get maybe two hours before my laptop dies, then I have to drive back home and let it charge for about an hour and a half and then repeat the process." Another student had to "make the decision to move out of my house and move in with a family friend so that I would have internet to continue my schoolwork." These connection issues often caused "a simple 20 minute assignment to

take 2 hours." The speed of internet access was also a noted barrier and frustration for students. One student noted, "there are six people on the same internet in my home as everyone is working/taking school from home and the internet can get a little slow or will completely crash from time to time." Students' also struggled with "lots of storms causing power to go out multiple times" that caused increased anxiety among students with one student stating, "it makes me nervous to take timed tests and such during a storm, because what do I do if the power goes out and I lose my access to the exam?" This was of concern to students who noted it "makes online work really tough at times, especially when professors penalize you for Wi-Fi issues even though you informed them of the problem."

To overcome this, many students had to purchase internet or new technology to be able to continue their education as shown in the subtheme *equipment issues and expenses*. One student voiced that their family "initially didn't have internet at home so we had to drive to our town and sit in our car outside of the library to do my work and classes. A pretty hefty chunk of our stimulus check went into getting internet at our house, which is still a little spotty." Similarly, another student stated their "family cannot afford the best internet services at the moment and [the internet] is unstable." Due to family financial limitations, some students reported having to "share a computer with my parents, sister and her 3 kids which we all use on a daily basis". Other students voiced not being able to acquire technology during the pandemic. A student specified that their laptop did not have "a functioning camera OR microphone" which were required for Zoom classrooms. This student followed by stating "the only real way to fix the issue is to return it. That isn't an option, however, due to the long turn-around times that were expressed to me by both Dell and Asurion, so Zoom meetings have been a nightmare." Without access to university facilities and resources, other students struggled with required software platforms as it was "difficult to use this Software now as the license is really expensive" and some had to "buy a $1200 laptop so I could complete my classes and projects with the correct software." This is of concern for students from limited income backgrounds and single parents, as articulated by one mom who stated "I had to purchase a computer when classes went online and libraries closed. I am a single mom with very little income so this was a HUGE blow to my budget and minuscule savings." This financial strain caused students to second guess their right to be in college with one stating the need for better technology off campus "proved to be costly and caused financial strain" and that it was "no fault of the university I'm too poor and had no business trying to afford college."

Classwork

Classwork changes were a frustration that impeded on student's well-being and ability to thrive during COVID-19. Many students struggled with the changes in *class format and quality*, with many concerns over "not learning as much as when attending classes*"* and feeling "at risk for a very poor grade" as a result of the transition to online learning. One student stated, "The quality level of education and instruction has dropped dramatically. Many professors are just trying to get through this semester. It's understandable, but I am not receiving the education that I was hoping for." The format of courses was especially concerning for students whose majored required field work or experiential training. For example, a student expressed that "as a nursing student it is

extremely important to receive hands on learning and that isn't an option currently which is very sad considering I will be entering the work force in 3 months". The means of online delivery was a concern due to "it being far more difficult to find the coursework engaging online" with some students stating their professors were "not continuing to teach" but instead "just sending notes with explanations" while others conveyed "most professors simply read off of the PowerPoint." The lack of a synchronous lecture was of concern to some students, with one stating their class "is just oh, here's the slides, good luck and the occasional office hours over a video call if you have any questions so we don't really get explanations or get to ask questions during the lecture." Some students explained that professors were "hosting live lessons not during their pre-corona times" or make their "lectures much longer than the class time" which caused conflicts in students course schedules. The transition to online exams also noted as "very frustrating" as "it seems professors were often concerned with the possibility of students cheating online so the format was far more difficult than the already established in-person format, which negatively affected the students who don't cheat." The lack of uniform technology platforms among professors was a concern to one student who stated, "I can't keep up. Teachers are using Blackboard, Pearson, and Google Classroom. I can't keep up. I am overwhelmed. I was valedictorian of my high school and now I am missing assignments and exams. I cannot focus, I can't remember things. And sometimes I don't know what day of the week it is."

Other students also expressed troubles with their *schedules* and being organized due to the fact that "every single class has changed their syllabuses and some have totally modified assignments" making it "awful having to track down assignments and their new due dates, lectures, and teacher messages." One student communicated they "missed several assignments because I was receiving so many emails at a time that things got lost." Students with learning disabilities or university approved accommodations found the transition especially hard for their schedules. One student indicated, "I have severe ADHD and have purposefully not taken any online classes because I knew I wouldn't be able to complete them. My ADHD mainly presents as not being able to register nonphysical/impersonal things as real, making it much easier to ignore or forget deadlines, assignments, and classes. I have been trying extremely hard to make lists and keep track of due dates and classes but nothing feels real and it is so much easier to get lost in hours of media and news." Other students struggled with the differences in time zones to stay on schedule. One student stated, "there is a 6 hour time difference between home and the university which makes meeting classes and deadlines harder" and another indicated "being in a different time zone caused me to turn in assignments late before I realized eCampus didn't account for time zone differences."

The change in *workload* that came with the new syllabi was also of concern to students and classified as "not helpful during this difficult transition." One student uttered they had "breakdowns every night from how much work all my professors are assigning me and it's greatly deteriorating my mental state at this point." Another expressed their "workload has at least doubled because professors think we have nothing more to do except just sit at home and do nothing but their class" which results in students "spending way more time on the course work than I ever had to before which is causing me to not be able to seek employment, spend time with my family, or take care of my mental health." Overall, students felt that "there is so much work it's unbelievable" and that "online college should not be harder than in person classes,

especially during these times!" Further, students conveyed that "trying to keep up with each professors' requests for online coursework has been difficult" and that the University isn't using a universal way to communicate, so each professor has different expectations" resulting in a lot of misunderstanding between professor and student and the impression that "some of our professors don't even care and they just want to assign us as much as possible without considering that most of us are now living at home and dealing with problems that arise from home like more added stress and worrying about the virus and maintaining a good grade in all of our classes."

Similarly, many students expressed displeasure with their *professors' communication*, with some "acting like it's business as usual" while "in the midst of a pandemic" and completely forgetting that "human factors affect coursework productivity." One student pronounced that when asking for help they would receive a response of "Did you read the email?" or "Did you read the instructions?" instead of help with the content which has resulted in them "crying while taking 2 exams so far". Another stated that their hardest classes were the ones in which the "professors are unwilling to adapt and want to continue classes and projects as if there was not a pandemic." Communication via email versus face to face also caused students to feel confused due to the "gray areas when you only have written communication with professors." Others expressed concern that professors did not know the online tools well enough to help students but asserted most "have been doing their best and it is understandable." Lastly, students voiced concern with receiving communication from "university departments that have gone to a work from home format" which caused students to not be able to "get an answer from people that I need help from. It is incredibly frustrating and stressful."

Research

Students who were involved in research faced barriers. Some students had to cease the start of their research as they "can't do any experiments from home since my research was deemed non-essential" and couldn't "sample and bring back specimens to university buildings for processing and analysis." Others had to put their research on hold as they could not "access university buildings to perform analyses on specimens collected prior to COVID-19." Research students stated they have "only been involved in writing papers" but even that was not ideal due to the need for "several different types of software that I could not use these at home because my laptop did not have enough storage."

This lack of access resulted in a delay in *progress* towards graduation or research completion for many students. One student communicated, "the lack of access to the laboratory has greatly reduced my potential productivity for the year and I'm at risk of losing an entire year of data collection." Students expressed that what they had at home was often not sufficient for research causing a delay in progress and stated that progress "has slowed dramatically". A student voiced, "the possibility of needing an additional semester to complete my research is becoming more likely as the labs remain closed. Prior to COVID-19 closures, I was on track to present preliminary results at a conference in August, now I am not sure I will be able to complete my analysis or even attend the conference." Distance from advisors was also seen as a frustration as students were not able to "ask questions to my research advisor in person" and some questioned "whether I want to come back in the fall."

Family

The transition from campus to home with family initiated turmoil for students. Many students said their home *environment* was not equivalent to the learning and studying environment they created on campus as home was always "a place of relaxation, so getting into the right frame of mind was challenging" as most students seemed to prefer a "more school oriented setting like the library." Students said that prior to the pandemic, they could "go to campus to get work done and get away from all the distractions at home" which made them "focus better as well as be way productive" as many do not have a " dedicated office space" at home. At home students felt they had "little control over the environment" and have "trouble finding a quiet place" due to family distractions such as having to "clean and run the house", "take out the dog", or "helping parents with technology." Students felt that "physically lacking the setting of a learning environment has proven to be a huge step backward" in their academic careers.

Other students struggled with trying to be a student while dealing with *interactions with parents.* Some students expressed their parents lack understanding of their course requirements. One student identified they struggled with "receiving sympathy from my parents as they don't understand that when I'm in my room on my laptop I'm usually doing work – on my laptop. It is incredibly frustrating because they are labor-oriented and think that if I'm not cleaning all day or exercising or helping them with stuff that I'm being lazy, and they live for productivity. They give me quite a bit of grief because they don't understand." Similarly, another student stated, "I get a lot of pressure to make perfect grades, which is struggle. It can be really exhausting and frustrating to be asked how school is 10 times a day and also to try and deal with online school and have anxiety about everything happening with this COVID, and a parent who tells you to just 'suck it up and get over it' when it comes to your anxiety and worry." Students also conveyed "it has been difficult to adapt from living alone to living in a household with parents, where there is a new dynamic, new rules, and new expectations" and resulting in a loss of autonomy due to parents "nagging me to spend more time studying and less time playing video games and saying I need to go to bed earlier." Another voiced that working with their parents around "increases anxiety and stress because they are watching over you." Additionally, the home life of students is not always a place of happiness. One student conveyed, "my home life isn't great, and my father does not allow my brother and I to use internet at night, which is difficult when I work 40-50 hours a week, during the day" which has caused the quality of their work to not be at their "normal standard." Students expressed they went away to school in many cases to "make better of myself" and "figure out who I am without my parents shaping me into their mold even if they won't admit that" but being at home as a student puts students "back into that same old environment that doesn't even feel like me anymore." Some students were even forced to "move home, move back to my apartment, then to a family friends house because of issues at home" resulting in a disturbed learning environment as "it was really hard to focus on anything because of the unstable living situation. I couldn't focus on anything."

Lastly, some students had to take on the role of *caring for others* while trying to be a student at home, which often conflicted resulting in the feeling that they "take on too many roles at home to allow for me to be a full time student." One father highlighted

how caring for a child can interfere with course by stating, "I found out how difficult it is to take care of a 5-year-old while also taking a timed test. I think I received the lowest score in the class, mainly because I didn't finish the exam. I think I was able to complete about 2/3 of the exam, and the portions that I did manage to finish were still not to my satisfaction." Other parents expressed difficulty finding a balance between their schooling and their children's schooling. For example, one stated, "I have 4 kids. and have suddenly become homeschool teacher, meal provider, and housekeeper. I already did a lot as a single mom but having them home from school means I have little quiet time to study." The need to care for others extended beyond parents to college attending grandparents with one student remarking, "I was interrupted from completing this survey for a bit due to the same reasons I struggle with working from home. I have 4 grandchildren. Two are staying with me so their mom can work from home while a family friend is taking the two smaller ones. In the meantime, I have my two adult children who have been more needy at this time." Other students were taking care of adult family members, such as one student who moved in with their "Nana to take care of her and my aunt with down syndrome" and another with an "elderly grandmother that we are all taking turns caring for" making it "difficult balancing family responsibilities with school." The reality of going home and caring for others was exacerbated when the virus was present as one student describes, "I came home to a nightmare. My mom and little sister got the virus during the peak of the anxiety and uncertainty surrounding the virus. This was really scary because my grandparents live with us and a woman in our neighborhood was hospitalized for the virus a week prior. Also, I am the eldest of four so I was to be the caretaker for my little siblings, the nurse for the sick, and the protector/ sterilization queen to make sure no one else in my family got sick. It was awful and really scary."

Social

The social lives of college students suffered during the COVID-19 pandemic. Students expressed a lack of being able to separate their personal lives and work or school lives during the pandemic, resulting in poor *work and life balance*. There was a "pretty solid boundary of campus is work" and home is rest "before all this" but when working at home all day "there is no separation of the two" so it became difficult for students to "navigate how home can be both rest and work." As a result, students felt they "work all the time" which was noted as "destroying my mental health." One student parent stated, "It has been hard to balance work hours with the hours needed to help the children and time spent on household chores of laundry, grocery shopping, cooking all meals at home. I find myself working in the evenings, on weekends, even on Easter holiday. I feel "on" at all hours, answering emails, texts, phone calls. It has been very hard to balance home/family time with work. Although I have still been productive, I feel it takes longer to do everything and therefore I'm working constantly. I feel a lot of mental exhaustion."

Students articulated that being at home and in quarantine was "disheartening and isolating" but they understood "the necessity of the situation" although "being alone and far from family" while "having concerns for them [over the virus] was hard to handle." Students who quarantined along found that *isolation* was starting to feel "a bit like a jail cell" and those students who did not have someone to quarantine with felt "so

alone" and "barely speak a word most days now." One student identified they "miss being able to see and hug people." Students "miss classes in person" with "peers and talking about issues aloud" and felt they were "just doing this all alone" when they "should be surrounded by people" thus missing the campus interactions that online learning could not provide. The "lack of social interaction" caused students to "do the bare minimum for my classes due to being stuck inside unable to go anywhere and interact with people" and it was regarded as cause for "increased depression which further lowers motivation." One student stated, "I'm not learning anything except that I suck at this and I feel like all of the good work I had been doing has just been completely torpedoed by this situation. Combine that with me being all alone in my apartment and my depression showing up in a big way, everything just feels over-whelming and like I am destined to fail." Students who quarantined with family also felt isolated, with one student stating, "I am lonely, depressed, and anxious. I try to remind myself that I am not alone, but it's hard." Trying to communicate from home was hard for students who felt "lonely and don't have the mental capacity to carry large loads of work and communicate on projects." Students who were leaving the university found it especially difficult knowing they "will not get a chance to say goodbye to anyone" and it "feels like such a letdown."

Other students felt the opposite that being quarantined took away any *alone time* they received. Being home with family caused some students to have low "motivation and mental health" and they "don't get as much alone time" to process their feelings. The lack of alone time led to increased strain on relationships as communicated by one student, "I live with three other people, two of which work from home. The tension between us has only increased since beginning isolation." This was also true for college students who have children, as one parent explained, "I have two small children, so I completely lost my alone time that I had before COVID-19. I have a good sized house, but cabin fever has hit hard and the kids are starting to bicker more than usual." Another parent expressed a "loss of most of adult interactions and support of friends."

Emotional

College students' faced emotional changes as a result of the pandemic. The unknown was an emotional concern for many students who felt they couldn't complete any *future planning.* Students expressed feeling down because their "degree is less important than it used to be" especially since "the new normal is vague and my career trajectory will likely change as a result." Some students lost internship opportunities which resulted in loss of job opportunities. One student communicated, "My internship has been suspended. They were going to offer me a job, but I haven't heard from them since." This shift in the job market resulted in students being "very frustrated" over "not having a job or any concrete plans for after graduation" due to the pandemic which increased the stress of the situation for students.

The *stress* of the COVID-19 pandemic impacted student well-being. College students reported they faced "10x more stress" which made it harder to "focus on schoolwork". Students experienced increased stress over access to campus resources including losing their campus jobs, trying to navigate online classes with poor internet, and not having a steady place to live. This was further evidenced by a student who stated "I was pretty much reliant on the university meal plans and housing and only

needed to focus on education prior to COVID-19. Now, I not only have to worry about where my next meal will come from but if I can even safely obtain each meal." Nontraditional students conveyed the stress taking a toll on their lives while they tried to balance school while dealing with the "stressors of being an adult with other debts and family needs on top of being a student". Overall, the change to online learning and quarantine caused by the COVID-19 pandemic was described as "most stressful time since being in college" which "has taken an extreme toll on mental health" of students. One student even sought this survey as an outlet stating, "I never thought I could be this stressed. I decided to do this survey because I thought it could give me a moment to let it go while being productive. I thought if I could just type it all out the stress would go away enough for me to actually get my work done. I think it worked a little bit but I know I gotta get busy now. Thank you."

The notion of poor *mental health* was displayed by many students who expressed struggling with depression and anxiety during this time. Some students felt that the "university does not care about mental health" and "professors do not care about mental health" leaving students to feel like they were "drowning." Trying to complete coursework was increasingly difficult for students who experienced depression and anxiety and had "zero motivation to think about anything but the pandemic." One student said, "My ability to get literally anything done has absolutely plummeted and I am experiencing the worst depressive episode of my life." Compensating for the change in learning environment heightened student's mental health issues and lead to "stress migraines" and "many mental breakdowns a week". Students who faced additional struggles such as learning disorders found the experience to be especially challenging. For example, one student stated, "Having dyslexia makes it difficult to do anything through online communication. I tried my best to get through this. I'm so unbelievably disappointed and depressed that there wasn't a way to postpone the semester." Additionally, students who struggled with "financial instability" felt "endless amounts of uncertainty on top of isolation" which lead to mental health being "exponentially worse since the beginning of this crisis." Students expressed an inability to seek medical help during this time due to "the great amount of ill people in the doctor's office." Overall, students felt "scared for the world and it's people" with "no idea what's going to happen next" and the "depression that comes with a killing virus" impacted student mental health on a daily basis.

Other students experienced *fear of the illness* which impeded on their ability to concentrate on other aspects of life. Some students declared being "immunosuppressed which also adds stress on top of the normal stress of being in school." Others had sick family members and friends that worked in healthcare or other essential fields which took "an emotional toll" on wellbeing and resulted in a "poor mental state" that continues to "worsened by the fear around the pandemic." Students often faced hard decisions on where and how to quarantine to protect themselves, with one student expressing fear over not seeing family again and being "forced me to say good-bye for an indefinite amount of time" and another struggling to find an adequate environment stating, "My husband is an essential worker, and he is at risk of becoming exposed to COVID-19 every day he goes to work. We had discussed having me temporarily move out of the house, and I would move in with family so as to further isolate from potential contamination. However, my family does not have internet access. So, I can't reasonably move to protect myself. I have to stay at home so I can have internet to continue

with classes all while putting myself in harm's way. It's stressful to balance worry with schoolwork."

Physical

College students communicated changes in their daily habits and physical wellbeing. In regard to *diet and exercise*, students voiced being more sedentary during the COVID-19 pandemic and "with the gyms closed" they have few "outlets besides just walking around the neighborhood" with resulted in feeling "sluggish and stiff." Even students who reported they used to be "super active" and going to the gym "5-6 times a week and felt very motivated to be exercise" saw changes in their patterns and would stay "in bed for several hours without doing anything productive." Overall, students found it to be "very hard to be motivated" to be physically active while quarantined at home. Students also expressed changes to their dietary patterns with one student stating, "My eating habits have definitely changed since moving back home. In college, I was comfortable with myself. Since moving back home, I am extremely uncomfortable with what I'm eating and who I'm eating with." These changes resulted in students "attending class drowsy" due to not being able to "walk to class" as a means of waking up in the morning.

The reported *sleep* quality of students also reflected negative changes during the COVID-19 pandemic. Students reported they "sleep later" since they do not have to "account for walking or eating time since everything is at home" which resulted in a "poorer sleep schedule" that can affect productivity. Some students reported sleeping longer hours despite going to bed at normal times and in general felt "lethargic and sleepy most of the time during the day." However, students who were parents reported less time for sleep with one parent stating "I am stuck trying to juggle graduate school capstone work and chase 2 kids under the age of 5 while also completing my job duties from home. It is exhausting. I sleep about 8 hours for the entire 7 day week. Not 8 hours a night. 8 hours a week. It has affected my mental health as well as the mental health of my family. We are all extremely irritable. I have spent a lot of time crying from exhaustion and frustration." The change in sleep schedules caused many students to express troubles with "focus" that hindered their schooling and daily functioning.

Lastly, *screen time* increased for students due to the necessity of technology for online learning with many students "staring at the laptop all day for 5-6 days a week" resulting in "very bad migraines" or "shoulder and back pain." The change in technology available to students at home caused students to "soreness in the eyes" for "looking at a very small laptop screen" and even avoiding "looking at it during zoom classes" to prevent the eye discomfort although potentially resulting in missed course content. Students also struggled to balance gaming with other responsibilities they would have handled when out of the house. One student stated, "Before COVID-19, I wouldn't play on my PS4 during the semester, meaning I only play on it during summer and Christmas breaks. Since COVID-19, I have been playing on my PS4 more often, and it is getting in the way of my studies. Since I have never taken online classes from home, I don't know how to balance schoolwork with game time due to the distraction of the PS4."

Financial

The COVID-19 pandemic resulted in financial changes for students and their families leading to psychosocial frustrations. Being quarantined at home lead many students to face *new or increased expenses* with "bills that keep rising" due to the increased use of water, electricity, or other utilities in the household. This caused many students to feel they were "financially struggling while with family" and other students had difficulties due to "limited family financial support." Students reported not being eligible to "receive a stimulus check" due to dependent status although many reported not having financial support from parents and "paying all of the bills" at their home. Students who had roommates move home but stayed in their apartments felt an increased burden as they were stuck paying the full utility bill "without it being split three ways like before COVID." Students who faced financial limitations expressed "running out of food and money" and being "extremely stressed due to financial difficulties while also trying to graduate." As one student put it the "uncertainty of being able to afford the bills at the moment make it stressful to be confident in learning from home" and caused disruption in student wellbeing.

Coinciding with the rise in financial expenses, many students faced *loss of income* through cut hours or complete loss of a job. Students who were out of work struggled to find a new job as "nowhere is hiring" in their hometowns and therefore had "no money at all." Others who still had work faced hours that "have been cut by over half" or completed "zeroed" so while still employed the "paychecks are much lower." Students whose parents lost employment also felt an additional burden, with many having to fill bigger roles at home. The lack of employment interfered with students' abilities to focus on schooling. For example, one student communicated, "Ever since I was 16, I've always had a job and now I'm unemployed. I understand that my education is important, especially since I'm paying for it but I can't focus on my assignments and quizzes because I'm trying to find a job, trying to create a flow of income to pay for my bills and support myself. I think it's very frustrating that a lot of my professors are making us call every day during class times and assigning so many assignments. I can't give my education the attention it needs right now because I'm too focused and worried on how I'm going to survive. The extra classwork assigned also prevented students who had jobs from working adequate hours with "the extra time spent on class" taking away from "the number of hours I can get for work at home." Students who were unemployed struggled to know what benefits they were eligible for and left "waiting to find out if I can receive unemployment benefits." The change in financial status had catastrophic effects for some students who had to postpone their education or be "forced to leave" their current institution. One student said, "I make no income now, so I can't afford to take the necessary credit hours in order to appeal my financial aid and get back into school. It's been the hardest period of time I have ever experienced, and I am heartbroken that I can no longer afford to go back to school." Others uttered regret in paying for schooling with one student stating "I am paying out of pocket and I feel like I wasted half of the $4000 dollars I spent on this semester. I used my tax refund to pay for it, when I should have used that money to secure my financial situation."

Students who were deemed *essential workers* during the pandemic saw an increased workload and new stressors in their daily functioning. The increase in workload made "getting time to work on schoolwork even more difficult" and resulted in a "struggle to

complete work on time." The risk of exposure to COVID-19 was also a determinant of student wellbeing as those who worked in essential jobs felt "extra stress in life" and even faced isolation due to exposure and waiting to "get a [COVID-19] test." Students who worked in essential settings dealt with "not being able to see family" as they "cannot risk getting anyone sick." These students found it increasingly difficult to focus on school as evidenced by one student's statement, "Though I understand the necessity, it seems absurd that when I come home from working at a healthcare facility all day, worried about exposing my loved ones to the virus, I have to come home and do schoolwork on top of other responsibilities. It's no one's fault, but gosh it's surely stressful. There's no good answer, and the professors are doing everything they possibly can." This was echoed by another essential worker who stated it's "really hard to dedicate time to school after the emotions of being at work" and expressed "need of some self-care after all this."

Discussion

This study aimed to identify the academic and psychosocial frustrations students faced during the Spring 2020 semester while trying to learn amidst the COVID-19 pandemic. To our knowledge, this is the first peer-reviewed study to use mixed-methods to evaluate student experiences in the US during this time. Results indicated the COVID-19 pandemic negatively influenced student learning, with a 65.8% increase in the number of students who reported their learning as fair, poor, or very poor. Students also reported a 15.7% increase in the number of students who reported their health as fair, poor, or very poor. Students reported a loss of employment and a loss of income during the pandemic with these financial struggles resulting in 2.6% of students having to forgo their education. In general, quantitative results indicated the students' academic, health, and financial well-being were all negatively impacted by the COVID-19 pandemic. The qualitative findings in this study provide a richer understanding of factors that likely contributed to this decline in academic and personal well-being.

The use of online learning is not a new concept to higher education. In fact, a 2016 study found that 28% of all higher education students in the US took at least one remote course (Allen and Seaman 2016). Although online learning is touted to provide flexibility for students (Levy 2017), it also comes with limitations as retention rates and overall academic success rates are reported to be lower among students enrolled in courses fully online (Xu and Jaggars 2013). With the requirement to take on a larger responsibility in the facilitation of their learning (Levy 2017), many students may have lacked the preparation for online learning that was thrust upon them as a result of the COVID-19 pandemic if they traditionally took face-to-face classes prior to distancing requirements. Further, online learning requires specific online teaching pedagogies and understanding of technological resources for online learning (Levy 2017; Sinacori 2020). However, the COVID-19 pandemic also resulted in academic faculty having to abruptly switch classes to an online format without the time and professional development for learning a new pedagogy (Sinacori 2020). Thus, the transition to online learning thrust many students and faculty into an unprecedented situation.

The barriers of switching to an online, virtual learning format have been reported by students outside of the US during the COVID-19 pandemic. A study of college students

in the Philippines found that college students experienced difficulty adjusting learning styles from face-to-face to online, dealing with additional responsibilities at home, and poor communication between educators and students during the COVID-19 pandemic (Baticulon et al. 2020). Further, a study of medical students in Pakistan found that college students who require hands-on experience struggled to gain the skills necessary for career preparation (Mukhtar et al. 2020). The Hope Center found that students in the US attending two and four year institutions reported struggling to access technology despite higher education institutions seeking to help students fill this void (Goldrick-Rab et al. 2020). Further, this report highlighted the struggles students face when caring for family members and trying to concentrate on schooling during a pandemic (Goldrick-Rab et al. 2020). These findings are confirmed by college students in this study who voiced barriers in their day to day lives that prevented them from thriving in their academic careers. As such, higher education institutions are charged with understanding the academic barriers their students are facing and promoting an online educational learning environment that is sensitive to student realities. For example, one researcher observed issues with the transition to online learning at a Peking University and put forth instructional recommendations to achieve a successful transition to online learning (Bao 2020). These recommendations include having a plan in place for unexpected problems, dividing content into smaller units to help students focus, using appropriate voice due to loss of body language and gestures used in face-to-face learning, engaging teaching assistants, modifying assignments to include active learning at home, and incorporating offline self-learning combined with online teaching (Bao 2020). Although the strategies put forth here do not compensate for the many barriers students face, they may help educators to prepare content that will engage students online. Faculty can further be actively engaged with students to understand the issues they are facing and help them to troubleshoot and overcome their barriers (Goldrick-Rab 2020). Ensuring that faculty are provided adequate information and policies are put in place to provide for students' academic needs during this time are needed to help students endure the pandemic and succeed in higher education.

The psychosocial barriers many students faced are also in line with research emerging on college students from other countries. Students in this study reported financial barriers, increased mental health issues, lack of social balance, and physical detriments to their health. Students reported changes in their day to day life that resulted in lack of physical activity, less healthy eating patterns and more screen time, which may the increased report of fair, poor, or very poor health since the start of the pandemic. Further, the impact of their mental health may have influenced this decline in self-reported health, as physical and mental health coincide (Ohrnberger et al. 2017). The mental health of college students has been reported as low among college students during the COVID-19 pandemic. College student anxiety is reportedly increased for many students as a result of moving back home (Cao et al. 2020), which may be explained by the qualitative findings in this study as students report lack of empathy from parents and loss of campus environment for academic and social affairs. Students in this study also reported a loss of income which can exacerbate stress and mental health issues (Gallo et al. 2000). Half of students surveyed who were unemployed had lost employment due to COVID-19. This lack of income caused a financial burden on students who faced increased expenses. Further, students vocalized facing housing and food insecurities as a result of the pandemic which aligns with findings from The Hope

Center which reported that 5.8 out of every 10 students experienced basic needs insecurities during the COVID-19 pandemic. The Hope Center provided recommendations for how to support college students during the COVID-19 pandemic on topics of health care, food, emergency aid, housing, and additional financial assistance (Goldrick-Rab 2020). This resource can be shared with university personnel to ensure that all faculty and staff have an understanding of issues students may face and resources that may be available if a student reaches out for help.

Contributions to Theory and Implications to Practice

Results from this study contribute to prior research that students' ability to thrive is significantly impacted by their environment, social interactions, and overall emotional well-being (Schreiner 2010). Participants in this study showed significant struggles in their ability to complete their coursework and maintain emotional and mental well-being after being forced to leave campus and shift to online learning. Further, this is of concern based on previous educational theory, such as Tinto's Theory of Student Departure, which states that students commonly depart from higher education due to academic problems, lack of social integration, and low commitment from the college or university (Tinto 1975). Based on the results of this study, students expressed concerns with all three aspects of Tinto's Theory of Student Departure, indicating many students could be on the verge of leaving higher education and thus a need for increased commitment by those working closely with students during the pandemic. College-attending young adults are at a critical time in their life in which thriving is essential to their academic success. This is largely dependent on the resources they have to handle unprecedented situations. Ensuring course content is fair and flexible with understanding that technology and off-campus learning environments are often far from ideal for students is needed to promote student academic achievement and psychosocial well-being. Higher education administrators and professors can use these findings to prepare for the issues their students might face as the pandemic continues.

Conclusion

A student in this study conveyed the powerful message: "COVID-19 should make for a permanent change in the status quo about the way education is being taught in America. Not everyone is privileged enough to not have a list of responsibilities to place in front of their education." This statement highlights the reality that many students face barriers when completing academic demands during the pandemic which caused increased academic and psychosocial frustrations and prevented students from thriving during their academic experience. Delivery of higher education and communication with students needs to factor in the realisms students face in their daily lives.

Limitations and Future Research Directions

Although this study provides a glimpse of student experiences during the COVID-19 pandemic, this study is not without limitations. First, this study used a cross-sectional design which captured data at the beginning of the pandemic, thus student reported issues may have changed as the semester progressed. Second, the use of an online, open-ended question to

capture qualitative data may have resulted in student responses that were shorter and less in-depth than in person interviews. However, given the pandemic, asking students to connect virtually for a face-to-face interview could have cast increased burden during a stressful time, thus the use of online response was used. Lastly, these results represent students attending a public, land-grant institution in the United States. Student frustrations and barriers to well-being during the COVID-19 pandemic may be different among students attending other types of institutions, such as private or community colleges, or among students in different geographical regions of the United States. Future research is needed to understand how higher administration can better accommodate students during an unprecedented situation like the COVID-19 pandemic.

Declarations

Ethics Approval   This study was approved by West Virginia University's Institutional Review Board (#2003924134).

Consent to Participate   Participants completed online informed consent prior to accessing the online survey.

Consent for Publication   Authors transfer to Springer the non-exclusive publication rights and warrant their contribution is original and that they have full power to make this grant. This transfer of publication rights covers the non-exclusive right to reproduce and distribute the article, including reprints, translations, photographic reproductions, microform, electronic form (offline, online) or any other reproductions of similar nature.

Conflicts of Interest/Competing Interests   Authors have no conflicts to disclose.

References

Allen, I. E., & Seaman, J. (2016). Online report card: Tracking online education in the United States. ERIC.

Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies, 2*(2), 113–115.

Baticulon, R. E., Alberto, N. R. I., Baron, M. B. C., Mabulay, R. E. C., Rizada, L. G. T., Sy, J. J., et al. (2020). Barriers to online learning in the time of COVID-19: A national survey of medical students in the Philippines. *medRxiv*.

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research, 287*, 112934. https://doi.org/10.1016/j.psychres.2020.112934.

Charles, N. E., Strong, S. J., Burns, L. C., Bullerjahn, M. R., & Serafine, K. M. (2021). Increased mood disorder symptoms, perceived stress, and alcohol use among college students during the COVID-19 pandemic. *Psychiatry Research, 296*, 113706.

Conrad, R. C., Koire, A., Pinder-Amaker, S., & Liu, C. H. (2021). College student mental health risks during the COVID-19 pandemic: Implications of campus relocation. *Journal of Psychiatric Research, 136*, 117–126.

COVID-19 impact on college student mental health. (2020). Active Minds. https://www.activeminds.org/wp-content/uploads/2020/04/Student-Survey-Infographic.pdf. Accessed.

Cuevas, A., Schreiner, L. A., & Kim, Y. (2017). Honors student thriving: A model of academic, psychological, and social wellbeing.

Duong, V., Pham, P., Yang, T., Wang, Y., & Luo, J. (2020). The ivory tower lost: How college students respond differently than the general public to the covid-19 pandemic. *arXiv preprint arXiv:2004.09968*.

Gallo, W. T., Bradley, E. H., Siegel, M., & Kasl, S. V. (2000). Health effects of involuntary job loss among older workers: Findings from the health and retirement survey. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 55*(3), S131–S140.

Goldrick-Rab, S. (2020) 'Beyond the food pantry: Supporting #RealCollege students during COVID19'. The Hope Center for College, Community, and Justice. Available at: https://hope4college.com/wp-content/uploads/2020/03/BTFP_SupportingStudentsDuringCOVID19_v2_Final.pdf.

Goldrick-Rab, S., Coca, V., Kienzl, G., Welton, C. R., Dahl, S., & Magnelia, S. (2020) '#REALCOLLEGE during the pandemic new evidence on basic needs insecurity and student well-Being'. The Hope Center for College, community, and justice.

Hoyt, L. T., Cohen, A. K., Dull, B., Castro, E. M., & Yazdani, N. (2021). "Constant stress has become the new normal": Stress and anxiety inequalities among US College students in the time of covid-19. *Journal of Adolescent Health, 68*(2), 270–276.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277–1288.

Huckins, J. F., DaSilva, A. W., Wang, W., Hedlund, E., Rogers, C., Nepal, S. K., et al. (2020). Mental health and behavior of college students during the early phases of the COVID-19 pandemic: Longitudinal smartphone and ecological momentary assessment study. *Journal of Medical Internet Research, 22*(6), e20185.

Levy, D. (2017). Online, blended and technology-enhanced learning: Tools to facilitate community college student success in the digitally-driven workplace.

Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, limitations and recommendations for online learning during COVID-19 pandemic era. *Pakistan Journal of Medical Sciences*, 36(COVID19-S4).

Murphy, M. P. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*, 1-14.

Ohrnberger, J., Fichera, E., & Sutton, M. (2017). The relationship between physical and mental health: A mediation analysis. *Social Science & Medicine, 195*, 42–49.

Perz, C. A., Lang, B. A., & Harrington, R. (2020). Validation of the fear of COVID-19 scale in a US College sample. *International Journal of Mental Health and Addiction*, 1-11.

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online University teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science and Education*, 1-23.

Schreiner, L. A. (2010). The "thriving quotient": A new vision for student success. *About Campus, 15*(2), 2–10.

Shek, D. T. (2020). Chinese adolescent research under COVID-19. *Journal of Adolescent Health, 67*(6), 733–734.

Shek, D. T. (2021). COVID-19 and quality of life: Twelve reflections. *Applied Research in Quality of Life*, 1-11.

Sinacori, B. C. (2020). How nurse educators perceive the transition from the traditional classroom to the online environment: A qualitative inquiry. *Nursing Education Perspectives, 41*(1), 16–19.

Term Enrollment Estimates Fall 2019. (2019). https://nscresearchcenter.org/wp-content/uploads/CTEE_Report_Fall_2019.pdf. Accessed.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*(1), 89–125.

Xu, D., & Jaggars, S. S. (2013). The impact of online learning on students' course outcomes: Evidence from a large community and technical college system. *Economics of Education Review, 37*, 46–57.