

Studying U.S. college faculty during the COVID-19 pandemic: Perceptions of severity, concerns, sources of information, preventive behaviors, barriers to work performance, and impact on work productivity

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ABSTRACT

This study examined perceptions of and experiences during the COVID-19 pandemic among 489 faculty from four public universities in the southeast United States. Data were collected via an online survey during the Fall 2020 semester, when campuses re-opened after closing in March. Two thirds of faculty perceived the severity of COVID-19 as severe, and their greatest concerns related to preventive behaviors, the possibility of a virus resurgence, and concern for the health of family/friends. The majority reported frequently engaging in COVID-19-preventing behaviors, which was highest among female and older faculty, and those with higher perceived severity and concern for personally contracting the virus. Over half of respondents reported teaching and scholarly activities were negatively impacted by the pandemic; most notable barriers to productivity included anxiety/stress and a distracted home environment. The study adds to the research on university faculty during the pandemic and aligns with research on the adult population.

Keywords: COVID-19, pandemic, university faculty, prevention, productivity, severity

INTRODUCTION

The COVID-19 pandemic brought unprecedented changes and challenges to universities (Arday, 2022; Losina et al., 2021; Majowicz, 2020). In the United States, early 2020 government-mandated stay-at-home orders and recommended behavioral restrictions were soon followed by universities shutting campuses, sending students home, and transitioning all instruction to online to mitigate the spread of COVID-19 and protect students, faculty, staff, and communities (Gostin & Wiley, 2020; Hodges et al., 2020; Lederer et al., 2021; Lee et al., 2021; Losina et al., 2021). Simultaneously, lack of a clear understanding of the disease, accompanied by social isolation, business closures and anxieties about economic impacts added to stress and concerns about the current and future state of life.

Research about pandemic-related attitudes, beliefs, and behaviors has proliferated in several fields. Understanding student perceptions and responses has been of significant interest as college students are perceived as an at-risk group. This line of study has examined aspects of mental health (e.g., Batra et al., 2021; Browning et al., 2021; Hoyt et al., 2021; Keckojevic et al., 2020; Liu et al., 2020; Murphy et al., 2020; Reena et al., 2023; Rudenstine et al., 2021), and documented reduced physical activity and sleep quality (e.g., Barkley et al., 2020; Huckins et al., 2020; Maher et al., 2021) among students during the pandemic. Studies examined students' sources of stress, pandemic-related concerns, challenges during the emergency transition to online instruction, and perceived impact of the pandemic on career paths (e.g., Aguilera-Hermida, 2020; Aucejo et al., 2020; Charles et al., 2021; Cohen et al., 2020; Garris & Fleck, 2020; Hickey et al., 2021; Rentner & Alsulaiman, 2022; Serhan, 2020; Son et al., 2020; Tasso et al., 2021).

Less often have researchers studied college faculty during the pandemic. Logically, much of the research on university faculty has focused on the emergency transition to online teaching. The pivot from face-to-face to online teaching was swift and

unprecedented, giving instructional faculty with varying online teaching experience little time to prepare (Bergiel et al., 2021; Chakraborty et al., 2020). The change to virtual classes necessitated adopting unfamiliar online technologies, tools, and teaching platforms, and there was considerable variation in university ability to support teaching faculties with the sudden transition (Hodges et al., 2020). A significant body of research has described faculty experiences, challenges, and responses to the pandemic-related pivot (e.g., Belikov et al., 2021; Bdair, 2021; Colclasure et al., 2021; Culp-Roche et al., 2021; Cutri et al., 2020; Daumiller et al., 2021; Fox et al., 2020; Hebert et al., 2022; Howe et al., 2021; Johnson et al., 2020; Lee & Jung, 2021; Roy & Covelli, 2021). While limited, some research has also examined and documented their pandemic related concerns (Belikov et al., 2020;), mental health (Evanoff et al., 2020; Melnyk et al., 2021), and how the pandemic impacted their professional productivity and personal roles/lives (Aubry et al., 2020; Delaney et al., 2021; Kotini-Shah et al., 2021; Krukowski et al., 2021; MacIntyre et al., 2020; Weinreich et al., 2023). Yet, largely absent from studies of university faculty during COVID-19 is an examination of other COVID-19-related measures documented in students and the larger population such as their perceptions of the disease, sources of information, and behavioral response. Thus, the purpose of this study was to examine U.S. college faculty perceptions of and experiences during the COVID-19 pandemic. Of specific interest were their perceptions of the severity of the virus, concerns during the pandemic, sources of COVID-19 information, engagement in preventive behaviors, barriers to work performance, and impact of the pandemic on work productivity. In addition, variation among several variables were examined relative to age and gender.

METHODS

Participants & Setting

Participants were 489 faculty employed by four public universities in the southeast U.S. from the same university system (female, $n=314$, 64.2%; male, $n=164$, 33.5%). Over 95.0% of the sample were full-time faculty; part-time faculty made up 4.1% ($n=20$). Among full time faculty, 207 (42.3%) were at the instructor rank, 87 (17.8%) were tenure track, and 175 (35.8%) were tenured. Over 80.0% were between 30 and 69 years of age (30-39 years: 21.7%; 40-49 years: 21.7%; 50-59 years: 25.2%; 60-69 years: 19.0%). Faculty were from a variety of disciplines including nursing ($n=63$); business ($n=53$); sciences including biology, chemistry, and physics ($n=48$), history and political science ($n=33$); and health promotion/kinesiology ($n=30$). In response to the pandemic, in mid-March of the Spring 2020 semester, all four universities closed campus offices, cancelled on-campus activities, and moved instruction online for the remainder of the semester. The universities re-opened and on-campus instruction resumed at the start of the Fall 2020 semester with policies in place to reduce the spread of COVID-19 (i.e., reduced class size and mandatory wearing of a face mask in buildings). Faculty were encouraged to return to campus but were given the opportunity to continue to work from home and teach online should they have COVID-19-related concerns.

Data Collection

Data were collected early during the Fall 2020 semester using an online survey designed for the study. With the assistance of university administrators, emails were sent to all faculty at the four institutions describing the study, inviting their participation, and providing a link to the survey. The survey instrument included demographic questions (university, age, gender, faculty rank, and academic area/department) and items addressing perceptions and experiences during the pandemic.

Perceived severity & concerns during the COVID-19 pandemic

Faculty were presented the question, "If you contracted the COVID-19 virus, how severe do you believe you would be affected?" Responses were selected on a five-point scale ranging from (1) "not severe at all," to (5) "very severe; potentially life threatening." This section also included nine concerns including those related to personally contracting the virus, health of family or close friends during the pandemic, people failing to take precautions, being unable to visit loved ones during the pandemic, the possibility of a resurgence in the pandemic causing a subsequent disruption life, and the negative impact of the pandemic on personal and family employment and the economy. Participants rated each as a "low," "moderate," or "high" concern.

Preventive behaviors & sources of the pandemic-related information

This section of the survey presented a list of COVID-19 preventing behaviors including wearing a face mask when in public areas, maintaining physical distance from others, frequent hand washing, and avoiding touching surfaces or ones face. Participants indicated the frequency to which they were currently engaging in each behavior by choosing from the options "never," "sometimes," "often," or "always." In a following panel, faculty were asked to indicate their sources of information about COVID-19 and the pandemic. A list of potential sources of information were listed (e.g., healthcare professionals/providers, public health organizations such as the Centers for Disease Control, family and friends, mass media, personal training in healthcare/public health/medicine), and faculty rated each on a 3-option scale ranging from "not a source" to "primary or major source" of information about the pandemic.

Barriers to work performance

This section focused on faculty perceptions of barriers to work performance during the pandemic-affected Spring 2020 semester, during which they were required to work from home and teach all classes online. Faculty were presented a list of seven potential barriers to work productivity and asked to rate each as "not at all a problem," "a moderate problem," or "a significant problem." Barriers included lack of a computer or other needed technology, anxiety and stress, a distracted environment at home, lack of time due to caring for others, time management, and lack of motivation.

Table 1. Perceived severity of COVID-19 among faculty in different age groups

| Age group | n | n (%) | | | |
|-----------|-----|-------------------|---------------------------|------------|---|
| | | Not severe at all | No worse than common cold | Severe | Very severe: Potentially life threatening |
| 20-39 | 125 | 19 (15.2) | 36 (28.8) | 48 (38.4) | 22 (17.6) |
| 40-49 | 104 | 17 (16.3) | 20 (19.2) | 40 (38.5) | 27 (26.0) |
| 50-59 | 120 | 8 (6.7) | 30 (25.0) | 49 (40.8) | 33 (27.5) |
| 60 & over | 110 | 4 (3.6) | 19 (17.3) | 44 (40.0) | 43 (39.1) |
| Total | 489 | 48 (10.0) | 109 (22.8) | 190 (39.7) | 132 (27.6) |

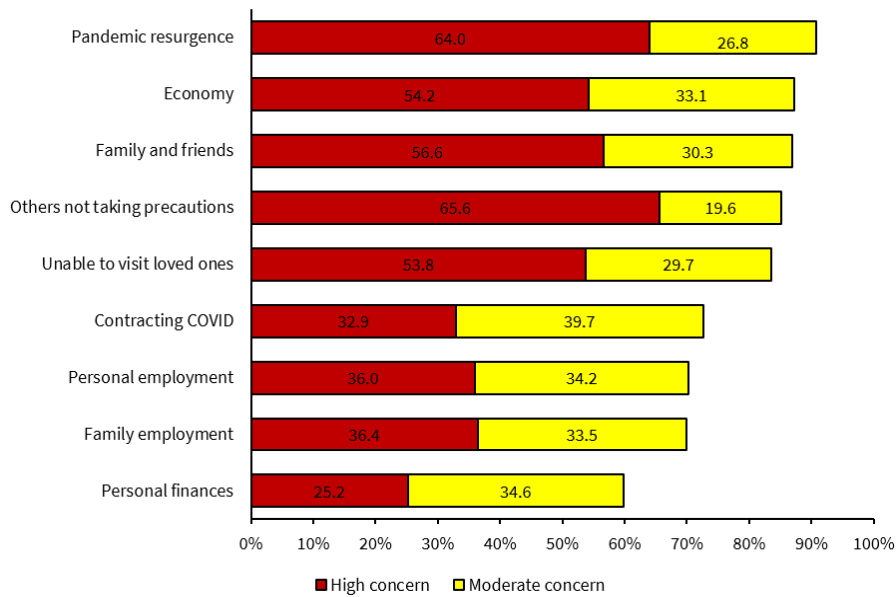


Figure 1. Percentage of faculty with moderate & high concerns during COVID-19 pandemic (Source: Authors’ own elaboration)

Return to campus & impact of the pandemic on work productivity

At start of the Fall 2020 semester, as campuses re-opened and face-to-face instruction was resumed, faculty were encouraged to return to campus, but were given the opportunity to choose to continue to work from home and teach online. In this section of the survey, faculty indicated their Fall 2020 work situation as either “I returned to work on campus,” or “I took steps to continue to work from home due to virus-related concerns. Finally, faculty responded to a series of items, where they indicated the extent to which the COVID-19 pandemic had a negative impact on aspects of work performance. Items addressed teaching effectiveness, engaging in university service activities, conducting research, pursuing grants, and presenting at professional conferences. Responses for each item were along a three-point scale anchored by “not negatively affected” and “greatly negatively affected.”

Data Analysis

Descriptive characteristics (frequency and percentage) of item responses were calculated for the entire sample. In addition, several relationships were examined using Chi-square. To examine variation among age groups, faculty were placed into four categories: 20-39, 40-49, 50-59, and 60 years and over. Age and gender differences were examined for all variables. In addition, relationships were examined between engagement in preventive behaviors and return-to-campus decisions with perceived severity of COVID-19 and concern for personally contracting the virus. Data analysis was conducted using the Statistical Package for Social Sciences software, version 25 (IBM Corp., Armonk, NY, USA).

RESULTS

Perceived Severity

When rating the perceived severity of COVID-19, two-thirds of faculty indicated it could be “severe” (39.7%) to “very severe/potentially life threatening” (27.6%) if they were to contract it, while one-third predicted the severity of their symptoms would be minimal. As shown in **Table 1**, perceptions of severity were significantly related to age ($\chi^2[9]=27.08, p=.001$), lowest among 20-39 year olds with 56.0% expecting their symptoms could be severe or very severe and increasing in each age group to a high among faculty aged 60 and over (79.1% anticipating their symptoms could be severe or very severe). Comparison of perceived severity responses for male and female faculty showed no significant differences.

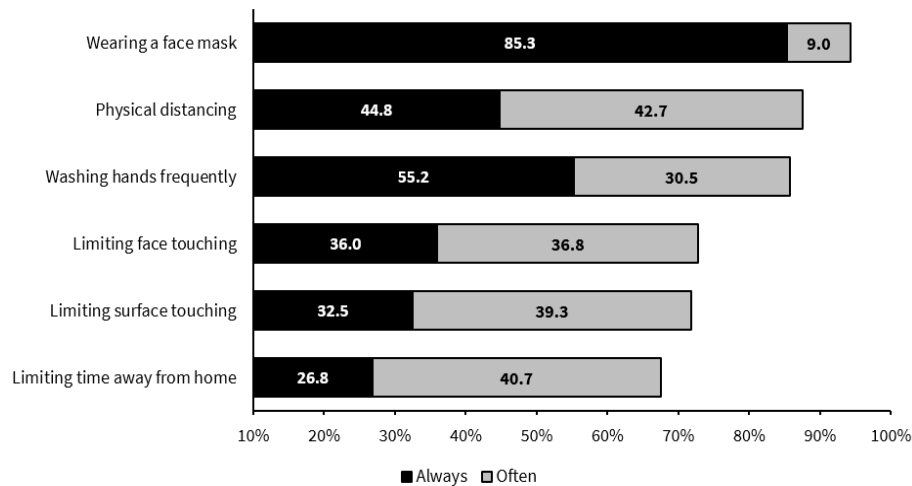
Concerns

When presented with a list of pandemic-related concerns, over 70.0% of faculty indicated moderate-to-high levels of concern for the majority of survey items (see **Figure 1**).

Table 2. Percentage of male/female faculty in in varying age groups indicating a high level of concern for COVID-19 related issues

| Concern | Age group | | | | Gender | |
|-------------------------------|---------------|---------------|---------------|-------------|--------------|----------------|
| | 20-39 (n=126) | 40-49 (n=106) | 50-59 (n=123) | 60+ (n=112) | Male (n=164) | Female (n=314) |
| Contracting COVID-19 | 27.8 | 34.9 | 33.3 | 36.6 | 31.3 | 32.8 |
| Health of family & friends | 61.9 | 55.7 | 56.1 | 49.6 | 56.1 | 56.1 |
| Others not taking precautions | 69.0 | 60.0 | 66.4 | 65.5 | 69.3 | 63.3 |
| Unable to visit loved ones | 56.0 | 53.8 | 52.0 | 52.3 | 49.1 | 56.9 |
| Economy | 45.2 | 57.5 | 55.7 | 60.9 | 48.1 | 58.0 |
| Personal finances | 27.8 | 31.1 | 24.6 | 16.1 | 19.6 | 27.8 |
| Personal employment | 33.3 | 40.6 | 39.3 | 31.0 | 38.4 | 34.5 |
| Family employment | 38.9 | 37.1 | 39.8 | 28.3 | 34.1 | 37.2 |
| Pandemic resurgence | 65.9 | 66.0 | 63.1 | 62.2 | 62.3 | 65.2 |

Note. *Significant gender difference ($p < .050$)

**Figure 2.** Percentage of faculty reporting often & always engaging in COVID-19 preventive behaviors (Source: Authors' own elaboration)**Table 3.** Percentage of male/female faculty & in varying age groups who reported always engaging in preventive behaviors

| Behavior | Age group | | | | Gender | |
|--|---------------|---------------|---------------|-------------|--------------|----------------|
| | 20-39 (n=126) | 40-49 (n=106) | 50-59 (n=123) | 60+ (n=112) | Male (n=164) | Female (n=314) |
| Physical distancing ^a | 31.7 | 44.3 | 47.5 | 53.1 | 43.9 | 44.7 |
| Limiting time away from home | 24.6 | 25.5 | 20.5 | 33.0 | 28.8 | 25.2 |
| Washing hands frequently ^b | 53.2 | 60.4 | 50.4 | 57.1 | 42.6 | 61.7 |
| Limiting surface touching ^b | 37.9 | 30.5 | 26.4 | 33.6 | 23.9 | 37.1 |
| Limiting face touching ^b | 38.4 | 39.0 | 31.7 | 36.6 | 25.6 | 41.9 |
| Wearing a face mask | 83.3 | 81.1 | 91.8 | 83.9 | 84.7 | 86.3 |

Note. ^aSignificant age group difference ($p < .050$) & ^bSignificant gender difference ($p < .050$)

The greatest concerns among faculty were for the failure of others to engage in preventive behaviors, the possibility of a resurgence causing an extension of the pandemic, concern for the health of family/friends, and the impact of the pandemic on the economy. By comparison, fewer faculty expressed a high level of concern for personally contracting the virus, or the impact of the pandemic on personal employment or finances.

Female faculty tended to rate more concerns at a high level than male faculty (see [Table 2](#)). A significant gender difference was observed for concern for not being able to visit loved ones during the pandemic, this reported as a high concern by 56.9% of female faculty compared to 49.1% of male faculty ($\chi^2[6]=14.31, p=.030$). In addition to his significant difference, 9.9% more female faculty indicate high concern for the economy, and 8.2% more female faculty had high concern for the effects of the pandemic on personal finances than male faculty.

Comparisons of concerns by age group yielded no significant differences, but some age-related patterns were evident (see [Table 2](#)). Concern for personally contracting the virus tended to increase across age groups as did concern for the economy. Other concerns tended to show an inverse relationship to age. Concern for personal financial difficulties and for the health of family and friends during the pandemic was highest among the youngest faculty and tended to decline with age.

Preventive Behaviors

The vast majority of faculty reported engaging in COVID-19-preventing behaviors (see [Figure 2](#)), with the greatest frequency for wearing a face mask (94.3% often or always), physical distancing (87.5%), and washing hands frequently (85.7%). Female and older faculty more often reported engaging in many COVID-19-preventing behaviors (see [Table 3](#)).

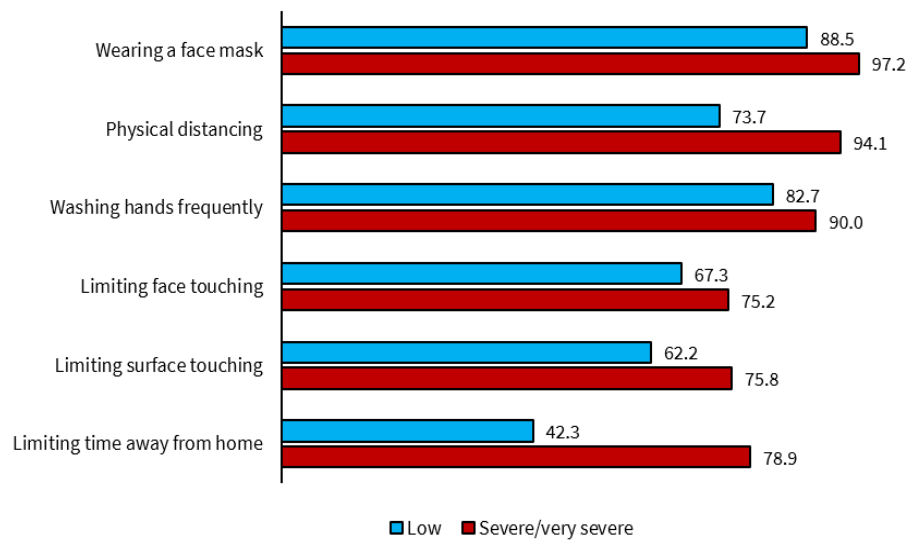


Figure 3. Percentage of faculty with low & high perceived severity of COVID-19 who reported often-or-always engaging in preventive behaviors (Source: Authors' own elaboration)

A significant relationship between age and physical distancing was indicated ($\chi^2[9]=19.49$, $p=.020$), this behavior increasing across age from a low of 31.7% of 20-30 year-olds to a high of 53.1% of faculty aged 60 or over. Three behaviors showed significant gender differences, with female faculty engaging in washing hands frequently ($\chi^2[9]=31.07$, $p<.001$), limiting touching of surfaces ($\chi^2(9)=18.72$, $p=.03$), and limiting touching of ones face ($\chi^2[9]=35.40$, $p<.001$) more often than male faculty.

Engagement in COVID-19 preventing behaviors was also related to both *perceived severity* of the virus, and *concern for personally contracting it*. Faculty who perceived the virus as more severe, and those with greater concerns for contracting it, engaged in preventive behaviors more often.

Figure 3 depicts the percentage of faculty with lower vs. higher perceptions of COVID-19 severity who reported “often or always” engaging in preventive behaviors. Chi-square analyses indicated significant relationships between perceived severity and physical distancing ($\chi^2[9]=107.93$, $p<.001$), limiting time away from home ($\chi^2[9]=145.41$, $p<.001$), washing hands often ($\chi^2[9]=27.82$, $p<.001$), limiting surface touching ($\chi^2[9]=37.96$, $p<.001$), and wearing a face mask ($\chi^2[9]=85.34$, $p<.001$).

A similar pattern was revealed with respect to concern for personally contracting the virus and all behaviors: physical distancing ($\chi^2[6]=70.26$, $p<.001$), limiting time away from home ($\chi^2[6]=100.45$, $p<.001$), washing hands often ($\chi^2[6]=25.11$, $p<.001$), limiting surface touching ($\chi^2[6]=27.51$, $p<.001$), limiting face touching ($\chi^2[6]=17.34$, $p<.010$), and wearing a face mask ($\chi^2[6]=46.23$, $p<.001$). Individuals with higher concern for personally contracting the virus were more likely to report often or always engaging in these preventive behaviors.

Sources of COVID-19-Related Information

When faculty identified sources of pandemic-related information, they most often indicated public health organizations ($n=292$, 59.7%) and healthcare professionals ($n=291$, 59.5%) as primary sources. Approximately one-fourth of faculty indicated mass media ($n=127$, 26.0%) and personal training in healthcare/public health/medicine ($n=119$, 24.3%) as primary sources. Few indicated family or friends ($n=24$, 4.9%), or political leaders ($n=7$, 1.4%) as primary sources. Female faculty (29.0%) more often identified personal training in healthcare/public health/medicine as a primary source than did male faculty (16.6%) ($\chi^2[6]=17.92$, $p<.010$). This difference is likely a function of the distribution of female vs. male faculty from the sample teaching in nursing and allied health. Among 62 nursing faculty, 93.5% were female, and females made up 67.2% of faculty teaching in allied health.

Returning to Campus

Among the sampled faculty, 68.3% returned to campus, and 30.9% took steps to continue to work from home. This decision was significantly related to the age of faculty ($\chi^2[3]=9.60$, $p<.010$), with 40.2% of faculty aged 60 and over electing to continue to work from home, compared to 22.0% to 31.2% of faculty in younger age groups (see **Figure 4**). Choosing to work from home was also significantly related to the perception of the severity of COVID-19 ($\chi^2[3]=27.49$, $p<.001$), and the level of concern for personally contracting the virus ($\chi^2[2]=5.99$, $p<.050$).

As shown in **Figure 4**, faculty who perceived the severity of COVID-19 as most severe or had higher concerns for personally contracting the virus were more likely to continue to work from home during the Fall 2020 semester.

Barriers to Work Performance

When presented a list of barriers to work success during the pandemic, anxiety/stress was identified as a “moderate” or “significant” problem by approximately 60.0% of faculty (see **Figure 5**). This was followed by a distracted home environment and time management. Lacking needed technology at home was rated least often as a barrier.

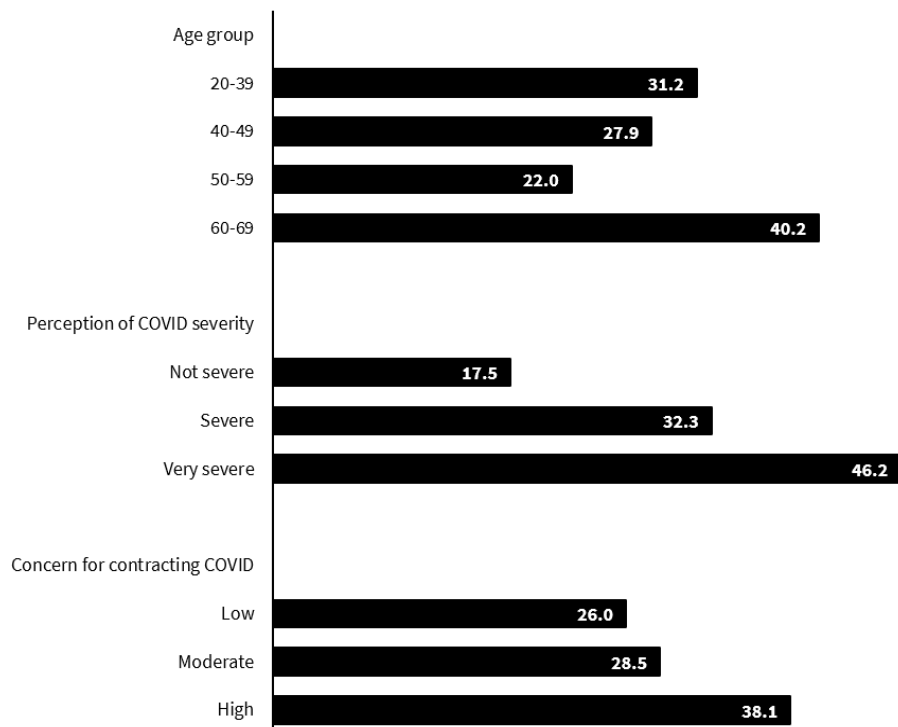


Figure 4. Percentage of faculty who continued to work from home in Fall 2020 due to COVID-related concerns (Source: Authors' own elaboration)

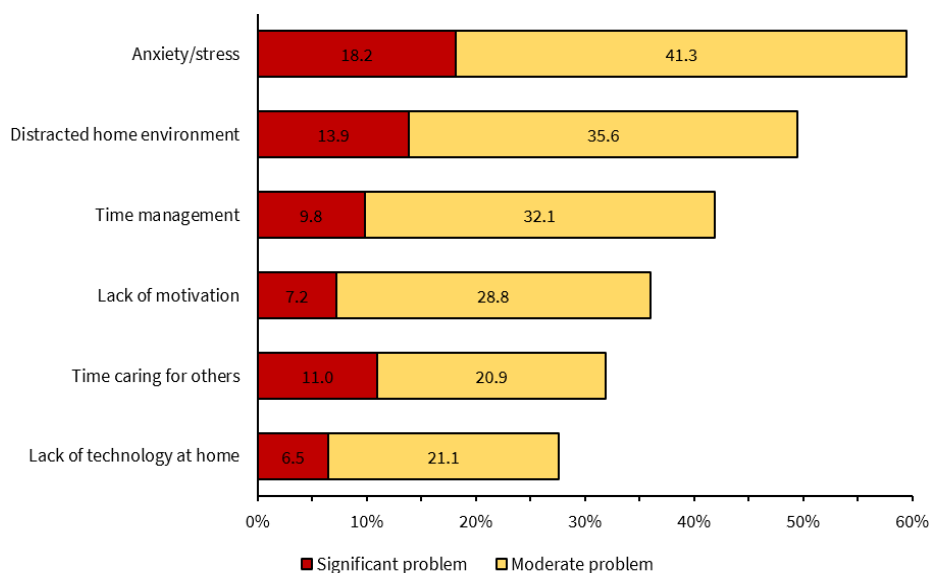


Figure 5. Percentage of faculty who perceived moderate & significant barriers to work success while working from home during pandemic (Source: Authors' own elaboration)

Responses indicate a pattern of highest perception of barriers as problematic among the youngest faculty and a tendency to decrease with age (see [Table 4](#)). Chi-square analyses indicated significant links between age and several barriers: lack of motivation ($\chi^2=18.34$, $p<.010$), anxiety/stress ($\chi^2=23.67$, $p<.001$), a distracted home environment ($\chi^2=49.63$, $p<.001$), and lack of time due to caring for others ($\chi^2=50.36$, $p<.001$). No significant gender differences were observed.

Negative Impact of the Pandemic on Work Productivity

Slightly over one-fourth (25.2%) of faculty indicated that the pandemic had “greatly negatively affected” their ability to teach effectively. By comparison, more indicated a negative impact on their ability to engage in university service, conduct research, and present at conferences (see [Figure 6](#)). These perceptions did not vary significantly by age or gender.

Table 4. Percentage of faculty in age groups indicating barriers to work success were “moderate or significant” during pandemic

| Barrier | Age group | | | |
|---------------------------------|---------------|---------------|---------------|-------------|
| | 20-39 (n=126) | 40-49 (n=106) | 50-59 (n=123) | 60+ (n=112) |
| Lack of technology at home | 31.2 | 23.6 | 33.3 | 25.2 |
| Lack of motivation* | 48.8 | 35.8 | 37.4 | 25.2 |
| Anxiety/stress* | 75.2 | 57.5 | 61.0 | 46.8 |
| Time management | 46.8 | 39.6 | 47.9 | 35.1 |
| Distracted home environment* | 65.6 | 58.5 | 47.9 | 27.7 |
| Lack of time caring for others* | 44.0 | 43.4 | 31.7 | 9.8 |

Note. *Significant age group difference ($p < .010$)

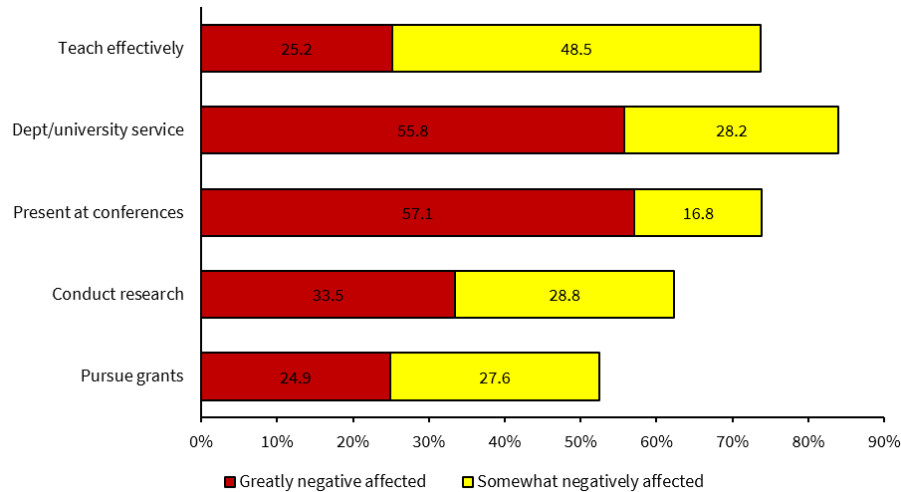


Figure 6. Percentage of faculty who perceived aspects of their work performance was somewhat and greatly negatively affected by pandemic (Source: Authors' own elaboration)

DISCUSSION

Faculty thoughts and actions during the pandemic are important for universities both in terms of understanding employees during current and evolving COVID-19 pandemic as well as to plan for future events. Yet, little research has focused on university faculty other than concerning their response to transitioning instruction online. This study examined faculty perceptions and behaviors during and related to the COVID-19 pandemic, and data were collected from faculty employed at four universities in U.S. during the Fall 2020 semester, when they had returned to campus following the pandemic-induced closure.

Perceived Severity, Concerns, & Behaviors

Two thirds of faculty perceived the severity of COVID-19 as high (“severe” or “very severe/potentially life threatening”). Perceived severity increased with age but was unrelated to gender. When presented a list of specific concerns, high concern was most often indicated for the failure of others to engage in preventive behaviors, the possibility of a resurgence causing an extension of the pandemic, concern for the health of family/friends, and the impact of the pandemic on the economy. By comparison, fewer faculty expressed a high level of concern for personally contracting the virus, or the impact of the pandemic on personal employment or finances. Women tended to be more concerned than men about their inability to visit loved ones, the economy and personal finances. The vast majority of faculty reported engaging in COVID-19-preventing behaviors with the greatest frequency for wearing a face mask, physical distancing, and washing hands frequently. Female and older faculty more often reported engaging in many COVID-19-preventing behaviors. Engagement in COVID-19 preventing behaviors was also related to both perceived severity of the virus, and concern for personally contracting it. When campuses re-opened, 68.3% of surveyed faculty indicated they returned to campus, while 30.9% elected to continue to work from home. Older faculty made this stay-at-home decision. Choosing to work from home was also significantly related to the perception of the severity of COVID-19 and the level of concern for personally contracting the virus.

These findings add to extremely limited data about college faculty perceptions, concerns, and behaviors during the pandemic, but is largely consistent with data on U.S. adults. Nationally and regionally distributed surveys consistently report the majority (70.0% or more) of adults considered the pandemic as a serious threat, had significant concerns about the health of loved ones, and engaged in recommended preventive behaviors including social distancing, mask wearing, and hand washing (Bakdash & Marsh, 2021; Hearne & Nino, 2022; Hill et al., 2022; Matthews et al., 2021; Wachira et al., 2022). Previous work also reports variations in COVID-19-related perceptions and behaviors related to age and gender. Women and older adults are more likely to report mask wearing (Hearne & Nino, 2022), social distancing (Matthews et al., 2021), and engaging in preventive behavioral recommendations (Anaki & Sergay, 2021; Ferrin, 2021; Wachira et al., 2022). In addition, women have consistently been found to have higher COVID-19-related fear, anxiety, concern, and perceived risk (Ferrin, 2021; Lewis & Duch, 2021; Metin et al., 2022; Scarinci et al., 2021).

Impact of the Pandemic on Work

In addition to altering teaching delivery, the pandemic also had an impact on other aspects of faculty work life. Professional conferences were cancelled and then later some were delivered virtually. Faculty could not meet in person with colleagues, nor collect data or access materials on campus. Previous survey-based studies about faculty work during the Spring 2020 semester indicate work life satisfaction was reduced particularly among women and those with young children, and having a non-distracting home office played a role in work productivity (Aubry et al., 2020; Colcasure et al., 2021; Delaney et al., 2021; Kotini-Shah et al., 2021; Krukowski et al., 2021; Lawson et al., 2023; Weinreich et al., 2023).

In this study faculty presented a list of potential barriers to work productivity during the pandemic most often identified anxiety/stress as a moderate-to-significant significant problem, followed by a distracted home environment and time management. Lacking needed technology at home was rated least often as a barrier. In addition, older faculty tended to perceive barriers as less problematic than younger faculty, which may reflect a reduced role in caring for others and associated distractions at home.

Surveyed faculty also rated the extent to which the pandemic had negatively affected their ability to perform various aspects of their jobs. Previous work by Aubry et al. (2020) reported most faculty indicated their ability to do research, teach, mentor, and engage in outreach were negatively affected by the pandemic. In the present study, only 25.2% of faculty indicated that the pandemic had “greatly negatively affected” their ability to teach effectively. However, more reported a notable negative impact on conference attendance (57.1%), producing research (33.5%), and seeking grants (24.9%). Previous work reported 55.0% of faculty reported decreased productivity due to the pandemic (Delaney et al., 2021), with female faculty and those with young children indicating a greater reduction in scholarship (Krokowsky et al., 2021), stress due to scholarly productivity (Weinreich et al., 2023), and intention to leave academia (Lawson et al., 2023).

CONCLUDING COMMENTS

This study adds to limited research on college faculty perceptions and behaviors during the COVID-19 pandemic. Strengths of this project include a relatively large sample size of faculty from multiple universities and collecting data on several variables allowing for both descriptive and relational analyses. Limitations are also related to the sample, which are faculty from one U.S. state, all who were employed by regional public universities; thus, their responses may not reflect those of faculty from other regions and/or who work at different types of universities. Recommendations for future research include continuing to expand understanding faculty experiences and responses to the COVID-19 pandemic, and to use research evidence to develop plans for reducing the negative effects of similar future pandemic events.

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Ethical statement: The authors stated that since data was collected from faculty at three universities, the authors sought approved by the appropriate committee at all three institutions: (1) The lead author submitted the proposal to the Institutional Review Board at Southeastern Louisiana University; they approved the study on Oct 26, 2020. (2) On Dec 10, 2020, the Institutional Review Board at the University of Louisiana-Lafayette recognized approval by the lead author’s university (#1 above), did not require dual review, and approved the faculty there to recruit participants. (3) On Dec 9, 2020, the Institutional Review Board at the University of Louisiana-Monroe recognized approval by the lead author’s university (#1 above), did not require dual review, and approved the faculty there to recruit participants.

Declaration of interest: No conflict of interest is declared by authors.

Data sharing statement: Data supporting the findings and conclusions are available upon request from the corresponding author.

REFERENCES

- Aguilera-Hermida, A. P. (2020). College students’ use and acceptance of emergency online learning due to COVID-19. *International Journal of Educational Research Open*, 1, 100011. <https://doi.org/10.1016/j.ijedro.2020.100011>
- Anaki, D., & Sergay, J. (2021). Predicting health behavior in response to the coronavirus disease (COVID-19): Worldwide survey results from early March 2020. *PLoS ONE*, 16(1), e0244534. <https://doi.org/10.1371/journal.pone.0244534>
- Arday, J. (2022). COVID-19 and higher education: The times they are a’changin. *Educational Review*, 74(3), 365-377. <https://doi.org/10.1080/00131911.2022.2076462>
- Aubry, L. M., Laverty, T. M., & Ma, Z. (2021). Impacts of COVID-19 on ecology and evolutionary biology faculty in the United States. *Ecological Applications*, 31(2), e2265. <https://doi.org/10.1002/eap.2265>
- Aucejo, E. M., French, J., Araya, M. P. U., & Zafar, B. (2020). The impact of COVID-19 on student experiences and expectations: Evidence from a survey. *Journal of Public Economics*, 191, 104271. <https://doi.org/10.1016/j.jpubeco.2020.104271>
- Bakdash, T., & Marsh, C. (2021). Knowledge, attitudes, and beliefs regarding the COVID-19 pandemic among women in Kansas. *Journal of Community Health*, 46(6), 1148-1154. <https://doi.org/10.1007/s10900-021-00994-1>
- Barkley, J. E., Lepp, A., Glickman, E., Farnell, G., Beiting, J., Wiet, R., & Dowdell, B. (2020). The acute effects of the COVID-19 pandemic on physical activity and sedentary behavior in university students and employees. *International Journal of Exercise Science*, 13(5), 1326-1339. <https://digitalcommons.wku.edu/ijes/vol13/iss5/8>

- Batra, K., Sharma, M., Batra, R., Singh, T.P., & Schvaneveldt, N. (2021). Assessing the psychological impact of COVID-19 among college students: An evidence of 15 countries. *Healthcare*, 9(2), 222. <https://doi.org/10.3390/healthcare9020222>
- Bdair, I. A. (2021). Nursing students' and faculty members' perspectives about online learning during COVID-19 pandemic: A qualitative study. *Teaching and Learning in Nursing*, 16(3), 220-226. <https://doi.org/10.1016/j.teln.2021.02.008>
- Belikov, O., VanLeeuwen, C. A., Veletsianos, G., Johnson, N., & Prusko, P. T. (2021). Professional and personal impacts experienced by faculty stemming from the intersection of the COVID-19 pandemic and racial tensions. *Journal of Interactive Media in Education*, 2021(1), 8. <https://doi.org/10.5334/jime.647>
- Bergiel, B. J., Bergiel, E. B., & Bergiel, B. J. (2021). COVID-19 forced faculty to move from teaching face-to-face online teaching fast: What are the advantages and disadvantages to faculty and students? *International Journal of Education Research*, 16(1), 81-96.
- Browning, M. H., Larson, L. R., Sharaievska, I., Rigolon, A., McAnirlin, O., Mullenbach, L., Cloutier, S., Vu, T. M., Thomsen, J., Reigner, N., Metcalf, E. C., D'Antonio, A., Helbich, M., Bratman, G. N., & Alvarez, H. O. (2021). Psychological impacts from COVID-19 among university students: Risk factors across seven states in the United States. *PLoS ONE*, 16(1), e0245327. <https://doi.org/10.1371/journal.pone.0273938>
- Chakraborty, P., Mittal, P., Gupta, M. S., Yadav, S., & Arora, A. (2020). Opinion of students on online education during the COVID-19 pandemic. *Human Behavior and Emerging Technologies*, 3(3), 357-365. <http://doi.org/10.1002/hbe2.240>
- 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. <https://doi.org/10.1016/j.psychres.2021.113706>
- Cohen, A. K., Hoyt, L. T., & Dull, B. (2020). A descriptive study of COVID-19-related experiences and perspectives of a national sample of college students in spring 2020. *Journal of Adolescent Health*, 67(3), 369-375. <https://doi.org/10.1016/j.jadohealth.2020.06.009>
- Colclasure, B. C., Marlier, A., Durham, M. F., Brooks, T. D., & Kerr, M. (2021). Identified challenges from faculty teaching at predominantly undergraduate institutions after abrupt transition to emergency remote teaching during the COVID-19 pandemic. *Education Sciences*, 11(9), 556. <https://doi.org/10.3390/educsci11090556>
- Culp-Roche, A., Hardin-Fanning, F., Tartavouille, T., Hampton, D., Hensley, A., Wilson, J. L., & Wiggins, A. T. (2021). Perception of online teacher self-efficacy: A multi-state study of nursing faculty pivoting courses during COVID 19. *Nurse Education Today*, 106, 105064. <https://doi.org/10.1016/j.nedt.2021.105064>
- Cutri, R. M., Mena, J., & Whiting, E. F. (2020). Faculty readiness for online crisis teaching: Transitioning to online teaching during the COVID-19 pandemic. *European Journal of Teacher Education*, 43(4), 523-541. <https://doi.org/10.1080/02619768.2020.1815702>
- Daumiller, M., Rinas, R., Hein, J., Janke, S., Dickhäuser, O., & Dresel, M. (2021). Shifting from face-to-face to online teaching during COVID-19: The role of university faculty achievement goals for attitudes towards this sudden change, and their relevance for burnout/engagement and student evaluations of teaching quality. *Computers in Human Behavior*, 118, 106677. <https://doi.org/10.1016/j.chb.2020.106677>
- Delaney, R. K., Locke, A., Pershing, M. L., Geist, C., Clouse, E., Debbink, M. P., Haaland, B., Tanner, A. J., Anzai, Y., & Fagerlin, A. (2021). Experiences of a health system's faculty, staff, and trainees' career development, work culture, and childcare needs during the COVID-19 pandemic. *JAMA Network Open*, 4(4), e213997. <https://doi.org/10.1001/jamanetworkopen.2021.3997>
- Evanoff, B. A., Strickland, J. R., Dale, A. M., Hayibor, L., Page, E., Duncan, J. G., Kannampallil, T., & Gray, D. L. (2020). Work-related and personal factors associated with mental well-being during the COVID-19 response: Survey of health care and other workers. *Journal of Medical Internet Research*, 22(8), e21366. <https://doi.org/10.2196/29069>
- Ferrín, M. (2022). Reassessing gender differences in COVID-19 risk perception and behavior. *Social Science Quarterly*, 103(1), 31-41. <https://doi.org/10.1111/ssqu.13116>
- Fox, K., Bryant, G., Lin, N., & Srinivasan, N. (2020). Time for class—COVID-19—part 1: A national survey of faculty during COVID-19. *Tyton Partners and Every Learner Everywhere*. <http://hdl.voced.edu.au/10707/555443>
- Garris, C. P., & Fleck, B. (2022). Student evaluations of transitioned-online courses during the COVID-19 pandemic. *Scholarship of Teaching and Learning in Psychology*, 8(2), 119-139. <https://doi.org/10.1037/stl0000229>
- Gostin, L. O., & Wiley, L. F. (2020). Governmental public health powers during the COVID-19 pandemic. *The Journal of the American Medical Association*, 323(21), 2137-2138. <https://doi.org/10.1001/jama.2020.5460>
- Hearne, B. N., & Niño, M. D. (2021). Understanding how race, ethnicity, and gender shape mask-wearing adherence during the COVID-19 pandemic: Evidence from the COVID impact survey. *Journal of Racial and Ethnic Health Disparities*, 9, 176-183. <https://doi.org/10.1007/s40615-020-00941-1>
- Hebert, E., Wood, R., Joen, K., & Reena, I. (2022). Faculty making the emergency online transition during the COVID-19 pandemic: Effects of prior online teaching experience and strategies used to learn to teach online. *Higher Learning Research Communications*, 12(0), 59-76. <https://doi.org/10.18870/hlrc.v12i0.1322>
- Hickey, S. E., Hebert, E. P., & Webb, N. (2021). College student experiences of the COVID-19 pandemic: Concerns, preventive behaviors, and impact on academics and career choice. *American Journal of Health Studies*, 36(2), 76-87. <https://doi.org/10.47779/ajhs.2021.647>

- Hill, L. M., Davis, H., Drewry, M., Shelus, V., Bartels, S. M., Gora Combs, K., Ribisi, K. M., & Lazard, A. J. (2022). Barriers to and facilitators of COVID-19 prevention behaviors among North Carolina residents. *Health Education & Behavior, 49*(2), 231-241. <https://doi.org/10.1177/10901981221076408>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Howe, D. L., Heitner, K. L., Dozier, A., & Silas, S. (2021). Health professions faculty experiences teaching online during the COVID-19 pandemic. *ABNF Journal, 32*(1), 6-11.
- 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. <https://doi.org/10.1016/j.jadohealth.2020.10.030>
- Huckins, J. F., DaSilva, A. W., Wang, W., Hedlund, E., Rogers, C., Nepal, S. K., Wu, J., Obuchi, M., Murphy, E. I., Meyer, M L., Wagner, D. D., Holtzheimer, P. E., & Campbell, A. T. (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. <https://doi.org/10.2196/20185>
- Johnson, N., Veletsianos, G., & Seaman, J. (2020). U.S. faculty and administrators' experiences and approaches in the early weeks of the COVID-19 pandemic. *Online Learning, 24*(2), 6-21. <https://doi.org/10.24059/olj.v24i2.2285>
- Keckojevic, A., Basch, C. H., Sullivan, M., & Davi, N. K. (2020). The impact of the COVID-19 epidemic on mental health of undergraduate students in New Jersey, cross-sectional study. *PLoS ONE, 15*(9), e0239696. <https://doi.org/10.1371/journal.pone.0239696>
- Kotini-Shah, P., Man, B., Pobee, R., Hirshfield, L. E., Risman, B. J., Buhimschi, I. A., & Weinreich, H. M. (2022). Work-life balance and productivity among academic faculty during the COVID-19 pandemic: A latent class analysis. *Journal of Women's Health, 31*(3), 321-330. <https://doi.org/10.1089/jwh.2021.0277>
- Krukowski, R. A., Jagsi, R., & Cardel, M. I. (2021). Academic productivity differences by gender and child age in science, technology, engineering, mathematics, and medicine faculty during the COVID-19 pandemic. *Journal of Women's Health, 30*(3), 341-347. <https://doi.org/10.1089/jwh.2020.8710>
- Lawson, K. M., Barrineau, M., Woodling, C. M., Ruggles, S., & Largent, D. L. (2023). The impact of COVID-19 on US computer science faculty's turnover intentions: The role of gender. *Sex Roles, 88*(7), 383-396. <https://doi.org/10.1007/s11199-023-01361-1>
- Lederer, A. M., Hoban, M. T., Lipson, S. K., Zhou, S., & Eisenberg, D. (2021). More than inconvenienced: The unique needs of US college students during the COVID-19 pandemic. *Health Education & Behavior, 48*(1), 14-19. <https://doi.org/10.1177/1090198120969372>
- Lee, J., & Jung, I. (2021). Instructional changes instigated by university faculty during the COVID-19 pandemic: The effect of individual, course and institutional factors. *International Journal of Educational Technology in Higher Education, 18*, 52. <https://doi.org/10.1186/s41239-021-00286-7>
- Lee, J., Jeong, H. J., & Kim, S. (2021). Stress, anxiety, and depression among undergraduate students during the COVID-19 pandemic and their use of mental health services. *Innovative Higher Education, 46*, 519-538. <https://doi.org/10.1007/s10755-021-09552-y>
- Lewis, A., & Duch, R. (2021). Gender differences in perceived risk of COVID-19. *Social Science Quarterly, 102*(5), 2124-2133. <https://doi.org/10.1111/ssqu.13079>
- Liu, C. H., Zhang, E., Wong, G. T. F., & Hyun, S. (2020). Factors associated with depression, anxiety, and PTSD symptomatology during the COVID-19 pandemic: Clinical implications for US young adult mental health. *Psychiatry Research, 290*, 113172. <https://doi.org/10.1016/j.psychres.2020.113172>
- Losina, E., Leifer, V., Millham, L., Panella, C., Hyle, E. P., Mohareb, A. M., Neilan, A. M., Ciaranello, A. L., Kazemian, P., Freedberg, K. A. (2021). College campuses and COVID-19 mitigation: Clinical and economic value. *Annals of Internal Medicine, 174*(4), 472-483. <https://doi.org/10.7326/M20-6558>
- MacIntyre, P. D., Gregerson, T., & Mercer, S. (2020). Language teachers' coping strategies during the COVID-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. *System, 94*, 102352. <http://doi.org/10.1016/j.system.2020.102352>
- Maher, J. P., Hevel, D. J., Reifsteck, E. J., & Drollette, E. S. (2021). Physical activity is positively associated with college students' positive affect regardless of stressful life events during the COVID-19 pandemic. *Psychology of Sport and Exercise, 52*, 101826. <https://doi.org/10.1016/j.psychsport.2020.101826>
- Majowicz, S. E. (2020). What might the future bring? COVID-19 planning considerations for faculty and universities. *Epidemiology & Infection, 148*, e92. <https://doi.org/10.1017/S0950268820000898>
- Matthews, V. S., Stough-Hunter, A., & Marazita, J. M. (2021). Attitudes towards social distancing in response to COVID-19. *Public Health Nursing, 38*(6), 1019-1029. <https://doi.org/10.1111/phn.12954>
- Melnik, B. M., Tan, A., Hsieh, A. P., Amaya, M., Regan, E. P., & Stanley, L. (2021). Beliefs, mental health, healthy lifestyle behaviors and coping strategies of college faculty and staff during the COVID-19 pandemic. *Journal of American College Health. https://doi.org/10.1080/07448481.2021.1991932*

- Metin, A., Erbicler, E. S., Sen, S., & Cetinkaya, A. (2022). Gender and COVID-19 related fear and anxiety: A meta-analysis. *Journal of Affective Disorders, 310*, 384-395. <https://doi.org/10.1016/j.jad.2022.05.036>
- Murphy, L., Eduljee, N. B., & Croteau, K. (2020). College student transition to synchronous virtual classes during the COVID-19 pandemic in northeastern United States. *Pedagogical Research, 5*(4), em0078. <https://doi.org/10.29333/pr/8485>
- Reena, I., Hebert, E., Das, K., Dipti, S. M., Gope, N. C., & Doe, R. (2023). Anxiety and depression among U.S. international students during the COVID-19 pandemic. *Education, 143*(3), 89-99.
- Rentner, T. L., & Alsulaiman, S. A. (2022). "Not me!": Optimistic bias and college students' perceived susceptibility, severity, benefits, and self-efficacy in following COVID-19 preventive guidelines. *Journal of American College Health. https://doi.org/10.1080/07448481.2022.2079950*
- Roy, S., & Covelli, B. (2021). COVID-19 induced transition from classroom to online mid semester: Case study on faculty and students' preferences and opinions. *Higher Learning Research Communications, 11*, 10-32. <https://doi.org/10.18870/hlrc.v11i0.1197>
- Rudenstine, S., McNeal, K., Schulder, T., Ettman, C. K., Hernandez, M., Gvozdieva, K., & Galea, S. (2021). Depression and anxiety during the COVID-19 pandemic in an urban, low-income public university sample. *Journal of Traumatic Stress, 34*(1), 12-22. <https://doi.org/10.1002/jts.22600>
- Scarinci, I. C., Pandya, V. N., Kim, Y. I., Bae, S., Peral, S., Tipre, M., Hardy, C., Hansen, B., & Baskin, M. L. (2021). Factors associated with perceived susceptibility to COVID-19 among urban and rural adults in Alabama. *Journal of Community Health, 46*, 932-941. <https://doi.org/10.1007/s10900-021-00976-3>
- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research, 22*(9), e21279. <https://doi.org/10.2196/21279>
- Tasso, A. F., Hisli Sahin, N., & San Roman, G. J. (2021). COVID-19 disruption on college students: Academic and socioemotional implications. *Psychological Trauma: Theory, Research, Practice, and Policy, 13*(1), 9-15. <https://doi.org/10.1037/tra0000996>
- Wachira, E., Laki, K., Chavan, B., Aidoo-Frimpong, G., & Kingori, C. (2023). Factors influencing COVID-19 prevention behaviors. *Journal of Prevention, 44*(1), 35-52. <https://doi.org/10.1007/s10935-022-00719-7>
- Weinreich, H. M., Kotini-Shah, P., Man, B., Pobee, R., Hirshfield, L. E., Risman, B. J., & Buhimschi, I. A. (2023). Work-life balance and academic productivity among college of medicine faculty during the evolution of the COVID-19 pandemic: The new normal. *Women's Health Reports, 4*(1), 367-380. <https://doi.org/10.1089/whr.2023.0007>