




## Dissertation Writing During COVID-19: Student Anxiety and Productivity


**Christy Fraenza, PhD**

Walden University, Minneapolis, Minnesota, United States

 <https://orcid.org/0000-0003-0175-048X>

**Kimberly Palermo-Kielb, PhD**

Southern New Hampshire University, Manchester, New Hampshire, United States

 <https://orcid.org/0000-0002-5570-3382>

**Contact:** [christy.fraenza2@mail.waldenu.edu](mailto:christy.fraenza2@mail.waldenu.edu)

### Abstract

Many students across all levels of education experienced disruptions due to stay-at-home orders as part of the response to the COVID-19 pandemic. The purpose of our qualitative study was to specifically explore the doctoral student experience managing the writing of a dissertation amid stay-at-home orders during COVID-19. The majority of participants reported experiencing anxiety more frequently during stay-at-home orders and more productivity before stay-at-home orders. Reasons for decreased productivity during stay-at-home orders included reduced motivation, distractions, and lack of access to outside services and support.

**Keywords:** *dissertation writers, COVID-19, anxiety, productivity, dissertation writing anxiety, doctoral student dissertation experiences*

**Date Submitted:** May 8, 2022 | **Date Published:** December 2, 2022

#### Recommended Citation

Fraenza, C., & Palermo-Kielb, K., (2022). Dissertation writing during COVID-19: Student anxiety and productivity. *Journal of Educational Research and Practice*, 12, 304–322.

<https://doi.org/10.5590/JERAP.2022.12.1.21>

### Introduction

Writing a dissertation is a stressful experience that can often feel isolating and overwhelming, given the standards and independence that come with the process (Barry et al., 2018). However, the stress, caused by factors other than the dissertation experience itself, can influence the writer's performance (Pyykkonen, 2021). Beginning in 2020, the world experienced significant disruptions in response to the COVID-19 pandemic as countries instituted sweeping measures to contain the spread of the virus. For dissertation writers, the many changes during this time may have impacted their productivity and progress in a myriad of ways. However, the current literature on the COVID-19 experience in higher education has focused primarily on course-based instruction and other campus challenges, with only limited attention on the dissertation experience specifically (Donohue et al., 2021; Maldonado et al., 2021). The purpose of our qualitative study was to explore the experiences of students writing a dissertation during COVID-19, with a specific focus on

their anxiety and productivity. Our study provides a foundation on what challenges dissertation writers face during emergency transitions to online learning and widespread closures.

## Literature Review

To stop the spread of COVID-19, higher education institutions around the world took unprecedented steps in 2020 and 2021, including emergency transitions to online learning and widespread campus closures. Like in other crisis situations, the safety of everyone on campus was the priority, but these events can disrupt the academic processes and experiences (Holzweiss et al., 2020). For many learners, this rapid shift to online learning was jarring, and instructors and institutions struggled to provide comparable experiences to students accustomed to being on campus while also managing the psychological impact of the pandemic. Even for online learners not regularly on campus before the pandemic, there were disruptions to face-to-face events, and libraries and other possible study locations were shuttered. As noted by Sahu (2020), the quick spread and rise in case numbers “created a sense of uncertainty and anxiety about what is going to happen” (p. 3). The situation also created much stress among everyone in higher education, including students, which may negatively impact the “learning and psychological health of students” (Sahu, 2020, p. 3). Although this is likely the case for students across degree levels and program stages, the situation might be particularly harmful to doctoral students writing a dissertation, which is already known to be an experience characterized by high stress and anxiety levels (Pyykkonen, 2021).

### Doctoral Student Experience

Due to the stress involved with doctoral work, it is no wonder that many doctoral students get stuck in what is known as “All but Dissertation” status. One of the biggest challenges of doctoral work is research writing, yet it is an essential skill set for students to complete their dissertations and graduate. Research writing is a lengthy, complicated process involving critical thinking skills over which even experienced academic writers flounder. In a study on the writing perceptions of doctoral students, researchers discovered three types of research writing profiles: struggler writers, reduced productivity writers, and productive writers (Sala-Bubere et al., 2018). Although the researchers found that struggler writers are more likely to have thoughts of dropping out, all three types of writer profiles indicated having maladaptive writing perceptions involving perfectionism, blocks, and procrastination (Sala-Bubere et al., 2018). Such patterns may impede students’ dissertation-writing productivity and make them feel stuck or overwhelmed.

### Anxiety

Anxiety is defined as “an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure” (American Psychological Association, 2020, para. 1). As noted by Huges and Gullone (2008), anxiety is a reasonable reaction to stressful situations or events. However, this experience can impact an individual’s behavior, sleeping and eating patterns, well-being, and academic performance (Farrer et al., 2016). Researchers have found that stressful events and situations highly correlate with anxiety in various populations, including doctoral students (Liu & Abliz, 2019). During the pandemic, many individuals around the world experienced stress related to economic changes, health concerns, and overall well-being, and many parents struggled with how to manage school closures and remote learning. Not surprisingly, researchers identified high levels of anxiety among college students during the pandemic (Browning et al., 2021), up to 1.5 times higher than the previous year, with research doctoral students experiencing the highest prevalence of anxiety (Chirikov et al., 2020). This dramatic increase among doctoral students is particularly concerning, given the amount of anxiety often already experienced during these programs.

The doctoral student experience is known to be filled with high levels of anxiety. Doctoral student anxiety can stem from financial concerns (Johnson et al., 2020), navigating relationships with faculty (Stubb et al., 2011), and writing dissertations (Liu et al., 2019). They may also struggle with preparing for the transition from

student to graduate, which can create additional anxiety for those at the end of their program and writing their dissertation (Straforini, 2015). In an online survey of graduate students in 2018, Evans et al. found that 41% of graduate students experienced moderate to severe anxiety, compared with only 6% of the general population. More recently, Chirikov et al. (2020) found the prevalence of anxiety was highest among research doctoral students compared with students in other graduate or professional programs. Although students may experience anxiety at any stage of the doctoral program, perhaps the most trying stage is the final requirement of completing a dissertation, which has been equated with finishing a marathon (Black, 2012). This milestone can be overwhelming for students as there are no clear deadlines and, perhaps, less oversight from their faculty (Straforini, 2015). Students at this stage can experience anxiety related to receiving feedback (Badenhorst, 2018), writing (Holmes et al., 2018; Klocko & Marshall, 2017), and statistics skills and information literacy (Lim et al., 2019). For those students at this stage during the pandemic, they have faced additional challenges. For example, many students experienced lab closures that could potentially delay the completion of their research (Elmer & Durocher, 2020), while others had to adapt and change their methodology so their study could be carried out virtually (Byrom, 2020). These changes, along with pressures to keep making progress (Byrom, 2020) and concerns about future job prospects in a changing academic landscape (Wang & DeLaquil, 2020), may have exacerbated the underlying anxiety already experienced by doctoral students. As noted by Blum (2010), “conflicts pertaining to the research and writing of a dissertation are always part of, and never isolated from, the rest of a person’s conflicts and concerns” (p. 83), highlighting that the stress and anxiety related to the dissertation process are not experienced in a vacuum; doctoral writers still must manage and overcome the situational factors that may contribute to increased anxiety, such as a global pandemic.

### **Impact of Anxiety on Productivity**

Not all students who begin a doctoral program will complete their program. According to Hurt et al. (2022), 40%–60% of doctoral students do not finish their academic programs. The high attrition rate for doctoral students is a concern because their lack of progress weakens the academic pipeline for quality research, teaching, and scholarship in higher education (Holley & Gardner, 2012). Furthermore, due to the long journey of completing a doctoral degree, life events and responsibilities can supersede a student’s academic progress and dissertation productivity (Barry et al., 2018). Those students working on a dissertation during the COVID-19 pandemic experienced the widespread, unexpected, and profound impact of a global pandemic. The worldwide anxiety and disruption due to COVID-19 may have influenced the productivity of doctoral writers.

Dissertation writing is an anxiety-provoking and stressful experience that puts students on an emotional roller coaster. Doctoral students report this is due to stress from time constraints to write and having to resolve inconsistent feedback from faculty during the editing process (Klocko et al., 2015). Furthermore, instead of viewing the feedback from faculty as objective, students tend to associate the feedback as personal and a measure of their ability for success (Badenhorst, 2018). In turn, this maladaptive type of thinking undermines their self-confidence and stalls their dissertation-writing productivity (Klocko et al., 2015; Russel-Pinson & Harris, 2019). The stress to meet writing goals from faculty and advisors and unreachable goals that students place on themselves lead them to feel that their writing needs to be perfect (Russel-Pinson & Harris, 2019). Hence, there is pressure to perform academically and personally during the dissertation stage.

Although there are many elements involved in productivity, such as barriers to time (Ondrusek, 2012), procrastination, perfectionism, and lack of organizational skills (Dominguez, 2006), anxiety has been found to influence executive function (Shields et al., 2016), memory (Maloney et al., 2014), decision making (Park & Moghaddam, 2017), and concentration (Robinson et al., 2013). Another factor to consider is the role of mind-wandering. Boals and Banks (2020) noted that living through a pandemic could create an abundance of mind-wandering, as individuals check the news more regularly and worry about the health and finances of

themselves and loved ones. Any of these factors has the potential to impact one's productivity. Without concentration, for example, a writer may struggle to put ideas to paper. Every cognitive task we perform requires a certain level of concentration and cognitive resources; when we become overwhelmed, we must draw on more resources to be successful (Von Gehlen & Sachse, 2015). For doctoral students, anxiety's impact across these areas can have a profound influence on their productivity and progress.

### **COVID-19 and Doctoral Student Productivity**

Throughout the pandemic, media and social media messages portrayed two common patterns; one was about being incredibly productive—taking on tasks that individuals may have been putting off for lack of time. The other pattern was one of low productivity—individuals finding it difficult to complete tasks. It's likely that doctoral writers, as individuals, experienced similar patterns, with some being more productive and others struggling to make progress.

However, the COVID-19 pandemic and the resulting lockdowns and restrictions had numerous implications on individuals conducting research, which could be an additional factor in a doctoral student's anxiety and productivity. As Byrom (2020) noted, more than half of 4,800 doctoral students and researcher participants experienced challenges in data analysis and writing, while three-quarters experienced a negative impact on collecting data. Such barriers as losing access to participants and necessary software (Byrom, 2020) and physical library access (Piotrowski & King, 2020) could significantly impact a writer's productivity and progress.

### **Theoretical Framework**

The Yerkes-Dodson Law highlights the connection between anxiety and performance and provided a lens to view the dissertation experience during the pandemic. As Dodson (as cited by Mellifont et al., 2016) described, anxiety can support performance but only to a certain level; once anxiety levels increase too much, performance will suffer. In other words, moderate anxiety levels can increase attention and the completion of tasks, but high levels can result in less focus and organization (Mair et al., 2011). Thus, when a person is experiencing stress, there is a zone where they can function at their best level of performance before hitting a tipping point. Being in the optimal performance zone depends on whether the individual appraises the stressor as manageable or not (Lazarus & Folkman, 1984; Salehi et al., 2010). Manageable stress, well-known as eustress, is the positive side of stress. Here, stress becomes purposeful. Researchers have characterized eustress situations as challenge stressors offering opportunity and growth (McCauley & Hinojosa, 2020). Conversely, the negative side of stress, when the stress level exceeds the individual's belief that they have the resources to cope, is distress. Researchers have characterized distress situations as hindrance stressors that lead to negative affective thoughts (McCauley & Hinojosa, 2020).

Throughout the COVID-19 global pandemic, the stressors remained chronic and systemic. There is fear that physical as well as mental and economic health is at risk. The phrase, the new normal, heard from the media regarding social distancing, masking, and isolation, is a terrifying thought for many. According to Lazarus and Folkman (1984), the pandemic event can be classified as a type of "environmental stress stimuli with major catastrophe or change" (p. 13). The problems that occur from living through a disaster such as a pandemic are outside of anyone's control, and this dictates how we cope (Folkman et al., 1986; Lazarus & Folkman, 1984). Given the chronic, intense levels of stress and anxiety for individuals during the COVID-19 pandemic, it's possible some individuals reached a level of anxiety that was no longer manageable.

### **Purpose of the Study, Research Questions, and Hypotheses**

The purpose of our qualitative study was to explore the doctoral student experience in managing the writing of a dissertation amid stay-at-home orders during the COVID-19 pandemic. The second purpose was to explore the impact of stay-at-home orders on dissertation productivity. The guiding research questions were:

1. How do doctoral students describe their dissertation writing productivity before and during stay-at-home orders during a global pandemic?
2. What are the factors influencing the anxiety of doctoral students working on their dissertations during a global pandemic?

## Methods

We used a basic qualitative design to explore doctoral student experiences related to writing a dissertation during stay-at-home orders put into place in response to COVID-19. Before collecting any data, we obtained Institutional Review Board approval and then posted an anonymous online survey on the website SurveyCircle.

## Participants

Of the 108 responses, 71 met the two screening criteria and completed the survey. Of the participants, 61 (86%) attended a traditional, campus-based program, nine (13%) attended an online program, and one (1%) reported they attended a hybrid-based program. Participant demographics are provided in Table 1.

**Table 1.** *Participant Demographics*

		Frequency	Percentage
Age	18–29	44	62%
	30–49	21	30%
	50–64	5	7%
	65 and over	1	1%
Gender	Female	48	68%
	Male	23	32%
Ethnic/Racial Background	White	51	72%
	Asian/Pacific Islander	14	20%
	African American/Black	2	3%
	Other/Not Listed	2	3%
	Hispanic/Latino	1	1%
	Prefer not to Respond	1	1%
Field of Study	Psychology and Counseling	28	39%
	Business and Management	26	37%
	Criminal Justice	4	6%
	Other	4	6%
	Public Health and Health Sciences	3	4%
	Public Policy and Administration	2	3%
	Communication	2	3%
	Education	1	1%
	Information Technology	1	1%

## Instrumentation

We developed an anonymous online survey with seven multiple-choice questions, two Likert questions, and nine open-ended questions. The survey included demographic and open-ended questions where participants could share information about their writing practices, productivity, and anxiety before and during stay-at-home orders. A copy of the survey is provided in the Appendix.

## Data Collection

Information regarding the study was posted on the online survey website, SurveyCircle, where individuals could access the informed consent, and if they met the criteria and chose to participate, they could begin the survey. To gain access to the full survey, participants had to meet two screening criteria. To qualify, participants had to (a) be currently enrolled in a doctoral program and be working on their dissertation/capstone study, and (b) have experienced stay-at-home orders during the COVID-19 pandemic.

## Analysis

We used Braun and Clark's (2006) six-phase guide for qualitative analysis as a guide to analyze each short-answer question. We hand-coded participant responses using an inductive process, which began with reading and re-reading participant responses, listing each response, and color-coding similar answers. Once color coding was complete, the data was counted for frequencies and categories to derive themes. To ensure credibility, the raw color-coded data was shared between both of us before developing the main themes.

## Results

Participants were asked to describe how COVID-19 had impacted their doctoral program. More than half of participants (60%) shared descriptions of a general move to the online setting by sharing that classes, lectures, and meetings were all moved to an online platform. Almost a quarter of participants (23%) shared that their research process had been interrupted in some way, such as not having access to participants or equipment or having to change the design of their planned research. For example, one participant noted that they had "no ability to collect data from people doing interviews," while another shared that they "have no access to my experimental setup in the campus since everything is closed." Another 15% of participants shared that they lacked access to resources and support, including the library and advisors. One participant shared that "support and advice has been hard to find as faculty seem far more distant," while another shared that they were "not able to go to the university library, which has limited my access to resources for my writing."

## Anxiety

Participants were asked to reflect on how often they experienced anxiety before and during stay-at-home orders. Overall, more participants reported experiencing anxiety *frequently* (31%) and *daily* (15%) during stay-at-home orders compared with before (13% frequently; 8% daily). Also, fewer participants reported experiencing anxiety *sometimes* (41%) or *never* (13%) during stay-at-home orders compared with before (61% sometimes; 18% never).

Before stay-at-home orders, many students (31%) noted that academic responsibilities and expectations were the source of their anxiety, while another 34% identified life, social, and family responsibilities as their source of anxiety. For example, one participant shared that their anxiety stemmed from "not being as good as other students," while another experienced "worry about meeting deadlines for the dissertation due to life events surrounding my kids' issues and financial problems; these issues affected my ability to concentrate." Only 7% noted work as a source of anxiety, and 6% mentioned mental health concerns. Other responses included the media, lack of support, and no anxiety.



During stay-at-home orders, 29% identified COVID-19 and health concerns as a source of their anxiety, while 25% identified academic responsibilities. One participant noted that their source of anxiety remained the same as before stay-at-home orders but that there was an “intensification of health-related fears.” Other participants highlighted challenges with conducting research by sharing, “I am not moving forward, I cannot research,” and “no samples to conduct a survey.” Mental health was noted by 16% of the participants as a source of anxiety, while 14% mentioned social and family responsibilities. Other sources of anxiety included a lack of support and media.

### **Productivity**

Participants were asked to compare their dissertation productivity before and during stay-at-home orders. The majority of participants (61%) reported they were more productive before stay-at-home orders, compared with 21% who reported they were more productive during stay-at-home orders. The remaining participants (18%) reported their productivity stayed the same.

Participants were asked to share what factors influenced their productivity. Among those who reported they were more productive before stay-at-home orders, common barriers to productivity during stay-at-home orders included reduced motivation (27%), distractions (27%), and lack of access to outside services and supports (18%). Other participants noted challenges with concentration, lack of boundaries between school and home, and additional stress as barriers to their productivity. One participant shared, “with the whole family at home, it is hard to do any work uninterrupted. I find myself working a lot more hours and producing a lot less work,” while another shared, “I don’t have a place of my own at home, I don’t have my own desk, I can’t concentrate because there are too many around me.”

For those participants who reported they were more productive during stay-at-home orders, common benefits included the lack of distractions or other options to engage in other activities (60%). One participant shared, “I was unable to see friends, so it gave me more time to work on my assignments. My place of work closed for 3 months, so I didn’t have any other commitments and gave my dissertation 100% of my attention.” Another participant shared, “my work closed as did everything else that wasn’t deemed essential, so I had a lot of free time to spend studying instead of working or being out with friends. There’s only so much you can do at times so I found myself studying more often than I used to.” Other benefits during stay-at-home orders included flexibility and comfort. For example, one participant shared, “I found it easier to break up the research and writing throughout the day, I did it in 2-hour chunks. I used the time I would be travelling to campus as extra study time.”

### **Time Spent Writing**

Participants were asked to report how many hours per week they spent on their dissertation before and during stay-at-home orders. On average, participants reported spending a maximum of 19 hours per week on their dissertation *before* stay-at-home orders, while on average, participants spent a maximum of 20 hours per week *during* stay-at-home orders. An overview of the time spent working on their dissertations is provided in Table 2.

**Table 2.** *Frequency of Hours Spent on the Dissertation Before and During Stay-At-Home Orders*

	Hours	Frequency	Percentage
<b>Before</b> stay-at-home orders	0–5	10	14%
	6–10	14	20%
	11–20	29	41%
	21–30	9	13%
	31–40	4	6%
	More than 40	4	6%
	Varies	1	1%
<b>During</b> stay-at-home orders	0–5	14	20%
	6–10	9	13%
	11–20	22	31%
	21–30	14	20%
	31–40	7	10%
	More than 40	5	7%

### Writing Locations

When asked where they typically worked on their dissertation/capstone before stay-at-home orders, the majority of respondents (68%) shared that they worked on their dissertation outside of their home. Common locations included their university campus, the library, their office, or at a coffee shop. One participant noted that they “would always do working/writing in a library or similar academic setting as I find my productivity to be horrendous at home.” Another participant shared that they “would go to the university to work because I am able to focus more when I am not in the house.” A couple of participants indicated they worked on their project at the pub or their mother’s house. Only 32% of participants shared that they worked on their project at home before stay-at-home orders related to COVID-19.

When asked where they worked on their dissertation/capstone during stay-at-home orders, 92% shared they worked on their project at home, while only 8% shared they worked on the project outside of the home. Common locations at home included the bedroom, kitchen, or a home office or study. One participant shared that nothing changed for them during the lockdown, as they have “always worked on this online from home.”

### Discussion

The purpose of our study was to explore the experiences of dissertation writers during the COVID-19 pandemic to get a sense of the impact of such a historical event on their productivity and anxiety. Data collected from 71 participants described a variety of insights into their experiences. In line with messaging seen throughout the pandemic, some students were more productive during the stay-at-home orders due to reduced opportunities to engage in other activities. For some students, the increased stress and anxiety associated with the pandemic appear to have remained manageable, allowing them to continue to be productive and move forward.

In contrast, the majority of participants in this study noted decreased productivity, despite an increased number of hours spent writing during stay-at-home orders. The impact of distractions in the home setting that participants experienced as a barrier to writing aligned with research about how distractions impact



cognitive performance and productivity (Brown et al., 2019). For these students, as suggested by the Yerkes-Dodson Law, the stress and anxiety because of the pandemic, combined with the existing anxiety present during the dissertation process, may have become too much to manage.

Interestingly, the average number of hours spent writing during stay-at-home orders increased by 1 hour compared with before, yet reported productivity decreased. This pattern suggested that participants did experience factors that influenced productivity. This aligned with points from Boals and Banks (2020), who noted that mind-wandering about the pandemic, regardless of the amount of time one has to write, can reduce focus and attention, thereby impacting productivity, as well as the discussion by Brown et al. (2019) of how distractions can negatively impact one's ability to focus and complete a task. This also aligned with research on remote work productivity during the pandemic that indicated that distractions in an environment might negatively influence motivation and engagement (Galanti et al., 2021). It also aligned with other researchers who found decreased productivity among dissertation writers during the pandemic (Boukhentache, 2021; Orendain & Djalante, 2020). Writing is already fraught with many emotions as one navigates the process, and to improve performance, it is best to keep those emotions within a moderate range (Boice, 1994, as cited by Janke et al., 2020). For many dissertation writers, though, it seems the added worries experienced during the pandemic and the increased distractions at home impacted cognitive performance and efficiency, which reduced their overall productivity.

Another experience highlighted by participants was reduced connections to support—including people, such as faculty, but also services and resources, such as the library. This isolation from others and regularly used resources may have exacerbated what researchers, such as Shin et al. (2019), have noted about the isolating experience of writing a dissertation. These increased feelings of isolation during the pandemic and lack of support aligned with patterns identified by Zahneis and June (2020) and Donohue et al. (2021). Other researchers have found challenges related to relationships during the pandemic, including barriers to collaborating with others (Almuraqab, 2020; Boukhentache, 2021), issues receiving timely feedback (Wang & DeLaquil, 2020), and uncertainty about navigating the relationship with their mentor or supervisor during a crisis (Donohue et al., 2020). In line with Stuart et al. (2021), for some graduate students, the loss of laboratory materials and resources, in particular, appeared to increase anxiety and feelings of uncertainty during the pandemic. Together, these findings highlighted the importance of social connection, support, and ongoing access to the necessary resources among the doctoral student population that is essential information outside of a worldwide pandemic.

## Limitations

The basic qualitative design using an online survey format is a limitation for this study, as participants could not be prompted for more detailed responses from participants. However, our study was meant to be exploratory and provide an early insight into how the pandemic impacted dissertation writers specifically. Future studies could use in-depth interviews to fully capture the experience of dissertation writers during a pandemic or similar stressful event. A second limitation is that participants were asked to reflect on their behaviors and feelings before the stay-at-home orders. Given the stress and anxiety throughout the pandemic, such a self-reflection may not have been entirely accurate, as the present negative experience may have altered perceptions of their previous habits and experiences. However, the pandemic is a dramatic, unprecedented event that could not have been predicted for the purposes of such research to determine a direct causal relationship between student anxiety and productivity and stay-at-orders associated with the pandemic. Our study did not explore differences that may have potentially influenced the levels of stress and anxiety, such as gender or parental status (Ogilvie et al., 2020; Stuart et al., 2021), employment or financial status (Donohue et al., 2021), or technology challenges (Hargrave, 2021; Orendain & Djalante, 2020). Finally, only nine participants reported attending an online doctoral program; potential differences between these students and those attending traditional programs were not explored. Triangulating the data to expand on group

differences and more in-depth studies could explore how the pandemic impacted students who were enrolled in a fully online doctoral program differently from those who were attending campus-based programs.

## Implications for Theory and Practice

To support dissertation writers during a global health crisis that may impact their routines, motivation, and psychological health, graduate schools could introduce program initiatives to eliminate or reduce the stress and barriers students face by providing them instructional and social/emotional support. The following strategies were found in the literature to have positive results for dissertation students' writing productivity. They may help to address some of the challenges participants noted in this study.

First, given the levels of anxiety and stress present among dissertation writers, institutions must take steps to address those experiences and help students learn effective, healthy coping strategies that can minimize the negative impact of those experiences on their productivity. For dissertation mentors, in particular, steps should be taken to check in with students more regularly and ask how they are doing; although faculty cannot solve all of their problems (Micciche, 2020), a regular check-in can help a faculty mentor to connect a student in need with other services, such as a student support center or counseling center. At an institutional level, ensuring such support services are available and accessible is essential, as is ongoing training for faculty to be sure they are informed of available student services.

Second, institutions should offer writing groups that are designed for students to either attend the entire session or "drop in." These group sessions are a win/win for students because they provide an opportunity for students to dedicate time to writing (Maldonado et al., 2021) and increase their writing skills, which in turn, will advance their dissertation progress (Jiang et al., 2021). Such groups can help foster essential connections and community, too, which, "even when mediated through a screen, is central to intellectual work and emotional health" (Micciche, 2020, para. 19). That is, even providing these opportunities virtually can help support student well-being and progress. Another strategy to create social connections is through peer mentor opportunities designed to connect students with one another. Such opportunities can help students learn helpful information, develop skills necessary to complete their degree programs, increase motivation, and increase a sense of connection (Lorenzetti et al., 2019). For dissertation writers, peer mentors and mentees could engage in topics such as learning how to manage feedback from their chair to make it more individualized, learning how to understand expectations from their chair to establish clear and concise writing goals, and learning how to have effective communication with their chair to maintain responsiveness and build trust (Jiang et al., 2021). Providing opportunities for connections and a peer network through writing-focused groups or more generalized peer mentoring programs may enhance a dissertation writer's experience and support productivity.

## Conclusion

Due to the ongoing pandemic, many dissertation writers likely face continuing challenges due to COVID-19. Even though many stay-at-home orders have lifted, the ongoing anxiety associated with the crisis may remain. For the participants in this study, the pandemic halted or reduced research activities and limited their access to supportive resources. Anxiety levels increased due to health concerns, academic responsibilities, and social/family responsibilities. As anxiety levels heightened, productivity levels decreased due to low motivation, lack of support, and distractions. Given previous research on how anxiety can negatively impact cognitive functioning, including attention and concentration (i.e., Robinson et al., 2013; Shields et al., 2016), these results are not surprising. However, participants faced additional challenges in adjusting during stay-at-home orders, as more than half indicated they worked on their dissertations outside the home prior to the pandemic; the upheaval of the pandemic created new issues for dissertation writers as they had to navigate distractions and lack of connections while trying to be productive from home.

Society was not prepared financially, socially, or emotionally for a global pandemic event such as COVID-19. Two years later, we are still adjusting, but on a positive note, we learned the importance of knowing how and when to pivot. Therefore, in the face of barriers associated with a public health crisis or other crises, students can cope and do a workaround to remain resilient and persist. Graduate programs can offer help by acknowledging the need for social connections and resource access for doctoral students—these needs are necessary even outside of a pandemic. However, perhaps the pandemic has helped to shine a light on underlying, existing issues during the dissertation that can negatively impact a writer's progress. Institutions must recognize the need for social connections, access to resources, and the importance of empathy and flexibility to help students persist and complete their programs.

## References

- Almuraqab, N. A. S. (2020). Shall universities at the UAE continue distance learning after the Covid-19 pandemic? Revealing students' perspective. *International Journal of Advanced Research in Engineering and Technology (IJARET)*, 11(5).  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7366799/>
- American Psychological Association. (2020). *Anxiety*. <https://www.apa.org/topics/anxiety>
- Badenhorst, C. M. (2018). Emotions, play and graduate student writing. *Canadian Journal for Studies in Discourse and Writing/Rédactologie*, 28, 103–114. <https://doi.org/10.31468/cjsdwr.625>
- Barry, K. M., Woods, M., Warnecke, E., Stirling, C., & Martin, A. (2018). Psychological health of doctoral candidates, study-related challenges and perceived performance. *Higher Education Research & Development*, 37(3), 468–483. <https://doi.org/10.1080/07294360.2018.1425979>
- Black, R. (2012). The dissertation marathon. *Contemporary Issues in Education Research*, 5(2), 97–104. <https://doi.org/10.19030/cier.v5i2.6926>
- Blum, L. B. (2010). The “all-but-the-dissertation” student and the psychology of the doctoral dissertation. *Journal of College Student Psychotherapy*, 24(2), 74–85.  
<https://doi.org/10.1080/87568220903558554>
- Boals, A., & Banks, J. B. (2020). Stress and cognitive functioning during a pandemic: Thoughts from stress researchers. *Psychological Trauma: Theory, Research, Practice, & Policy*, 12(S1), S255–S257.  
<https://doi.org/10.1037/tra0000716>
- Boice, R. (1994). *How writers journey to comfort and fluency: A psychological adventure*. Praeger.
- Boukhentache, S. (2021). Dissertation writing amid Covid-19: Challenges, consequences, and responses. *Psychological & Educational Studies*, 14(2), 1129–1143. <https://www.dirasat-nafsiyat-wa-tarbawiyat.com/index.php/DNWT/article/view/333>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Brown, S. G., Tenbrink, A. P., & LaMarre, G. (2019). Performance while distracted: The effect of cognitive styles and working memory. *Personality and Individual Differences*, 138, 380–384.  
<https://doi.org/10.1016/j.paid.2018.10.025>
- Browning, M. H. E. M., 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.0245327>
- Byrom, N. (2020). COVID-19 and the research community. The challenges of lockdown for early-career researchers. *eLife*, 9. <https://doi.org/10.7554/eLife.59634>
- Chirikov, I., Sofia, K. M., Horgos, B., & Jones-White, D. (2020). Undergraduate and graduate students' mental health during the COVID-19 pandemic. *UC Berkeley SERU Consortium Reports*.  
<https://conservancy.umn.edu/handle/11299/215271>
- Dominguez, R. (2006). Completing the dissertation: It's not only about academics. *College Teaching Methods & Styles Journal*, 2(2) 21–24. <https://doi.org/10.19030/ctms.v2i2.6871>
- Donohue, W. J., Lee, A. S.-J., Simpson, S. Y., & Vacek, K. (2021). Impacts of the COVID-19 pandemic on doctoral students' thesis/dissertation progress. *International Journal of Doctoral Studies*, 16, 533–552. <https://doi.org/10.28945/4818>

- Elmer, S. J., & Durocher, J. J. (2020). Moving student research forward during the COVID-19 pandemic. *Advanced Physiological Education, 44*(4), 741–743. <https://doi.org/10.1152/advan.00153.2020>
- Evans, T. M., Bira, L., Gastelum, J. B., Weiss, L. T., & Vanderford, N. L. (2018). Evidence for a mental health crisis in graduate education. *Nature Biotechnology, 6*(36), 282–284. <https://doi.org/10.1038/nbt.4089>
- Farrer, L. M., Gulliver, A., Bennett, K., Fassnacht, D. B., & Griffiths, K. M. (2016). Demographic and psychosocial predictors of major depression and generalized anxiety disorder in Australian university students. *BMC Psychiatry, 16*(241). <https://doi.org/10.1186/s12888-016-0961-z>
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50*(5), 992–1003. <https://doi.org/10.1037/0022-3514.50.5.992>
- Galanti, T., Guidetti, G., Mazzei, E., Zappalà, S., & Toscano, F. (2021). Work from home during the COVID-19 outbreak. The impact on employees' remote work productivity, engagement, and stress. *Journal of Occupational & Environmental Medicine, 63*(7), e426–e432. <https://doi.org/10.1097/JOM.0000000000002236>
- Hargrave, S. (2021). "Students were writing dissertations on mobile phones": How a laptop loan scheme transformed one university. *The Guardian*. <https://www.educate-nigeria.com/students-were-writing-dissertations-on-mobile-phones-how-a-laptop-loan-scheme-transformed-one-university-educating-tomorrow/>
- Holley, K. A., & Gardner, S. (2012). Navigating the pipeline: How socio-cultural influences impact first-generation doctoral students. *Journal of Diversity in Higher Education, 5*(2), 112–121. <https://doi.org/10.1037/a0026840>
- Holmes, B., Waterbury, T., Baltrinic, E., & Davis, A. (2018). Angst about academic writing: Graduate students at the brink. *Contemporary Issues in Education Research, 11*(2), 67–72. <https://doi.org/10.19030/cier.v11i2.10149>
- Holzweiss, P. C., Walker, D. W., Chisum, R., & Sosebee, T. (2020). Crisis planning for online students: Lessons learned from a major disruption. *Online Learning Journal, 24*(2), 22–37. <https://doi.org/10.24059/olj.v24i2.2135>
- Hughes, E. K., & Gullone, E. (2008). Internalizing symptoms and disorders in families of adolescents: A review of family systems literature. *Clinical Psychology Review, 28*(1), 92–117. <https://doi.org/10.1016/j.cpr.2007.04.002>
- Hurt, S., Woods Ways, E., & Holmes, B. (2022). Wait! Don't quit! Stay with your doctoral program during the global pandemic: Lessons learned from program completers. *Journal of Advancing Education Practice, 3*(1). <https://openriver.winona.edu/jaep/vol3/iss1/2>
- Janke, K., Wilby, K. J., & Zavod, R. (2020). Academic writing as a journey through "chutes and ladders:" How well are you managing your emotions? *Currents in Pharmacy Teaching and Learning, 12*(2), 103–111. <https://doi.org/10.1016/j.cptl.2019.11.001>
- Jiang, M., Arrambide, M., & Munoz, A. (2021). Effective practices in facilitating nontraditional adult learners' dissertation writing in an online doctoral program. *Journal of Educators Online, 18*(3). <https://doi.org/10.9743/JEO.2021.18.3.6>
- Johnson, R. L., Coleman, R. A., Batten, N. H., Hallsworth, D., & Spencer, E. E. (2020). The quiet crisis of PhDs and COVID-19: Reaching the financial tipping point. *Research Square*. <https://doi.org/10.21203/rs.3.rs-36330/v1>

- Klocko, B., & Marshall, S. M. (2017). Dissertation completion: No longer higher education's invisible problem. *Journal of Educational Research and Practice*, 7(1), 74–90.
- Klocko, B. A., Marshall, S. M., & Davidson, J. F. (2015). Developing practitioner-scholar doctoral candidates as critical writers. *Journal of Higher Education Theory and Practice*, 15(4), 21–31. [http://www.na-businesspress.com/JHETP/KlockoBA\\_Web15\\_4\\_.pdf](http://www.na-businesspress.com/JHETP/KlockoBA_Web15_4_.pdf)
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.
- Lim, J., Covrig, D., Freed, S., De Oliveira, B., Ongo, M., & Newman, I. (2019). Strategies to assist distance doctoral students in completing their dissertations. *International Review of Research in Open and Distributed Learning*, 20(5), 192–210. <https://doi.org/10.19173/irrodl.v20i5.4532>
- Liu, C., Wang, L., Qi, R., Wang, W., Jia, S., Shang, D., Shao, Y., Yu, M., Zhu, X., Yan, S., Chang, Q., & Zhao, Y. (2019). Prevalence and associated factors of depression and anxiety among doctoral students: The mediating effect of mentoring relationships on the association between research self-efficacy and depression/anxiety. *Psychology Research and Behavior Management*, 12, 195–208. <https://dx.doi.org/10.2147%2FPRBM.S195131>
- Liu, M., & Abliz, A. (2019). Anxiety and sources of anxiety in Chinese doctoral students. *Journal of Higher Education and Science*, 9(3), 640–650. <https://dergipark.org.tr/en/pub/higheredusci/issue/61500/918373>
- Lorenzetti, D. L., Shipton, L., Nowell, L., Jacobsen, M., Lorenzetti, L., Clancy, T., & Paolucci, E. O. (2019). A systematic review of graduate student peer mentorship in academia. *Mentoring & Tutoring: Partnership in Learning*, 27(5), 549–576. <https://doi.org/10.1080/13611267.2019.1686694>
- Mair, R. G., Onos, K. D., & Hembrook, J. R. (2011). Cognitive activation by central thalamic stimulation: The Yerkes-Dodson Law revisited. *Dose Response*, 9(3), 313–331. <https://doi.org/10.2203/dose-response.10-017.Mair>
- Maldonado, L. G., Dolfi, J. J., Bartlett, II, J. E., & Bartlett, M. E. (2021). Forward momentum: Providing supportive space for EdD students' dissertation progression through weekly online writing sessions. *Journal on Transforming Professional Practice*, 6(3), 13–20. <https://doi.org/10.5195/ie.2021.186>
- Maloney, E. A., Sattizahn, J. R., & Beilock, S. L. (2014). Anxiety and cognition. *WIREs Cognitive Science*, 5(4), 403–411. <https://doi.org/10.1002/wcs.1299>
- McCauley, K. D., & Hinojosa, A. S. (2020). Applying the challenge-hindrane stressor framework to doctoral education. *Journal of Management Education*, 44(4), 490–507. <https://doi.org/10.1177/1052562920924072>
- Mellifont, D., Smith-Merry, J., & Scanlan, J. N. (2016). Pitching a Yerkes-Dodson curve ball? A study exploring enhanced workplace performance for individuals with anxiety disorders. *Journal of Workplace Behavioral Health*, 31(2), 71–86. <https://doi.org/10.1080/15555240.2015.1119654>
- Micciche, L. R. (2020). *Dissertation assistance during COVID-19*. Inside HigherEd. <https://www.insidehighered.com/advice/2020/08/04/phd-students-need-more-support-their-dissertation-writing-opinion>
- Ogilvie, C., Brooks, T. R., Ellis, C., Gowen, G., Knight, K., Perez, R. J., Rodriguez, S. L., Schweppe, N., Smith, L. L., & Smith, R. A. (2020). *NSF Rapid: Graduate student experiences of support and stress during the COVID-19 pandemic*. [https://www.montana.edu/covid19\\_rapid/updated%20NSF\\_RAPID\\_GraduateStudentExperiences\\_Covid19\\_White\\_Paper.pdf](https://www.montana.edu/covid19_rapid/updated%20NSF_RAPID_GraduateStudentExperiences_Covid19_White_Paper.pdf)



- Ondrusek, A. L. (2012). What the research reveals about graduate students' writing skills: A literature review. *Journal of Education for Library and Information Science*, 53(3), 176–188. <https://www.jstor.org/stable/23249110>
- Orendain, D. J. A., & Djalante, R. (2020). *Six ways the COVID-19 pandemic is impacting students and another six ways they cope with it: Insights from the 2020 cohort of UNU-IAS, Japan*. International Science Council. <https://ingsa.org/covidtag/covid-19-commentary/orendain-unu/>
- Park, J., & Moghaddam, B. (2017). Impact of anxiety on prefrontal cortex encoding of cognitive flexibility. *Neuroscience*, 345, 193–202. <https://doi.org/10.1016/j.neuroscience.2016.06.013>
- Piotrowski, C., & King, C. (2020). COVID-19 pandemic: Challenges and implications for higher education. *Education*, 141(2), 61–66. <https://eric.ed.gov/?id=EJ1313847>
- Pyykkonen, B. A. (2021). Cognitive processes and the impact of stress upon doctoral students: Practical applications for doctoral programs. *Christian Higher Education*, 20(1–2), 28–37. <https://doi.org/10.1080/15363759.2020.1852134>
- Robinson, O. J., Vytal, K., Cornwell, B. R., & Grillon, C. (2013). The impact of anxiety upon cognition: Perspectives from human threat of shock studies. *Frontiers in Human Neuroscience*, 7, Article 203. <https://doi.org/10.3389/fnhum.2013.00203>
- Russell-Pinson, L., & Harris, M. L. (2019). Anguish and anxiety, stress and strain: Attending to writers' stress in the dissertation process. *Journal of Second Language Writing*, 43, 63–71. <https://doi.org/10.1016/j.jslw.2017.11.005>
- Sahu, P. (April 04, 2020). Closure of universities due to coronavirus disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus* 12(4): e7541. <https://doi.org/10.7759/cureus.7541>
- Sala-Bubaré, A., Peltonen, J. A., Pyhältö, K., & Castelló, M. (2018). Doctoral candidates' research writing perceptions: A cross-national study. *International Journal of Doctoral Studies*, 13, 327–345. <https://doi.org/10.28945/4103>
- Salehi, B., Cordero, M. I., & Sandi, C. (2010). Learning under stress: The inverted-U-shape function revisited. *Learning Memory*, 17, 522–530. <https://doi.org/10.1101/lm.1914110>
- Shields, G. S., Moons, W. G., Tewell, C. A., & Yonelinas, A. P. (2016). The effect of negative affect on cognition: Anxiety, not anger, impairs executive function. *Emotion*, 16(6), 792–797. <https://doi.org/10.1037/em00000151>
- Shin, H. Y., Rogers-Shaw, C., Unroe, C., & Zhang, X. (2019). The loneliness of a solitary dissertation writer: Avoiding isolation through a writing community [Conference session]. Adult Education Research Conference, Buffalo, NY, United States. <https://newprairiepress.org/aerc/2019/papers/28/>
- Straforini, C. M. (2015). Dissertation as life chapters: Managing emotions, relationships, and time. *Journal of College Student Psychotherapy*, 29(4), 296–313. <https://doi.org/10.1080/87568225.2015.1074021>
- Stubb, J., Pyhalto, K., & Lanka, K. (2011). Balancing between inspiration and exhaustion: PhD students' experienced socio-psychological well-being. *Studies in Continuing Education*, 33(1), 33–50. <https://doi.org/10.1080/0158037X.2010.515572>
- Suart, C., Suart, T. N., Graham, K., & Truant, R. (2021). When the labs closed: Graduate students' and postdoctoral fellows' experiences of disrupted research during the COVID-19 pandemic. *FACETS*, 6(1), 966–997. <https://doi.org/10.1139/facets-2020-0077>
- Von Gehlen, J., & Sachse, P. (2015). Benefits of distraction. *Social Behavior and Personality*, 43(4), 601–612. <https://doi.org/10.2224/sbp.2015.43.4.601>

- Wang, L., & DeLaquil, T. (2020). The isolation of doctoral education in the times of COVID-19: Recommendations for building relationships within person–environment theory. *Higher Education Research & Development, 39*(7), 1346–1350. <https://doi.org/10.1080/07294360.2020.1823326>
- Zahneis, M., & June, A. W. (2020). *How has the pandemic affected graduate students? This study has answers*. The Chronicle of Higher Education. <https://www.chronicle.com/article/how-has-the-pandemic-affected-graduate-students-this-study-has-answers>

## Appendix

### Screener Questions

1. Are you currently enrolled in a doctoral program working on your dissertation/capstone study? (Y/N)
2. Did you experience stay-at-home orders during the COVID-19 pandemic? (Y/N)

If individual answers “yes,” they will proceed to the survey. If they answer “no” to either question they will receive the following message:

- Thank you for your interest in participating in this study. However, in order to participate you must satisfy the screening criteria. Because you answered “No” to at least one of the screening questions you are not eligible to proceed. Thank you for your time.

### Demographic Survey Questions

- What is your area of doctoral study?
  - Business and Management
  - Public Health and Health Sciences
  - Information Technology
  - Psychology and Counseling
  - Social Work and Human Services
  - Education
  - Criminal Justice
  - Public Policy and Administration
  - Nursing
  - Communication
  - Other (please describe)
- What is your age?
  - 18–29
  - 30–49
  - 50–64
  - 65 and over
- What is your ethnic/racial background?
  - African American/Black
  - Asian/Pacific Islander
  - Hispanic/Latino
  - Native American/American Indian

- White
  - Not Listed (please describe)
  - Prefer not to respond
- What is your gender?
  - Female
  - Male
  - Neither male nor female
  - If you chose “neither male nor female” how do you identify yourself? (short answer)
  - Prefer not to respond
- What type of doctoral program are you enrolled in?
  - Traditional (campus-based)
  - Online
  - Other (Please describe)
    - [If participants select traditional] Was your traditional program impacted by COVID-19?
      - Yes
      - No
    - [If participants select yes] Please describe how COVID-19 impacted your program.

### Survey Questions

For the following questions, please reflect on your dissertation/capstone writing process before any stay-at-home orders put in place in response to COVID-19.

- Where did you typically work on writing your dissertation? (short answer)
- Approximately how many hours did you work on dissertation writing? (short answer)

For the following questions, please reflect on your dissertation writing process during any stay-at-home orders put in place in response to COVID-19.

- Where did you typically work on writing your dissertation? (short answer)
- Approximately how many hours did you work on dissertation writing? (short answer)

Which of the following best describes your productivity before and during any stay-at-home orders?

- I was more productive before stay-at-home orders
- I was more productive during stay-at-home orders
- My productivity stayed the same before and during stay-at-home orders

Please describe what factors influenced your productivity (either positively or negatively) during stay-at-home orders. (short answer)

For the following questions, please reflect on your anxiety before any stay-at-home orders put in place in response to COVID-19.

- How often did you experience anxiety? (Never, Sometimes, Frequently, Daily)
- What were your sources of anxiety? (short answer)

For the following questions, please reflect on your anxiety during any stay-at-home orders put in place in response to COVID-19.

- How often did you experience anxiety? (Never, Sometimes, Frequently, Daily)
- Where were your sources of anxiety? (short answer)

Please describe what factors influenced your anxiety (either positively or negatively) during stay-at-home orders. (short answer)

Please share anything else about your dissertation/capstone writing experience during COVID-19 that you would like to share. (short answer)



The *Journal of Educational Research and Practice* is a peer-reviewed journal that provides a forum for studies and dialogue about developments and change in the field of education and learning. The journal includes research and related content that examine current relevant educational issues and processes. The aim is to provide readers with knowledge and with strategies to use that knowledge in educational or learning environments. *JERAP* focuses on education at all levels and in any setting, and includes peer-reviewed research reports, commentaries, book reviews, interviews of prominent individuals, and reports about educational practice. The journal is sponsored by The Richard W. Riley College of Education and Leadership at Walden University, and publication in *JERAP* is always free to authors and readers.