Exploring Scholarly Productivity, Supports, and Challenges of Multinational Women Graduate Students During a Global Pandemic

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ABSTRACT

The onset of the COVID-19 pandemic led to shifts in higher education globally. This study reports the tensions multinational women graduate students experienced due to the change in delivery methods caused by the pandemic. Additionally, they examined how the students felt about their changing roles and lived experiences. This study highlights areas that institutions should address along with the type and level of support provided to their graduate student population. The authors recommend that institutions focus on providing equitable resources for graduate students, help to develop a support network, both in-person and online, provide resources to maintain a healthy work-life balance, and provide outlets to reduce the stress involved in graduate study.

Keywords: academic support, COVID-19, dissertation, doctoral students, graduate students, higher education, pandemic research, women academics

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INTRODUCTION

In March 2020, higher education institutions shifted face-to-face instruction to online and remote delivery due to the COVID-19 pandemic. As a result, faculty and students experienced multiple disruptions from their routines and had to adapt to the "new normal" of the pandemic (d’Orville, 2020; Rapanta et al., 2021). This shift exposed some of the nuances of the graduate student and faculty mentor experiences that were not apparent when classes were face-to-face. These distinctions include graduate students' varying roles and associated institutional demands, relative power, access to resources, and the
discrepancy in institutional and personal support between faculty and graduate students serving the university in official roles (Gammel & Rutstein-Riley, 2016; Nyquist et al., 1999).

With the increasing focus on engaging students and facilitating effective learning via new modes of delivery, the struggles of graduate students, assistants, and others employed in supplemental faculty/staff roles were overlooked, making them vulnerable (Jenei et al., 2020; Wang et al., 2020). While those serving in these roles were often granted some of the same resources as full-time employees, they are generally not considered when it comes to providing a full range of needed resources, from equipment and supplies to mentoring and general support.

Perhaps due partly to the lack of support, graduate and professional students expressed that the pandemic has impaired their ability to complete their degrees on time, according to the Center for Studies in Higher Education (Chirikov et al., 2020). The expected delays ranged from adding one term to their academics (24%) to uncertainty if or how much of a delay would be needed (34%). In sharing the reasons for the expected delay in completion, students reported being distracted (52%), barriers in conducting research (43%), and barriers for presenting research and networking (35%).

This study aimed to explore multinational women graduate students' lived experiences using a qualitative research design that enabled sharing the participants' perspectives and creating meaning from the collected data (Merriam, 2009). Multinational means from many nations and involving many people (Merriam-Webster, n.d.). It is a polycentric term, whereas international is ethnocentric. The term multinational is inclusive as research on domestic and international always tends to create an in-group vs. out-group (us vs. them) dichotomy. In this time of division, we see it more prudent and beneficial for our and our readers' well-being to use terminology that connects us.

Descriptive phenomenology was used to explore how multinational women graduate students described their academic experiences since the onset of the pandemic. The researchers specifically examined how these students described their experience of working and learning in the time of the pandemic and what kind of support, if any; they received from institutions of higher education and other entities.

**LITERATURE REVIEW**

**Graduate Students' Experiences with Expectations in the Academy**

The uncertainty experienced during the pandemic had significant and widespread negative consequences for students. In a comprehensive survey of graduate students from public institutions across the United States, Oglivie et al. (2020) found that the pandemic created critical challenges for participants. A third of the respondents reported mental health issues, a decrease in economic security with increases in food and housing insecurity for a quarter of the respondents, and disruptions in childcare for the 18% of parents in that group. Mental health challenges correlate to an even higher degree (Wang et al., 2020). In their study of 2031 participants from Texas A&M University, 48.14% scored in the range of moderate-to-severe depression, 38.48% had moderate-to-severe anxiety, and 18.04% had suicidal thoughts. For an overwhelming majority of participants (71.26%), their stress/anxiety had increased during the pandemic. More than half of them indicated that they could not cope with the stress related to their current situation.

Moreover, students receive graduate teaching or research assistantships intended to help them support themselves as they study, learn university expectations, and establish a teaching-mentoring
opportunity. Yet, as Malveaux (2004) points out, graduate assistants in American universities have the lowest status, often teaching multiple courses with heavy grading loads and little pay. While students in the Ogilvie et al. (2020) study felt supported by their faculty, many described feeling unsupported by university administration, specifically those in graduate assistant roles. Of the graduate students interviewed, only 11% said they felt "very supported" by the university administration, while 37% responded they felt "very supported" by their faculty and advisors.

Women graduate students often find themselves having to fulfill multiple roles while pursuing graduate education. For example, a case study by Younes and Asay (1998) of eight women graduate students at an American university found that the participants struggled with several challenges. These factors included finding a balance between being thought leaders in their professions, personal financial security, maintaining familial commitments, and dealing with resentment from others regarding their academic pursuits. Ultimately, the women felt torn between their personal and professional lives.

Negotiating these roles may even be more challenging for international students. Le et al. (2016) found that while international women graduate students from several countries had to negotiate the same roles as other women graduate students while studying in the United States; they also had other challenges to overcome, including language barriers and cultural differences. However, those interviewed found the experience as international graduate students to be valuable enough to persist.

In addition to the cultural struggles, international and domestic women in academia in the United States feel isolated and more excluded than their male counterparts (Wiest, 1999), and international women graduate students even more so (Le, 2016). Collectively, women graduate students often report feeling overlooked for opportunities to engage with senior faculty in discussions, receiving less critical feedback, and exclusion from research co-authoring opportunities (Weist, 1999). Additionally, they express concerns regarding safety, finances, representation, and mental wellness.

The struggles to balance life and the academy persist throughout graduate education. For example, Nyquist et al. (1999) found doctoral students in Research I institutions and master's students in comprehensive institutions in the United States often struggled with learning and understanding the nuances of life in the academy. The study further concluded that graduate students found explicit messages from the university regarding expectations for excellence in teaching to contrast with the implicit messages that privilege research productivity in tenure decisions. These mixed messages led graduate students to struggle with finding a balance that would enable them to succeed. Thus, graduate students reported that they "[saw] themselves as alone, facing down the odds and slaying the dragons along their path by themselves" (p. 23). With this bleak outlook on the progression from graduate students to faculty, many students leave their degree program and the academy. Analysis of data from the Ph.D. Completion Project found that the completion rate ten years after students begin their doctoral program in the United States is 56.6% (Sowell et al., 2008). More currently, Ogilvie et al. (2020) found that more women (35%) than men (27%) reported having to extend time in their program of study as a result of complications from the pandemic. The need for additional time in an academic program makes mentoring relationships essential to seeing students complete their degrees and transition to professional fields. Thus, the struggles women face in academia across the globe can make academic pursuits difficult on many levels, which may be made more challenging during a global pandemic when various connections to support groups may be less readily available.
Mentoring Relationships

The advisor-advisee relationship may be vital to some national and international graduate students' success in completing their education in the United States (Dodson et al., 2006) and in China (Liu et al., 2019). Some students find their advisors very close and supportive, while others find them distant and unapproachable (Dodson et al., 2006). Several studies have shown that mentoring guides students through university, department, and unspoken expectations (Brown, 1985; Kogler-Hill et al., 1989). Furthermore, these mentoring relationships are personal and reciprocal, especially for indigenous students (Chew & Nicholas, 2021). In China, mentoring programs often have a structure and focus that helps guide a student through different aspects of their graduate education (Liu et al., 2019).

Students entering these mentoring relationships often bring a variety of concerns, interests, and skill levels, while faculty has their own set of expectations. In some cases, there is a disconnect between faculty and student expectations. For example, Dodson et al. (2006) found that in American universities, master's students were excited about the possibilities of graduate school but were concerned about living up to expectations. Similarly, the Ph.D. students were concerned about being overwhelmed and struggled with their role relating to the mentor. The mentors, however, focused on following university and scientific procedures while helping the student become independent for the future. Nevertheless, both student groups expressed concern regarding their time management abilities, writing abilities, workload, and realizing overall program and faculty mentor expectations.

Faculty actively involved in mentoring graduate students strive to provide the right mix of motivation, feedback, and support for the students they are mentoring. Yet, as Gammel and Rutstein-Riley (2016) point out, the act of mentoring often falls into a relationship, is a power imbalance which can lead to women graduate students being marginalized. In their analysis of six mentoring relationships among women, the researchers found three primary mentoring relationships: a learning relationship, a collaborative relationship, and a joining relationship which extended beyond the research goal to include connections beyond academics and the profession. This led the researchers to conclude that relational mentoring that promoted mutual growth served both the women advisors and women graduate students better than the power dynamic found in traditional mentoring.

Mentoring may be more valuable for international women graduate students. This group reported turning to professors as a vital connection due to being without their home support networks (Le et al., 2016). The women graduate students mentioned they built positive relationships with their faculty advisors via knowledge of the academic area and navigating personal challenges. Regarding specific disciplines, Cline et al. (2020) found that women graduate students in agriculture education reported perceiving they were entering a male-dominated field where they lacked representation in mentors; however, they found peer support encouraging.

For many graduate students, seeking a mentor may be a difficult task. According to Waldek et al. (1997), graduate students in the United States had trouble starting a mentoring relationship with faculty. These students reported that faculty members were distant, unapproachable, or reluctant to enter into mentoring relationships. In China, many mentors treat their students as part of their family, thus building a bond that lasts beyond the time in school (Liu et al., 2019). As technology has improved, mentoring has evolved to include digital communication along with maintaining elements of traditional face-to-face communication. However, the pandemic removed some elements of mentoring as graduate students could...
not just stop by a mentor's office during office hours but had to arrange for connectivity along with a quiet space.

The Impact of Distance Learning

In the wake of the pandemic, one of the major changes was the overwhelming majority of faculty and students that were suddenly teaching and learning online. Even before the pandemic, those who had experience teaching online or participating in a fully online degree program had many barriers to overcome to reach academic success. Müller (2008) explored the promises made by universities such as flexibility and access for online education in 20 online women students (nine U.S. based undergraduate and 11 graduate). The participants expressed that personal growth, peer and faculty support, and feeling challenged were significant reasons they persisted in obtaining their degree. Barriers to degree completion included existing responsibilities, lack of connection with the faculty, technology, and feeling overwhelmed.

The impact of distance learning on graduate student stress has been somewhat explored. Furlonger and Gencic (2014) found that the stressors for on-campus and distance learning graduate students from Australia, Hong Kong, and Singapore were similar. In a later study, Silinda and Brubacher (2016) reported that distance learning brought about unique stressors for graduate students enrolled in a South African program. However, the themes that were reported as stressors for students completing their graduate degree via distance learning were the same as those reported by on-campus learners: the need for more support, the need for more critical feedback, the need for guidance on how to maintain a work-life balance and the uncertainty regarding the writing process. Consequently, as beneficial as technology is, the digital divide remains and creates issues for students without ongoing access to campus-based hardware and software. It is clear that while distance learning has enabled universities to expand education, this method of content delivery also has a unique set of stressors that should be explored at the national and international levels.

RESEARCH METHOD

To explore multinational women graduate students' lived experiences, we utilized a qualitative research design which allowed us to share the participants' perspectives and create meaning from the collected data (Merriam, 2009). We used descriptive phenomenology to explore how the participants described their academic experiences since the onset of the pandemic. The purpose of phenomenological inquiry is to discover the essential meanings of participants' shared lived experiences to arrive at a deeper understanding of the studied phenomenon (van Manen, 2007). Furthermore, phenomenology ensures flexibility for analyzing how adversity influences professional development.

Descriptive phenomenology focuses on interpretation and seeks meaning from understanding the ontology of human experiences (Creswell, 2013; Moustakas, 1994). This approach to phenomenology requires us as researchers to describe the participants' lived experiences. This is done while simultaneously bracketing personal prejudices by engaging in reflective interpretation to fully understand the true essence of the participants' lived experiences (Giorgi, 2009; 2012). Descriptive phenomenological data analysis moves from the raw data to the identification of meanings to organizing these into patterns and writing the results of themes related to the focus and context of the study.
As with most other methods of qualitative analysis, findings are reported and described contextually with direct quotes from the participants (Giorgi, 2012). Three unique benefits of using descriptive analysis to better understand the lived experiences of a phenomenon are: the holistic and authentic insights received, its appropriateness when the researchers are not directly involved in the phenomenon but are observers, and its claim of scientific rigor (Giorgi, 2009). Thus, using descriptive phenomenology, meanings have been found from the multinational women graduate students' experiences; they have been described in the text and organized into themes.

Data Collection

The collective research group consists of 16 multidisciplinary, academic women from around the world, self-titled the COVID G.A.P [Gendered Academic Productivity], who collaborated to explore the lived experience of fellow academic women. Our collective focus is on how the pandemic disparately impacts academia, particularly gendered biases. We met virtually via Zoom and developed a questionnaire focusing on the academic experiences of women during the pandemic. As a sub-group, our cohort focused specifically on questions about the participants' academic/scholarly expectations, supports, challenges, perceptions of productivity, and self-evaluations about graduate students.

All our participants were recruited from the I Should Be Writing (ISBW) Facebook group after receiving approval from the group administrator and the Institutional Review Board (IRB) of Adler University using purposive sampling. Although there are many benefits to using purposive sampling, one of the main limitations is that the data may not be representative of larger groups. We recruited from this pool for several reasons. First, the members of the group and the researchers have shared identities as academic women with the common goal of scholarly productivity. Secondly, this group hosts global, academic women at varying levels of their educational attainment, which made it ideal for participant recruitment. Lastly, this group was the space where our research team coalesced. We used a qualitative, eight-item open-ended survey to address the following research questions:

1. How do multinational women graduate students describe their experienced academic support in light of the COVID-19 pandemic?
   a. Do multinational women graduate students who are also employed in roles such as professors, adjuncts, lecturers, instructors, teaching/research assistants, and staff perceive they received more institutional level support than graduate students only?

The ISBW Facebook group is dedicated to helping women, and non-binary academics find support in their academic writing journey. Although communication in the group is primarily conducted in English, the group members are multinational and ethnically diverse. Participants are already confirmed to be committed to scholarly writing and identify as a woman or non-binary based on the membership guidelines for ISBW.

A message was sent to the group's Facebook administrator requesting permission to recruit. The message described the purpose and the significance of the study, the criteria for participants, and the participants' expectations. The questionnaire was delivered via Qualtrics, and all participants completed an informed consent immediately before starting the survey. No compensation was provided for participation. Furthermore, the participants' self-selected pseudonyms for anonymity and they are used throughout the remainder of the manuscript.
Participants

Our target population was women who were members of the ISBW Facebook group that further identified as graduate students during the onset of the pandemic. The ISBW membership criteria matches participant criteria for participation in this study.

The data from this study comes from 32 multinational women graduate students. These participants were selected because they responded that they were currently in a graduate program working towards degree completion. With this being a global group, we had quite a diverse sample, with 44% of our participants coming from the United States and 56% from Australia, Bulgaria, Canada, France, Norway, Scotland, South Africa, and the UK. The participants' composite demographic information is presented in Table 1. In addition, Table 2 shows a breakdown of the participants' countries of residence and their highest degree attained at the time of the study. This demographic information helps to understand the participants subjectively and contextually in the cross-cultural analysis process. Finally, the participants reported areas of study are presented in Figure 1.

Table 1

Participants Demographic Information

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Participants Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=</td>
<td>32</td>
</tr>
<tr>
<td>Ages</td>
<td>24-45</td>
</tr>
<tr>
<td>Ethnicities</td>
<td>26 White; 6 BIPOC (Black, Indigenous, and Persons of Color)</td>
</tr>
<tr>
<td>Gender Identity</td>
<td>Female/Women</td>
</tr>
<tr>
<td>Highest Degree</td>
<td>5 Bachelor's Degrees; 27 Master's Degrees  *These degrees are at different levels depending on the participant's country of residence. All of the participants were graduate students working on Master's Thesis or Doctoral degrees at the time of the study.</td>
</tr>
<tr>
<td>(Completed)</td>
<td></td>
</tr>
<tr>
<td>Relationship Status</td>
<td>9 Single; 21 Partnered; 2 Other</td>
</tr>
<tr>
<td>Employee Status</td>
<td>13 Full-Time; 7 Part-Time; 12 Other/Non-Disclosed</td>
</tr>
<tr>
<td>Student Status</td>
<td>18 Full-Time; 14 Part-Time</td>
</tr>
</tbody>
</table>

Table 2

Participants Country of Residence and Highest Level of Education

<table>
<thead>
<tr>
<th>Participant</th>
<th>Country of Residence</th>
<th>Highest Level of Education Completed (at time of the study)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amy</td>
<td>Australia</td>
<td>Honours</td>
</tr>
<tr>
<td>Kaz</td>
<td>Australia</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Shon</td>
<td>Australia</td>
<td>Bachelor (Hons)</td>
</tr>
<tr>
<td>Evie</td>
<td>Australia</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>TSVM</td>
<td>Bulgaria</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>ToffeeMaky</td>
<td>Canada</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Name</td>
<td>Country</td>
<td>Degree</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>Gabi Mandl</td>
<td>Canada</td>
<td>BSC Chemistry</td>
</tr>
<tr>
<td>Claire</td>
<td>Canada</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Schmeadow</td>
<td>Canada</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Bextrad</td>
<td>France</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Garja</td>
<td>Norway</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Regina Phalange</td>
<td>Norway</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Dog-Mum</td>
<td>Scotland</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Abe</td>
<td>South Africa</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Dee</td>
<td>South Africa</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Anna</td>
<td>UK</td>
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</tr>
<tr>
<td>KS</td>
<td>UK</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Tired Brit</td>
<td>UK</td>
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</tr>
<tr>
<td>Martina</td>
<td>United States</td>
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</tr>
<tr>
<td>Nell</td>
<td>United States</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>M</td>
<td>United States</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>STG</td>
<td>United States</td>
<td>Master's Degree</td>
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<tr>
<td>Beckella</td>
<td>United States</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Nightskey</td>
<td>United States</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Suze</td>
<td>United States</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Andrea</td>
<td>United States</td>
<td>Bachelor's Degree</td>
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<tr>
<td>Peyton</td>
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<td>Master's Degree</td>
</tr>
<tr>
<td>Florence</td>
<td>United States</td>
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</tr>
<tr>
<td>Frosty</td>
<td>United States</td>
<td>Master's Degree/EDS</td>
</tr>
<tr>
<td>Catherine McCatty</td>
<td>United States</td>
<td>Bachelor's Degree</td>
</tr>
<tr>
<td>Darwino</td>
<td>United States</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>Amyrlin</td>
<td>United States</td>
<td>Master's Degree</td>
</tr>
</tbody>
</table>

**Figure 1**
Word Cloud of participants areas of study
Data Analysis

Our team aggregated the raw data from Qualtrics to remove any potentially personally identifying information. Analysis of the responses included line-by-line coding and finding significant themes using descriptive phenomenology processes (Giorgi, 2009). To make the data analysis process easier and more efficient, we used Dedoose qualitative analysis software (https://www.dedoose.com) to code the responses. Dedoose was used to help find common statements and quotations, create codes, and find emerging themes. We then wrote a description of what the participants in the study experienced as multinational women graduate students evaluating their scholarly productivity, supports, and challenges during a global pandemic. Lastly, adhering to phenomenological research approach traditions, we wrote a structural description of how the experience happened and a composite description of the essence of the experience.

To demonstrate trustworthiness (Creswell, 2013) and dependability (Lincoln & Guba, 1985) in the present study, our research team employed three methods of verification: (a) peer review, (b) bracketing/bridling, and (c) considered alternative/rival explanations. First, the non-analyzing members of our research team acted as peer reviewers for debriefing to help with understanding and interpretation of the study and to help the readers better resonate with the findings. Secondly, bracketing/bridling was used throughout the study, clarifying researcher bias and creating transparency, which resonates well with the readers. Lastly, we were sure to consider and discuss negative or discrepant material opposing the themes to further increase the findings’ authenticity.

Researcher Positionality

The current researchers all identify as women who hold doctoral degrees. Two researchers identify as Caucasian, and one identifies as a Black woman. All three of the researchers are citizens of the United States. While our fields of study are diverse, we elected to study women graduate students due to seeing a need to explore the lived experiences of women graduate students and help foster an environment where future women graduate students can and will be better prepared for entering the academy than we were. We acknowledge and appreciate the work done by women academics who have come before us and, in some cases, served as mentors for us on our academic journeys. Throughout data analysis, the researchers identified, discussed, and questioned any biases in order to maintain a neutral data analysis.

RESULTS

Three broad themes emerged from the participants' responses: (1) Who am I? Role identity as a woman, an academic, a student, and a scholar, (2) That's a plus: Supports and networks, and (3) An uphill battle: Challenges and trials. We found that the participants have diverse perceptions of their supporting networks during the global pandemic; however, the challenges outweigh the supports, as represented in Figure 3.
Theme 1: Who am I? Role Identity as Women, Students, Academics, Researchers, and Scholars

The participants in this study identified as several categories such as women, females, graduate students, doctoral/Ph.D. students, teachers or educators, academics, scholars, researchers, mothers, partners/wives, advisors, employees, mentors, mentees, parents/caregivers, friends, and peers/colleagues. It was evident that varying identities intersected and influenced the participants’ perceived levels of scholarly productivity, support, and challenges during the onset of the pandemic.

Beckella (USA) talked about finding her identity as a scholar during her graduate studies relating to her mentor.

It wasn't until my doctoral studies that I truly had a female mentor. I’d had professors that were women, but I'd never had a female mentor...Working with S completely changed how I understood myself as a scholar. I was able to ask her questions that I wasn't able to ask even my advisor because she was navigating academia as a women, too.

Graduate students must reconcile multiple, sometimes conflicting roles and challenging experiences that can have long-lasting social, emotional, and cognitive effects (Leshem, 2020). Bextrad (France) confidently was able to navigate her role as a Ph.D. student and mother during the pandemic, standing up for herself at times it felt necessary when comparing her experiences to her peers' concerning communications with her academic supervisor.

I feel like everyone is very much doing the best they can...my (male) Ph.D. supervisor did send a group email at the start of the pandemic that we would have time for loads more research, and we'd get loads of writing done, that we should see it as a great opportunity. His other students are 22 years old with no family or professional responsibilities. His own children are old enough to look after themselves.
Academics can include roles such as professors, adjunct professors/instructors, and teaching, graduate, or research assistants. Balancing professional responsibilities as academics and scholarly expectations as a graduate student can be taxing on ground and downright traumatic during a global pandemic.

When asked about teaching expectations since the pandemic, the participants had mixed reactions. Amy (Australia) mentioned the benefit of "condensed classes," which modified her teaching time. Claire (Canada), however, perceived that there was "lots" of support for teaching faculty during the pandemic but "none for [graduate students]." She went on to say that university "emails about balance" they received after the fact was "tokenistic." Gabi Mandl (Canada) talked about having more time to focus on research and scholarly tasks as her "administrative" and academic tasks such as being a "teaching assistant [TA]" were postponed during the pandemic.

Regardless of the role that the graduate student is in, there are several responsibilities and tasks that they are expected to complete. Having the proper supporting networks should promote academic success in all areas.

**Theme 2: That's a Plus: Supports and Networks**

The participants in this study mentioned various forms of social and emotional support and networks that helped them continue their productivity. This support came from the institutions, academic supervisors, student peers, and from increased use of social media and self-care tactics. The participants further mentioned special accommodations such as virtual dissertation defenses that allowed graduate students to continue with their scholarly activity.

**Institutional Support**

Dyke (2020) points out that "graduate students -- who exist within professional and graduate fields with vastly different requirements and expectations -- are often left to decipher how such messages apply to them and are merely instructed to consult their advisers." However, graduate students support institutional operations at a salary that is significantly lower than faculty and universities benefit from their teaching, research, and service but these students have been left with unclear guidance during the pandemic. Only one participant, Regina Phalange (Norway), described an authentic increase in institutional support outside of her direct advising and dissertation committee team:

The department head didn't really communicate with me much before the pandemic, but now he sends weekly emails about how things are going and new/updated plans. He has also reached out to me personally to see how I am doing...the university has declared Ph.D. students a "vulnerable population", so basically, administration is doing everything they can to help us. I think they will be pretty lenient this year during our evaluations with research and whatnot...[admin] have definitely been reaching out to me and asking how I'm doing, what they can do to make things better for me, just saying hello... much, much more than usual.
Tech Support and Professional Development

The primary source of institutional support that the participants mentioned receiving from their institutions of higher learning came as tech support or increased professional development training as institutions shifted to the virtual learning environment. Florence (USA), Nell (USA), and M (USA) described their increased use of the video conferencing software Zoom to help employees familiarize themselves with the necessary resources to work remotely. Beckella (USA) specifically states her program "has instituted monthly Zoom check-ins, and there's a weekly departmental Zoom gathering for those who are still more closely connected to campus." Having increased "online support," according to Shon, has been beneficial for the transition to working remotely. Others, such as Catherine McCatty (USA), described "MANY" forms of training and support. "You name it," she states, "we have access to it, teaching, technology, writing workshops, online data collection workshops..."

Academic Supervisor/Advisor

After the onset of the pandemic, academic supervisors and advisors had to not only transition to virtual instruction but had to help their graduate students navigate the changes that the pandemic was going to cause on their programs and research plans. Regarding support, we were able to identify increased levels of academic support and maintained levels of support from academic supervisors and advisors.

Shon (Australia) describes her supervisors as having been "supportive" and "more flexible" throughout the pandemic, stating that "there's a level of leniency regarding the impacts of the pandemic on deadlines and mental health." KS (UK) describes her supervisors as "supportive" as they have "continued to meet/discuss work regularly during the pandemic." Anna's (UK) supervisor has been "kind and understanding," having "complemented [her] on completing so much during the pandemic." She states he "really cares about how [she's] doing and asks whether [she's] coping." Gabi Mandl's (Canada) supervisor has been very "respectful about the pandemic and constantly says if [they] do not feel comfortable going to the lab, to stay home and he will respect it."

Graduate Student Peers

Although minimal for this group, having the increased support of graduate student peers during the challenges and changes of the pandemic proved beneficial to a couple of the participants. STG (USA) talked about how she had been able to adjust but is not sure her peers are.

…my other grad student friends are all feeling more overwhelmed and are not doing that, so I often find myself in a place where it seems like nobody is on the "same page" as I am. I have spent more time talking with my lab members about adjusting to working from home and things like that, which has been helpful.

Tired Brit (UK) described interaction with her peers as valuable to those involved even with visible gender differences in the group.

In terms of my studies, I see far more interaction from my female peers, support, and engagement in maintaining the collegial aspect of our studies. In a recent coffee break, a male student came for 20 mins, talked for 16, and was given support for 4. The remaining 20 mins were discussions between the five female participants, equally split, a give and take.
Social Media & Self-Care

Finding support can come in various ways, and for some of the participants, those were via social media and connecting as self-care. As the pandemic progressed and people were mandated to social distance and quarantine in some instances, social media was the only outlet and method of communication that they had with the rest of the world. To maintain some semblance of sanity, participants had to find unique and creative ways to provide self-care and remain academically productive.

Amyrlin (USA) appreciated Facebook memes about not "feeling pressured to be uber productive during this time." She stated, "That was a pressure I was [putting] on myself, and having the community rally together to tell us all via social media that it's okay not to become super productive really helped prevent that from becoming an added stressor." Nightskey (USA) made sure to "follow strong women on social media" whereas Tired Brit (UK) became a strong woman on social media by organizing and facilitating online doctoral support networks.

I set up and run a biweekly doctoral coffee break originally through zoom and have now been given a channel on my institutional Teams account. In 2 months, it has become a solid 20 doctoral students' key support network. Much of that burden falls on me but I am happy to be making a difference. I also have weekly research sounding boards with like-minded Ph.D. students. She has further been able to access and take advantage of classes and sessions that she might not have been able to virtually prior to the pandemic.

Eventbrite has become a site of scholarly debate with numerous free or very reasonable events with luminaries such as Slavoj Zizek, Gloria Steiner, Ian MacGilchrist. I went to a coffee house event at the Royal Society of the Arts which would normally have been closed to me last week, did a masterclass on negotiation, sat in on a psychoanalytic panel.

Schmeadow (Canada) received the opportunity to participate in a "virtual dissertation boot camp, and that has increased [her] productivity." She further went on to say that "while [she and her] colleagues are not meeting in person, [they] have scheduled online meetings and touch base with each other every 25 minutes or so. This has been a positive benefit to the stay-at-home orders". Dog-Mum (Scotland) has found support for writing through both the ISBW group and Rowena Murray's Facebook writers' group. She stated, "This has helped me to write at least once a week in a structured retreat, and if it hadn't been for this, I would probably be no further forward with my doctorate since March."

During the pandemic, few participants discussed the benefits of increased attention to self-care on their scholarly productivity. Anna (UK) discussed the benefits that breaking away from her desk has on her scholarly activity.

I...chose to take some time for self-care every day because it makes me feel much better. It took a few months, but I am now convinced that spending less but more focused hours behind my desk actually increased my productivity instead of decreasing it...I limited the hours to make more time for self-care (taking a walk, reading a non-academic book, dancing, biking on the home-trainer, napping). This has actually made me more productive. I found that when I'm well-rested and don't try to spend 9 hours in a row focusing, I can do a lot more in the time that I do spend behind my desk.
Amyrlin (USA) shares how a simple trip to the coffee shop cleared her mind and allowed her to "escape" as "some days [she] gets crabby being in the house all the time, but now that [their] coffee shops have reopened, [she] can take [her] laptop and escape for a couple of hours." She goes on to say that "without that occasional escape, [she] starts exhibiting signs of depression and anxiety."

**Virtual Dissertation Defenses**

Before the pandemic, doctoral dissertation defenses were traditionally delivered face-to-face on a college campus or at least in the same room, in front of a dissertation committee (Chang, 2007). There has been little deviation from this format until the social distancing guidelines were mandated. As such, social media became not just a place of entertainment and social support but a necessary means to connect with faculty, colleagues, and peers. Beckella (USA) explained that with her program now, "[dissertation] defenses can now be done via Zoom. Previously, there were no exceptions to the rule that defenses must be done with all parties physically present in the same room. This is huge, as [she] lives quite far from the city in which [her] institution is". Saving students and committee members' resources such as time and money, the virtual dissertation defense may be the new normal for doctoral programs of study.

**Theme 3: An Uphill Battle: Challenges and Trials**

These participants' challenges presented as reductions of support from the institutions, supervisors/advisors, and their student peers. Furthermore, a major area of concern for the participants was the ideology of the "toxic academic environment" and its impact on their physical and mental health.

**Reduced Institutional Support**

The reduction of institutional support was briefly highlighted by a couple of participants in the study. KS (UK) spoke to the challenges of limited access to campus resources when "the library closed (and is still closed now) so [she was] limited to online resources for [her] thesis." On the other hand, Tired Brit (UK) suffered significant institutional support loss before and after the onset of the pandemic.

...last year, [my] University shifted its criteria to only include those who placed more than 30% of their time on research which as the director of learning and teaching was impossible. As a result, the support structure was considerably lessened. When COVID hit, those structures were further compromised and, with my choice to step down and take voluntary severance, removed.

**Reduced Academic Supervisor/Advisor Support**

The reduction of support from academic supervisors/advisors was a significant challenge the participants addressed in their responses. For example, Abe (South Africa) found that her employers have been far more "understanding" of the challenges associated with the pandemic than her Ph.D. supervisor. Nell (USA) had issues before the pandemic started, which were exacerbated as her "advisor was very hands-off and [she] didn't have much of a Ph.D. cohort so [she] already felt difficulty finishing [her] Ph.D. pre-pandemic". Similarly, Nightskey (USA) mentioned limited academic support during this transition as well.

We used to have weekly in-person meetings with my faculty adviser…After March, I have had…sporadic emails from my advisor if I reach out first. [Their] emails back are usually one short sentence. If that…I have not heard from my department at all.

STG (USA) understands that academic supervisors and advisors have had to navigate their work/home life balance through the pandemic as well:
My clinical and research supervisors/advisors both have kids at home and are managing a lot, so I feel less connected to them and more uncomfortable reaching out for support. When we do have meetings, they are distracted by kids and figuring out how to reopen the university, and my concerns/writing progress feel like they matter less, and I feel like a burden sometimes.

**Reduced Graduate Student Peer Support**

Participants reported on the reduction of support of their student peer support and the influence that has had on their scholarly productivity during the pandemic. M (USA) mentioned that her graduate school peers are a big part of her support system and being distant from them has been hard. Anna (UK) has "not been in touch with her fellow Ph.D. students and has no idea how productive they have been."

Suze (USA) discussed missing conducting research with her lab mates after everything transitioned online in the Spring as she stated she was "spending more time individually writing and analyzing data, rather than doing so with [her] lab or collecting data in [their] community." Gabi Mandl (Canada) was also "extremely close" to her lab mates. She described losing contact with them as being "very strange and somewhat sad at first as [she] used to be very reliant on their guidance and emotional support when things were going badly."

Anna (UK) and Amyrlin (USA) spoke specifically of experience with Ph.D. program student peers. Anna discussed missing contact and failed attempts to reconnect with fellow Ph.D. student peers:

I used to see them often around seminars and lectures and in the library, and we would talk about our research at lunch afterward, but since the pandemic has started, this contact has faded. I have tried to reach some of them but did not get any response...

Amyrlin feels a general distancing from her peers, including an inability to share successes with them.

[My] Ph.D. student cohort has always been supportive, but lately, I feel like I shouldn't share as much with this group. I've had some early successes with publications, and I feel kind of like that's playing into a general sense of distancing within the group, especially with those who have struggled more to progress. Or maybe we're all just going our separate ways at this point.

Anyway, I feel like this group is less of a support structure lately.

**Physical and Mental Health Challenges**

Scholarly productivity and academic output have been diminished for this group due to lapses in physical and mental health. Since the pandemic began, Beckella (USA) has been able to find her groove and become productive; however, "for the first month, it was a really rough adjustment mentally, physically, and productivity-wise" for her. Amy (Australia) identified as feeling "isolated and a bit depressed" throughout this pandemic, where Dee (South Africa) described her mental health as "pretty much non-existent." She went on to state that "even though there is time, [she] feels overwhelmed and simply unable to focus" on producing academically or scholarly. The changes in higher education due to the pandemic have caused Tired Brit (UK) to struggle with "a quagmire of self-doubt and self-flagellation" while job seeking in the "worst crisis" in several years.

Claire (Canada) described her mental health as being "low," and her "brain is absolutely exhausted." She went on to say:

I have to take sleeping meds much of the time to work through the anxiety and got to a bit of a place of acceptance that while I have done nothing but work hard for five years and while I built up an exceptional CV it is now potentially not enough as I have lost a lot of "productivity" over
the last six months. I may have to leave academia, but I am not sure that is the worst. The productivity required does not motivate original work these days; just output after output. I am coping partly by focusing on the negatives of academia as I may likely not get a job within it. Anxiety has proven to be a real deterrent in scholarly productivity for these participants. Amyrln (USA) was "less motivated by [her] usual interests (including research and writing) due to general anxiety and emotional exhaustion." STG (USA) spoke about the impact of her anxiety on her scholarly productivity and was highly aware of the privilege of not being responsible for another during this difficult time.

...I have days where I am more anxious and worried and find it hard to focus. On the other hand, I know that feeling productive is a bit of a coping mechanism for me when I am feeling anxious or overwhelmed, so I have actually made progress on a lot of projects (mostly writing)...

Evie (Australia), too, spoke of the mental health challenges that the pandemic has presented on her doctoral journey. The stress of limited support from partners and family members "made [her] consider giving up." The strain on her mental health impacted her perceived "ability to be a good parent."

**Toxic Academic Environment**

Suggesting that higher education and academia are toxic is not news to those in; yet, it has been recently suggested but not validated that the pandemic is amplifying academia's toxic nature. A few of the participants discuss some of their toxic experiences since the pandemic began.

Nightskey (USA) was required to "work on campus even during lockdowns," while KS (UK) was expected to complete "UNPAID online training AFTER term finished on their [own] time." Although these may seem small scale in terms of severity of toxicity, there are levels to it. Tired Brit (UK) discussed a variety of topics that academics are challenged with.

A feeling of time being compressed, expectations higher, timescales shorter - write a white paper based on your research for next week - really? However, coupled with BLM, there is also a reckoning - the complacency of the institution is being challenged, and because everything is online, it is far more difficult to gatekeep the respondents. This, at least, is a positive. However, the financial implications are dire, and I do not expect my funding to continue...

Claire (Canada) feels that academia is a "toxic sludge which has just become thicker through this all." She went on to say:

I don't expect handouts, but this is certainly just a drop of me by my colleagues as I can't produce in the ways I usually do. Support for parent researchers has been to abandon them, and as someone that does not have a job, I fear how it's now going to happen as I haven't published as much as "I should" through this despite the fact that I barely sleep and work and parent at all times...My child's mental health has suffered from the pandemic, and my attention needs to go there... it's just been absolutely traumatizing to try to function in an already toxic institution...

**DISCUSSION**

Early in the pandemic, scholars predicted that women academics would experience tremendous hardships regarding professional stagnation during the pandemic in the form of decreased research productivity (Flaherty, 2020, Kibbe, 2020). However, this prediction has been disputed as studies find that while overall production patterns may appear the same, discrepancies are apparent when analyzed by discipline (Jemieleniak, et al, 2022). Even before the pandemic, doctoral students' professional formation involved difficult experiences such as: isolation, alienation, and loneliness as part of the first steps into becoming an academic (Lehem, 2020). This team sought to understand how multinational women graduate students described
their perceived academic support in light of the pandemic, and in doing so, three key themes emerged. It was discovered that role identity significantly mattered regardless of whether they were identifying as a woman, student, academic, educator, mother, and any intersection or variation of these, influencing their scholarly productivity. Continuing to seek an advanced degree in the shadow of a global pandemic has allowed these women to see some of their greatest supports, networks, and strengths take center stage.

Although being a graduate student is a unique challenge within itself that is already fraught with adversity, the pandemic exacerbated that for some participants. Factors such as isolation and loneliness, stress, conflicts and lack of support, work/life imbalance, struggles with time management, and reduced motivation and burnout are all associated with graduate school (Allen et al., 2020; Kalubi et al., 2020; Yusuf et al., 2020). Add in navigating a global pandemic and the personal experiences that come with that, and it could be a powder keg for graduate students. With reduced support from institutions, academic advisors/supervisors, and student peers, the graduate school journey becomes even more lonely, isolating, and exhausting. Aristovnik et al. (2020) conducted a large-scale study (30,383 students from 62 countries) on how students perceive the impact of the first wave of COVID-19 crisis on various aspects of their lives. They found that students' perception of a higher workload affected their performance in the new teaching environment made necessary by the pandemic. The findings also showed that female students and students who faced financial problems were affected more by the pandemic both emotionally and in terms of personal circumstances. Key factors influencing students' satisfaction with the role of their university are also identified.

Graduate school, more specifically doctoral programs of study are stressful, demanding, and can be quite isolating and lonely; thus, student peer support is significantly valuable for predicting factors such as satisfaction and successful completion (Tompkins et al., 2016). In considering whether there were any variations in support for the participants that were employed in roles such as professors, adjuncts, lecturers, instructors, teaching/research assistants, staff, nothing was reported. However, faculty members were expected to be far more flexible in their students' teaching responsibilities, thus increasing their workload.

Though there is a sense of nervousness and fear of the unknown, our study found that resilient eagerness drives these participants to continue on their paths. The participants acknowledge that they have worked hard, but they also attribute their success to the support from those closest to them. Lastly, the benefit of social support such as the ISBW Facebook group has proven helpful beyond measure, especially amid a global pandemic. The specialized support provided by social relationships such as those through social media sites may be essential to student success. Social media is associated with several categories, such as academic engagement, mentoring, professional development, career exploration, and funding opportunities, to name a few. Although there is a significant body of literature that says broad and unspecified social media use such as doom scrolling is highly detrimental to mental health (Pruulmann-Vengerfeldt, 2020); targeted, specialized, and private social media use has provided scholarly and academic support that prior generations were not able to access (McLaughlin & Sillence, 2018).

**IMPLICATIONS & LIMITATIONS**

As with all studies, this study has its limitations. The respondents of this study came from an online community devoted to academic writing, which encouraged women to support women. This could have resulted in a preponderance of responses from people who struggle with writing and expected significant support from their institutions. Additionally, this study only looked at responses from women graduate students. Arguably, this only tells half of the graduate student story by excluding male graduate students. Future research should look at the support received by all graduate students to compare and complete the picture of the type of support they received during the pandemic.

**CONCLUSION**

The literature (Jenei et al., 2020; Wang et al., 2020) and this study demonstrates that graduate students are vulnerable due to mental unrest, career uncertainty, power dynamics within institutions, work-life balance, and disparities in research funding. The pandemic has exacerbated areas that cause students the most anxiety, resulting
in a wellness crisis among graduate students. Higher education has an ethical and practical responsibility to advocate and provide for student wellness to enable their success. In practical terms, universities should strive to ensure that the same support mechanisms available to faculty are available to graduate students and that access to those systems is communicated clearly and regularly. Additionally, universities should incorporate structures and supports to help graduate students with their self-care and mental health, as many have done for undergraduate students. This should go beyond a general optional check-in to providing access to additional networks for the benefit of graduate students. This should be even more so for those graduate students that work in those professional roles serving the institution.

Graduate students represent the future of the professoriate and many other fields. As such, they are a resource that should be cultivated in their future profession and supported to enable them to succeed. The pandemic has highlighted a disparity that women academics are facing regarding their scholarly productivity due to several internal and external factors. Our participants shared several scenarios describing their experiences and the challenge to be scholarly productive since the pandemic began with a few exceptions. We believe that the experiences of these participants are more common and far-reaching than even the scope of this study extends.

REFERENCES


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