The Experiences of International Doctoral Students During the COVID-19 Lockdown

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ABSTRACT

This study explored the impact of the COVID-19 lockdown on international doctoral students at a US university. It elicited narratives of coping with the lockdown and stress-reducing resources and strategies. The lockdown allowed students to focus on their work, and additional household and child caregiving roles required students to develop innovative coping practices. It also forced students without adequate social networks and community integration to experience more uncertainties. All respondents experienced strong disrupted emotions, e.g., anxiety and sadness. Social closeness was an effective stress antidote. Universities should create programs to expand and nurture students' social networks aligned with their interests and needs. Health policies and programs aimed at preventing and treating stress and burnout among doctoral students should focus on their social environment.

Keywords: coping, emotions, international students, pandemic, student experience

INTRODUCTION

The coronavirus pandemic has disrupted life as we know it. Within a few weeks, the outbreak spread globally, infecting nearly 2 million people and causing over 130,000 casualties (World Health Organization, 2019). In

addition to the spread of fatal diseases caused by this outbreak, inadequate government leadership, the fragility of health systems, and anticipated economic consequences also spread chaos and uncertainty globally. By April 1, 2020, 43% of the world population was in lockdown in more than 80 countries and territories around the world (Marinoni et al., 2020). This lockdown impacted every aspect of life, notably higher education, as educational institutions had to cancel in-person classes because of sanitary measures (Marinoni et al., 2020). Educational institutions were among the first to execute and adequately implement remote learning practices in times of prescribed social distancing. Universities worldwide quickly adapted to the pandemic, taking advantage of prior experiences and technological availability. Nevertheless, many teachers and students had to learn new ways, create new habits, and promptly adapt to new technological platforms.

Research has indicated that doctoral students experience stress mostly related to academic responsibilities and pressures, finances or debt, and poor work/school life balance (Maher et al., 2004). International students, in particular, have expressed experiencing additional challenges: language and cultural barriers, social isolation, financial hardships, difficulties finding jobs postgraduation, and personal psychological adjustment, such as homesickness, loneliness, and lost identity (Aubrey, 1991; Tseng & Newton, 2002). The lockdown due to COVID-19 added to the challenges of doctoral students, making it an important area of exploration.

In this context, the study set out to explore how this disruption impacted international doctoral students studying in the U.S. We adopted the definition of international students given by the United Nations Educational, Scientific and Cultural Organization [UNESCO] Institute for Statistics for this study, which states that they are "students who have crossed a national or territorial border for the purpose of education and are now enrolled outside their country of origin." The U.S. hosted 957,475 international students in 2020, close to 15% of the world's international student population (UNESCO, 2020), making it a good case. This exploratory case study attempts to describe the experiences of international doctoral students during the coronavirus lockdown, particularly exploring what resources and coping mechanisms were practical for international doctoral students to cope with the situation. Although several quantitative research studies on graduate student stress and coping mechanisms have been conducted (El-Ghoroury et al., 2012; Holahan, 1979; Mechanic, 1962), there is a lack of in-depth qualitative research on international doctoral students, specifically in the field of social work. Qualitative research is vital because it enables an in-depth understanding of how international students internalize stressful events and identify individualized matching stressors with coping strategies and resources.

LITERATURE REVIEW

Stress among International Doctoral Students

Across the literature and for a long time, doctoral students have been consistently reported to experience high stress levels due to the emotional demands and the emotional labor implicit in their jobs (World Health Organization [WHO], 2020). In addition to family responsibilities, students meet with two additional sources of stress: the academic environment and the clinical work environment. The transition from student to the workforce is associated with uncertainty, fear, and feelings of incompetence in entering a new role (WHO, 2020). To put up with all the responsibilities, students prevalently get fewer hours of sleep. A recent study with 2683 graduate students, including doctoral students, showed that they slept 6.4 hours per night on average (Allen et al., 2020). This is crucial information since lack of sleep is a significant risk factor for anxiety and depression (Allen et al., 2020). Other factors that compound anxiety include long working hours, challenges in adapting scientific knowledge to practice, limited contact with family, poor support, and lack of leisure time (Duchscher & Myrick, 2008). Research suggests that perceived role conflict and emotional demands are "the most important and most consistent risk factors" for psychological distress among this group (Johannessen et al., 2013, p. 12). Students dealing with family issues during their doctoral programs often experience significant additional pressure (Maher et al., 2004).

Various countries estimate the attrition rate for doctoral students to be 50%; depending on the field of study, it varies from 30% to 70% (Council of Graduate Schools, 2010; Groenvynck et al., 2013; Rigler et al., 2017; Vassil & Solvak, 2012). According to Beeler (1991), the adjustment process of becoming a doctoral student places a psychological burden that overwhelms some students. Parenting responsibilities, the emotional toll of a divorce or death, and the financial security associated with success are diversions that might lead doctoral students to exhibit concerns regarding stress and emotional and psychological well-being (Moyer et al., 1999).

International students experience additional stress coping with cultural differences during their stay in the United States (Heggins & Jackson, 2003; Rahman & Rollock, 2004; Schmitt et al., 2003). Evidence suggests that international students experience more intense stress than their fellow American students (Groenvynck et al., 2013). Research shows that stressors closely associated with international students fall into two categories: stressors related to the academic and educational environment and stressors in the sociocultural and personal domains (Aubrey, 1991). Cena et al. (2021) found that differences in the education system and issues affecting social relations on campus contributed to educational challenges, and language and cultural barriers contributed to adjustment challenges for international

students. Educational challenges include adaptation to the academic environment, the pressure of academics with an obligation to succeed, an adjustment to a foreign university system and the skills needed for success, and long hours of study and work (Akhtar & Kroener-Herwig, 2019). Scholars point to a high level of social alienation concerning the personal level and sociocultural challenges (Owie, 1982); psychological changes daily in their acculturative experience (Akhtar & Kroener-Herwig, 2019); general living adjustment, such as becoming accustomed to life in America and its food, housing, environment, and transportation; personal and psychological adjustments, such as homesickness, loneliness, or feelings of isolation and lost identity (Tseng & Newton, 2002). Notably, "physical wellness could positively influence emotional wellness," and academic challenges could negatively influence emotional wellness (Koo et al., 2021, p. 801). Scholars highlight financial factors as essential stressors during international students' adjustment to the new environment (Oropeza et al., 1991). Chen (1999) argues that social isolation and alienation may restrict the social support necessary to energize and refine students' internal coping resources and increase stress.

Stress and Coping

Our postmodern culture (Maturana & Davila, 2008), namely, the achievement society (Han & Butler, 2015), values productivism (Marcuse group, 2006); therefore, the notion of stress can be "positive" (eustress) when it leads to success in fulfilling such demands. Since the human body reacts to complex life challenges and events such as diseases (Selye, 1976), the boundaries between eustress and distress are unclear. The literature often describes stress as a person's response mechanism or a survival reaction to an adverse event (Folkman, 2008; Ursin & Eriksen, 2004). Cannon´s classic observations show that threat perception activates the sympathetic nervous system and triggers an acute stress response that prepares the body to fight or flee (Cannon, 1915). Schauer and Elbert's (2010) work reflects a more contemporary understanding of the fight or flight response. Their elaborated model denotes physiological/psychological/behavioral responses to threats as the 'defense cascade.' They describe a series of stages that individuals exposed to threat or trauma may go through, including freeze, flight, fight, fright, flag, and faint. Other authors suggest that stress is a response syndrome of adverse effects that develops because of prolonged and increased pressures that an individual's coping strategies cannot control (Ursin & Eriksen, 2004).

Doctoral students may be particularly susceptible to chronic stress and precariousness, as they run a high risk of having or developing mental health problems, especially anxiety and depression, due to factors such as organizational policies, work-life imbalance, job demands, and career prospects outside academia (Levecque et al., 2017). Evidence from studies

with international students supports the view that coping strategies influence adaptation, sense of life satisfaction, performance, and well-being (Struthers et al., 2000). Endler (1997) describes three basic coping styles: task-oriented, emotion-oriented, and avoidance-oriented. A considerable body of research demonstrates that social support can buffer the impact of stress on numerous outcomes, notably when the type and amount of support offers an excellent fit for recipient needs (Uchino & Birmingham, 2011). Mallinckrodt and Leong's (1992) study on international graduate students' stress and social support reveals that social support directly affects psychological adjustment and buffering effects on life's stresses. El-Ghoroury et al. (2012) assessed a national sample of 387 graduate students (54% of whom were doctoral students) in the field of psychology to examine stressors, coping strategies, and barriers that interfered with their optimal functioning. The results revealed that 70.5% of respondents experienced stress mostly related to academic responsibilities and pressures, finances or debt, and poor work/school and life balance. The major coping strategies discerned were friends' support, family support, talking to a classmate, regular exercise, and pursuit of hobbies. A clear outcome of these studies is that social support, particularly from the academic program (student–faculty relations, quality of instruction, curriculum flexibility, tangible support, and relations with other students), is essential to the well-being of international students. These studies suggest that the lack of social support may be a source of stress.

The Study Context

Although several quantitative studies have investigated graduate student stress and coping (El-Ghoroury et al., 2012; Holahan, 1979; Mechanic, 1962), the personal experiences of doctoral students have largely remained underexplored (Amran & Ibrahim, 2012). Most stress and coping studies have ignored the situational and life context of the participants and their appraisals of how they could realistically cope (Lazarus, 2000). Moreover, stress remains a salient personal experience of doctoral students (Pappa et al., 2020). There are limited qualitative studies on stress and international doctoral students, and there is a lack of in-depth qualitative research on the subject, particularly in social work. In-depth qualitative research facilitates understanding how international students internalize stressful events and helps identify individualized matching stressors with coping strategies and resources (Chen, 1999; Dickerson et al., 2014). Given the unprecedented events of the current pandemic and the effect of the lockdown on international social work doctoral students, studying cross-cultural individualized coping strategies and resources is essential. It may help expand the body of knowledge. Toward this goal, this study posed the following research questions:

1) What are the experiences of international doctoral students during the COVID-19 lockdown?
2) What coping strategies and resources did international doctoral students identify as effective during the COVID-19 lockdown?

Through these questions, the study aims to describe the experiences of international doctoral students during the COVID-19 lockdown and to document the coping strategies and resources that they found to be effective in dealing with the circumstances originating from the pandemic.

Theoretical Framework

This research is grounded in psychology and social psychology. The research questions are guided by appraisal theory, particularly the theoretical framework propounded by Lazarus and Folkman's Transactional Model of Stress and Coping (Lazarus & Folkman, 1984). The central proposition of appraisal theory is that the interpretation of events, rather than events themselves, triggers individuals' reactions to stress. The origin of this theory was stress studies conducted during the Second World War. Lazarus and colleagues' seminal work has been an essential reference for studies on stress since 1950. In the early 1980s, Lazarus collaborated with Folkman and developed the transactional model of stress and coping (see Figure 1). Since then, this framework has critically guided stress and coping research. Numerous studies on a wide variety of different populations and contexts have used this framework.

According to Lazarus (2000, 2001), this theory captures four fundamental processes: appraising, coping, the flow of actions and reactions, and relational meaning. Appraising evaluates our ongoing and changing relationships with others and the physical environment. Coping is our effort to manage adaptational demands and the emotions they generate. The flow of actions and reactions comprises interpersonal exchanges among the participants in an encounter generating one or more emotions; this flow provides continuous feedback to both participants about the potential implications of the changes that are taking place between them. Furthermore, relational meaning concerns the significance (meaning) of what is happening in the person-environment relationship for the individual (Lazarus, 2006).

Each individual observes the circumstances constructing meaning by his or her relationship with the environment. Therefore, depending on the observant's appraisal, a particular situation could be categorized as stressful or not. Lazarus's theory of stress states that a person experiences stress when they perceive that the demands of a situation exceed the personal and social resources they can mobilize (Lazarus, 2000, 2001). Coping strategies suggest reappraisal processes of the experienced emotion and the judgments of the events or the troubled relationship with the environment. In other words,

coping is seeking the most serviceable meaning available in an encounter and acting on it. It involves supporting realistic actions while allowing the person to view the encounter in the most favorable way possible. The appraisal process shapes the discrete emotions generated (Scherer, 2019). Lazarus and Folkman's Transactional Model of Stress and Coping asserts that coping processes mediate the relationships between stress and outcomes, including personal and social resources and the coping strategies and reappraisals required to regulate stress. Critical components of this model include primary and secondary appraisals of stress and available resources that inform emotion and problem-focused coping strategies. This framework integrates experiences, resources, and coping styles and is adequate and valuable to underpin both research questions. In Figure 1, the appraisal process begins when an individual assesses his or her welfare in light of potential challenges, threats, harm, or loss; this primary appraisal constitutes the perceived stress.
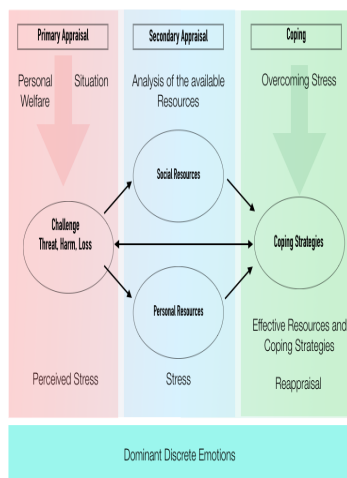
In a secondary appraisal, the availability of social and personal resources is evaluated and determines stress. A third step to overcome this stress is applying a coping strategy congruent to the challenge and the available resources. Finally, successful coping strategies and effective resource management allow a final reappraisal of the situation. All stages trigger a particular discrete emotion that guides the individual for further actions and reflections.

Figure 1
Lazarus and Folkman's Transactional Model of Stress and Coping (authors' elaboration)

RESEARCH METHOD

The COVID-19 lockdown binds this exploratory study; the study examines the impact of the lockdown on international students (N=6) pursuing doctoral education in the School of Social Work at a University on the east coast of the U.S. The interviewees of this study had diverse cultural backgrounds, maturities in their academic processes, and levels of community integration (see Tables 1 and 2 for interviewees' demographics and profiles). This study took an exploratory approach because of the novel situation caused by the COVID-19 pandemic and the presence of unexplored areas that the study intended to examine.

Table 1

International Students' Demographics

	Demographic Information					Cultural Background			
Interviewee	*Gender*	*Age*	*Marital Status*	*Number of Dependents*	*Yearly Income*	*Ethnicity*	*Country of Origin*	*First Language*	*Religion*
1	Female	35	Married	1	Less than 10K	Latin American	Mexico	Spanish	None
2	Male	42	Married	1	20-29 K	Latin American	Chile	Spanish	None
3	Male	35	Married	2	20-29 K	Latin American	Chile	Spanish	Catholic
4	Female	51	Married	2	20-29 K	Latin American	Chile	Spanish	Catholic
5	Male	35	Married	0	10-19K	Asian	Nepal	Nepali	Hindu
6	Female	28	Married	1	10-19K	Asian	India	Hindi	Catholic

Table 2

International Students' Profiles

Interviewee	Maturity in the Ph.D. program		Community Integration				
	Year In the program	*Course Work Status*	*Current Engagement*	*Living Abroad*	*Living with Family*	*Other memberships or affiliations besides the University*	*More than One Specific Community Affiliation*
1	5	Completed	Teacher	No	Yes	Yes	Yes
2	4	Completed	Teacher	Yes	Yes	Yes	Yes
3	4	Completed	Freelance	Yes	Yes	Yes	-
4	3	Completed	Teacher	Yes	Yes	Yes	Yes
5	2	Ongoing	Full-time Student	Yes	No	Yes	Yes
6	3	Completed	Full-time Student	Yes	No	No	No

Research Design

The research is qualitative and cross-sectional. It uses a case study approach and design. The study analyzes data from six subunits at a single time. Six international doctoral students constitute subunits of analysis. All international doctoral students come from the School of Social Work from a single university. All doctoral students together and their University represent the unit of analysis. The research considers multiple data sources: field notes, interview transcripts, voice recordings, and video observations. The author collected data during the lockdown by directly accessing interviewees in their homes—their natural settings (Creswell, 2009).

Data Collection

The researcher used an interview guide to conduct in-depth interviews. Using interviews allowed the collection of in-depth information on each participant's unique experience through active questioning. All interviews were conducted and recorded using an online video conference platform (Zoom) and lasted between 50 and 70 minutes. The first author conducted the interviews while he was an international doctoral student, enabling a climate of trust, empathy, and closeness. He video recorded the interviews eliciting participants' narratives on their experiences, including how participants coped under the lockdown due to the COVID-19 pandemic and sought their experiences on resources and strategies to cope with stress. The first author conducted four of these six interviews in Spanish since it was the participants' preferred language and the interviewer was a native speaker of Spanish. Both authors transcribed the interviews verbatim and coded thematically following the principles of appraisal stress theory using a deductive approach to qualitative analysis. The study collected demographic data using an online questionnaire. All data were collected between May and June 2020.

Recruitment

The researchers invited international doctoral students to participate in the study voluntarily. They identified the interviewees through a nonprobability sampling technique (snowballing). They conducted an initial screening to assess whether the participant met all inclusion criteria. Inclusion criteria for participation in the study were (a) full-time international graduate student status; (b) 21 years or older; (c) access to a computer and internet; and (d) fluency in English or Spanish. The authors gave adequate information on the study to potential participants and obtained written informed consent from each participant. The University's Institutional Review Board approved this study (Approval Number: 20.257.01e), ensuring compliance with federal regulations to protect human subjects in research.

Study Sample

The sample comes from the Social Work doctoral students and has equal representation in terms of sex (50% female; 50% male); it has multicultural coverage from several countries of origin (Mexico, Chile, Nepal, and India) and two continents of the global south (Latin-American 67%, Asia 33%). All the interviewees reported being married and having a yearly income between 10,000 and 29,000; four of the six interviewees reported having children, and all six mentioned that English was their second language. Tables 1 and 2 give the profiles and demographic information of the participants.

Data analysis procedure

The study used thematic analysis to examine the data, following six steps advised by Braun and Clarke (2006): becoming familiar with the data; generating initial codes; searching for themes; reviewing themes; defining themes; and writing up. The first author translated all the data from Spanish to English. Both researchers familiarized themselves with the data by listening to and reading the interview transcripts multiple times. The authors used Saldaña's (2009) coding methods for the thematic synthesis of interviews. They used the components of the Transactional Model of Stress and Coping to organize the initial coding framework. The authors independently coded each interview transcript to search for themes, guided by Lazarus and Folkman's Transactional Model of Stress and Coping. They discussed discrepancies in their coding and created a consensus code; the average intercoder reliability for all six interviews was 89%. Trustworthiness was also ensured through member checking: the respondents validated all excerpts used in the study. All interviewees agreed that the results were accurately represented and resonated with their experiences.

RESULTS

The study aims to describe the experiences of international doctoral students during the coronavirus lockdown and identify and document which resources and coping strategies worked for them. Verbatim interview responses are highlighted in this section to ensure the authenticity of responses.

Overall Experiences of International Doctoral Students

According to Lazarus and Folkman's Stress Model, stressful experiences are triggered by a challenge that produces harm, threat, or loss (Lazarus & Folkman, 1984). An obvious threat under the COVID-19 lockdown that mattered to the interviewees was people's health and lives. All interviewees expressed concerns regarding health and care for their families, as evident in the following excerpts:

The impact that has particularly stressed me implies the care of my son. I feel that the greatest costs of the pandemic are being paid by my son and by children in general. I have gone through moments of great guilt in seeing myself like this... *puta madre*! I want to be more with him. (Male, Latin American, 4th year Ph.D. student)

It was a lot of anxiety, a lot of fear, because I do not have a social support system here. I do not know how good my health insurance is. Therefore, if I get hospitalized, what will happen? I have no networks here. No social networks, no safety net financially as well here. Back home, I could always ask someone for money, and they could easily access me so they could transfer money to me easily or they could pay for something easily. Here, I do not know whom to ask for money. (Female, Asian, 3rd year Ph.D. student)

In addition to the threat of getting sick due to the coronavirus and its consequences, additional incremental stress factors are associated with the challenge of the lockdown itself, including worries about family members getting sick, increasing days in confinement, restricted physical activities, lack of access to friends and family, travel restrictions, delay in academic work and overall uncertainties. Such conditions can undermine the ability to focus and function adequately to meet the intellectual demands of any doctoral program. For instance, one interviewee mentioned:

A lot of my supervisors are now assuming that I have a lot of time and I should be very productive because I'm at home. However, the truth is that because there is this constant stress level, because of COVID, I do not feel like working. (...) I am barely working one hour, two hours a day. I'm very distracted. I have never been this distracted in the whole program. (Female, Asian, 3rd year Ph.D. student)

Another example of setbacks and stress came from a Latin American student studying homelessness. In his case, fieldwork during a pandemic was dangerous and not suitable for the transition to an online format. Because of the circumstances, a paid project was canceled, making him unemployed too. He expresses his frustration in the excerpt below:

I see that everyone is losing their jobs and there is nowhere to find a job. This moment would have been ideal for me to sit down and write the thesis, write the results I had, but emotionally I did not have it in me, to be honest. I had time. However, my energy went to my children. [...] I am not depressed, but very discouraged. (Male, Latin American, 4th year Ph.D. student)

Another interesting finding is that layers of risk factors might build on each other. For example, with mandatory online classes, international students no longer had to live in the U.S.; suddenly, they needed to relocate with their families.

However, traveling and moving during a lockdown put students under additional stress as well as at risk; this male student moved twice within three months:

> I do not know if travel will be possible or not… because of the coronavirus situation, everything shifted online, uh, at least for sure, for the summer. Therefore, the plan is now that I will stay here [in a city different from the University's location] with my brother until I get a chance to fly home. I think the underlying idea behind all these changes is not being alone, being with family, being, uh, celebrating your social relationships as much as possible. (Male, Asian, 2nd year Ph.D. student)

> I have never been this distracted in my life. In addition, I do not know if this is because I am burnout, or because it is almost [my] fourth year. It could be that, it could be COVID, it could be a mixture of both. Therefore, it is like one layer on top. Burnout from the end of the program, to not having any social interaction, to the fear of COVID, not sleeping well. (Female, Asian, 3rd year Ph.D. student)

Paradoxically, for some of these international students, the lockdown also provided new unexpected conditions that impacted their priorities and roles. In several cases, these new conditions were a positive catalyst for their studies and academic work, as seen in excerpts below:

> Without the pandemic, it would have never been feasible to do three interviews during one afternoon. I would tell you that it has been a tremendous, tremendous opportunity. (Male, Latin American, 4th year Ph.D. student)

> Therefore, actually, having limited mobility and being locked down because of the coronavirus benefited my work in terms of studies. I was able to do a lot, and I was focused. I was very less distracted. I think that there was a lot of work that I could get done because of the lockdown. (Male, Asian, 2nd year Ph.D. student)

> Therefore, I am saving 6 hours of commute from my classes. Maybe another five hours, making eleven hours of commute that I managed to save because of food delivery services. I'm not sure if I would have followed the same pace, that is, if there had been no pandemic, if I could have finished this article. (Female, Latin American, 5th year Ph.D. student)

Effective Coping Strategies

The interviewees mentioned using various strategies to cope with the lockdown successfully. Among them were venting out, using humor, relaxing, engaging in distractions, actively solving problems by adjusting expectations, seeking support, and communicating with and helping family, friends, and the community, as seen in the excerpts below.

I think the most important thing is communication. Therefore, I have spent maybe more time during the lockdown communicating with my family and friends than I would usually do. (Asian, 2nd year Ph.D. student).

I think [I am getting] a lot of support from the people staying in my house (.) We end up talking a lot in common areas. So talking to them is a huge stress relief emotionally. In addition, currently, because it is warm here, we're also going out on the balcony and drinking. Therefore, we're trying our best to cope with the situation. Talking to people, friends, and family is very helpful. (Female, Asian, 3rd year Ph.D. student)

Every 15 days, I followed up with my therapist during the first month. Then, I had to stop, it was a money issue. I did not want that expense to rebound. I spoke with my therapist, he told me to talk to him whatever happens, obviously at no cost. In addition, I have two therapy groups online as well. (Latin-American, 5th year Ph.D. student)

Passing time, staying patient and talking. Talking shit, really. Yes, I have a friend over here who is good at talking. In addition, we complain together and sometimes a couple of those conversations are very soothing. Finding sort of a scapegoat. (Latin-American, 4th year Ph.D. student)

Of course, I have had to increase my role in the house, that is, cooking. In addition, on the other hand, that has helped me. Now, all this role in the kitchen, for example, cooking, has been like a super important issue for us as a family (Latin-American, 3rd year Ph.D. student).

All international students consistently refined coping strategies by adjusting expectations, adopting new roles, and changing plans. For example, two members of this study are also full-time primary caregivers and responsible for their children and family. They had to adjust their parenting roles with their educational requirements while at home during the lockdown.

At first, it was like a lot of fuss. However, later, the isolation and being away from commitments… allowed me to set my priorities. Therefore, I decided my priority is my daughter and enjoying my daughter, and my Ph.D. (Female, Latin American, 5th year Ph.D. student)

There are these additional roles that you have at home, when you have children or when you have to take care of the house. There is the education of children, which are additional roles that one had not contemplated. (Female, Latin American, 3rd year Ph.D. student)

Other students also experienced complementary roles to fit with family circumstances; for example, this student from Latin America traditionally worked alone at home, but his academic sanctuary was transformed to accommodate homeschooling and share household responsibilities with his wife:

Working from home is particularly comfortable for me, home is where I can write the most, I am not much of a library [person] or [like] being at the office. For me, there was no dramatic change in my work and academic functioning, but there was an important change because my son stopped going to daycare, and my wife also stayed at home. That did have an impact since the three of us... We began to cohabit the space every day, 24/7, and of course that impacted my functioning… (Male, Latin-American, 4th year Ph.D. student)

Table 3 summarizes the effective coping strategies that the interviewees used. This shows that adjusting expectations by prioritizing and being actively involved and close to family and the community are strategies that allow them to keep up with the lockdown in a reasonably good spirit.

Effective Resources

Students identified the following personal resources as effective: practicing meditation, having a sense of humor, watching movies, pursuing hobbies such as gardening, taking care of pets, and engaging in physical and relaxing activities. For example:

I meditate regularly, like every day before breakfast. (...) And yeah, it has always helped me, um. In addition, because that has been helpful, I have incorporated it in my daily life and even in the corona situation, yes. It is always helpful. (Male, Asian, 2nd year Ph.D. student)

I meditate every day in the morning when I wake up at 8. I meditate in the afternoon. I try to block myself when I have intense meetings. I meditate for ten minutes and then another 10 minutes. Meditation and many television series. Many, eh! Play with my son, certainly. With my wife. I do not know, opening a bottle of wine, talking, watching a movie and things like that. (Male, Latin American, 4th year Ph.D. Student)

Using humor is definitely a little bit from my culture, not like, oh Lord. It has been very helpful. Therefore, watching any funny content is definitely useful. It is a useful resource. Therefore, yes, humor is definitely a useful resource. (Female, Asian, 3rd year Ph.D. student)

A resource commonly used by most international students to cope with stress was the use of recreational substances such as tobacco or alcohol, as expressed in the excerpts below:

Table 3

Effective Coping Strategies Used by Interviewees

Interviewee	Emotional Coping		Avoiding Coping		Problem Coping			
	Sense of Humor	*Venting*	*Distraction*	*Relaxation*	*Adjusting Expectations*	*Seeking Support*	*Being in touch with family*	*Helping Others*
1	Yes	Yes	Avoiding news	Playing, gardening, Drinking	Yes	Yes	Yes	Yes
2	Yes	Yes	Watching Series	Drinking	Yes	No	Yes	Yes
3	No	Yes	Playing	Games	Yes	Yes	Yes	Yes
4	Yes	No	Cooking, Movies	Family, dinners, Walking	Yes	Yes	Yes	Yes
5	Yes	No	Movies	Smoking	Yes	Yes	Yes	Yes
6	Yes	Yes	Avoiding, News	Drinking, Chatting	No	Yes	Yes	Yes

There were two or three weeks that I bought a bottle and poured a glass of wine daily. Now I have tequila. (Female, Latin American, 5th year Ph.D. student)

I think our consumption rate has increased; we do not get drunk, but every day I have a beer. (Male, Latin American, 4th year Ph.D. student)

Drinking yerba mate relaxes me. I no longer smoke. When I hang out with friends by Zoom, I sometimes have a couple of drinks, but no, no, I made a regular practice of having yerba-mate to relax. (Male, Latin American, 4th year Ph.D. student)

The study highlights that social resources played a vital role in the well-being of these international students. All interviewees reported their engagement with networks of friends and family, and the internet and social media were essential communication resources. Support and flexibility from advisors, teachers, and university colleagues were crucial for the well-being of these international students. Finally, an interesting finding is the ability and willingness of the participants to support and help others. All interviewees could turn themselves into a resource for other vulnerable groups or friends. For them, social awareness was a practical component for actively coping with and reducing stress. By helping others, they were able to help themselves. For example:

I have dedicated myself to helping my inner circle…I also have helped a friend who is making some family baskets to deliver to people who are in need, although I am not part of the team that delivers. I have helped people who are helping [other] people. I am also a coach for people who are on the front line. (Female, Latin American, 3rd year Ph.D. student)

I have been trying to offer emotional support to my friends whenever they are saying that they cannot deal with it or they're unable to cope with it. (Female, Asian, 3rd year Ph.D. student)

Supporting others and being socially aware are traits these international students exhibited. Another attractive trait is their ability to appreciate and be grateful for unexpected positive outcomes, such as being reunited and close to family members despite the lockdown or unemployment. According to Maslow (1970), gratitude is essential for positive mental health. All students appreciated the benefits and availability of digital communications and online platforms. They highlighted the possibility of conducting research remotely or being in touch with family in their countries of origin. Even having access to food delivery services was highly appreciated by some interviewees for whom having food delivered at home meant a significant reduction of costs and saving time and energy on commute. Being appreciative and reflective of the circumstances and purposely making plans was an effective strategy that allowed the reappraisal of the circumstances, leading to finding unseen new additional resources to cope. Table 4 summarizes the resources effective for this group of international students to cope with the lockdown due to COVID-19.

Table 4

Resources used by Participants to Effectively Cope with the Lockdown

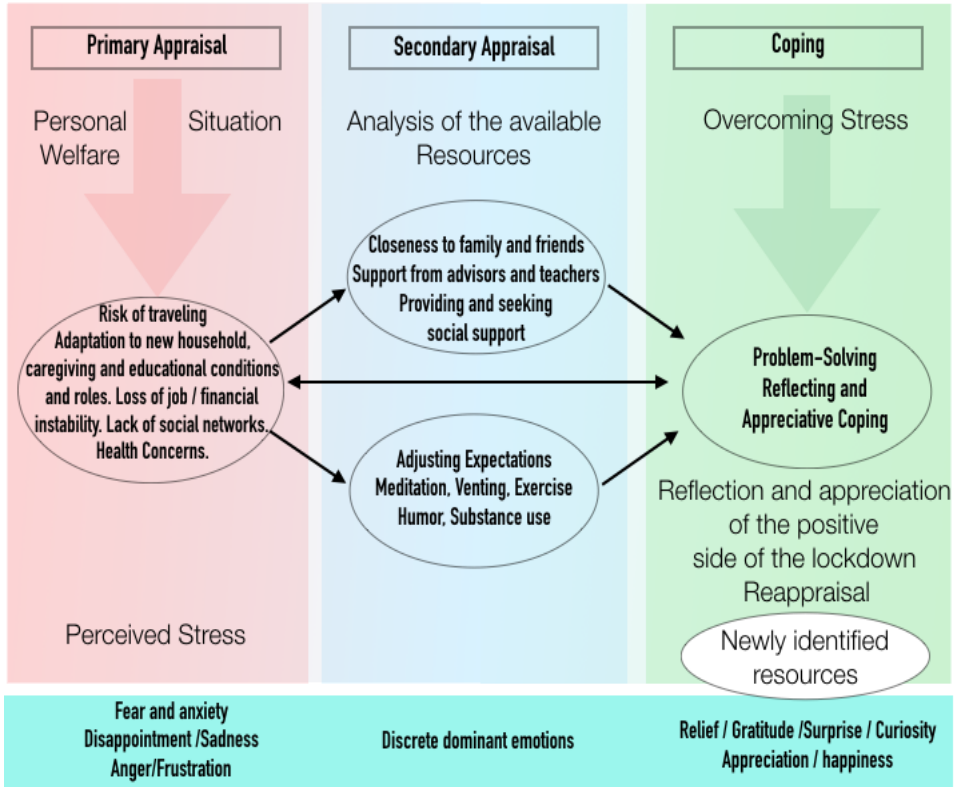| Participant	Personal Resources						Social Resources				
	Therapy	*Mind habits*	*Spiritual Practices*	*Games, Hobbies*	*Exercise*	*Relaxation*	*Social Media*	*Support Groups*	*Friends & Family*	*University Community Support*	*Helping Others*
1	Yes	Humor	No	Having a Pet, Gardening	Spinning	Tequila, Smoking	Yes	Yes	Yes	Yes	Yes
2	No	Mantras Meditation	No	Reading	Yoga	Beer	Yes	No	Yes	Yes	Yes
3	No	Venting	No	No	No	Drinking	Yes	-	Yes	Yes	Yes
4	No	Meditation, Praying	Yes	Movies	Yoga	Smoke, Wine	Yes	-	Yes	Yes	Yes
5	No	Meditation	Yes	Movies	Walking	Smoking	Yes	Yes	Yes	Yes	Yes
6	No	Humor	No	Cooking	Weight	Drinking Smoking	Yes	No	Yes	No	Yes

DISCUSSION AND CONCLUSIONS

Discussion

This study reveals that the primary sources of stress that international students experienced were health concerns, the risks of traveling and relocating, and the loss of jobs, which impacts financial stability. These findings add to Sustarsic and Zhang's (2021) study of international students in the U.S. through COVID-19, highlighting that international students were affected by the unforeseen shift to online learning and travel restrictions. Other sources of stress aligned with risk factors well established in the literature included emotional demands and role conflict. Potential role conflict derived from a new household, caregiving, and educational conditions for all these students. Additionally, aligned with the literature (Chen, 1999; Mallinckrodt & Leong, 1992; Mechanic, 1962; Uchino & Birmingham, 2011), the results show that international students perceived the lack of social networks as a source of stress. The results of this study are consistent with classic observations. For example, "Student's reaction to stress depended on the resources or coping mechanisms that the student possessed and where they were in the social network" (Mechanic, 1962, p. 27). This observation seems to capture the experiences of these six international doctoral students. Mechanic's notion of time and space is also very relevant in this study context. The lockdown experience abroad or in the home country can differ regarding roles and the emotional demands each student faces. These students had more robust social networks in their home countries; being integrated and part of a community was vital. Consistently, across this study's interviews, social awareness and social closeness seem to capture relevant meanings that could be associated with these students' well-being and the welfare of their loved ones. Most participants reported support from faculty members and advisors, congruent with Mallinckrodt and Leong's (1992) study on stress and social support for international graduate students. In the study, Mallinckrodt and Leong (1992) found that student–faculty relations directly affect psychological adjustment and buffer the effects of the impact of life's stressors. The findings are also congruent with El-Ghoroury et al.'s (2012) study, which discerned that social resources such as friends' support, family support, talking to a classmate, and personal resources such as regular exercise and hobbies were the major coping strategies.

Figure 2 summarizes the main findings of the study, the experiences of the international students, and the effective coping mechanisms and resources they found compelling.

Figure 2

Findings Aligned to Lazarus and Folkman's Model of Stress

Primary Appraisal	Secondary Appraisal	Coping
Personal Welfare — **Situation**	Analysis of the available Resources	Overcoming Stress

Risk of traveling Adaptation to new household, caregiving and educational conditions and roles. Loss of job / financial instability. Lack of social networks. Health Concerns.

Closeness to family and friends Support from advisors and teachers Providing and seeking social support

Adjusting Expectations Meditation, Venting, Exercise Humor, Substance use

Problem-Solving Reflecting and Appreciative Coping

Reflection and appreciation of the positive side of the lockdown Reappraisal

Newly identified resources

Perceived Stress

Fear and anxiety Disappointment /Sadness Anger/Frustration	Discrete dominant emotions	Relief / Gratitude /Surprise / Curiosity Appreciation / happiness

The primary appraisal in Figure 2 shows that welfare assessment by international students during the lockdown mainly comprised health concerns, risk of traveling, job loss and financial instability, adaptation to a new household, and educational and caregiving roles as the main challenges, threats, and loss that constitute perceived stress. These primary appraisals lead students to experience unpleasant and constricted discrete dominant emotions such as fear, anxiety, sadness, and anger. In a secondary appraisal, the recognition and evaluation of social resources such as closeness to family and friends; support from advisors, counselors, and teachers; seeking and providing social support; and personal resources such as adjusting expectations, meditation, venting, exercise, humor, and recreational substances were used to cope. Congruent with the challenge and the available resources, these international students applied problem solving, reflective coping, and appreciative coping as the main strategies to overcome stress. These successful coping strategies and effective resource management allowed a final reappraisal of the situation. By showing appreciation and optimism, these international students could discover additional resources, such as online work, home delivery services, finding themselves at home with their loved ones,

etc. Recognizing these new findings makes the students feel relief, gratitude, surprise, curiosity, appreciation, and happiness, all pleasant and expanding discrete emotions.

What is particularly effective for these international social work students is their ability to appreciate the lockdown's positive outcomes and unexpected consequences. They tended to observe positive relationships, stay flexible and optimistic even under hardship, and, more importantly, reflect on how new environmental changes might be helpful given the complexity they and their communities faced. We describe this particular coping style not found in the literature as appreciative coping. For instance, when these students faced role conflicts and emotional demands (Johannessen et al., 2013), appreciating the circumstances allowed them to be flexible. Flexibility is a fundamental trait that allows creativity. Creativity, in turn, leads to positive emotions and the ability of individuals to cope and reappraise their relationship with the environment. Creativity allowed these students to locate new resources at hand. For example, a female student from Asia expressed generally feeling isolated and without enough social networks. Suddenly, the lockdown allowed her to be close to her roommates and to experience relief.

Similarly, another female student highly appreciated saving commute time by staying home and adding delivery services as a new asset. As the environment changes, individuals can observe opportunities and experience hope, a sense of relief, or even a gain from these opportunities. Being open to opportunities means using a reflective coping style, which is described by Akhtar et al. (2019) as a problem-focused strategy that is the tendency to examine causal relationships, plan, and be systematic in the solution of the problems. These international social work students went beyond being exclusively reflective from a cognitive perspective. They showed social and emotional awareness by demonstrating empathy and acting deliberately and purposefully. There is a better term to express their coping style than reflective coping, thus proposing the concept of appreciative coping. For us, appreciative coping is an opportunity-focused coping style. A mix of problem-focused and emotion-focused strategies in the tendency to observe positive relationships by being optimistic and flexible and building the ability to reflect on how new changes in the environment might help manage the complexities that individuals and communities face. The recursive nature of appreciative coping could allow the design of new models that capture broader emotional content derived from opportunities, hopes, release/relief, and gains; this could integrate stress research into resilience research (Fraser et al., 1999). Akhtar & Kroener-Herwig (2019) highlight the importance of improving students' coping strategies as an efficient way to enhance their psychological well-being in academic/university and general life contexts (Akhtar & Kroener-Herwig, 2019). This study shows that appreciative and reflecting coping styles can be critical strategies for students' resilience and well-being. To extend this study, future

research should consider focusing on (1) how adjusting expectations and changes in the environment under disruptive circumstances (such as a lockdown) might create opportunities and (2) how the presence of discrete emotions influences appraisal processes, specifically, how reflection, appreciation, and gratitude might influence the identification of resources and the emergence of expanding dominant discrete emotions.

CONCLUSION

The data analysis revealed that all six participants reported stressful events with personal significance or meaning and described helpful resources and coping mechanisms to overcome stress. The peace of mind of the international students depended not only on the health of their family members, but their professional commitment also allowed them to be engaged in some social support mechanism; this was an essential aspect of their resilience (Fraser et al., 1999).

The findings revealed that students' responses to the lockdown led to bifurcated consequences. Regarding the positive aspect, international doctoral students acknowledged the importance of self-care and family care. They adjusted their expectations, prioritized engagements, and adapted their plans accordingly. The lockdown provided unexpected conditions for some students to focus and excel academically. Additional household, child caregiving, and education roles required that students develop innovative coping practices by adjusting their expectations. International doctoral students used meditation and mindfulness, therapy, gardening, exercise, board games, movies, occasional drinking and smoking, and social media to contact family and friends to deal with the lockdown. These students exhibited resilience and the ability to carry on with the circumstances. All of them were able to turn themselves into a resource for other students and vulnerable populations. On the negative side, students without solid community integration—while living abroad—experienced more significant uncertainties. The lack of family closeness and support, traveling, and moving concerns created additional sources of stress. Both groups experienced strong disrupted emotions, such as fear, sadness, frustration, and anxiety. Extended periods of confinement were a source of emotional exhaustion and stress.

Furthermore, the findings highlight students' importance of social support and appreciative coping. Appreciative coping and social closeness—in times of physical distancing—were effective "stress antidotes." These findings align with appraisal stress theory, suggesting that a problematic relationship with the environment can be reappraised, in this case, predominantly through social reach. Social support can strengthen an individual's position against a stressor and reduce the threat level (Lazarus, 1996). We suggest that universities' advisors, counselors, and financial providers form an active part of the social support system for

international students and provide adequate emotional and social support during crises based on students' individual needs and interests.

IMPLICATIONS

The study's particular resources and coping mechanisms that are effective in overcoming stress may provide helpful information for universities' psychology and counseling services. Interventions and programs focused on resilience and stress prevention could benefit from understanding the traits and characteristics of social work doctoral students evidenced in the study. The study reveals that health policies and programs that aim to prevent and treat stress and burnout and reduce attrition rates among international doctoral students should focus on the social environment. University programs that recruit and train international doctoral students should create programs to expand students' social networks in alignment with their particular interests and needs.

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