Research Article

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Living Abroad During COVID-19: International Students' Personal Relationships, Uncertainty, and Management of Health and Legal Concerns During a Global Pandemic[1]

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ABSTRACT

The purpose of this study is to better understand the uncertainties that international students faced and managed throughout COVID-19 and the impact that these uncertainties had on their personal relationships. We conducted interviews with 14 international students and found that they were particularly uncertain about the health of their family members (RQ_{1a}), their own health (RQ_{1b}), and where to wait out COVID-19 (RQ_{1c}). Those uncertainties that could be navigated were managed via participants giving informational directives, providing instrumental support, making emotional appeals (RQ_{2a}), engaging in new behaviors and self-care (RQ_{2b}), and increasing communication with and withholding information from family members (RQ_{2c}). Last, we found that COVID-19 impacted international students' personal relationships in two distinct,

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positive ways: They became closer with friends and connected more with family members (RQ₃). Overall, the findings from our study have implications for future research and offer suggestions for supporting international students during times of future uncertainty.

Keywords: COVID-19, health, international students, uncertainty management theory

As cities and states began to "shelter in place" in response to the global 2019 coronavirus (COVID-19) pandemic, early research and media coverage centered on how communities might mitigate transmission, vaccine development, and its economic effect (Dalton et al., 2020). Less scholarship focused on how international students navigate COVID-related stressors (Wilczewski et al., 2021) and no empirical research, to date, has addressed the specific uncertainties faced by the over 1 million international students studying in the United States during this time (Institute of International Education [IIE], 2019). Thus, despite research that argues that international students experience a great deal of uncertainty when studying abroad (e.g., Bista, 2016), little is known about their experiences with uncertainty surrounding COVID-19.

Guided by the Uncertainty Management Theory (UMT; e.g., Brashers, 2001), we developed the current study to learn what, if any, uncertainties international students faced and managed in the midst of COVID-19 and the impact of these uncertainties on their personal relationships. In what follows, we explicate our rationale for the present study, provide a summary of UMT, review the literature on uncertainty among international students, and explore research on the impact of COVID-19 on personal relationships before explaining our findings, their implications, and offering suggestions for supporting international students during times of future uncertainty.

UNCERTAINTY MANAGEMENT THEORY

According to Brashers (2001), "uncertainty exists when details of situations are ambiguous, complex, unpredictable, or probabilistic; when information is unavailable or inconsistent; and when people feel insecure in their own state of knowledge or the state of knowledge in general" (p. 478). However, because uncertainties are regularly "… ubiquitous, … often reasonable and healthy, and very often, simply irreducible" (Babrow & Striley, 2015, p. 111), Brashers developed UMT in response to questions about the main premise of the Uncertainty Reduction Theory (URT; Berger & Calabrese, 1975)—namely that the main goal when faced with uncertainty is always to reduce it. The UMT is also the most dominant theory used to examine uncertainty as neither a positive nor a negative today.

As noted by Babrow and Striley (2015), some uncertainties can extend over long periods of time, whereas others can arise or dissipate as circumstances and contexts change. Relatedly, people often experience a pileup of multiple

uncertainties at once—with the response to one uncertainty impacting other, related, uncertainties—requiring people to "develop responses sensitive to multiple goals and tasks" (Brashers, 2001, p. 481). Given the unprecedented, capricious, and circumstantial nature of COVID-19, and the myriad ways in which COVID-19 has simultaneously affected health, social practices, and personal relationships, UMT is an appropriate lens through which to examine international students' experiences with and their responses to this global crisis.

UNCERTAINTY, INTERNATIONAL STUDENTS, AND WELL-BEING

Research indicates that international students' experiences with studying abroad are steeped in uncertainty. Specifically, when deciding whether or not to study abroad, legal considerations (e.g., navigating legal processes, obtaining a visa, preparing appropriate documents, etc.) are among the most constraining, uncertainty inducing, structural factors that international students encounter (e.g., Bista & Dagley, 2015; Eder et al., 2010). Once abroad, although hopeful and excited, international students face additional uncertainties stemming from language deficiency/proficiency (e.g., Andrade, 2006), cultural adjustment (e.g., Smith & Khawaja, 2011), psychological stressors (i.e., anxiety and homesickness; e.g., Bista, 2016), and navigating the complex U.S. healthcare/ insurance system (Adegboyega et al., 2020). Researchers report that international students employ a variety of strategies to manage and reduce these uncertainties. For instance, international students often seek information from official sources to navigate the visa process (Bista, 2016). Mesidor and Sly (2016) found that international students engage in a variety of social strategies (e.g., connecting more with family back home, forming new connections and friendships, and expressing emotions, challenges, and needs to others) to manage their uncertainty regarding cultural adjustment.

Considering that COVID-19 affects nearly every aspect of daily life, uncertainty is likely central to many international students' experiences. Of the scant research conducted on university students' experiences with this global pandemic, Cohen et al. (2020) reported that most students were concerned about how the pandemic might impact their educational/career plans, the economy, and the health of their family members and society. However, considering that the uncertainties faced by international students throughout COVID-19 are likely distinctive, especially given that they navigated COVID-related stressors in conjunction with their unique legal status while often separated from their families, warrants further attention. Thus, we posed the following research questions:

RQ$_1$: What, if any, uncertainties do international students report having faced in the midst of COVID-19?

RQ$_2$: How, if at all, have international students managed the uncertainties they have faced in the midst of COVID-19?

INTERPERSONAL RELATIONSHIPS AND COVID-19

Brashers (2001) argued that one of the most common ways in which individuals respond to uncertainty is by way of seeking (providing) social support to/from friends and family. Relatedly, early studies suggest that COVID-19 has contributed to a number of positive and negative outcomes for personal relationships. Specifically, Luetke et al. (2020) reported that many romantic partners experience increased conflict with one another related to COVID-19 restrictions and spread. Pietromonaco and Overall (2020) suggested that couples' relational functioning, quality, and stability may be threatened by external pandemic-related stressors (e.g., loss of income, demanding jobs, etc.) and exacerbated by existing individual vulnerabilities and the broader contexts in which relationships are situated (e.g., age, social class, minority status). With regard to university students, Wilczewski et al. (2021) found that self-isolating international students experienced increased levels of loneliness after their transition to COVID-related online learning.

Contrary to these findings, Goodwin et al. (2020) reported that psychological stress and being in quarantine had mixed effects for relationships depending on the relationship type, arguing that couples in already established close relationships may benefit from navigating the challenges of COVID-19 together. Relatedly, Nitschke et al. (2021) found that social connections buffered individuals against pandemic-specific stress and worries during COVID-19-related lockdown periods.

Although these initial findings are applicable to the current examination, no empirical research has focused specifically on how COVID-19 has impacted international students' personal relationships. Although related literature suggests that highly resilient international students may be buffered from the many negative psychological/behavioral challenges that others often face when experiencing significant adversity (Kim & Cronley, 2020), it is unclear how, if at all, this resilience may function in the midst of a global pandemic. Thus, we developed the following research question to extend upon the initial findings and to address this gap in the literature:

RQ3: What, if any, impact do COVID-19-related uncertainties have on international students' personal relationships?

METHOD

We used an exploratory qualitative design to answer our research questions. Specifically, we conducted interviews with international students to learn about their in-depth experiences with COVID-19.

Participants

Our participants included 14 international students (13 [92.9%] graduates and 1 [7.1%] undergraduates) enrolled in a mid-sized U.S. university on the West Coast. We recruited each participant by using snowball and network sampling and conducted all interviews between June and July 2020. All interviews were conducted in English. Among our 14 participants, 12 (85.71%) were former students of the first author. Twelve (85.71%) of our participants were female and two (14.28%) were male, ranging in age from 21 to 37 ($M = 28.85$, $SD = 4.26$). Participants were citizens of India, Kenya, Russia ($n = 2$, 14.28%, respectively), Brazil, Egypt, England, Pakistan, Singapore, and Vietnam ($n = 1$, 7.14%, respectively). Two of our interviewees had dual citizenship, Brazil/Argentina and Singapore/Saudi Arabia ($n = 1$, 7.14%, respectively). Ten (71.43%) of our participants were single. The four (28.57%) participants who were married lived with their spouses in the United States but their spouses were not current U.S. citizens (e.g., U.S. Green Card or H-1B/F1 visa holder). Only one (7.14%) participant returned home after the university's move to remote education. We provided no compensation to our interviewees for their participation.

Data Collection

After receiving approval from the Institutional Review Board, we conducted one-on-one interviews with each participant by using Zoom video conferencing (i.e., the first two authors conducted 10 and 4 interviews respectively). We used a semi-structured interview protocol (available from the first author) as a guide to ask questions related to COVID-19 and uncertainty, including "What was your family's experience with this pandemic before/after it became widespread in the U.S.?" and "What, if any, worries did you have for your family/yourself before/after this pandemic hit the U.S.?" Interviews ranged from 33 to 61 min ($M = 45.84$, $SD = 3.27$).

All interviews were transcribed verbatim by using Zoom transcription, yielding 208 pages of single-spaced data. We compared transcripts against each audio file to ensure accuracy and gave pseudonyms to each participant and their family members. We reached theoretical saturation at interview 10 (e.g., the information shared by our participants was redundant) but conducted four more interviews to ensure that no new information emerged.

Data Analysis and Validation

We employed thematic analysis by using Braun and Clarke's (2006) six-step process to answer our research questions. Specifically, each researcher first (a) individually read through the entire set of transcripts to get an overall sense of these data. Next, we each (b) individually generated initial coding categories and subcategories before (c) grouping each set of categories into themes. Although uncertainty was used as an initial lens for this analysis, we used an iterative process in which we adapted research questions and themes as we worked through

Braun and Clarke's stages and revised our results. Fourth, we met as a group to (d) collectively review and (e) label themes by using process coding (i.e., gerunds or "ing" words) to organize our results—discussing, debating, and coming to agreement as an entire group. Last, we (f) identified exemplars for each theme.

The first author had no family members living abroad, the second author's parents lived in Italy, and the third author was a dual citizen (i.e., Hong Kong and the United States) and an undergraduate student living abroad away from her family throughout the entire COVID-19 pandemic. Thus, in order to address our potential bias, we enhanced our methodological rigor by using two data validation techniques: researcher triangulation and member checks (Creswell & Miller, 2000). Specifically, all three authors completed the initial data analysis, reaching themes independently before meeting to compare themes, discuss differences, and engage in reflexivity until we reached a consensus. Last, the first author conducted member checks with three (>21%) participants to affirm that the findings rang true with their lived experience.

FINDINGS

We present our findings as three major results. First, our findings suggest that international students were particularly uncertain about the health of their family members (RQ1a), their health (RQ1b), and where to wait out COVID-19 (RQ1c). Those uncertainties that could be navigated were managed via participants giving informational directives, providing instrumental support, making emotional appeals (RQ2a), engaging in new behaviors and self-care (RQ2b), and increasing communication with and withholding information from family members (RQ2c). Last, we found that COVID-19 impacted international students' relationships in two distinct, positive, ways: They became closer with friends and connected more with family members (RQ3). The following sections highlight each set of results and provide supporting exemplars for each finding.

Worrying about Family's Health (RQ1a)

Our first finding related to RQ1 suggests that participants had ongoing concerns regarding the health of their family members as COVID-19 spread. Some interviewees shared that their worries stemmed from the cultural conditions/norms of where their family currently resided, whereas others shared that their worries were exacerbated because their family members were at a high risk for COVID-19 infection.

Concerning Cultural Conditions/Norms

A number of our interviewees explained that the worries they had concerning their family's health were compounded by the conditions/norms embedded within their home culture. For example, Prisha, whose family lives in India, shared:

> Once we [my husband and I] heard … there was a case [in India], we knew that it was going to spread. … We are overpopulated … And that

is when we actually freaked out. … [In India, to even] go to [the] grocery store, there are going to be tens of thousands of people. … It's not possible to maintain … [the needed] hygiene.

Relatedly, when explaining Brazilian culture, Gabriela said, "we like to touch. We like to, you know, stay together. … It's very different … [from] Americans in terms of personal space." These examples highlight how participants' worries with regard to the health of their family members were intensified by the cultural conditions and norms of their home country.

Concerning Threats to Specific Family Members

In addition to cultural conditions/norms, many participants shared that they worried about the health of specific family members because of their age, previous health conditions, or occupations that placed them at a greater risk of being exposed. For example, Linh, whose family resided in Vietnam, shared, "I was really worried about my grandparents. They are old and they have … one of the highest chances of getting infected." Similarly, when discussing preexisting conditions that made certain family members vulnerable, Hamza, whose family lives in Pakistan, described, "My father is … a heart patient. God forbid … [if he got] the virus, it would [be] serious."

A final set of interviewees shared that they worried about a specific family member's health because of their increased COVID-19 exposure via their occupation. For example, Nastya, whose mom and dad both worked for the Russian healthcare system, shared, "my parents are doctors. So they were working, … not with … COVID patients, but they … [are] with patients." Even though her parents shared, "'We know what we are doing. … We are grown-ups,'" Nastya was still concerned about their potential exposure. Hence, the worries that a number of participants had with regard to the health of their family members stemmed from specific risks to which the participants' family members were susceptible.

Managing Uncertainties Related to Family's Health (RQ2a)

In line with our earlier findings, participants reported engaging in three main strategies to help them manage their uncertainty about their family members' health (RQ2a): giving informational directives, providing instrumental support, and appealing to emotions.

Giving Informational Directives

The overwhelming strategy shared among participants to manage the uncertainties they experienced related to their family's health was to give informational directives. For instance, Victoria, who was particularly worried that her grandfather may be exposed to COVID-19, shared, "I would call my mom [in Russia] and I ask her not to let him … go outside." Further, Emmanual, an ordained priest, stated, "[when COVID-19 reached Kenya] I told them … don't

go to church on Sunday, because … this thing moves very fast." Emmanual continued, "that's when my mother realized, whoa [this is real, because] … I've never told them to do that [stay home from church]." Combined, these statements exemplify the informational directives that our participants provided to their family members to help them manage their uncertainty about their family's health.

Providing Instrumental Support

Some participants shared that they provided instrumental support to their family even though they lived abroad. For example, Iyana explained, "My friends and my family [in Singapore] started asking me … to ship hand sanitizers and masks and stuff. … I remember [going] through different supermarkets … to look for hand sanitizers [to send to them]." Similarly, Emmanual shared, "[I have] a friend from home … buying groceries for them [my family] to drop at [their] home." Thus, for Iyana and Emmanual, providing instrumental, tangible, support to their families reduced their uncertainty about whether or not their family would have safe access to cleaning supplies and food.

Appealing to Emotions

A final way in which participants managed uncertainties related to the health of their family members was by using persuasion to appeal to their emotions. Specifically, Prisha shared, "[my family acted like] nothing will happen to us … It's not [a] big thing." She continued, describing how she finally scared them into being more careful, stating:

> One day I just got aggravated and I told them … 'if anything happens to you, like they don't allow us to travel … so I won't be able to see you, I won't be able to visit you and nobody will [be] able to … do the last rites.' … [I used] a lot of emotional blackmailing so that they [would] take me seriously.

Relatedly, Camila, who has not been able to visit her 85-year-old grandfather in Brazil for more than six years, shared how she tried everything, even guilt, to convince her grandfather to be more careful, stating, "[I would say] 'If something happens. … like, I cannot go to Brazil. … [I] cannot leave [the U.S.].'" However, Camila shared, "[even with guilt], my grandfather, he keeps going out, [he] keeps taking public transportation. He just, he doesn't listen." These examples illustrate how participants used persuasive emotional appeals, albeit at times unsuccessfully, to impress the seriousness of COVID-19 on their family members and to persuade them to mitigate health-related risks.

Worrying about Personal Health (RQ1b)

In addition to being worried about the health of their family, numerous participants shared that they also worried about their personal health as COVID-19 spread. In particular, interviewees shared that their worries were exacerbated

by cultural conditions/norms in the United States and rumination about the personal behaviors in which they had engaged.

Concerning Cultural Conditions/Norms

A number of participants shared that certain U.S. cultural conditions/norms increased the concerns they had about their personal health as COVID-19 spread. In particular, Iyana shared, "[in the U.S.], I actually feel really unsafe. … You guys don't do contact tracing." She continued, explaining:

> [At home, there is] an app where you have to scan every time you enter a public place … [so] they [the Singaporean government] know who is in that space. … and if there's a positive COVID patient … they will alert those people.

Last, participants listed the costs associated with the U.S. healthcare system as a cultural concern. Specifically, even though every participant had health insurance, Mercy, who grew up in the Kenyan healthcare system, described, "In the United States, you do not have social medicine. … So that's the biggest worry … [if] you get COVID. … [it seems] health insurance does not really … help." These examples illustrate how U.S. cultural conditions/norms contributed to participants' concerns about their own health.

Ruminating about Personal Behaviors

A final element that factored into participants' concerns for their health was their rumination about whether or not their past behaviors placed them at a higher risk for contracting COVID-19. For example, after meeting face-to-face with others, Mercy commented, "different ideas come in your mind, like, 'What if the person had COVID and the person didn't know?' … So were you exposed to COVID and then boom, boom, boom?" Hence, as illustrated by Mercy, participants shared that ruminating about the everyday behaviors in which they engaged made them uncertain about their personal health.

Managing Uncertainties Related to Personal Health (RQ2b)

The main strategies used by participants to manage and reduce their concerns about personal health after the onset and spread of COVID-19 were to adopt new behaviors and engage in self-care (RQ2b).

Adopting New Behaviors

An initial strategy used by participants to manage concerns related to their personal health involved adopting new, more hygienic, behaviors to reduce their risk of COVID-19 infection. For example, Nastya, who worked as a bridal gown associate, explained, "[even] though we have much less … appointments, … you are in very close contact with people." She continued, "[I am now always using] antibacterial wipes and washing hands." Although Nastya is still at risk, adopting

these new behaviors helped put her mind at ease and allowed her to manage the concerns she had about COVID-related health risks.

Engaging in Self-Care

A final strategy used by participants to manage concerns about their personal health involved engaging in self-care. For example, Mariam, a graduate student who grew up in Egypt, explained, "The first month for me, shelter in place, I was devastated. … [I] was completely alone … [and] stopped going out because I didn't want to get on Muni [the bus] or [take an] Uber." Miriam continued, stating that things did not get better until she engaged in self-care. Specifically, she shared, "when I got the bike … it just started getting better. [And now, with my roommate back] … [We] hike … as much as we can."

Like Miriam, Prisha shared how she and her husband had started taking care of themselves better, describing, "We actually started cooking together, … going to hikes together." Moreover, Ayesha, a dual citizen from Singapore and Saudi Arabia, acknowledged how beneficial it was for her to meditate during this time, explaining, "One of the gifts that COVID has given me is [that] it changed my relationship with myself … and I got really clear … about what I wanted [in life]." Combined, adopting new behaviors and engaging in self-care were key for participants as they worked to manage and reduce their health concerns.

Deciding Where to Wait Out COVID-19 (RQ1c)

Our final finding related to RQ1 suggested that participants were uncertain about where to wait out COVID-19. These uncertainties, however, were rooted in participants' understanding of existing, new, and changing legal constraints and varying emotions.

Understanding Existing, New, and Changing Legal Constraints

For many of our participants, changing visa issues, anticipated quarantine mandates, and new travel restrictions intensified their uncertainty surrounding where to wait out COVID-19.

Changing Visa Issues. With regard to where to wait out COVID-19, an overwhelming number of participants shared that a major factor contributing to their uncertainty was their fear that the laws surrounding their student visa may change or that their visa may be put in jeopardy if they left the United States. For instance, Iyana, when talking about why she had not gone home to Singapore, shared,

> There are so many uncertainties. I don't know if I can come back [to the U.S.]. I don't know if they [the U.S. government] are going to allow me to come back. … There's all these uncertainties … that are stopping me from booking a flight.

Relatedly, Gabriela, who is in the process of getting her H1B work visa, shared, "they [U.S. policies] are changing a lot in terms of the immigration, … like every month or every week. … Trump [will] tweet [and] say that he was going to … ban or freeze [student visas], … it's very concerning." She continued, explaining, "while I'm in this [H1B visa] process … I don't want to risk [it]. … [for now, staying is] the best option." Thus, fear that the rules surrounding their visa status may change served as a source of uncertainty for participants and influenced their decision to stay in the United States.

Anticipating Quarantine Mandates. In addition to being concerned about changing visa issues, many participants shared that their uncertainty related to where to wait out COVID-19 was compounded by the anticipation they had regarding differing quarantine mandates. For example, Emmanual shared, "I want to go home." However, after learning from a friend who recently returned to Kenya that he had to quarantine for more than a month, Emmanual stated, "That's my biggest fear … quarantine at my own expense … and possibly not getting to see my family." Similarly, Victoria shared, "When you travel to Moscow … you need to [quarantine] for two weeks. … I couldn't just go and visit my family. I would need to stay at least two weeks, totally isolated, in a hotel." Combined, participants' uncertainty related to where and for how long they might need to quarantine influenced their travel decisions.

Navigating Travel Restrictions. A third and final factor contributing to our participants' uncertainty related to where they should wait out COVID-19 was the ever-changing travel restrictions of the United States and their home country that they had to navigate. Specifically, Mercy shared, when COVID-19 first hit the United States, "everything was so uncertain." She continued, sharing, "[going back to Kenya] wouldn't be a wise move … [because] maybe a [travel] restriction will be imposed. … Right now there's a restriction that no one [is allowed in from the U.S.]" Thus, although the current laws reduced her uncertainty (i.e., there was no option to travel), the ever-changing nature of these restrictions exacerbated Mercy's uncertainty about booking a flight home. Mercy's comments illustrate how the changing travel restrictions added to the uncertainty she had regarding where to wait out the pandemic.

Experiencing Varying Emotions

Many participants shared that they experienced varying emotions regarding where to wait out COVID-19. Specifically, interviewees shared that their emotions were intensified by the desires of their family members with regard to returning home or staying in the United States and their feelings about the United States/U.S. policy.

Feelings about Family's Desires. A number of participants shared that they experienced ongoing emotional contradictions with regard to returning home that stemmed from their family members' desires. Specifically, Prisha, who was scared about contracting COVID-19, shared how her family motivated her and her husband to stay in the United States, explaining, "We were thinking that we might [go back], but they [my in-laws] were the ones who said that 'You don't

need to come back. … [It] is temporary. It's going to go [away].'" Unlike Prisha, whose family encouraged her to stay in the United States, Lihn explained, "My dad's been pushing me. He said … 'Come home [to Vietnam]. It's safer.'" In addition, Lihn stated, "My grandma [would] call me … very emotional … [begging] 'You just need to … get a slot on that rescue flight and … go home.'" Although Lihn told her family that the reason she was staying was because it was too risky to be on an airplane, she explained, "[I'm not ready to] end my day here."

Moreover, Iyana emphasized how her emotions were ongoing, sharing, "When it [COVID-19] exploded, my mom … [said], 'Just come back.' … [Then] she kind of stopped. … [But] recently she's like, 'Oh, … [class] is online. Why don't you just come back?'" Iyana continued, explaining, "Multiple times … I thought that maybe I should … [go] home. … [but that] feeling is a bit mixed."

Combined, these examples illustrate how the conflicting desires of international students' family members influenced the varying emotions they had regarding where to wait out COVID-19.

Feelings about U.S./U.S. Policy. Despite being excited to continue their education in the United States, many participants shared that they felt frustrated and dehumanized by the messages that were put out by the U.S. government with regard to international students. For example, Camila shared, "The pandemic just made it even more clear how hard it is for internationals living away, … the obstacles, all of the challenges. … This administration makes things even harder. … It's an emotional problem." Similarly, Mercy, when responding to a subsequently overturned U.S. order stating that international students were not going to be allowed to stay in the United States if their university classes were taught online, echoed:

> [I feel like the U.S. government is telling us] 'Your health does not matter.' … The fact that [we]'ve been told 'You must go to class … to maintain your status,' … [it] makes you take a step back and wonder whether the people who are making these decisions really are thinking about humanity.

These examples illustrate how governmental messaging and U.S. policies uniquely influenced international students' experiences with COVID-19.

Managing Varying Emotions (RQ2c)

Although participants did not report engaging in specific strategies to manage their feelings about new, existing, and changing U.S. policies on international travel, two specific strategies, communicating more with and withholding information from family members, were used by participants to process the desires of their family members related to where to wait out COVID-19 (RQ2c).

Communicating More

The most common way in which participants managed the desires of their family members related to where to wait out COVID-19 was to communicate with them more often. Specifically, when sharing how she managed the pressure from her mother to come home, Iyana explained, "[we] video chat every week." Similarly, Mercy shared, "I was in constant communication with my family" and Camila stated, "[I talk to] my grandparents every day." Thus, by engaging in regular and scheduled communication with family members, participants were able to manage some of the intense emotions surrounding their family member's ongoing desires for them to either stay in the United States or return home.

Withholding Information

A final subset of participants reported that they withheld information from their family members in order to mitigate their emotions related to the ongoing pressures for them to return home. For instance, when talking to her parents, Prisha explained, "I will not share the statistics … how many [cases] … the death rate. … We [my husband and I] just [say], 'We are fine, and, it's fine.'" Similarly, Kiara, who recently received an email that someone in her apartment complex tested positive for COVID-19, explained, "We didn't tell her [my mom] … because, you know, that again [would] freak them [my parents] out." Thus, withholding information from their family members related to COVID-19 allowed the participants to manage some of the emotions surrounding their family members' ongoing desires for them to return home.

Impact on Personal Relationships (RQ3)

Although some participants shared that their relationships with family and friends did not change, many indicated that COVID-19 impacted their personal relationships in two distinct, positive, ways: (a) They became closer with friends and (b) connected more with family members (RQ3).

Becoming Closer with Friends

A number of participants indicated that their long-distance friendships thrived in the midst of COVID-19. Specifically, Victoria shared,

> At the beginning of COVID, I would call every day to my friends [in Russia] that I didn't have conversation [with] for months. … Everyone [had] anxiety and they wanted to … talk about that. … So I would have like a lot of calls with my friends that I didn't have before.

Similarly, Charlotte, who returned home to England, shared that she was worried about maintaining her friendships with people in the United States, describing, "I'm actually really impressed, … I think [I've connected with] more people than I thought I would." She continued, sharing, "I got much, much, closer with my … friends." Hence, despite the geographical distance that

COVID-19 forced on participants, many stated that this pandemic allowed them to reengage with important friends in their life.

Connecting More with Family

In addition to becoming closer with select friends, some participants also indicated that they connected more with family members during this time. For example, Victoria explained, "[I think] fear … brings people together." In particular, she shared, "During the pandemic … [I] started calling my extended relatives [in Russia], which I did not do before. … I realized that I should talk with them and see if they're okay. … We started talking a lot." Similarly, Hamza shared: "these things do bring you a lot closer. … [when you are] that far away from where your family is … it does bring it [the family] closer." In addition, Camila explained, "[COVID-19] gives us this need to check in on each other more often. … [it] created a bigger like bond."

Thus, many participants shared that COVID-19 served as a trigger for them to foster their friendships and connect with family members in ways that they had not done earlier. Moreover, although participants did not report seeking out friends and family members as a specific uncertainty management strategy, their efforts to reengage with these individuals were often reported as resulting from their COVID-19-related anxieties.

DISCUSSION

The purpose of this study was to examine how international students experienced and managed uncertainty during the COVID-19 pandemic. Further, we aimed at understanding how, if at all, this pandemic impacted international students' personal relationships. Our findings suggest that COVID-19 was and is a significant circumstantial, episodic, uncertainty-inducing phenomenon that required international students to manage multiple, concurrent uncertainties in a diverse set of ways, which, in some cases, inadvertently and positively impacted their relationships. In what follows, we highlight how our findings connect to previous research on COVID-19 and international students, make connections between our results and theorizing on uncertainty management, and discuss the limitations and implications of this study.

First, although COVID-19 caused many individuals to be more concerned about the health of their family members (e.g., Cohen et al., 2020), our findings indicated that international students' concerns were amplified when the cultural norms of their home country facilitated the spread of this virus. Specifically, many participants expressed that their family's inability to socially distance due to population density, consumer behaviors, and regular haptic communication behaviors (e.g., touching/affection) intensified their concerns about their family members contracting COVID-19. These cultural findings add to the current body of literature on COVID-19, as they identify distinct, culturally based, health and safety uncertainties that are unique to this population. Moreover, consistent with research on uncertainty management (Brashers, 2001), support in times of crisis

(Li et al., 2020), and persuasion (Xu & Guo, 2018), we found that international students engaged in three primary strategies to manage the uncertainty they had for their family's health: They (a) provided informational directives (e.g., insisted mask wearing), (b) gave instrumental support (e.g., arranged delivery of food/goods to their family abroad), and (c) appealed to their family members' emotions (e.g., communicated their fear/sadness related to the potential illness/death of their family members). Further, these findings signal that COVID-19 may be a context in which some individuals dismissed their culture's expectations for filial piety (Dia & Diamond, 1998), such that many participants provided information, advice, and made emotional appeals to older family members because their concerns were so grave that they felt the need to provide unsolicited advice/instruction.

A second uncertainty expressed by participants was that COVID-19 gave rise to new concerns about their personal health. Specifically, participants shared that their health worries were exacerbated by cultural conditions/norms in the United States (e.g., no formal contact tracing and an expensive healthcare system) and rumination about personal behaviors in which they had engaged. Although our findings regarding participants' concerns related to health via cultural hygiene and contact tracing are new and possibly unique to COVID-19, our results regarding participants' increased uncertainty due to the U.S. healthcare system are consistent with Adegboyega et al.'s (2020) research, as they reported that understanding the U.S. healthcare system is a challenge that international students often struggle to navigate. Further, although participants were unable to change the cultural norms to which they were subjected, they adapted by adopting new behaviors and engaging in self-care to manage their uncertainty. Combined, this finding, similar to the result reported earlier, reiterates that international students' uncertainties related to their health and COVID-19 were heightened when the cultural conditions/norms of the United States deviated from those to which they were accustomed.

Third, many of the international students in our study shared that they experienced uncertainty regarding their decision about where to wait out COVID-19. This uncertainty was exacerbated by the legal constraints surrounding international travel, their family's desires for them to stay in the United States or return home, and the emotions they had about the United States/U.S. policy. Although many university students across the United States likely had to consider the desires of their family members when deciding whether or not to return home as COVID-19 spread, international students' experiences with this uncertainty were uniquely heightened, as their uncertainty was compounded by U.S. policies that they felt placed their health at risk, changing visa issues, anticipated quarantine mandates, and new travel restrictions. Specifically, our findings regarding changing visa issues and legal constraints were consistent with Eder et al. (2010), who found that, even without the additional uncertainty of a pandemic, visa concerns are a major problem faced by students when they consider studying in the United States. Moreover, this finding is further supported by Bista and Dagley (2015), as they added that the visa process and obtaining the correct documents were more difficult than actually getting accepted to a university itself.

The quarantine concerns mentioned by participants echo those of Brooks et al. (2020), who found that there were negative psychological effects associated with extended quarantine. Combined, this finding reiterates Brashers' (2001) claim that multiple uncertainties often occur simultaneously. However, considering the extent to which so many of these concerns were out of their control, the only aspects that our participants reported managing—via communicating more with their family and withholding information—were the desires of their family members related to where they should wait out COVID-19.

Last, contrary to the literature that reports that COVID-19 contributes to a number of negative outcomes for personal relationships (e.g., Pietromonaco & Overall, 2020), the international students in our study most often reported that COVID-19 gave rise to more communication and promoted feelings of closeness with their friends and family. As such, our findings are consistent with Goodwin et al. (2020), who reported that, for younger individuals, this pandemic enhanced relationships with friends, and Nitschke et al. (2021), who argued that social connections buffer individuals against pandemic-specific stress. Relatedly, our findings align with the network activation hypothesis, as it suggests that friendships and social networks are often activated and increased during times of a health crisis (e.g., Latham-Mintus, 2019). Hence, although there is a great deal of literature suggesting that COVID-19 has contributed to relationship strain, our findings suggest that international students' relationships may thrive in times of crisis, as personal connections may serve as a source of certainty for them in an otherwise chaotic situation.

Limitations/Future Research

Despite its strengths, there are limitations of this study that should be addressed in future research. First, our sample size was small, did not include a large group of individuals from one country, lacked representation from our university's Chinese international student body, and most of our participants were single. Therefore, we were unable to compare the uncertainties experienced by individuals from Eastern versus Western cultures or gauge whether or not having a spouse mitigated or exacerbated the participants' COVID-19 uncertainties.

Second, this study was cross-sectional, such that data were collected at one time during the fourth and fifth month of the COVID-19 pandemic in the United States. During this time, participants may have experienced the most acute stress, as the pandemic was a new experience. Thus, future research should explore to what extent uncertainty unfolded over time and examine whether or not the concerns felt by international students and the management techniques they reported evolved throughout the duration of the pandemic.

Implications

Our findings offer further support for examining uncertainty cross-culturally. Specifically, Hofstede (1980) reported that individuals from Western and Eastern cultures handle uncertainty differently, such that Eastern cultures are more

uncertainty avoidant and Western cultures are more comfortable with uncertainty. Although our findings did not seek to uncover differences across cultures, we did find that culture and cultural circumstances/norms surrounding COVID-19 were central to participants' experiences as they served to exacerbate uncertainty and should be further explored.

Our findings also have practical implications for how universities and family members can better support international students in the midst of health crises. First, universities should work to better understand the unique circumstances of international students during a pandemic. Institutions should set up understandable mechanisms to communicate directly with international students about how to manage the concerns they have about family members, help them navigate the changing visa issues, and provide resources to help them manage their roles not only as students, but also as individuals separated from their families during a global crisis. Last, family members of international students must make time to talk to them, encourage them to express their feelings, listen, and acknowledge their concerns, as these strategies may buffer their stress during uncertain times.

In sum, our findings illustrate that international students experienced a range of uncertainties throughout the COVID-19 pandemic, many that were culturally based. In turn, participants engaged in a range of related coping mechanisms to manage their uncertainty. Despite these uncertainties, the relationships that our participants had with their family and friends often benefited from the support they offered to one another during this time. Moreover, our findings suggest that personal relationships may serve as a safeguard for international students, not only during a pandemic, but also perhaps as they face new situations, in a new country, on a day-to-day basis.

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