Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

International Journal of Intercultural Relations 94 (2023) 101800

Contents lists available at ScienceDirect

International Journal of Intercultural Relations

journal homepage: www.elsevier.com/locate/ijintrel

Exploring homesickness among international students in China during border closure

Yohana Kifle Mekonen [a,b,1], Michael Agyemang Adarkwah [c,*,2]

[a] Faculty of Education, Southwest University, No. 2 Tiansheng Road, Beibei District, Chongqing 400715, PR China
[b] Department of Educational Psychology and Administration, Asmara College of Education, Asmara, Eritrea
[c] Smart Learning Institute of Beijing Normal University, 12F, Block A, Jingshi Technology Building, No. 12 Xueyuan South Road, Haidian District, Beijing 100082, PR China

ARTICLE INFO

Keywords:
Homesickness
Coping strategies
International students
Higher education
COVID-19

ABSTRACT

It is nearly three years since the World Health Organization (WHO) declared the COVID-19 crisis as a pandemic. Since its inception, border closures have been subscribed to by many countries as an extreme policy tool to curb the rate of infection amid emerging variants. China, one of the earliest countries to implement this measure just opened its borders to international students for inbound and outbound travel with several preconditions. Homesickness, a grave discomfort because of its cognitive hallmark of destabilizing the affective states and routine activities of individuals has been underexplored in many studies on the COVID-19 impact on education. This phenomenological study is the first to explore the level of border-closure-induced homesickness among international students in an Asian context (China). International students (n = 20) sampled from five universities in China were interviewed on how the COVID-19-engineered border closures have prompted homesickness among them and their development of coping skills. The thirteen (13) themes that emerged from the study suggest that the students suffered from somatic and psychological symptoms of homesickness. The social and academic life of students were negatively affected. Participants in the study relied on frequent phone calls, entertainment, and indoor and outdoor activities such as exercise and campus excursions as coping strategies against homesickness. It is advocated that higher education leaders in China put in measures to hasten the acculturation of international students to minimize their homesickness. Further research areas such as taking a keen focus on maladaptive symptoms of homesickness are also discussed.

Introduction

The current Covid-19 pandemic has impacted all countries across the globe. Although primarily a health concern, its cataclysmic effect on the economy, education, and social life has been reported in several studies (Almanthari et al., 2020; Sintema, 2020; Viner et al., 2020). In this pandemic era, the concern of international students has been among the top concerns of higher education leaders and researchers (Nam, 2021). Homesickness originating from COVID-19 jeopardizes social life (English et al., 2022) and directly

* Corresponding author.
E-mail address: adarkwahmichael1@gmail.com (M.A. Adarkwah).
[1] ORCID: 0000-0002-1051-3964.
[2] ORCID: 0000-0001-8201-8965.

https://doi.org/10.1016/j.ijintrel.2023.101800
Received 21 October 2022; Received in revised form 3 March 2023; Accepted 8 March 2023
Available online 21 March 2023
0147-1767/© 2023 Elsevier Ltd. All rights reserved.

impacts foreign students' mental health, and moral and social well-being (Hari et al., 2021). For example, a recent study documented that COVID-19 seriously deteriorates international students' homesickness which is the focus of this paper (Rathakrishnan et al., 2021).

Homesickness which is considered evasive in its nature (Kegel, 2009) can be defined as "a psychological reaction to the absence of significant other and familiar surroundings" (Poyrazli & Lopez, 2007, p. 263). It is generally known as stress or anxiety due to separation from home. According to Thurber (2012), the separation might be real or predicted. The isolation and lack of social support to adapt to the new surrounding might develop feelings of stress and sadness (Poyrazli & Lopez, 2007). Oftentimes, homesickness increases foreign students' stress and is intensified during a pandemic crisis such as COVID-19 (Rathakrishnan et al., 2021). Peters et al. (2020) stated that China's lockdown and university closure led to a lack of proper mentorship for academic projects and uncertainty about the graduation of international students at Beijing Normal University (BNU). Remarkably, long border closure homesickness and other emotional and social impairment had been observed as a result of strict prevention measures to reduce the rate of new infection in countries like China. Overall, it can be seen that the pandemic has significantly affected higher education students in China (English et al., 2022; Mbous et al., 2022; Yuan et al., 2021).

However, irrespective of the adverse impact of the COVID-19 pandemic on international students, it has been overlooked by researchers (Mbous et al., 2022). According to the authors, while - homesickness of international students has been widely explored, especially in these pandemic times, international students' needs are often conflated with those of domestic students. The insufficient commitment of higher educational institutions (HEIs) to equally investigate and address the needs of international students, particularly during this pandemic times made them a vulnerable student population (Sherry et al., 2010). Homesickness researchers have asserted that there is a dearth of research studies on homesickness and the global pandemic. Moreover, the limited available homesickness literature is dominated by western countries (Hack-Polay, 2012; Hack-Polay & Mahmoud, 2021). In this regard, a topical study alluded to the need to investigate the challenges related to the emotional and social conditions of international students due to the global pandemic in China (English et al., 2022). China is one of the leading destinations for international students, meriting the need to examine the cross-cultural adjustment of international students during adverse times such as the COVID-19 pandemic (Cao & Meng, 2022). According to English and Zhang (2020), international students in China who experience perceived discrimination are an understudied population.

As of February 10, 2023, China has fully opened its borders for inbound and outbound travel of international students. Those who could not complete their studies because they left the country in the early days of the pandemic (in 2020) now have the opportunity to register and return to continue their studies. However, there are limited slots and registration does not guarantee approval for a student to return. Previously, international students who were privileged to gain approval had to pay exorbitant fees to travel and quarantine themselves for at least a month in a designated city before a two-week quarantine in their host institutions. This policy was just recently revised on January 8, 2023, to cancel mandatory quarantine and testing for inbound travellers. The ordeal of international students returning to China has discouraged their counterparts who hope to visit their home countries and return to pursue their studies.

Essentially, international students who have spent nearly three years in China without visiting home were faced with lockdown measures which had the potential to further aggravate their homesickness. However, recent policy changes have led to the cancellation of lockdowns in cities which is relieving for homesick international students. Homesickness can have profound short, medium, and long-term impacts on international students. A key contribution of this study is to advocate the need for HEIs to create family-mediated infrastructures (how parent-child relationships can be leveraged by HEIs to ensure the welfare of international students before and during a crisis). This facilitates dealing with homesickness, the provision of effective mental health support for students with suicidal ideation, and the assessment of the effectiveness of institutional support mechanisms for students to better create a homesickness-resistant framework in HEIs (Brammer & Clark, 2020; Fronek et al., 2021; Hu et al., 2022).

It is obvious that the future is unpredictable and HEIs are often faced with complex problems relating to international students' safety and academic progress. This necessitates knowledge about the effectiveness of institutional measures against homesickness, viable structures needed to be built to withstand triggers of homesickness, and the pattern of homesickness over two years of the pandemic and self-adopted survival strategies of international students. Such knowledge will help HEIs to provide quality social support services for international students and develop resilient structures against homesickness induced by unforeseen disasters or events. Exploring how HEIs will be affected in the short, medium, and long term regarding internalization due to the COVID-19 and border closure is of much importance (Brammer & Clark, 2020).

Therefore, the present study aims to investigate how the border closure as a result of the COVID-19 pandemic impacted the homesickness of international students in China and how they are trying to cope in a new pandemic-normal era. This is the first study to explore the concept of long-border-closure-induced homesickness using an Asian context such as China. The findings of the study can provide a comprehensive view of international student experiences during the pandemic and serve as a roadmap for universities in China intending to ameliorate the negative effect of COVID-19-induced homesickness through the establishment of effective support structures for better acculturation of international students. Specifically, the study asks the following questions;.

1. How have the COVID-19-engineered border closures prompted homesickness among international students?
2. What are the coping skills developed by international students in the advent of the COVID-19-engineered border closures?
3. What was the pattern of the homesickness of international students in varying stages of the pandemic as a result of institutional support and self-adopted measures?

COVID-19 and border closure

COVID-19 is one of the respiratory pathogens in human coronaviruses (HCoVs) detected in Wuhan, China for the first time (Paules et al., 2020; Roy et al., 2020). While the number of newly infected cases and fatality rate escalated rapidly, the World Health Organization (WHO) officially announced a worldwide health emergency and declared the crisis a pandemic on March 11, 2020 (Kang & Kim, 2020; WHO, 2020) Accordingly, China declared an immediate local lockdown and implemented social distancing as advocated by WHO as preventive measures at the early detection of COVID-19 (Fernandes, 2020). China further implemented serious immigration controlling measurement and international travel bans to reduce the number of imported infections (Emeto et al., 2021; Fernandes, 2020; Li et al., 2021) and to lessen human-human transmission (Cowling et al., 2020).

The first local lockdown started on January 23, 2020, in Wuhan (the hub of the outbreak) followed by other cities of Hubei province, China (Crossley, 2020; Socrates & Lashitew, 2020). Thus, it delayed the spread of the virus in other parts of China for 3 days (Chinazzi et al., 2020). Nearly all countries applied the border closure policy leading to a decline in the travelling rate of fast passenger flights (Goffman, 2020; Shiraef et al., 2022). According to Connor's (2020) report, at the end of March during the COVID-19 pandemic, 93 % of the total population of the world lived in nations with travel restrictions.

The border closure is believed to be a "costly decision" and comparatively an "extreme policy tool" that had a negative impact on the economy and societal affairs (Shiraef et al., 2022) and also hampered trade exchanges (Emeto et al., 2021; Socrates & Lashitew, 2020). Until the recent policy decision to open borders, China imposed "aggressive" actions to combat the spread of COVID-19 (Lawrence, 2020) as normal prevention measures and cautions although the daily routine was back to normal (Xiao et al., 2021). "A one-size-fits-all strategy using solely border closure measures does not seem adequate for the containment of COVID-19″ (Emeto et al., 2021, p.1181) and needs careful consideration (Kang & Kim, 2020).

In this regard, researchers suggested halting people's movement internationally may not contribute to slowing down the wave of infection but the timing of the closure integrated with other prevention measures (Bou-Karroum et al., 2021) and internalized behavioral changes (Chinazzi et al., 2020). Similarly, Xiao et al. (2021) asserted that in countries where there are low COVID-19 cases, complete border closure seems irrational. However, the authors recommended proper screening and isolation at international airports. Likewise, Shiraef et al. (2022) in their studies found domestic shutdowns showed more promising results in reducing new SARS-CoV-2 cases than international border closures.

Homesickness and international students

International students particularly students from Africa, Latin America, and Asia have been suffering from homesickness prior to the pandemic (Kegel, 2009). Although studying abroad is a worthy opportunity for international students, the aggregation of educational practice differences, cultural shock, the pressure of independent living, and language fluency problems make their stay challenging (Geary, 2016; Pardede, 2015). Additionally, visa issues, stereotype, discrimination and lack of social support aggravate their problems (Heng, 2018; Zhai et al., 2021). On the issue of discrimination, Poyrazli and Lopez (2007) mentioned in their study that the level of perceived ethnic and racial discrimination is high among non-white US (United States) students and higher among international students which leads to feelings of depression, loneliness, and alienation. They further added that being a European international student predicted decreased levels of perceived discrimination than being an international student from other parts of the world. In China, a study reported that African international students found racial discrimination unacceptable although the discrimination did not happen on campus (Chiang, 2015). That is, because of the homogenous nature of the Chinese population (92 % Han Chinese), it is not uncommon for local Chinese who rarely interact with foreigners from different countries to act in a way that may be interpreted as discrimination by foreigners (English & Zhang, 2020). However, it does not mean all students living abroad suffer from this impairment, others find it as an encouraging adventure for social and academic development (Thurber & Walton, 2012).

Despite all the controversies regarding the conceptualization of homesickness among scholars (Nijhof & Engels, 2007), it can be surmised that it is predominantly related to missing home and an adapted environment. Homesickness implies a distressed state because of separation from familiar people and residences (Biasi et al., 2018) and places or things (Hack-Polay & Mahmoud, 2021). It also negatively impacts emotional state, the prevalence of preoccupation, and exaggerated crave going back to native places (Moeini et al., 2018) as they likely perceive the new environment as "strange, bizarre, and outlandish" (Zulkarnain et al., 2019, p. 135). Several studies have underscored that all human beings regardless of age and environment experience homesickness (Rathakrishnan et al., 2021; Zulkarnain et al., 2019). Hence, Thurber and Walton (2012) labelled homesickness as "a nearly universal experience" (p. 415) where female students are more likely to suffer homesickness than males (Shoukat et al., 2021). This is because females tend to have more adjustment difficulties than their male counterparts (Stroebe et al., 2002).

The COVID-19 pandemic-born lockdown and strict isolation measures threw the life of international students into scores of psychological and social turbulences (Shoukat et al., 2021). Homesickness unfavorably affects students' psychological and physical well-being, overall health conditions (Thurber & Walton, 2007), academic activities (Tartakovsky, 2007) as well as career performance and organizational devotion (Hack-Polay & Mahmoud, 2021). A strong correlation between homesickness and depression has been revealed in numerous studies and is known to likely result in eating and sleeping disturbances (Constantine et al., 2004; Kegel, 2009). Additionally, significant clinical symptoms and attempts of committing suicide are among the intensified depression of homesickness consequences (Pardede, 2015; Zulkarnain et al., 2019). A wealth of literature has underscored how severe homesickness can provoke thoughts of suicide in underrepresented students (Scharp et al., 2016; Watt & Badger, 2009; Wittrup & Hurd, 2021). A core claim in the current study is that the homesickness of international students, if not addressed, will give rise to a major depressive disorder which can put them at a greater risk of committing suicide (Wittrup & Hurd, 2021). This makes the need to address issues relating to the

homesickness of international students of much importance.

Theoretical framework

Theoretical perspective: homesickness and attachment theory

Unequivocally, in our modern world, many things compel us to leave our comfort zones or home environment to new places for shorter or longer periods. Studying abroad is one of the pressing factors linked with the tendency to suffer from homesickness (Saravanan et al., 2019). In exploring the concept of homesickness in a pandemic era where border closure is a norm, the attachment theory, which has been consistently used in the field of psychology, is employed to provide a theoretical basis for the phenomenon. The foundational concept of the theory postulates that human beings have inborn "attachment behavior" (Bretherton, 1992; Sheinbaum et al., 2015). According to the theory, the developmental root of an individual's behavior is influenced by early interaction with attachment figures (Bowlby, 1973). These figures can be a person (e.g., a friend, sibling, or parent), a thing (diet, habit, or culture), or a place (e.g., someone's home environment).

Shal et al. (2011) mention that the formation of attachment helps in lessening anxiety and the development of coping skills stemming from homesickness. The theory assumes two types of attachment; secure and insecure attachment with different characteristics (Fogler, 2016; Sheinbaum et al., 2015; Wang, 2021). People with secure attachments are characterized by high confidence, self-efficacy and self-dependent. Insecure attachment is classified into anxious-ambivalent (high feeling of stress, insecurity and low social interaction), anxious-avoidant (feeling of rejection, anxiety and loneliness of separation from significant others), disorganized-disoriented (feeling of sadness, low self-esteem and insecure), which characterize are contradictory to secure attachment (Wang, 2021). The formation of attachment relationships also affects psychological state and physical health (McCain et al., 2007) and determines students' achievement (Wang, 2021).

In the current study, the researchers assume that the COVID-19-inspired border closures can result in feelings of alienation, sadness, depression, and boredom which are all traits of homesickness. These negative feelings have the propensity to translate into poor cognitive and social functioning. Withdrawing from social life and the inability to perform cognitive tasks can affect the academic performance of students whose main goal is to successfully complete their studies. Thus, attachment theory enables the researchers to explore in-depth the extent of homesickness of the students and how they are navigating through the experience with the development of coping strategies.

Prior studies have utilized attachment theory to investigate the homesickness of international students (Gouin & MacNeil, 2019; Nauta et al., 2020; Wang, 2021). According to Nauta et al. (2020), the homesickness of international students might be triggered during interactions (such as phone calls) with attachment figures at home. This is to say that the attachment figures turn on the attachment behavioral system in international students. Additionally, Scopelliti and Tiberio (2010) also linked placed attachment to homesickness such as international students relocating to a new university. The authors expounded that the negative emotion students develop towards a new place can initiate homesickness. From this perspective, attachment theory is used in this study to show that international students might feel homesick after interacting with home-based attachment figures and the negative emotions they might have developed towards their new environment under the COVID-19 restrictions.

Method

Approach

In order to elicit open and unrestrained responses with further probing to understand the lived experiences of the participants, we utilized a phenomenological approach, which is a qualitative method. The phenomenological approach is specially designed to obtain a deeper understanding of the shared or common lived experiences of people in a particular situation or context (Giorgi, 1991). In this light, the emotional unrest of the participants as a result of COVID-19-border-closure-induced homesickness was adequately explored (Creswell & Poth, 2017; Zahavi, 2019). Participants who had experienced the lockdown measures during the initial phase of the pandemic and were unable to travel home because of the border closures could give accurate responses regarding the world they lived in. Specifically, an interpretive approach (hermeneutic phenomenology) was taken for the phenomenological inquiry to enable participants to share their thoughts and feelings to make meanings from them (Palmer et al., 2010).

Because the researchers were active "actors" in the world of the participants (they also experienced the border closure and COVID-19 restrictions), they were able to carefully consider how the gathered data contributed to evolving understanding of the phenomena. The hermeneutic approach permitted the researchers to include their past experiences during the pandemic and existing knowledge about the phenomena to guide the interpretive process. The mode of data collection and analysis, data description and reporting of findings were informed by the hermeneutic phenomenological approach and this allowed the researchers to capture the experiences intrinsic to the respondents of the study and make meanings from them (Cilesiz, 2011).

Participants and sampling

An opportunistic sampling method was adopted to recruit the study respondents from five (5) randomly sampled universities in China. The random sampling technique was used in selecting the universities to allow participants from different locations to be included in the study. The researchers hoped the contextual situation prevalent in HEIs in different cities would provide a

comprehensive understanding of the homesickness of international students. In each of the five universities, four students were chosen. After contacting a key informant in each of the universities, students who were present at the time of the study and were willing to share their experiences were recruited.

The twenty (20) international students who made up the final sample of the study were those who have been in China since the onset of the pandemic. Out of the total sample, 7 of the participants were females, and 13 were males. A majority of the students were aged between 25 and 30 (80 %), 10 % were aged 20–24 %, and 10 % were aged 31–35. The participants came from all grade levels in their universities from different faculties; bachelors were 4, master's students were 9, and PhD students were 7. The students originated from Africa (n = 13), Asia (n = 6), and Europe (n = 1). Traditionally, a large share of international students in China come from Asia, followed by Europe, and then Africa according to the 2019 Ministry of Education of the People's Republic of China report (Adarkwah & Zeyuan, 2020). China has nearly 500,000 international students who originate from 194 countries studying in 1004 universities; 60 % are from Asia and 17 % are from Africa (Jiang et al., 2022). In the current study, most of the participants originated from Africa. The demographic information of the participants is presented in Table 1.

Data collection and instrumentation

After gaining written informed consent from participants, both face-to-face and online interviews were conducted using a self-designed interview protocol. Using the analysis of the literature reviewed, the researchers formulated the interview guide with a list of open-ended questions. The content validity of the instrument was ensured through peer debriefing. A designated area and time for the convenience of the respondents were chosen to conduct the face-to-face interviews. Social distancing was maintained by ensuring that both the interviewer and interviewee were at least two (2) meters apart. Online interviews were conducted using both the Zoom and WeChat application in a private area to prevent access to the interview session by a third party. All the interviews were conducted in English over a period of 30–40 min per participant. The collected data was encrypted and protected with a password known to only the researchers.

Ethical consideration

The study was conducted in accordance with the set guidelines of the researchers' host university. Approval was sought from the International Office of the first author's university. The sampled respondents were briefed on the objectives of the study and had the choice to fully participate or withdraw from the study at any stage. They were guaranteed that none of their identifying information would be shared with anyone or included in the analysis and reporting of the study's findings. All COVID-19 health protocols during data collection were adhered to. Trustworthiness was ensured by: recruiting only participants willing to offer data freely; using probes where necessary to elicit iterative questioning; rechecking transcribed data by informants; peer debriefing; detailed description and interpretation of participants' experiences to convey the actual situation; presenting the preliminary results to an academic body in the first author's university; and situating the current study's findings in previous research (Shenton, 2004).

Data analysis

The researchers congregated at a set time to familiarize themselves with the gathered data and begin verbatim transcription of the data. Prior to analysis, respondents were given the liberty to access their data to ascertain if they were a true reflection of their thoughts

Table 1
Participant information.

Participant	Gender	Marital status	Grade level	Major	Region
P1	Female	Single	PhD	Education Leadership & Management	Africa
P2	Female	Single	PhD	Agricultural Economics Management	Africa
P3	Male	Married	Master's	Computer Science	Africa
P4	Female	Single	Bachelors	Chinese Language	Africa
P5	Male	Single	Master's	Economics of Education	Asia
P6	Male	Single	Master's	Software Engineering	Africa
P7	Male	Single	PhD	Animal Science	Asia
P8	Male	Single	Master's	Education Management	Africa
P9	Male	Married	PhD	Business Administration	Asia
P10	Female	Single	PhD	Management Science (Eco-innovation)	Europe
P11	Male	Single	PhD	Microbiology	Asia
P12	Female	Married	Bachelors	Chinese Language	Africa
P13	Female	Single	Master's	Food science	Africa
P14	Male	Single	Bachelors	Chinese Language	Africa
P15	Female	Single	Master's	Economics of Education	Africa
P16	Male	Single	PhD	Crop Science	Asia
P17	Male	Single	Master's	Teaching Chinese as Foreign Language	Asia
P18	Male	Single	Master's	Economics of Education	Africa
P19	Male	Single	Bachelors	Chinese Language	Africa
P20	Male	Single	Master's	Environmental Science	Africa

and feelings. During analysis, pseudonyms were assigned to every participant to maintain confidentiality. The thematic analysis by Braun and Clarke (2006) and Clarke et al. (2015) was followed. This mode of analysis is a method for "identifying, analyzing, and reporting patterns (themes) within the data" (p. 79). The six (6) iterative processes followed are; (1) familiarization with the data, (2) generation of coding categories, (3) generation of themes, (4) reviewing the themes, (5) defining and naming the themes, and finally (6) locating exemplars.

Data was read several times to get a comprehensive understanding of participants' experiences and ensure accuracy. In a systematic manner, the researchers manually highlighted key statements from the data and assigned codes to them to form general and sub-themes for the study. That is, all the generated codes were collated into themes and sub-themes based on the content of the codes. Codes that were not recurring or pertinent to the research questions were deleted. The generated themes were further reviewed by the researchers before being sent to an external qualitative expert for corrections and validation. Few modifications were made until a consensus was reached. This was to ensure the coded text segment corresponded to the various themes. The themes were further redefined for clarity and conciseness. Out of the abundant data excerpts, compelling and rich statements relating to each theme were extracted as examples of participants' lived experiences, perceptions, and emotions.

Results

The study's findings suggest that all the respondents of the study experienced some level of homesickness in the aftermath of the COVID-19 border closure. Thus, the COVID-19-engineered border closure intensified the homesickness that the students might have already encountered before the pandemic crisis. The coping strategies adopted by the respondents were found to be similar with slight

Table 2
Coding scheme.

Categories	Themes	Sub-themes
1. **Homesickness** (COVID-19 engineered border closure prompting homesickness)	1. Travel plans	1. Vacation 2. Internship
	2. Impact on work-life	3. Communication 4. Social life 5. Academic life 6. Sleeping routine 7. Eating routine
	3. Reopening of borders	8. COVID-19 status 9. Socialization 10. Graduation
	4. Rationale for staying in China	11. School-related tasks 12. Information 13. Home distractions 14. Cost of flight ticket
	5. Main challenges experienced	15. Missing home 16. Academic difficulties 17. Adhering to COVID-19 protocols
2. **Coping strategies** (The coping skills developed by students to mitigate the homesickness)	6. Phone calls	18. Calls to family 19. Calls to friends
	7. Entertainment	20. Watching movies 21. Social media
	8. Indoor-outdoor activities	22. Campus trips 23. Get-together 24. Exercise
	9. Religious observance	25. Zoom meetings 26. Personal prayers 27. Holy book readings
	10. Institutional support	28. Free meals 29. Psychological and social support 30. Academic support 31. Online events
3. **Homesickness Pattern** (The alteration in the degrees of homesickness during different stages of the pandemic).	11. Depression	32. Anxiety 33. Frustration 34. Insomnia
	12. Concentration	35. Inability to study 36. Dysfunction in normal daily routine
	13. Lethargy	37. Backache 38. Headache 39. Laziness

variation. Although some participants envisaged that they would be homesick, they had rationales for staying in China to continue their studies during the initial stages of the pandemic when border restrictions were not intensive. Thirteen (13) main themes emerged from the qualitative data analysis under the three (3) main categories; homesickness (n = 5), coping strategies (n = 5), and homesickness pattern (n = 3). The thirteen themes were redivided into thirty-nine (39) sub-themes (Table 2).

First category: homesickness

Theme 1: Travel plans

Over half of the respondents voiced their plans for vacation and internship opportunities outside China before the travel restrictions. Some of the participants who were married hoped to reunite with their families and later return to continue their studies. One participant also revealed that there were festivities at home that demanded his presence. The weather situation in China was also some of the reasons why some students hoped to spend summer or winter vacations in their home countries. However, the border closure curtailed their travelling plans as explained;.

> *If there was no Covid-19, I think I would have gone on summer vacation. And if I can, I want to go home for winter vacation also because there are some festivals I want to celebrate with my family in my country. Yeah, I wouldn't have stayed during summer vacations as it's too hot for me* [P12, Africa].

> *Actually, I planned to travel in my second year. Maybe I would have gone to my country for an internship but because of the Covid-19 restrictions, I couldn't* [P14, Africa].

A student mentioned that his booked flight had to be cancelled because of the border restrictions;.

> *Before the outbreak, I have planned to go back for holidays and even booked my air ticket in December before the pandemic emerged. But even now, my ticket is not refunded. Sometimes, my children are worried* [P3, Africa].

The feeling of visiting home, at least once, before graduation to prevent being homesick was widely shared by the participants. It is worth mentioning that most of the participants began their studies in 2019 and had to experience COVID-19 campus restrictions in the first quarter of 2020, prior to the border closure which ultimately shattered their hopes of journeying back home to see their families. There are fewer internship opportunities in the universities where the participants came from because of limited monetary support and language barriers. Those who could enhance their skills and put into practice lessons from the classroom through internships at home were hindered.

Theme 2: impact on work-life

For most of the students, their inability to travel home generated feelings of loneliness, isolation, and depression that significantly affected their communication, social life, academic life, and their sleeping and eating routine. Some felt alienated from their classmates who returned home prior to the border restrictions. Some of the students revealed that they missed their local foods. Also, the anxiety of being far from home affected the eating and sleeping habits of some of the participants. Some of the participants felt uneasy about how their families were dealing with COVID-19 at home and were also bothered by family concerns about their well-being in a foreign country. They expressed;.

> *I used to call at least once a week before. But since the spread of COVID-19 across the globe, the frequency of calling home changed dramatically. This is because I am worried about them and how they also worry about me. So nowadays, I call at least 3–4 days a week* [P1, Africa].

> *Some time ago I had sleeping disturbances and restless nights because of some problems that happened in my family and somewhat required my presence. I could barely eat at the time or concentrate on my academics here. At times, you feel alone and a little depressed* [P7, Asia].

On a positive note, the separation between friends that led to loneliness among some students also inspired them to cultivate new relationships with the Chinese people;.

> *Because of Covid-19, many of my foreign friends are not around, so it made me socialize with Chinese people. So now, I have a lot of Chinese friends. It gives me more opportunities to be friends with local Chinese* [P13, Africa].

Additionally, they described being homesick as resulting in a decreased motivation to study. The online learning that was introduced to help students who find themselves outside China further strengthened homesickness among those on campus as they were mostly confined in their dormitories to take part in the classes.

Theme 3: Reopening of borders

The thought of the possibility that borders might be opened brought feelings of desperation among the students. Many of the

participants shared they felt hopeless about visiting their home countries without endangering their studies because of the current COVID-19 situation in China and other parts of the world. With the surge of new variants of the virus and tightening of restrictions in China to prevent any possibility of another wave of the virus, the students believed it was nearly impossible that they would have opportunities to go on vacations or visit their families any time soon. The feelings associated with the reopening of borders perpetrated homesickness among the participants. Nonetheless, participants hoped that borders will be opened before their graduation and reconnect with their classmates again as illustrated;.

> *I don't have hope that the borders will be reopened soon. We are in talks with our embassies and friends. Sometimes, we have to prepare suspension letters for our mates. I think depending on the virus situation in and outside China, the borders will be opened or closed. I will be happy if the borders are opened so I can see my friends again and those who are facing many problems because they are not in China can finish their studies* [P2, Africa].

China and Australia announced a similar travelling ban and closed their borders for more than a year. At the time of this study, Australia had fully reopened their borders but China had yet to welcome international students into the country possibly because of the pandemic crisis. However, as mentioned earlier, since January 8, 2023, China has opened its borders to travellers.

Theme 4: rationale for staying in China

As the participants shared their frustrations of being homesick and their desire to return home, the researchers were interested to know why they decided to remain in China during the initial phase of the outbreak when they could have travelled to meet their families. Some of the reasons why they chose to remain in China included their engagement in school-related tasks if on campus, the possibility of missing essential information about their studies, the distractions at home, such as nurturing children and family issues that could interfere with their studies, and the high cost of purchasing an air ticket. They pinpointed that;.

> *I decided to stay in China because I was writing my thesis and needed to download a lot of papers. I could only get them at school because of their subscription to some databases. I couldn't access such resources if I returned to my country. Internet access is a problem at home* [P9, Asia].

> *The cost of procuring an air ticket increased to the point where I could not purchase one. Besides, I am a Confucius Institute Scholarship (CIS) holder. I was paid allowances and felt safe in my room. There was no job which could earn me income at home. There are a lot of distractions at home that will not make me give maximum concentration on my studies* [P19, Africa].

Presently, international students can travel to their respective countries but might face academic-related challenges that might delay their graduation.

Theme 5: Main challenges

Many difficulties linked with homesickness stemming from the border closure were mentioned by the participants. Some of the participants who were bereaved and had plans for marriage were not able to visit their families because of the fear of endangering their studies if they left China. Some also had difficulties with the COVID-19-inspired online learning and also adhering to outlined health protocols on campus. Two of the participants indicated;.

> *I was unable to travel and collect data for my dissertation. I experienced low concentration, and also missed my family and neighbourhood. But the greatest challenge I encountered was the death of my father while being unable to travel and join the funeral rites. Can you imagine after long years of separation and hearing bad news like that? This was the most painful incident in my life coupled with my inability to see my family adversely affected my studies at a very critical time. In addition staying here for three consecutive years without travelling disrupted my relationship plans* [P1, Africa].

> *I find it difficult to concentrate and publish papers. Sometimes, my wife messages me while studying and my kids also want to talk to me because they've not seen me for more than two years. This keeps my focus away. Even on campus, the restrictions and daily reports of health information all make it difficult for me to study* [P3, Africa].

Some of the students expressed feelings of depression. However, they added that the school provided a counselling service for any student who was struggling because of the pandemic. From the perspective of attachment theory, it can be surmised that students who were married and with a child formed close bonds with their families, thereby triggering homesickness.

Second category: coping strategies

Theme 6: Phone calls

In order to escape the triggers of homesickness such as loneliness at the dormitory, a majority of the students resorted to phone calls (audio/video). The phone calls served as a channel for them to keep in contact with their families, friends, and classmates who were "trapped" in their home countries because of the border restrictions. As expressed;.

To minimize the feeling of homesickness, what I commonly do is just call my family and friends frequently although it is costly. And I tried to make myself busy with my friends [P11, Asia].

There is a change in the frequency of calling my family. Now, I call them very often. The reason I could no longer go out with friends when the border was closed. So, staying alone in my room, my phone helps me to talk with people often [P4, Africa].

It can be inferred that the homesickness induced by the border closure exacerbated the calling habits of the students. They considered talking with family and friends as a source of relief. The time difference between China and other countries was revealed by the participants as the major challenge during the phone calls. Notwithstanding, as indicated in the attachment theory, frequent calls with attachment figures can trigger homesickness in international students.

Theme 7: Entertainment

Other participants mentioned that they watched movies and other videos available on social media to occupy themselves to avoid boredom. This was the main source of entertainment to participants as other social activities were cancelled or postponed because of the health protocols initiated and less number of international students on campus to partake in such an activity. As demonstrated;.

Oh, when I feel bored, I watch a series on my computer or visit Facebook. I am able to watch videos and communicate with friends on Facebook. If you don't entertain yourself, there is little activity here to entertain you. There are even channels on WeChat where you can watch videos [P11, Asia].

Social media such as Facebook and YouTube became increasingly popular avenues for entertainment. In China, applications like WeChat are also alternative avenues for foreigners and locals to entertain themselves. These avenues also provided COVID-19 information to users. Some friends also played video games on their laptops and handheld mobile devices.

Theme 8: Indoor and outdoor activities

As the campus COVID-19 restrictions eased, some of the students were able to visit attractive sceneries in their vicinities. Excursions were limited to the campus and the town of the participants. Hence, some of the participants also engaged in indoor activities such as exercise at the gym or a "food fests" with friends at the same dormitory. Some of the games commonly played among friends as a means of exercise were badminton, tennis, and football, all on campus. The participants intimated that;.

I play football just to avoid depression. You have to connect with others, and you can do that through sports. If not, if you stay long in your office or room you'll start thinking [P20, Africa].

I go to the gymnasium every day. I don't have time to be idle either I make myself busy by playing football or doing exercise at the gymnasium. But we've also had a chance to visit nice places on campus and in the town [P16, Asia].

Theme 9: Religious Observance

Some participants emphasized how their affiliation with some religious organizations helped them in dealing with homesickness. During the weekends, they had the opportunity to have religious activities online on Zoom meetings and YouTube. Although the fellowship with other members of the same denomination was weekly, it was highly valued by the participants. Additionally, some of the participants also held personal prayer sessions with the belief that a Supernatural Being watches over them and keeps them company even when they are alone. The daily prayers were also augmented with a frequent reading of their sacred books (the Holy Bible and Quran) which kept their attention away from all COVID-19-related symptoms and events. Some of the reports are;.

I used to visit a nearby Mosque for prayers but because we can't go out, I have the prayers in my room when it is time. I have my Quran also with me, so I read it often, especially before going to sleep. It helps me to think about the readings and less about the current situation before falling asleep [P12, Africa].

There are a lot of International Christian Fellowships here which you can join online even if it is not your Church. I'm fortunate that I have my Church fellowship here. We have a WeChat group where we communicate and help each other. During the weekends, we also have a service on Zoom where reassuring messages are shared to bring comfort [P19, Africa].

Theme 10: Institutional support

The role of HEIs in alleviating homesickness among international students and ensuring their cross-cultural adjustment cannot be overemphasized. The need to ensure the mental health and safety of the students was of grave concern in these pandemic times. The researchers sought to explore some of the institutional support mechanisms set up to facilitate the coping skills of international students regarding their homesickness. It was deduced from participants' responses that their universities provided an emergency contact person in case any student experienced mental health issues. Additionally, online recreational activities such as a fashion show and food festival were organized. Some of the students also received faculty support in relation to their academics. As of the close of 2022, students in universities who are under lockdown are provided with free meals to relieve the burden of international students with

financial constraints and spending time restocking food items. Some participants pinpointed that;.

> *The free meals they are now providing are very helpful. I don't have to cook or think of applying to go to the supermarket. I can save a little time to perform other duties such as completing my research project* [P15, Africa].

> *When the pandemic started, it was announced in our school group that students can contact the teacher (laoshi;老师) at the International Office in case there needs any form of help. I didn't experience psychological counselling but it was available in my school*[P7, Asia].

Third category: homesickness pattern

Another aim of the study was to monitor alteration in the level of homesickness during different stages of the pandemic. Participants were asked about how they perceived changes in their ability to cope with COVID-19-induced homesickness from 2020 to 2022. This was necessary in the sense that it helped the researchers to assess whether institutional support systems and self-adopted coping strategies were effective in helping international students build resilience against homesickness over the period. It was observed that during the initial phase of the pandemic in 2020, participants experienced depressive symptoms because of the novel nature of the virus and the sudden disruptions in school operations and other routine activities.

In 2021, there were improvements in how participants dealt with homesickness because the schools had resumed online, some had taken the COVID-19 vaccines, and some had adjusted to the "new normal". The main concern was the apparent lack of concentration during class hours and in the performance of some daily tasks.

As of the close of 2022, many students indicated that they were under lockdowns but were used to the situation. The lockdowns were intermittent in nature and were lifted when the situation improved. They were reunited with some of their colleagues who had the opportunity to return. Because participants spend many hours in their dormitories in an event of a lockdown, some experienced body pains and headaches due to lethargy. It could be argued that there were improvements in the extent of homesickness over the period as a result of institutional support and the survival strategies adopted by the participants.

Theme 11: Depression

The depression developed because some of the students were anxious about their studies and safety. They were also concerned about their families at home, how they would feel if they run out of stock, and the financial muscle to afford quality healthcare if they were to contract the virus. Because of the experimental nature of the COVID-19 measures, there were uncertainties among the students if they were following the right protocols and if they were effective. There were limited interactions between students in the same dormitory because of the avoidance of handshakes and other social distancing norms. Since most students spend time alone in their rooms, symptoms of depression such as sleep disturbances and frustration developed. A participant indicated;.

> *I would say that the situation was more frightening in 2020 because the pandemic had just begun and the whole world was not sure about how to deal with it. Daily, you would read about the number of infections and deaths which makes you anxious. Because I was alone in my room, there was no one to discuss the situation with them. You just read updates from the school. Because school was also closed for a while, I was uncertain if we could complete the syllabus for the semester. I thought we would all be told to go home and will be unable to complete our studies. The thought can even affect your sleep*[P9, Asia].

Theme 12: Concentration

Participants expressed that the online nature of most university activities in 2021 led to a lack of concentration on their part in terms of engaging in organized activities, especially relating to their academics. Also, some participants opined that they were somewhat ineffective as before in the performance of normal daily activities because of aggravating factors of homesickness in their environment such as curfews and limited time slots to visit the supermarket to purchase food items. A participant indicated;.

> *I must confess that I struggled to follow lectures on the DingTalk app. Sometimes I fall asleep while listening to the teacher. I could not give my full concentration on most online activities, even the recreational ones* [P7, Asia].

Theme 13: Lethargy

The intermittent lockdown measures in 2022 somewhat made some of the participants lethargic according to their responses. Although there was more freedom to attend to their duties, in an event of a lockdown, they spent much time alone in their rooms. As a result, some participants felt lazy to study and those who spent prolonged hours in bed experienced headaches and body pains. One participant mentioned;.

> *Right now, situations are better. I feel homesick but it is okay for me because I know I will complete school soon and go home. The university is now providing free meals when we are under lockdown. I don't have to worry about how I would get foodstuffs* [P15, Africa].

Anxiety, depression, emotional distress, and malaise are some of the most common mental and physical health problems in this pandemic (Yuan et al., 2021). Because issues relating to mental health are of much importance, it is imperative for HEIs to provide quality psychological and social support services for students with suicidal ideation, low self-esteem, reduced concentration to engage in activities and those suffering from other depressive symptoms.

Discussion

It can be deduced from the study's findings that the travel restrictions triggered homesickness among participants in the study. While it is an undeniable fact that studying abroad often results in homesickness (Rathakrishnan et al., 2021), the border closure in China which denied international students vacation and internship opportunities (Mekonen & Xu, 2023) also precipitated and exacerbated the level of homesickness in the participants of the study. Homesickness among international students was further compounded by social discrimination. According to Jiang et al. (2022), the pandemic had a magnitude of discrimination against foreigners in China, particularly black folks. The authors add that students also suffered from mental and physical health issues. In the US, international students suffered from coronavirus depression, anxiety about career development, mental health problems, social isolation and homesickness because of COVID-19 health restrictions (Koo, 2021). The discrimination, lifestyle changes, issues with acculturation, and travel restrictions associated with the COVID-19 pandemic also negatively affected international students' mental health in the US (Mbous et al., 2022). International students suffered from homesickness and loneliness because of a loss of motivation and concern for relatives.

Since the time the origin of COVID-19 was linked to the Wuhan City of China, the country has initiated stringent measures to curb the virus. Emeto et al. (2021) call the international travel ban policy of China a "serious immigration controlling measurement." As of January 8, 2023, the borders of China have been opened to international students. Students who wish to return to China need to register with their universities and hope to gain approval which is less likely. The anxiety of endangering one's study, especially for students with laboratory experiments, was one principal reason why international students remained in China at a time when borders were opened for emigrating to another place. English et al. (2017) reported 135 international students from Mainland China with a 32 % of prevalence of depression symptoms. In the current study, some of the participants exhibited adaption and depression symptoms as a result of homesickness. The mental and physical problems that characterize homesickness have the propensity to decrease international students' ability to function and effectively cope with problems (Sezer et al., 2021). This was evidenced by participants' narration of academic and social life struggles in the current study.

The preoccupation with thoughts about home while unable to travel negatively affected the eating habits and sleeping routines of the students. A previous study reported acculturative stress among international students in China (Yu et al., 2014). The authors opined that acculturative stress among international students in China is more common than in developed countries. In their study, students from Africa and Asia reported difficulties with adapting to their new environment than those from other regions such as Europe, America, or Oceania. In this study, a majority of the participants were from Asia and Africa. In dealing with the adjustment difficulties of homesickness, students resort to myriad coping mechanisms such as talking with friends, thinking positively, indulging in physical activities, and keeping themselves busy with useful activities as protective factors (Saravanan et al., 2019; Sezer et al., 2021).

Participants relied on social media, phone calls, and other indoor and outdoor activities to cope with the homesickness they experienced. In the current study, it was observed that males were more resilient in dealing with homesickness than their female counterparts. This is in consensus with the study by (Stroebe et al., 2002) who opined that inherently, females have more adjustment difficulties than males. When stressed, females tend to engage in activities connected with others such as spending quality time with friends and family. Because of the lockdown measures, there were minimal social interactions and opportunities for females to engage in social events. While their male counterparts are more proactive in participating in indoor physical activity that relieves them of stress. Also, only three of the participants were married but none of them had a spouse in China. Communication was through phone calls. Because each of the three participants had a child, their major concern was family security and nostalgic feelings about being with their children. No major difference was observed regarding the level of homesickness and coping mechanisms of married and unmarried participants and also in terms of age.

Chiang (2015) believes that one way for international students to cope with homesickness in China is for international students to frequently interact with the Chinese people. Unlike other countries such as the USA and Canada, China is not a country of immigrants. Hence, homesickness is more prone to occur among international students in the country than in other regions. Hence, various coping strategies need to be adopted or put in place for international students, especially in times of crisis such as COVID-19. Institutional support in the form of free meals, psychological services, recreational online events, and the provision of academic support to international students was found in the study to be efficient in helping them cope with homesickness. School leaders should solicit the concerns and challenges of international students regarding their homesickness and reception of institutional support to effectively implement supportive structures for the students. The failure of school administrators to ameliorate the negative effects of homesickness in this pandemic era can demoralize students (Jiang et al., 2022).

The psychological adaption of international students is also closely related to their academic and sociocultural adaption (Sheng et al., 2022). Because the population of international students keep growing in China, ensuring their cross-cultural adjustment is important. Mitigating the adverse effect of homesickness will ensure the psychological well-being of international students so they can successfully pursue their studies and integrate with the Chinese locals. To make the stay of international students rewarding even in these pandemic times, school leaders should set up measures that facilitate their coping skills and make them less homesick.

Conclusion

The study was designed to explore the homesickness among international students in China amid the COVID-19-engineered border closure and the coping strategies they employed as protective factors. The study is the first to report the homesickness of international students from an Asian context, particularly in China. After analyzing the data collected, thirteen (13) main themes emerged, split into three (3) main categories; homesickness (n = 5), coping strategies (n = 5), and homesickness pattern (n = 3). The twelve main themes were subdivided into thirty-nine (39) sub-themes. The attachment theory was used to postulate that international students have strong longing feelings for home as a result of over two years of confinement in a foreign country with no opportunity for outside travel.

The findings from the current study evince the intensity of homesickness among international students in five (5) Chinese universities. The acculturative stress of international students is worsened in times of crisis such as COVID-19. The somatic and psychological symptoms emanating from the border closure-induced homesickness affected the vacation and internship plans, and the communication, social and academic life of the participants in the study who can be better described as "sojourners" (international students in China upon completion of studies must leave the country unless they secure work in-country). Also, the level of homesickness was felt differently by the students in varying stages of the pandemic. Homesickness was found to be intense during the first wave of the pandemic in 2020 as opposed to new waves of infection in 2021 and 2022. The students who hesitated in leaving the country when travelling restrictions were eased to allow those in China to leave the country cited access to relevant school information, school-related tasks such as laboratory work, home distractions, and the cost of flight tickets as the principal motives behind their reason to stay and cope with the homesickness they experienced.

With the emergence of new variants and the current lockdowns as of late December 2022, in Chinese cities like Beijing, Shanghai, and Chengdu, the participants of the study shared their hopelessness concerning the opening of borders. Some students shared their thoughts on the possibility of reopening borders further exacerbated their feelings of homesickness. The main challenge experienced by them involved missing home and their inability to honor family rites such as funerals and marriage, difficulty with concentrating on academic tasks and adhering to the COVID-19 health protocols. Personal efforts were made involving frequent phone calls, participation in indoor and outdoor activities, and entertainment from social media to cope with the maladaptive symptoms of homesickness. The students found their defense strategies fairly effective in coping with the stressors from the border closure-induced homesickness. Institutional supports such as free meals, academic support, and psychological support were all found to be helpful. It can be deducted from the study that universities can play a crucial role in relieving international students from homesickness during distressing times such as the COVID-19 pandemic. Leaders of HEIs should find ways of implementing relief strategies to facilitate the coping skills of international students. One sure way to do this is to solicit students' needs and concerns and find ways to address them.

Implications, recommendations, and limitations

The significant effect of homesickness on the health and well-being of international students poses a great challenge to their studies and optimal functioning. This implies that the graduation of international students might be prolonged and they might incur further costs in treating the somatic and psychological symptoms that accompany homesickness. Their host institutions might also have to utilize other resources, energy, and time that could be channelled towards other projects to ensure the well-being of international students.

It is recommended that higher education leaders assess the physical and mental health information of international students in Chinese institutions to know the level of their homesickness and how they can better address any acculturative stress of the students. Additionally, it is advocated that students who have been fully immunized against COVID-19 should be allowed to travel inside and outside the country. This can be done by issuing vaccine passports to qualified applicants and quarantining them upon arrival in the country. Virtual laboratories can be established for students who wish to carry their experiments at home to journey to their respective countries without jeopardizing their educational careers.

Future studies can take a keen focus on the psychological or physical symptoms of international students while utilizing a large sample. Researchers can probe further into the support mechanisms that aid the cultural adaption of international students in China. The subjectivity associated with qualitative research calls for a quantitative look at the same phenomenon on a broader scale. The study was limited to only five universities among the many universities in China and many of the participants originated from Asia and Africa. This means that results may differ in other populations. Future researchers can include more universities in different cities with variations in the origins of the sample.

Conflict of interest/Competing interests

Not applicable.

Code Availability

Not applicable.

Funding

Not applicable.

Data Availability

Not applicable.

References

Adarkwah, M. A., & Zeyuan, Y. (2020). Perceptions of the effect of an EAP course on english self-efficacy and english proficiency: Voices of international students in China. *Online Submission, 10*(2), 1–17. https://doi.org/10.5430/wjel.v10n2p1

Almanthari, A., Maulina, S., & Bruce, S. (2020). Secondary school mathematics teachers' views on E-learning implementation barriers during the COVID-19 pandemic: the case of Indonesia. *Eurasia Journal of Mathematics, Science and Technology Education, 16*(7), 1–9. https://doi.org/10.29333/ejmste/8240

Biasi, V., Mallia, L., Russo, P., Cerutti, R., & Violani, C. (2018). Homesickness experience, distress and sleep quality of first-year university students dealing with academic environment. *Journal of Educational and Social Research, 8*(1), 9–17. https://doi.org/10.2478/jesr-2018-0001

Bou-Karroum, L., Khabsa, J., Jabbour, M., Hilal, N., Haidar, Z., Abi Khalil, P., & El Bcheraoui, C. (2021). Public health effects of travel-related policies on the COVID-19 pandemic: A mixed-methods systematic review. *Journal of Infection, 83*(4), 413–423. https://doi.org/10.1016/j.jinf.2021.07.017

Bowlby, J. (1973). *Attachment and loss: Separation, anxiety, and anger*. New York: Basic Books.

Brammer, S., & Clark, T. (2020). COVID-19 and management education: Reflections on challenges, opportunities, and potential futures. *British Journal of Management, 31*(3), 453–456. https://doi.org/10.1111/1467-8551.12425

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology, 28*(5), 759–775. https://doi.org/10.1037/0012-1649.28.5.759

Cao, C., & Meng, Q. (2022). A systematic review of predictors of international students' cross-cultural adjustment in China: Current knowledge and agenda for future research. *Asia Pacific Education Review, 23*(1), 45–67. https://doi.org/10.1007/s12564-021-09700-1

Chiang, S.-Y. (2015). Cultural adaptation as a sense-making experience: International students in China. *Journal of International Migration and Integration, 16*(2), 397–413. https://doi.org/10.1007/s12134-014-0346-4

Chinazzi, M., Davis, J. T., Ajelli, M., Gioannini, C., Litvinova, M., Merler, S., & Vespignani, A. (2020). The effect of travel restrictions on the spread of the 2019 novel coronavirus (COVID-19) outbreak. *Science, 368*(6489), 395–400. https://doi.org/10.1126/science. aba9757

Cilesiz, S. (2011). A phenomenological approach to experiences with technology: Current state, promise, and future directions for research. *Educational Technology Research and Development, 59*(4), 487–510. https://doi.org/10.1007/s11423-010-9173-2

Clarke, V., Braun, V., & Hayfield, N. (2015). Thematic analysis. In *Qualitative Psychology A Practical Guide to Research Methods* (Third edition.,). SAGE Publications.

Crossley, G. (2020). *Wuhan lockdown "unprecedented", shows commitment to contain virus: WHO representative in China. Reuters*. Available from: https://www.reuters.com/article/us-china-health-who/wuhan-lockdown-unprecedented-shows-commitment-to-contain-virus-who-representative-in-china-idUSKBN1ZM1G9.

Connor, P. (2020). More than nine-in-ten people worldwide live in countries with travel restrictions amid COVID-19. *Pew Research Center*, 1 (Available from) ⟨https://www.newsbreak.com/news/1539216718347/more-than-nine-in-ten-people-worldwide-live-in-countries-with-travel-restrictions-amid-covid-19⟩.

Constantine, M. G., Okazaki, S., & Utsey, S. O. (2004). Self-concealment, social self-efficacy, acculturative stress, and depression in African, Asian, and LatinAmerican international college students. *American Journal of Orthopsychiatry, 74*, 230–241. https://doi.org/10.1037/0002-9432.74.3.230

Cowling, B. J., Ali, S. T., Ng, T. W., Tsang, T. K., Li, J. C., Fong, M. W., & Leung, G. M. (2020). Impact assessment of non-pharmaceutical interventions against coronavirus disease 2019 and influenza in Hong Kong: An observational study. *The Lancet Public Health, 5*(5), e279–e288. https://doi.org/10.1016/S2468-2667(20)30090-6

Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches*. Sage Publications.

Emeto, T. I., Alele, F. O., & Ilesanmi, O. S. (2021). Evaluation of the effect of border closure on COVID-19 incidence rates across nine African countries: An interrupted time series study. *Transactions of The Royal Society of Tropical Medicine and Hygiene, 115*(10), 1174–1183. https://doi.org/10.1093/trstmh/trab033

English, T., Davis, J., Wei, M., & Gross, J. J. (2017). Homesickness and adjustment across the first year of college: A longitudinal study. *Emotion, 17*(1), 1–5. https://doi.org/10.1037/emo0000235

English, A., Yang, Y., Marshall, R. C., & Nam, B. H. (2022). Social support for international students who faced emotional challenges Midst Wuhan's 76-day lockdown during Early Stage of the COVID-19 Pandemic. *International Journal of Intercultural Relations, 87*, 1–12. https://doi.org/10.1016/j.ijintrel.2022.01.003

English, A. S., & Zhang, R. (2020). Coping with perceived discrimination: A longitudinal study of sojourners in China. *Current Psychology, 39*(3), 854–869. https://doi.org/10.1007/s12144-019-00253-6

Fernandes, N. (2020). *Economic effects of coronavirus outbreak (COVID-19) on the world economy. IESE Business School Working Paper No. WP-1240-E*, Available at SSRN: https://ssrn.com/abstract=3557504. ⟨http://doi.org/10.2139/ssrn.3557504⟩.

Fogler, J. (2016). Review of attachment theory and research: New directions and emerging themes. *Journal of Developmental & Behavioral Pediatrics, 37*(9), 701. https://doi.org/10.1097/DBP.0000000000000344

Fronek, P., Briggs, L., Liang, J., Gallagher, H., Doherty, A., Charles, B., & McDonald, S. (2021). Australian social work academics respond to international students in crisis during COVID-19. *Frontiers in Education, 6*, 1–9. https://doi.org/10.3389/feduc.2021.637583

Geary, D. (2016). How do we get people to interact? International students and the American experience. *Journal of International Students, 6*(2), 527–541. https://doi.org/10.32674/jis.v6i2.369

Giorgi, A. (1991). *Phenomenology and psychological research*. Duquesne University Press.

Goffman, E. (2020). In the wake of COVID-19, is glocalization our sustainability future. *Sustainability: Science, Practice and Policy, 16*(1), 48–52. https://doi.org/10.1080/15487733.2020.1765678

Gouin, J. P., & MacNeil, S. (2019). Attachment style and changes in systemic inflammation following migration to a new country among international students. *Attachment & Human Development, 21*(1), 38–56. https://doi.org/10.1080/14616734.2018.1541515

Hack-Polay, D. (2012). When home isn't home: A study of homesickness and coping strategies among migrant workers and expatriates. *International Journal of Psychological Studies, 4*(3), 62–72. https://doi.org/10.5539/ijps.v4n3p62

Hack-Polay, D., & Mahmoud, A. B. (2021). Homesickness in developing world expatriates and coping strategies. *German Journal of Human Resource Management, 35*(3), 285–308. https://doi.org/10.1177/2397002220952735

Hari, A., Nardon, L., & Zhang, H. (2021). A transnational lens into international student experiences of the COVID-19 pandemic. *Global Networks*, 1–17. https://doi.org/10.1111/glob.12332

Heng, T. T. (2018). Different is not deficient: Contradicting stereotypes of Chinese international students in US higher education. *Studies in Higher Education, 43*(1), 22–36. https://doi.org/10.1080/03075079.2016.1152466.

Hu, Y., Xu, C. L., & Tu, M. (2022). Family-mediated migration infrastructure: Chinese international students and parents navigating (im)mobilities during the COVID-19 pandemic. *Chinese Sociological Review, 54*(1), 62–87. https://doi.org/10.1080/21620555.2020.1838271

Jiang, Q., Horta, H., & Yuen, M. (2022). International medical students' perspectives on factors affecting their academic success in China: A qualitative study. *BMC Medical Education, 22*(1), 574. https://doi.org/10.1186/s12909-022-03597-z

Kang, N., & Kim, B. (2020). The effects of border shutdowns on the spread of COVID-19. *Journal of Preventive Medicine and Public Health, 53*(5), 293–301. https://doi.org/10.3961/jpmph.20.332.

Kegel, K. (2009). Homesickness in international college students. *Compelling cOunseling Interventions: VISTAS*, 67–76.

Koo, K. (2021). Distressed in a foreign country: Mental health and well-being among international students in the United States during COVID-19. In *Impacts of COVID-19 on International Students and the Future of Student Mobility*. Routledge,.

Lawrence, S. V. (2020). *COVID-19 and China: A chronology of events (December 2019-January 2020)*. Congressional Research Service.

Li, H., Sun, K., Persing, D. H., Tang, Y. W., & Shen, D. (2021). Real-time screening of specimen pools for coronavirus disease 2019 (COVID-19) infection at Sanya Airport, Hainan Island, China. *Clinical Infectious Diseases, 73*(2), 318–320. https://doi.org/10.1093/cid/ciaa1074

Mbous, Y. P. V., Mohamed, R., & Rudisill, T. M. (2022). International students challenges during the COVID-19 pandemic in a university in the United States: A focus group study. *Current Psychology*, 1–13. https://doi.org/10.1007/s12144-022-02776-x

McCain, M.N., Mustard, J.F., & Shanker, S. (2007). *Early years study 2: Putting science into action*. Retrieved from ⟨http://earlylearning.ubc.ca/media/publications/early_years_study_2.pdf⟩.

Mekonen, Y. K., & Xu, X. (2023). "We did it right on time": International students' internship in China during COVID-19 pandemic. *Journal of Education and Learning, 12*(1), 91–101. https://doi.org/10.5539/jel.v12n1p91

Moeini, B., Abasi, H., Afshari, M., Haji Hosseini, M., & Ghaleiha, A. (2018). Homesickness, depression and happiness in university students in Hamadan, Iran. *International Journal of Epidemiologic Research, 5*(3), 73–79. https://doi.org/10.15171/ijer.2018.17

Nam, B. H. (2021). Online teaching experience as a member of international faculty during the outbreak of COVID-19 in China. In K. Bista, A. Ryan, & R. Chan (Eds.), *Impacts of COVID-19 on international students and the future of student mobility: International perspectives and experiences* (pp. 104–118). New York: Routledge.

Nauta, M. H., aan het Rot, M., Schut, H., & Stroebe, M. (2020). Homesickness in social context: An ecological momentary assessment study among 1st-year university students. *International Journal of Psychology, 55*(3), 392–397. https://doi.org/10.1002/ijop.12586

Nijhof, K. S., & Engels, R. C. M. E. (2007). Parenting styles, coping strategies, and the expression of homesickness. *Journal of Adolescence, 30*, 709–720. https://doi.org/10.1016/j.adolescence.2006.11.009

Palmer, M., Larkin, M., de Visser, R., & Fadden, G. (2010). Developing an interpretative phenomenological approach to focus group data. *Qualitative Research in Psychology, 7*(2), 99–121. https://doi.org/10.1080/14780880802513194

Pardede, G. (2015). *Homesickness among international college students: The impact of social embeddedness and connection to home (Doctoral dissertation)*.

Paules, C. I., Marston, H. D., & Fauci, A. S. (2020). Coronavirus infections—More than just the common cold. *Jama, 323*(8), 707–708. https://doi.org/10.1001/jama.2020.0757

Peters, M. A., Wang, H., Ogunniran, M. O., Huang, Y., Green, B., Chunga, J. O., & Hayes, S. (2020). China's internationalized higher education during Covid-19: Collective student autoethnography. *Postdigital Science and Education, 2*(3), 968–988. https://doi.org/10.1007/s42438-020-00128-1

Poyrazli, S., & Lopez, M. D. (2007). An exploratory study of perceived discrimination and homesickness: A comparison of international students and American students. *The Journal of Psychology, 141*, 263–280. https://doi.org/10.3200/JRLP.141.3.263-280

Tartakovsky, E. (2007). A longitudinal study of acculturative stress and homesickness: High-school adolescents immigrating from Russia and Ukraine to Israel without parents. *Social Psychiatry and Psychiatric Epidemiology, 42*, 485–494. https://doi.org/10.1007/s00127-007-0184-1

Thurber, C.A. (2012). *Homesickness and young people's adjustment to separation*. American Camp Association.

Thurber, C. A., & Walton, E. A. (2007). Preventing and treating homesickness. *Pediatrics, 119*(1), 192–201. https://doi.org/10.1542/peds.2006-2781

Thurber, C. A., & Walton, E. A. (2012). Homesickness and adjustment in university students. *Journal of American College Health, 60*(5), 415–419. https://doi.org/10.1080/07448481.2012.673520

Rathakrishnan, B., Bikar Singh, S. S., Kamaluddin, M. R., Ghazali, M. F., Yahaya, A., Mohamed, N. H., & Krishnan, A. R. (2021). Homesickness and socio-cultural adaptation towards perceived stress among international students of a public university in Sabah: An exploration study for social sustainability. *Sustainability, 13*, 4924. https://doi.org/10.3390/su13094924

Roy, D., Tripathy, S., Kar, S. K., Sharma, N., Verma, S. K., & Kaushal, V. (2020). Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian Journal of Psychiatry*. , Article 102083. https://doi.org/10.1016/j.ajp.2020.102083

Saravanan, C., Mohamad, M., & Alias, A. (2019). Coping strategies used by international students who recovered from homesickness and depression in Malaysia. *International Journal of Intercultural Relations, 68*, 77–87. https://doi.org/10.1016/j.ijintrel.2018.11.003

Scharp, K. M., Paxman, C. G., & Thomas, L. J. (2016). "I want to go home": Homesickness experiences and social-support-seeking practices. *Environment and Behavior, 48*(9), 1175–1197. https://doi.org/10.1177/0013916515590475

Scopelliti, M., & Tiberio, L. (2010). Homesickness in university students: The role of multiple place attachment. *Environment and Behavior, 42*(3), 335–350. https://doi.org/10.1177/0013916510361872

Sezer, Ş., Karabacak, N., & Narseyitov, M. (2021). A multidimensional analysis of homesickness based on the perceptions of international students in Turkey: A mixed method study. *International Journal of Intercultural Relations, 83*, 187–199. https://doi.org/10.1016/j.ijintrel.2021.06.001

Shal, R. S., Abdekhodaee, M. S., kafi Masoleh, S. M., & Salehi, I. (2011). Survey the relationship between attachment style and general self-efficacy with homesickness among college students. *Procedia-Social and Behavioral Sciences, 30*, 538–541. https://doi.org/10.1016/j.sbspro.2011.10.105

Sheinbaum, T., Kwapil, T. R., Ballespí, S., Mitjavila, M., Chun, C. A., Silvia, P. J., & Barrantes-Vidal, N. (2015). Attachment style predicts affect, cognitive appraisals, and social functioning in daily life. *Frontiers in Psychology, 6*(296), 1–10. https://doi.org/10.3389/fpsyg.2015.00296

Sheng, L., Dai, J., & Lei, J. (2022). The impacts of academic adaptation on psychological and sociocultural adaptation among international students in China: The moderating role of friendship. *International Journal of Intercultural Relations, 89*, 79–89. https://doi.org/10.1016/j.ijintrel.2022.06.001

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63–75. https://doi.org/10.3233/EFI-2004-22201

Sherry, M., Thomas, P., & Chui, W. H. (2010). International students: A vulnerable student population. *Higher Education, 60*(1), 33–46. https://doi.org/10.1007/s10734-009-9284-z

Shiraef, M. A., Friesen, P., Feddern, L., & Weiss, M. A. (2022). Did border closures slow SARS-CoV-2. *Scientific Reports, 12*(1), 1–13. https://doi.org/10.1038/s41598-022-05482-7

Shoukat, S., Callixte, C., Nugraha, J., Budhy, T. I., & Irene, T. (2021). Homesickness, anxiety, depression among Pakistani international students in Indonesia during Covid-19. *ASEAN Journal of Psychiatry, 22*(7), 1–8.

Sintema, E. J. (2020). E-Learning and Smart Revision Portal for Zambian primary and secondary school learners: A digitalized virtual classroom in the COVID-19 era and beyond. *Aquademia, 4*(2), 1–2. https://doi.org/10.29333/aquademia/8253

Socrates, M.K., & Lashitew, A. (2020). *The effect of lockdown policies on international trade: Evidence from Kenya*.

Stroebe, M., Van Vliet, T., Hewstone, M., & Willis, H. (2002). Homesickness among students in two cultures: Antecedents and consequences. *British Journal of Psychology, 93*(2), 147–168. https://doi.org/10.1348/000712602162508

Viner, R. M., Russell, S. J., Croker, H., Packer, J., Ward, J., Stansfield, C., & Booy, R. (2020). School closure and management practices during coronavirus outbreaks including COVID-19: A rapid systematic review. *The Lancet Child & Adolescent Health, 4*(5), 397–404. https://doi.org/10.1016/S2352-4642(20)30095-X

Wang, R. (2021). The influence of attachment types on academic performance of children. In *Proceedings pf the 2021 4th International Conference on Humanities Education and Social Sciences (ICHESS 2021)* (pp. 512–517). Atlantis Press. ⟨https://doi.org/10.2991/assehr.k.211220.087⟩.

Watt, S. E., & Badger, A. J. (2009). Effects of social belonging on homesickness: An application of the belongingness hypothesis. *Personality and Social Psychology Bulletin, 35*(4), 516–530. https://doi.org/10.1177/0146167208329695

Wittrup, A., & Hurd, N. (2021). Extracurricular involvement, homesickness, and depressive symptoms among underrepresented college students. *Emerging Adulthood, 9*(2), 158–169. https://doi.org/10.1177/2167696819847333

World Health Organization (WHO) (2020). *Updated WHO recommendations for international traffic in relation to COVID-19 outbreak*. https:// www. who. int/ news-room/ artic les- detail/ updat ed- who- recom menda tions- for- inter natio nal- traffic- in- relat ion- to- covid-19- outbreak.

Yu, B., Chen, X., Li, S., Liu, Y., Jacques-Tiura, A. J., & Yan, H. (2014). Acculturative stress and influential factors among international students in China: A structural dynamic perspective. *PLoS One, 9*(4), Article e96322. https://doi.org/10.1371/journal.pone.0096322

Xiao, R., Zhao, T., Wu, Y., Cheng, C., & Sun, C. (2021). How does China keep COVID-19 outside its boarder? First-hand experience of medical staff at an international airport in China. *Journal of Travel Medicine, 28*(2), taaa230. https://doi.org/10.1093/jtm/taaa230

Yuan, L. L., Lu, L., Wang, X. H., Guo, X. X., Ren, H., Gao, Y. Q., & Pan, B. C. (2021). Prevalence and predictors of anxiety and depressive symptoms among international medical Students in China during COVID-19 pandemic. *Frontiers in Psychiatry, 12*(1–11), Article 761964. https://doi.org/10.3389/fpsyt.2021.761964

Zahavi, D. (2019). *Phenomenology: The basics*. Routledge & CRC Press. ⟨https://www.routledge.com/Phenomenology-The-Basics/Zahavi/p/book/9781138216709⟩.

Zhai, Y., Zhang, L., Yan, Z., & Wei, Y. (2021). Social dominance orientation, social contact, and attitudes toward international students. *Current Psychology*, 1–11. https://doi.org/10.1007/s12144- 020- 01311-0

Zulkarnain, Z., Daulay, D. A., Yusuf, E. A., & Yasmin, M. (2019). Homesickness, locus of control and social support among first-year boarding-school students. *Psychology in Russia, 12*(2), 134–145. https://doi.org/10.11621/pir.2019.0210