

# Stressors and Stress Management of Chinese International Students in South Korea during the Covid-19 Outbreak

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Chinese international students, the biggest population of students in South Korea, experienced stress during the Covid-19 outbreak. However, little is known about their stressors and stress management during this time. As a case study, this study aims to explore what stressors contribute to their stress and how the stress was managed during the Covid-19 outbreak in South Korea. The sample consists of 8 Chinese international graduate students, with 3 males and 5 females. A semi-structured interview was adapted. Thematic analysis was undertaken on the transcripts using MAXQDA 2020 software. The list of codes and themes were not pre-determined but developed through content analysis. The theory of preventive stress management (TPSM) proposed by Quick, Quick, and Nelson (1998) was used to analyse the survey data. The results indicate uncertainty is the most significant stressor, and communication with family, friends, and classmates and online courses are the two most adopted stress management strategies at the individual and organisational levels, respectively. It was also found that most of the stress management strategies at the organisational level belong to the contributions to primary prevention, while most strategies at the individual level target secondary prevention. As for tertiary intervention, it is disappointing that the results do not reflect any signals or characteristics of psychological intervention. The results have important implications for Chinese international students and relevant staff in South Korean universities.

**Key words:** *Stressor, Stress Management, Chinese International Students, the Covid-19 Outbreak, South Korea.*

## Introduction

Coronavirus disease (COVID-19), once also named SARS-CoV-2, 2019-nCoV, is an infectious disease caused by a newly discovered coronavirus (World Health Organisation, 2020). On 20 January 2020, National IHR Focal Point (NFP) for the Republic of Korea reported the first case of a novel coronavirus in South Korea (World Health Organisation, 2020). Until February 17, the number of confirmed cases in South Korea remained relatively stable, with only 30 confirmed cases; however, the situation changed drastically after the 31st confirmed case was identified, and the number of confirmed cases surprisingly soared to 2,022 by February 28 (Jung & Jun 2020). The number of confirmed cases has steadily increased among some groups, such as believers in religious cults, Shincheonji Church of Jesus as a typical case, from their second and tertiary infection (Ha, K. M., 2020). At that time, with rising concerns of “fake news” related to Covid-19 from various sources, people in South Korea might experience high anxiety and stress. Also, in the case that the source of infection remained uncertain in some cases, the factors, such as travel bans, self-isolation, border restrictions, etc., might drive people to feel that “there is no safe place”, which can further amplify public anxiety.

However, to halt COVID-19 spreading, many countries where Chinese students pursue their academic studies announced travel restrictions on foreign nationals as of Feb 2020. Hence, Chinese international students were stressed, fearing that their families in China are susceptible and at risk of infection with Covid-19. Meanwhile, they also face stereotypes, prejudices, discrimination, and self-isolation due to being considered as potential Covid-19 carriers. This situation can lead to mental health problems, such as denial, stress, anxiety, and fear. Hence, the mental health needs, especially stress, of international Chinese students are urgently needed to be addressed (Zhai & Du, 2020). Local residents expressed opposition to the entry of Chinese nationals into South Korea, which was advocated by some mass media practitioners; under pressure, many local universities have postponed classes to mid-March to prevent the potential spread of Covid-19 (Ha, K. M., 2020).

Among the international students in South Korea, the largest group was Chinese students, which accounted for 68,184 (55%) (The Pie News, 2018). It is likely that during the Covid-19 outbreak, Chinese international students in South Korea suffered stress. However, stressors and stress management on Chinese international students in South Korea during the Covid-19 outbreak has not been studied, so little is known about their stressors and stress management. In the 21st century, human civilisation has witnessed at least six global health emergencies, e.g. H1N1 in 2009, polio in 2014, Ebola (broke out in West Africa in 2014), Zika (2016), Ebola (Democratic Republic of Congo in 2019), and Covid-19 (Chakraborty & Maity, 2020). These global contagious outbreaks triggered a large number of fatalities, morbidities, cost billions of dollars, and caused numerous troubles (Allocati et al., 2016; Fan



et al., 2019). Compared to other global health emergencies and their respective burdens, Covid-19 is likely to cause as much or greater human suffering than all other contagious diseases in the whole world (Chakraborty & Maity, 2020). Considering the extensive and deep impact on the world, it is believed that Chinese international students in South Korean universities have been unprecedentedly impacted. As is mentioned above, China is the biggest source of international students studying in South Korea, therefore the unprecedented pandemic of Covid-19 makes stress management of Chinese students a significant area of research.

Therefore, the purpose of this study is to explore what stressors contribute to stress and how stress was managed for Chinese international students during the Covid-19 outbreak in South Korea.

For this study, the research questions are addressed:

1. What are the stressors that contribute to the stress of Chinese international students during the Covid-19 outbreak in South Korea?
2. How was stress management conducted on Chinese international students during the Covid-19 outbreak in South Korea?

## **Literature Review**

### ***Definitions and Theories***

What is a stressor? It is reasonable to understand a stressor at the levels of individual and organisational respectively. Individually, stressors are the physical and psychological demands which trigger the stress response within individuals (Pandey, Quick, Rossi, Nelson, & Martin, 2010; Quick et al. 1997). At the organisational level, stressors can be induced from many different sources, such as role ambiguity, interpersonal relationships, and organisational change. Mack, Nelson, and Quick (1998) argued that as individuals anticipate and perceive a change in the organisation, stress responses would arise. Generally, in organisations, stressors were classified into four categories in a theoretical framework: role factors, job factors, physical factors, and interpersonal factors (Quick and Quick, 1979). There are some common stressors: time pressure, situational stressors caused by the environment in which a person lives, and expected stressors which refer to those that have not yet occurred but are likely to occur as unpleasant events, including fear and unpleasant expectations (Beehr & McGrath, 1992).

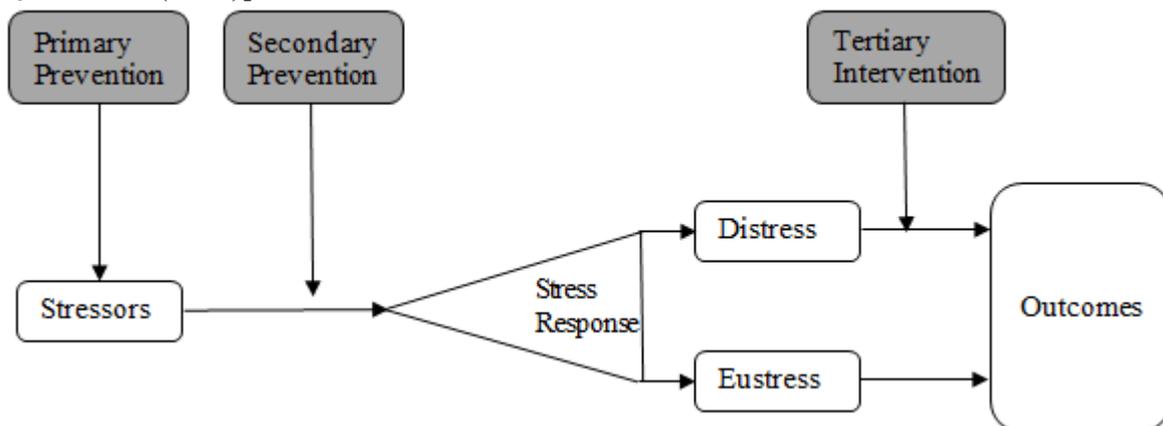
### ***Theoretical framework***

From the above stressor theories, it is apparent that a stressor is most related to individual psychology and the organisational environment. Hence, in this research, stress management is

classified into two levels: stress management at the individual level and stress management at the organisational level.

The theory adopted in the study is the theory of preventive stress management (TPSM afterward) proposed by Quick, Quick, and Nelson (1998), which is suitable both for individual stress management and organisational stress management. The conceptual model of the TPSM presented in Figure 1 (Pandey et al.2010; Quick et al.,1997) consists of a platform and a translated overlay. The platform represented by the unshaded boxes specifies the stress process. The process flows from stressors to stress response, then to outcomes. Stressors may be either environmental or self-imposed, and are the causal factors that are often considered demands. The stress response is caused by exposure to stressors; the stress response may be positive leading to eustress or negative leading to distress.

**Figure1.** Preventive stress management model—stressors, stress response (eustress or distress), and outcomes [Adapted from Figure 11.1 in Pandey et al. (2010) and Figure 8.1 in Quick et al. (1997)]



The three stages of prevention – primary prevention, secondary prevention, and tertiary prevention – are represented by the shaded boxes (Hargrove et al., 2011). The primary intervention is aimed at reducing stressors, secondary intervention at moderating the stress response, and tertiary intervention moderating the outcomes related to distress (Hargrove et al., 2011).

Primary prevention focusses on stressors and health risk factors; the aim is not to eliminate all stress. Only the stress that may produce negative responses should be eliminated, such as violence, hazardous conditions, etc. Primary intervention should seek to reduce stressors to levels that promote positive stress responses and create conditions of eustress (Hargrove et al., 2011). Secondary prevention as the figure shows is aimed at utilising available resources, such as relaxation techniques, meditation techniques, hypnosis and biofeedback training, and faith and spirituality-based practices (Quick, 1999b). Secondary stress prevention is not an alternative to primary stress prevention, but a supplement that creates resilient and healthy

individuals (Quick et al., 1998). Secondary interventions may be especially appropriate when individuals regularly encounter high levels of stressors for focussing on preparing individuals with a toolbox of coping techniques for dealing with stressors. Some techniques that may be useful during the stress response phase include relaxation techniques and meditation techniques (Quick et al., 1997). Perhaps the most common secondary prevention techniques are exercise and wellness programs. Good exercise programs include aerobic training, strength training and flexibility exercises; wellness programs, often designed to improve diet and promote weight loss, serve a similar function (Quick et al., 1997). Tertiary prevention is the last line of defence for stress management, being considered treatment intervention (Hargrove et al., 2011). At this stage, the stressors have stimulated negative responses, which then generates negative outcomes. Tertiary prevention is designed to treat and heal individual symptoms of distress (Quick, 1999b), and repair negative organisational outcomes that have accrued because of individual distress (Quick et al., 1997). An example of tertiary prevention is that conducted in the wake of the 2009 Fort Hood shooting; the Army offered Fort Hood soldiers and employees treatment and counselling to deal with the distress caused by the violence (Hargrove, Quick, Nelson, & Quick, 2011).

### ***Recent Literature***

The Covid-19 virus is still spreading in the world, but there is little literature on international students' mental health during the Covid-19 outbreak. The studies on stress management on Chinese international students during the Covid-19 outbreak in South Korea have not yet completed. However, the following relevant studies on students' stressors and stress management during the Covid-19 outbreak were searched.

As for studies on the mental health of Chinese international students during the Covid-19 outbreak, only one article by Zhai, Y., & Du, X. was found. Zhai & Du (2020) stated some mental health problems existed among Chinese international students, such as denial, stress, anxiety, and fear. The potential stressors are fears that their families in China are susceptible and at risk of infection of the Covid-19, discrimination, and isolation. Regarding stress management, they also argued that some universities have sent messages of solidarity, offering support and resources such as counselling services to the Chinese international students; however, counselling centres are often understaffed, which leads to long waiting times (Zhai & Du, 2020).

In terms of college students' perception of stress during the Covid-19 outbreak in China, two publications were found (Cao et al., 2020; Wang et al., 2020). Cao et al. argued that about 24.9% of college students experienced anxiety because of this COVID-19 outbreak. Results of the research indicated that economic effects, and effects on daily life, as well as delays in academic activities, were positively associated with anxiety symptoms; however, social

support was negatively correlated with the level of anxiety. Regarding stress management, Cao et al. suggested that the government and schools should collaborate to resolve this problem to provide high-quality, timely crisis-oriented psychological services to college students (Cao et al., 2020b). Wang and his colleagues stated that students were found to experience a psychological impact of the outbreak and higher levels of stress, anxiety, and depression; the uncertainty and potential negative impact on academic progression could have an adverse effect on the mental health of students (Wang et al., 2020).

## **Methods**

### ***Setting and Participants***

A semi-structured interview was adopted to explore the stressors and stress management of Chinese international students in South Korea during the COVID-19 outbreak. Semi-structured interview, a qualitative approach, is considered as a powerful tool to capture the voices and the ways people make meaning of their experiences (Rabionet, 2011).

Eight participants from a university in central South Korea were selected with snowball sampling. Qualitative researchers need to recognise that the process of snowball sampling is multi-dimensional and not just about one name leading to another but about relations of trust (Flores, 2018). Therefore, plenty of time and energy was used to build rapport and trust. Considering the survey was done during the period that social distancing was advocated by the Korean government, the participants were asked to be interviewed via Zoom in the Chinese language. Five of the participants were in China, who took online courses; while three of them were in South Korea, all of them were interviewed online.

### ***Survey Development***

The interview guide consists of two parts: demographic information and open-ended questions. Demographic data were collected based on gender, age, education, residential location (Wang et al., 2020), the experience of lock-down, and whether in quarantine or not. Survey questions were built based on the potential stressors which lead to stress on Chinese international students, and how their stress was managed. Additionally, recent literature and factual situations were also taken into account. Six open questions were designed for the interview.

Considering the features of the qualitative research, such as flexibility and interaction, not all the questions in the interview guide were asked in sequence, depending on the flow, direction, and pace of the individual interview. However, all the demographic information and open-ended questions were eventually checked to ensure the full coverage.



### ***Survey Analysis***

Xunjie Software (developed by Hudun Tech) was utilised to transcribe the audio files into text files. MAXQDA 2020 was used to code and analyse the text data. Given the vast quantities of data collected in both quantitative and qualitative approaches, computer-assisted qualitative data analysis software (CAQDAS) is essential (Burian, Rogerson, & Maffei III, 2010). As a broadly used CAQDAS, MAXQDA has outstanding advantages in storing, organising, and analysing qualitative data in the field of education research (García-Horta & Guerra-Ramos, 2009). Additionally, Microsoft Excel was also used to analyse demographic characteristics statistics in qualitative research (Burian et al., 2010).

Data analysis is supported by providing tools for archiving phrases, sentence fragments, themes, codes (labels), and data from various levels of analysis (Burian et al., 2010). Thematic analysis was undertaken on the transcripts using MAXQDA software. The list of codes and themes were not pre-determined but developed through content analysis based on the above-mentioned literature and theoretical framework.

### ***Interests and Equity***

Qualitative research has been increasingly used to understand the factors that influence equity, but there are potential limitations to this understanding related to how the research has been conducted (Minkler, 2004). Considering the researcher is also a Chinese international student in South Korea who also experienced stress during the Covid-19 outbreak, participatory research was not adopted to avoid biases related to the researcher's personal experiences, emotions, or feelings. The researcher should be cautious enough when he/she is engaged in a study as an 'insider researcher' in his/her own workplace, society or culture (Atkins and Duckworth, 2019). Therefore, interests and equity were considered when the research was conducted.

## **Results**

### ***Demographic Characteristics***

Eight respondents participated in the interview. They were recorded with pseudonyms after their approval. The demographic characteristics of the respondents are presented in Table 1.

**Table 1:** Respondents (n=8)

Name*	Gender	Age	Program	Quarantine experience	lock-down experience	Geographic location during the Covid-19 outbreak
Ma	Female	31	Doctoral	Yes	Yes	South Korea
Lee	Female	38	Doctoral	No	Yes	China
Sun	Female	36	Doctoral	No	Yes	China
Zhou	Male	41	Doctoral	Yes	Yes	South Korea
Zhao	Female	26	Doctoral	No	Yes	China
Tian	Male	25	Doctoral	Yes	Yes	China
Wu	Female	36	Doctoral	Yes	Yes	China
Liu	Male	41	Doctoral	Yes	Yes	China
* Pseudonyms were used						

## Results

The results of the study were produced via MAXQDA 2020. In response to the research questions, the results were shown in two dimensions: the stressors which contribute to the stress of Chinese international students during the Covid-19 outbreak in South Korea, and the strategies or ways of their stress management at the individual and organisational levels respectively.

Regarding stressors that contribute to the stress of Chinese international students during the Covid-19 outbreak, 8 stressors labelled as themes emerged from the interview data – uncertainty is the most significant stressor mentioned by all respondents. According to the memo of uncertainty, it refers to the uncertainties towards the development of the Covid-19 pandemic, international airlines, and authentication of their online courses after graduation. Among the respondents, Ma recalled and explained his experiences towards uncertainties:

Facing many uncertainties at that period, because I was alone in South Korea which was a foreign country which I was not familiar with, far away from my family, and my Korean language skill is poor. The uncertainties include my worries about starvation, surging of prices of goods, and even war between North Korea and South Korea. When I thought about these uncertainties, I felt worry and panic.

Uncertainties towards academic affairs are also mentioned, Wu said, “I was stressed at that time about my thesis because I heard that my supervisor would resign, but I have not got the assurance from TA. I don’t know what I should do during such a special and tough period.”



Tian also said:

“During the Covid-19 outbreak in South Korea, I felt very stressed about the uncertain date of the beginning of this semester, and the way of having classes, I mean online courses or face-to-face course. Because the date has been changed several times, and the way of having classes has been decided for a long period. So I don’t know whether I need to fly to Korea to attend face-to-face courses or online courses. So I hope the university could make decisions early and give us a certainty regarding these aspects.”

The stressor that followed is the risk mentioned by 7 respondents, which means the risks of getting infected from travelling from China to South Korea, and being repatriated if there was something wrong in South Korea. Zhou described what he thought:

“I remembered that day was March 10, I got the news that there were over 300 Korean people were infected. I was very worried and stressed about whether I should fly to South Korea or not, and if I should, how should I guarantee that I could not be infected from China to South Korea? So the risk did exist, especially from the journey from China to South Korea. You know, I need to take buses, flight, taxi and stay at the bus stations and the airports where clusters of people gathered.”

Wu recalled, “I think it was risky at that time in South Korea. You know, it was reported that some aliens were forcibly repatriated because they had broken the rules of quarantine at home.” And surprisingly Sun stated that she might face the risk of being penalised by her affiliation in China if she had had to travel abroad without permission from her affiliation. She mentioned:

“I think I faced many risks during that period. One risk was that I think you have got the news that one Chinese Ph.D. student who is studying in a South Korean university was penalised by her affiliation in China for travelling to South Korea during the outbreak. But you know she had no choice for she must go to South Korea to defend her dissertation. I was also stressed if I had to fly to South Korea and my affiliation in China didn’t get approval.”

Additionally, safety, dissertation, Five Ones Policy, discrimination are also the stressors emerging from the interview data. Some of the stressors will be analysed in the discussion section.

Regarding stress management, the results are presented at the individual and organisational levels respectively, which are based on the literature and theoretical framework. At the individual level, a majority of respondents indicated that communication with family, friends, and classmates is the strategy they used to manage stress during the Covid-19 outbreak, and

it was also the most mentioned strategy. The respondents said that they felt much better by communicating online with their parents, grandparents, friends, and classmates on something they felt stressed and uncertain about. Zhao said, “When I felt stressed at that period, I would chat with my parents; after chatting with them, I found much relief and I was more clear about something confusing.” Ma mentioned, “I chatted online with my classmates and friends, which I think is helpful to know the difficulties well we were facing at that time. When I talked with them I felt I was not in that panic anymore”. Although communication with friends was mentioned many times, some Chinese international students didn’t want to share everything in detail, just like Zhou said:

“It is indeed useful to relieve stress to communicate with friends online, but I don’t think you would talk about everything in detail with your friend, anyway, everyone has his or her secrets which they don’t want to share. And if you poured out everything to your friends, they would laugh at your fragility and immaturity in private. I don’t want to be laughed at.”

Two respondents mentioned they had communicated with their professors during the outbreak of Covid-19. Wu said, “I wrote emails to professors during the Covid-19 outbreak, suggesting that we should have classes online instead of the face-to-face classes”, and Liu mentioned, “I communicated with professors, asking for some advisories to help me make a decision.” Watching comedy video was also mentioned by 6 respondents when asked about how they managed their stress. Zhao said, “I would watch some comedy videos at that period, I found that I felt not so stressed after I laughed.” Zhou described his experiences:

“When I feel stress at that time, I found it is hard to concentrate on studying. But except studying, I had nothing to do at home. I felt very contradictory. So, I just choose to look to the cellphone, watching Trends in Moments of WeChat to look for some short entertainment videos to relax; or watching TV, including some drama. Anyway, because of the period of the pandemic, nothing could be done except killing time.”

Additionally, doing exercise, cooking, reading, drinking, eating, online shopping, etc, were also mentioned by the respondents.

At the organisational level, most of the respondents expressed that online courses that the university had provided instead of face-to-face courses is beneficial to reduce their stress during the Covid-19 outbreak in South Korea. Ma said, “Later on the university provided online courses, which is safer, and made me feel relieved.” Sun also mentioned, “I felt better, possibly because of the online courses which were provided later.” Although online courses make contributions to relieve stress, one respondent also mentioned the downsides of it. Lee said:



“Although at last, we can stay in China to take online courses instead of flying to South Korea, I don’t think I can learn a lot through online classes; frankly some online courses are really not good. And you cannot discuss some points with the professors deep enough, and there is no office hour online, you cannot get access to the opportunity to discuss something with professors face to face in detail.”

Humanistic management of the university follows, which was also mentioned by 2 respondents when asked about how their stress was managed at the organisational level. Zhao shared her ideas with passion:

“Although it was a little too late to decide to take online courses for this semester and let us choose either to stay in China or come to South Korea, I still think it is humanistic. And later we were told that we could take the comprehensive exam at any time when we arrived in South Korea. I also heard that some Chinese students who arrived at university later got some food, masks, and sanitisers for free from the university. So I think these things that the university did are really humanistic.

Additionally, pick-up service, quarantine accommodation and meals, and health packs from the Chinese embassy have also emerged as stress management strategies at the organisational level.”

## **Discussion**

This study was designed to explore the stressors that contribute to Chinese international students’ stress during the Covid-19 outbreak in South Korea and learn about their stress management at the individual and organisational levels. As presented in the results section, stressors such as uncertainties and risks were focussed on most by Chinese international students; the explanation is likely that Covid-19 was infectious, and was impacting many aspects of international students’ lives, such as traveling and academic work. Surprisingly, Five Ones Policy, issued by the Civil Aviation Administration of China (CAAC) in March 2020, concerned a majority of respondents. The policy said that China would restrict one airline, no matter foreign or domestic airlines, to having one weekly passenger flight from or into China to contain the increasing risks of imported COVID-19 cases (“CAAC to Further Reduce International Passenger Flights,” n.d.). A possible explanation of the concern is that the policy had no deadline, and some people guessed that it would extend to October or even next year; therefore, Chinese international students, both in China and foreign counties, are worried a lot about whether they could get access to tickets of flights into or from China. As might have been expected, the results illustrated that discrimination was among the stressors. Two respondents mentioned that they were worried about the contract extension of apartments because they had got the news from social media that some house-owners in South Korea refused to extend contracts to Chinese international students in that they thought the Covid-

19 in South Korea was transferred from China. This supports previous findings in the literature that Chinese people experienced discrimination during the Covid-19 epidemic (Ha, K. M., 2020). It is a pity that we may find it difficult to categorise the stressors into environmental ones or self-imposed ones based on the stressor theories in the literature section because almost all stressors are associated with both. And unsurprisingly, eustress was not mentioned by the respondents or emerged from the data; it is likely that during the Covid-19 outbreak Chinese international students were negatively affected by the pandemic, and it brought no positive results. However, it doesn't prove that the theoretical framework TPSM is not appropriate or its any downsides. It should be taken into account that the sample is small.

In response to research question two, the findings regarding stress management showed that Chinese international students often manage stress individually by communicating online with their family, friends, and classmates during the Covid-19 outbreak in South Korea. Some possible explanations are that Chinese international students often seek help from their family first and believe that kinship is beyond other relationships (Baker, 2015), and they might comfort each other or exchange more information by communicating online with friends and classmates (Ng, Wang, & Chan, 2017). And watching comedy videos was considered as an effective strategy to relieve stress by respondents; the reasons might be killing boring time and laughing can relieve stress. Interestingly, cooking was mentioned as an effective stress management strategy by many respondents when asked what interests or hobbies they got into during the outbreak. The finding may be explained by the fact that almost all Chinese cities were locked down somehow at that time, and people were advised to stay home; therefore they might find cooking is not only beneficial to solve the problem of not going out for dinner in restaurants, but killing time to relieve stress. One more interesting finding is that drinking, as a common strategy to relieve stress, was mentioned by only one respondent. The reason may be due to 5 out of 8 respondents were females, and the drinking proportion of Chinese females is low (Kim, Goggins & Wong, 2018). At the organisational level, the online course provided by the university was regarded as the most significant way to relieve stress. There are some possible explanations for this result; one might be the infectious risks of travelling from China to South Korea and the face-to-face courses can be avoided, and the other is likely to be that online courses can reduce their expenses, such as flights and living expenses which are higher in South Korea than say in China. Importantly, humanistic management, pick-up service, and quarantine accommodation are considered as useful aids for them to manage stress. Some respondents said they appreciated what the university did for them, while other respondents who returned to South Korea in the earlier period thought that the university did nothing for them – no picking up in the airport, no masks and thermometers provided. The possible reason is that the university reacted slowly in the earlier period of the outbreak of Covid-19 in South Korea from February 19 to March 12, 2020.

Based on the theoretical framework TPSM, Chinese international students' stress management strategies and ways during the Covid-19 outbreak in South Korea were found. Most of the things that the university did, such as online courses, humanistic management, pick-up service, and quarantine accommodation belong to the contributions to the primary prevention which focusses on seeking to reduce stressors and eliminate stress. While most stress management strategies at the individual level, such as communication with family, friends, and classmates, watching comedy videos, doing sports, and cooking, target the second prevention which aims to utilise resources and coping techniques for dealing with stressors. As for tertiary intervention, it is disappointing that the results do not reflect any signals or characteristics of psychological intervention. The possible explanations are that either the university did not provide psychological counselling, or had not enough resources of psychological counselling for Chinese international students. The explanation was confirmed by the study on Chinese international students in the USA in the literature (Zhai & Du, 2020), who stated although some universities provided counselling services, such centres were often understaffed, and long waiting times might aggravate students' mental health problems.

There is abundant room for progressive study in the future. Firstly, further research should be done using a quantitative approach with a big sample. Additionally, more extensive research on international students' stressors and stress management during big public health emergencies, such as SARS, MERS, should be comparatively done.

## **Conclusion**

This study has revealed that uncertainty is the most significant stressor contributing to Chinese international students' stress during the Covid-19 outbreak in South Korea. Infectious risk and personal safety are also important stressors. Regarding stress management, at the individual level communicating with family, friends, and classmates is the most commonly adopted strategy, while at the organisational level online courses is the most acknowledged way of relieving stress.

Additionally, we found that most of the stress management strategies at the organisational level belong to the contributions of primary prevention, while most stress management strategies at the individual level target secondary prevention. As for tertiary intervention, it is disappointing that the results do not reflect any signals or characteristics of psychological intervention. Generally, the research result fits the three stages of prevention. And in terms of two different stresses: distress and eustress in the framework, eustress has not emerged from the interview data. The reason may be either the small sample of the research or disastrous effects of the Covid-19 outbreak do not illustrate that the theoretical framework doesn't work well or has some limitations.



This study makes several noteworthy contributions to Chinese international students and even international students from other countries in South Korea. They would learn more about their stress and how to manage their stress during the pandemic, which is still spreading in the world. To the relevant staff of South Korean universities, the results of this study would offer some references to them to improve their service and management. Additionally, this study is possibly the first study reporting the Chinese international students' stressors and stress management during the Covid-19 outbreak in South Korea.

### **Limitations**

Although the results of this study provide many meaningful and practical insights into Chinese international students' stressors and stress management in South Korea during the Covid-19 outbreak, this study had some limitations. First, the sample is small and not diversified – only 8 respondents and they were all doctoral students. Secondly, due to the exploratory nature of the qualitative approach, the correlation between stressors and stress management strategies has not been found, which would be achieved in further research. Finally, due to the social distancing policy during the study, Zoom was used to collect interviewing data, which lacks social context and comfortable location.

### **Positionality**

Reflexivity is a key feature of qualitative research (Anuik, 2018). The researcher's subjectivity is acknowledged as an insider, due to the fact that as qualitative interviewers we influence our participants by our own ascribed and achieved statuses (Flores, 2018). However, a researcher can be an objective and neutral observer in qualitative research if standing in the middle and carefully negotiating his/her positionality and being cautious (Anuik, 2018; Flores, 2018). Flores(2018) also stated that a qualitative researcher should embrace his/her insider/outsider positionality. He explained, "although you may feel that you share much in common with your participants, you are still an outsider who is conducting research and writing about them; Use this as an opportunity to ask participants questions that they assume you already know and hear their stories regardless of their point of view."

Therefore, in the interests of objectivity just be open and genuine to approach the participants with honest inquiry.

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International Journal of Innovation, Creativity and Change. [www.ijicc.net](http://www.ijicc.net)  
Volume 14, Issue 4, 2020

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