



## Effects of Government Actions on Safety and Security Perceptions of International Students during COVID-19 Pandemic in China

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### Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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### ABSTRACT

**Introduction:** International students' safety and security matters as they are migrants and foreigners belonging to a special minority group of people that need to be protected each and every time based on diplomatic ties on international endeavors. This study examines the effects of government actions in regards to safety and security perceptions of international students in Hubei Province, China during COVID-19 Pandemic.

**Materials and Methods:** A cross-sectional survey design was conducted in March 2020 involving 13 different universities in Hubei province of China. Data was collected through an online Microsoft questionnaire which was sent to selected universities that were purposively and conveniently sampled.

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**Results:** 300 questionnaires were received out of 392, representing a response rate of 76.5%. Majority of the respondents were in the age group of <30 years representing 92.3%, almost 96% were single. 79% were undergraduate students, and among these, 64% had stayed in China for over 2 years. It was also revealed that more than half (51.7%) were Christians and more than one third (37%) were Muslims. There was a positive correlation between social distance measures and safety and security perceptions while no correlation was found between information dissemination and safety and security perception. Lastly, students were materially supported with their respective authorities and that the political will was good.

**Conclusion:** The actions of the government especially through the social distance measures have proved to positively increase international students' safety and security perceptions. Further, authorities tried to facilitate material and social support to the students. We recommend authorities to continue putting the safety and security of international students at their heart as demonstrated in China.

*Keywords: COVID-19; safety; security; international students; government actions; perceptions.*

## 1. INTRODUCTION

Coronavirus (COVID-19) which started at the end of December 2019 in Wuhan China is still causing pervasive impacts in all the areas of life globally [1–3]. Until today, many scientists are still working on different types of therapy that could prove successful [4]. Specifically, COVID-19 is negatively impacting all areas of development i.e. agriculture, transportation sector, trade, health, education etc [5]. The negative impacts of COVID-19 on the education sector has been witnessed through several indicators such as the physical closure of academic institutions due to restrictions of public gatherings by observing social distance measures as recommended by World Health Organisation (WHO) [6]. The academic journey of students across the globe has been negatively affected with this pandemic. Many rich countries have started exploring online platforms for learning as the most reliable option while poor countries found it difficult to explore the online possibilities because of limited resources leading to total closure of academic institutions [7]. However, it is of utmost importance to examine the extent of the impacts of the pandemic on students that are studying in foreign countries as compared to their counterparts who are studying in their home countries.

### 1.1 Students Mobility and China Boom for International Students

The number of foreign students globally has increased from 2 Million in 1998 to about 5.3 Million as at 2017. Majority of foreign students are on stage of advancing in their academic levels in Australia, United Kingdom (UK), New Zealand, United States of America (USA) and

China [8,9] (See Fig. 1). Despite several debates on the definition of international students (IS) in literature, scholars and other international organisations have tried to differentiate these students by categorising them into three groups namely; degree-mobile students, foreign students, and international students. For the sake of this study, we adopted the international students definition which was agreed upon and was defined as: '*Students who have crossed a national or territorial border for the purpose of education and are now enrolled outside their country of origin*' [8] to refer to all the students that were subject and respondents of this study in China.

China is one of the countries that recently has been recorded as a destination attraction of many international students. About 492,185 students from 196 countries are studying in more than 1,004 higher education institutions with an increasing enrolment rate of 15.04% per year as indicated by China on Ministry Of Education (MOE) statistical reports in 2019 [10]. The increase of foreign Students in China has been attributed to the Chinese government initiatives to make reforms and invest heavily in their educational system in order to accommodate foreign students and compete at international level [11]. Furthermore, many IS have been attracted to study in China through initiatives by the Chinese government by offering scholarships which represent 12.81% of the total population of the IS. These scholarships range from; Ministry of Commerce Scholarship (MOFCOM), Chinese Government Scholarship (CGC), Provincial-Based Scholarship (PBS), University-Based Scholarship (UBS), etc. with majority of them coming from countries that are in a relationship with China through One Belt

One Road (OBOR), which have even fostered a strong relationship between China and the patterned countries in all areas of development [12]. Despite having these scholarships, the other group of foreign students are studying through self-sponsorship programs which form a large part of the population that is about 87.19% with Asia and Africa being the leading continents where these IS are from respectively [10]. The majority of these self-sponsored students choose China because of many reasons, some being affordability of living expenses, safety and security, affordable tuition fees and advancement of learning environment [13].

### 1.2 Safety and Security

Generally, the safety and security of foreigners has always been one of the main priorities to be addressed by those in authority in many countries as it involves diplomatic endeavours [14,15]. Foreign students attain a special status of belonging to a special social minority group which is supposed to be protected by those in authority in the host country [16]. As a result of the attainment of this special status, foreign students have special needs that need to be addressed regularly [17]. Therefore, with these facts, it is not surprising to know that safety and security factors are part of the main factors that contribute to the final decisions of IS regarding their study destination as demonstrated in the

Pull-Push theory. This theory states that push factors push students to go outside their countries for further educations and these includes lack or limited access to higher education in their home countries, ability to change their social economic life whereas Pull factors pull or attract IS to choose their destination like the conducive environment of the host country i.e. safety and security, political stability, the cost of tuition fees and living [18]. Despite having vast literature on IS safety and security in general [19], there are limited previous studies on the aspect of government policies or actions especially during viral disease outbreaks like COVID-19 pandemic, which has not only affected foreign students' safety and security perceptions but also the entire world. Therefore, this study tries to fill this research gap which is currently existing in the literature.

The examines the perceptions of IS on their safety and security in China during COVID-19 pandemic as a result of actions taken by the government. The findings of this study will be of high significance as it will provide a new insight of knowledge base to the policy makers or authorities on where to improve the standards of actions enforced. Secondly, the results will help all the potential foreign students who may be willing to study abroad to make sound decisions, and lastly, will supplement the existing literature on safety and security of foreign students in developing economies in the world.

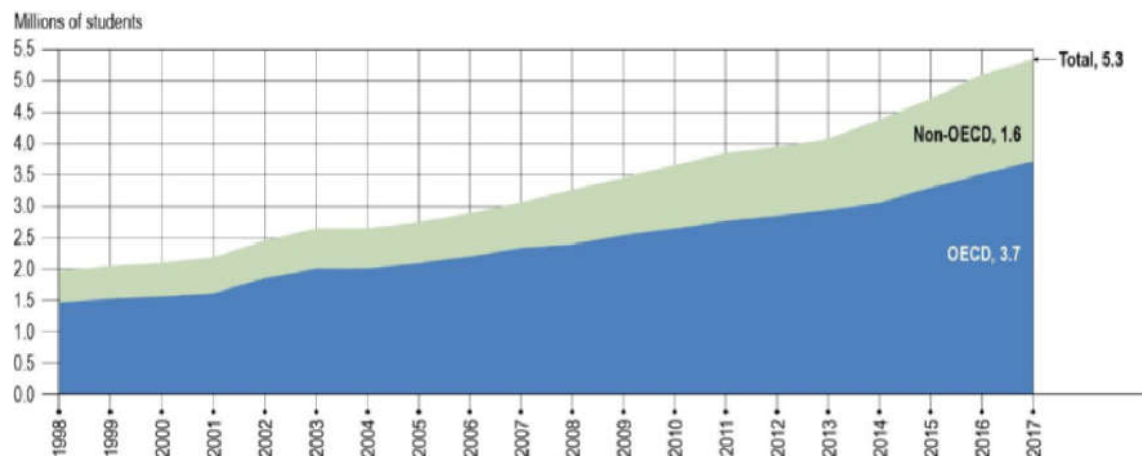


Fig. 1. Show number of international students enrolled in OECD and non-OECD countries

Source: OECD-Education at Glance (2019) [8]

### 1.3 Statements of Hypothesis

This study was guided by these hypotheses:

- i) (H<sub>0</sub>: 'Government Social distances measures had a positive impact on IS safety and security perceptions'  
(H<sub>1</sub>: 'Government Social distances measures had a negative impact on IS safety and security perceptions'
- ii) (H<sub>0</sub>: 'Government information dissention measures (actions) had a positive impact on IS safety and security perception'  
(H<sub>1</sub>: 'Government Information dissention measures (actions) had a negative impact on IS safety and security perception',

on personal aspects of it which may be affected by the actions of the government during the pandemic period, i.e., physical harm, economic harm, and psychological harm aspects. In this study IS' safety and security perception were measured by asking questions about satisfaction with personal safety and security in China amidst COVID-19 with NO representing 1 lower safety and security perception, or Yes representing 2 higher safety perception and vice versa depending on the nature of the question being asked.

## 2. MATERIALS AND METHODS

### 2.1 Research Variables

Research variables were developed from the literature on criminology studies, as they are the ones associated with safety and security issues. We opted to choose this because literature indicates that IS belongs to a special minority group that are socially vulnerable by applying the vulnerability theory which has been used in many safety and security studies from all over the world [20,21]. Literature indicates that government policies, measures, and actions are one of the major contributing factors that may influence safety and security of the country in general at a national level and of its citizens. Furthermore, the policies may also influence foreigners' safety and security perceptions in times of wars, epidemics and pandemics or any disasters [22,23]. However, if well implemented and followed they may even reduce the spread of pandemics like that of COVID-19 infectious disease [24].

### 2.2 Safety and Security Perception

In this study, the first variable is perception or sense of safety and security of IS. The concept of security is defined as 'the state of being away from hazards caused by deliberate intention of humans to cause harm. The source of hazard is posed by humans deliberately [25]'. Safety; '*the state of being away from hazards caused by natural forces or human errors randomly, the source of hazard is formed by natural forces and/or human errors* [25]'. Safety can also be defined as; 'to the physical, social, psychological and emotional conditions of being protected against danger, risks, and harm [26]'. Safety and security can be further grouped into personal and property, as it is noted from the definitions, safety and security are broad concepts on their own, as such for the sake of this study we will only focus

### 2.3 Information Dissemination

Literature indicates that dissemination of information by those in authority, especially the local authorities in the host countries at an appropriate time has the impact of increasing the knowledge level of the migrant's people which has a positive impact in perception of their safety in the host country [27].

### 2.4 Social distancing measures

Literature indicates that if implemented and followed properly lockdowns and other social distance measures may help to prevent the spread of infectious disease despite disruptions of social economic activities and perceived both positively and negatively by people on safety and security [6,28].

Variables of information dissemination and social distance measures were measured by asking questions to the respondents which were in binary form coded as Yes =1 and No=0 which was later converted to mean scores for further analysis.

### 2.5 Characteristics of People in the Study

The other variables of the study were (i) gender where the literatures indicates that male have higher safety perception as compared to female, (ii) age where old people have high safety perception than younger ones, (iii) education level where those with high education level have high safety perception than those with low education levels, (iv) length of stay, where those that have more stayed have higher safety perceptions as compared with those with no more experience, (v) marital status where the literature indicates that those that are married have higher safety perception as compared to those that are not married [27,29], (vi) regional comparison, thus, people who are residing closer

to military base may feel highly secured than others, and those located far from pandemic start point may have higher security perception than others [27,30]. The measurement of these variables was as follows: Gender in binary 1 and 2 representing male and female, age in number of years, education level in ranks of undergraduate and postgraduate, experience as length of stay based on years of stay in China, marital status as single, married or divorced.

## 2.6 Study Design and Population

This study used exploratory methodology which relied both on reviewing the literature online on the official Chinese Government website, peer reviewed published articles and published Chinese school notifications. Furthermore, the study is part of the main study that was conducted to find Knowledge, Attitude and Preventative practices among international students in China that used a cross sectional design survey which was conducted on the first week of May 2020 in 13 selected universities in Hubei province of China [31] (See Fig. 2). The names of Universities that were included are Central China Normal University, China Three Gorges University, China University of Geoscience, Huazhong Agricultural University, Huazhong University of Science and Technology, Hubei University of Economics, Jiangnan University, Jingchu University of Technology, South-Central University for Nationalities, Wuhan Institute of Technology, Wuhan Textile University, Wuhan University of Technology and Yangtze University. Hubei province is located in central China and is one of the provinces that has many academic institutions in China with many international students close to 21,371 [10]. We selected Hubei province because it was where the Pandemic started, within its capital Wuhan. The survey data was collected through using a Microsoft online questionnaire with main reasons being the restriction of physical contacts due the impact of COVID-19 by applying social distance. The online method is proven to be effective in many studies that are currently being conducted during this time of COVID-19 [5].

In this study we used a method applied by Yamane (1967:886) [32] to calculate a sample size with 95% confidence level and  $P = .05$  [32]. A total sample size of 392 was found using the population of 21,371 of total number of IS in Hubei Province of China.

$$x = \frac{N}{1 + N(e)^2}$$

Where N= Total number of Population Where n is the sample size, N is the population size, and e is the level of precision.

The study used a non-probability sampling method of convenience sampling technique to identify and recruit respondents from the selected university. After calculation of sample size, a total number of 392 respondents were targeted. A single Microsoft online form with a questionnaire was sent to the randomly selected universities through their representatives into their respective WeChat groups where everyone was responding there. Out of 392 targeted respondents, a final total of 300 respondents answered the questionnaires representing 76.5% response rate. The study only included the IS who were in China during COVID-19 pandemic. All those IS that were evacuated or at home because of holiday were restricted to participate through a section which was put on the questionnaire.

## 2.7 Study Validation and Pilot Study

In coming up with the final instrument, three experts were involved in the field from universities of Bangladesh, Tanzania and China who assessed the instrument and gave their advice. Thereafter, all necessary adjustments were done accordingly. Further, we conducted a pilot study involving 30 international students including undergraduate and postgraduate from Yangtze University to assess the instruments' validity and reliability. We calculated the internal reliability with Cronbach's alpha of 0.62 from the results obtained.

## 2.8 Data Analysis

Quantitative data was analysed by the software of IBM SPSS version 24. Descriptive statistics were performed to find the frequencies, means and standard deviations of the social demographic data and research variables. Pearson was performed in which a significance level was placed at 0.01 using 2-tailed to test the Hypothesis. While qualitative data was presented after critically looking at the credibility of the journals and sites retrieved.



**Fig. 2. Showing Hubei province of China**

*Source: Authors, 2021*

### 3. RESULTS

#### 3.1 Social Demographic Characteristics

Social and demographic characteristics of the respondents are presented in Table 1. The results indicate that there was almost equal

participation of male and female with 49% (n=147) and 51% (n=153) respectively. Most of the respondents belonged to age group of less than 30 years with total Mean and SD of (1.08, ± 0.267) respectively. About 96% (n=288) were single, of which the majority of them were doing undergraduate studies 79% (n=237).

Furthermore, 51.7% (n=155) were Christians while 37% (n=111) were Muslims, while 64% (n=192) of the respondents had experience of staying in China for more than 2 years.

**3.2 Research Variables**

Table 2 shows descriptive characteristics of research variables. While assessing their safety and security the majority of the respondents answered that they are not going to die 88.7% Mean= 1.89 and SD= .318, it's like any other diseases 60.7% Mean=1.61 and SD=.489 and there were safe in China 88% Mean=1.89 and

SD=.318 (See Fig. 3). Nearly 77% indicated that they received all the adequate necessary information in the timely manner from authorities with a total Mean=1.7 and SD=.424. Lastly, when asked about government's directive measures on social distances, the majority of the respondents thought it was necessary to use isolations for their safety and security 90.3% Mean=1.9 and SD=2.96, while about 92.3% Mean=1.92 and SD=.26 indicated that it was even necessary to follow them, and 60.7% Mean=1.61 and SD=.389 indicated that it was not difficult for an individual to follow all the measures laid down.

**Table 1. Social demographic characteristics (N=300)**

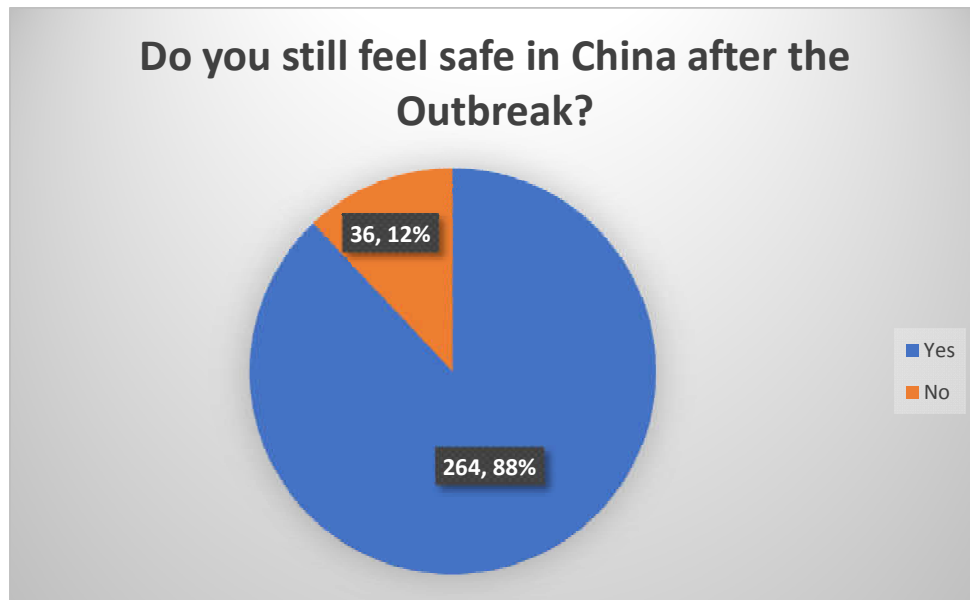
Variables		Frequency	Percent (%)	Mean	SD
<b>Gender</b>	Male	147	49		
	Female	153	51*	1.51	0.501
<b>Age Group</b>	<30	277	92.3*		
	30+	23	7.7	1.08	.267
<b>Marital Status</b>	Single	288	96*		
	Married	12	4	1.04	.196
<b>Level of Program</b>	Undergraduate	237	79*		
	Postgraduate	63	21	1.21	0.408
<b>Experience</b>	<2	108	36		
	2+	192	64*	1.64	0.481
<b>Religion Affiliation</b>	Islam	111	37		
	Christian	155	51.7*		
	Others	34	11.3	1.74	0.67

Note: \* Frequency above 50%

**Table 2. Frequencies of research variables**

Variables Statement	Yes		No		Mean	SD
	F	%	F	%		
<b>a. Safety and Security</b>						
1. How was your reaction after hearing the COVID-19- I am going to Die?	34	11.3	266	88.7	1.89	0.318
2. How was your reaction after hearing the COVID-19- It is like any other disease I will be okay?	182	60.7*	188	39.3	1.61	0.489
3. Do you still feel safe in China after the Outbreak?	264	88*	36	12	1.88	0.326
<b>b. Information Dissemination</b>						
4. All the adequate information regarding COVID-19 was provided to me by those in authority in a timely manner?	230	76.7*	70	23.3	1.77	0.424
<b>c. Social Distance Measures</b>						
5. Was it necessary for those with COVID-19 to be kept in isolation as one way of social distance measures?	271	90.3*	29	9.7	1.9	0.296
6. It was necessary to follow all the preventative measures like wearing Masks, etc?	277	92.3*	23	7.7	1.92	0.267
7. It is difficult for an individual to follow all the social distance measures laid down by the authorities?	118	39.3	182	60.7	1.61	0.389

Note: \* Frequency at above 50%, SD=Standard Deviation



**Fig. 3. Showing a Pie Chart indicating the percentage of safety in China**  
 Source: Authors 2021

**3.3 Relationship between Research Variables**

**3.3.1 Hypothesis testing**

The aim of testing the hypothesis was to reject the false one and accept the correct one.

Results from Person correlation show that there was a positive correlation between the variables of social distance measures implemented by the authorities and information dissemination  $r=.289$ ,  $P=.000$  ( $p<0.01$  (2-tailed)) (Table 3). This implies that it has a positive impact on safety and security perception levels. Further, the results indicated that there was a positive correlation between safety and security perceptions of international students and social distance measures  $r=.178$ ,  $P=.002$ , ( $p<0.01$  (2-tailed)).

However, the findings show that there was no significant relationship between Information dissemination and safety and security of IS  $r=0.051$ ,  $p=0.375$ . Therefore, we reject the first Null hypothesis ( $H_0$ ) which states that 'Government Social distances measures had a positive impact on IS safety and security perceptions' and we accept the alternative hypothesis ( $H_1$ ) which says that 'Government Social distances measures had a negative impact on IS safety and security perceptions'. We further accept the second Null Hypothesis ( $H_0$ ) which says 'Government information dissention measures (actions) had a positive impact on IS safety and security and reject the alternative hypothesis ( $H_1$ ) which states that 'Government Information dissention measures (actions) had a negative impact on IS safety and security perception'.

**Table 3. Relationships between variables**

Variables		1	2	3
1.Safety and Security	Pearson Correlation	1		
	Sig. (2-tailed)			
2.Information Dissemination	N	300		
	Pearson Correlation	.051	1	
	Sig. (2-tailed)	.375		
3.Social Distance Measures	N	300	300	
	Pearson Correlation	.178*	.289*	1
	Sig. (2-tailed)	.002	.000	
	N	300	300	300

\*\*Correlation is significant at the 0.01 level (2-tailed); Source: author computed data



#### 4. DISCUSSION

This study examines the effects of government actions on the safety and security perceptions of the IS in China during the time COVID-19 pandemic. We used variables of information dissemination and social distance measures enforced by the government to assess the influence of safety perceptions.

On the social demographic part this study has found out that the majority of IS were young, single, and pursuing undergraduate studies, and have stayed in China for more than two year making them to have vast experience about China. This factor of experience could be explained with the reasons that the majority of these students are doing majors that last up to 5 years, like the majors of medical and engineering that are mainly studied by the majority of international students in China [33,34]. This could have also contributed to gain more experience or years of staying in China that has helped them to build trust on the authorities based on their previous experience when it comes to handling issues. Studies show that experience with other people helped to build trust on safety and security [27].

In terms of information dissemination, this study has found out that IS benefited more from the advancement of technology just like any other human beings are benefiting from it. Thus, the majority of them have been able to find all adequate necessary information by using all available online social media and other platforms which are the current trend way of communication especially to the youth who are in majority as revealed in the study. The adequate and relevance of information dissemination has also been contributed by Chinese universities as they have contributed for the frequent provision of school notifications to the students during the pandemic time [31]. Our findings of this study on high dissemination means information agrees with other recent studies on IS in China which are said to have even gone to the extent of even helping in psychological perspectives to the students [35]. Despite having the good background of information dissemination this study has found out that the information dissemination has no correlation effect on IS perceptions on security and safety of COVID-19 pandemic, the results differ with other results where they found that information dissemination was vital to increase safety and security perception of the foreigners in general [27]. The

explanation behind this difference may be attributed due to the nature of our study design, the respondents and other uncontrolled limitations associated with the sample and timing of the study which could have been contributing to this effect.

On the aspect of government measures of social distancing. This study found out that the actions of the authorities that involved social distance measures like isolation, lockdowns, mandatory wearing of masks have positively influenced the safety and security perception of the international students in China. On the same point, this study has further found that almost all the students were even able to adhere to these social distance measures implemented by the authorities. These findings agree with other studies that found out that government actions especially during times of pandemics or any disasters would positively influence the perception of safety and security in that country [22,36]. However, this can also be argued that, on the aspect of close to 100% adherence to social distance measures by the students could be further explained with the reasons that it is because of the nature of the COVID-19 which has been shown to the world. Iso Besides, due to the fact that the students could be persuaded to adhere due to fear of being punished and other consequences that could follow them if they did not adhere and not only is associated to their safety and security perception of COVID-19. Furthermore, the positive impacts that are attributed to social distance actions could also be traced to and associated with the material support, supervision, and social support that the Chinese authorities provided during the Pandemic time. The findings indicate that due to the nature of the COVID-19 and measures implemented by the authorities it was reasonable for IS basic needs to be facilitated by their respective school teachers which in return reduced the risk of students contracting the virus by avoiding contacts with other people, as the Virus was a pathogens that could be transmitted from one person to another even could contaminate the air for some time [24,37] and this in turn increased the positive perception of the safety and security among IS. On the other hand, it is clear that the lives of the international students were at the heart of high office authorities as expected from time to time to be like what is demonstrated by remarks and quick responses from the Chinese authorities. It is evidenced that the fight against COVID-19 had full political will support from the top leaders'

authorities in China which can be evidenced through remarks in the response of the letter from authorities to foreign students in China [38]. This is not really a surprise as it can further be explained with the fact that international students have diplomatic endeavours as such, they attract top level decision and that the will of top political leaders was a good one toward the foreigners in China which is highly recommended and appreciated especially in times of pandemics like of COVID-19 [38,39].

## 5. STUDY LIMITATIONS

This study had some limitation just like any other study, firstly on secondary data the study relied upon information from government sources and other Scholars that could be subject to bias which could not be controlled by the researchers, however the credibility of the sources and cross checking of the data minimised this limitation, secondly, some students did not want to respond to the questionnaire with their personal reasons which could be argued to influence biasness to the overall results of this study as they may hold some of the information that would be of helpful to this study, however this biasness was addressed by informing the responded that the survey was anonymous and it was confidential. Lastly, this study relied on convenience sampling techniques by collecting data from students through the identified leaders who could also have biases in distributing the questionnaire, however, this limitation was minimised by increasing the sample size from many universities.

## 6. CONCLUSION

This study focused on international students who are migrants and foreigners belonging to special minority groups which need always to be protected by authorities in host countries in breach of which have a lot of diplomatic and international endeavours. With the coming of COVID-19 many students were still in China and experienced the pandemic together with their native friends, due to the nature of COVID-19 it is not surprising that this study found out that information was adequate and given on a timely manner either accessed through the internet or by school notifications. The social distance measures implemented by the government have proved to be an effective way to contribute to the positive higher safety and security perception of the international students towards COVID-19. On their part the government tried to provide

and facilitate necessary support to foreign students.

The findings of this study are very important to the international student community as they give them confidence of their safety and security and improve their decision when choosing to come and study abroad. Besides these results will help the policy makers as they give them a direction and a measuring stick on how to improve and continue where they did best. Lastly, we recommend future studies to be done on aspects of physiological and economic impacts of COVID-19 on international students. We further recommend the authorities all over the world as demonstrated in China to continue putting the safety and security issues of international students at their heart.

## ETHICS APPROVAL AND CONSENT

This study was conducted by following the procedures laid down by the Helsinki agreement Declaration 2008 on procedures conducting studies that involve human beings, further, Yangtze University Internationals Student Office reviewed the ethics of the study (Approval Ref number: REF/YU/2020/07). The participation in this study was voluntary and that all the respondents communicated in advance with a clear written consent statement indicated on the questionnaire that they could withdraw at any time without any problem.

## AVAILABILITY OF DATA AND MATERIALS

All data applicable for this study is available and provided in this paper, any special request is welcome to the corresponding author.

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### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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