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Cover Page Footnote

Thanks for the support from Wenzhou Univesity for allowing us to access their student population for this research.

AN EXPLORATORY COMPARISON OF THE IMPACT OF COVID-19 ON AMERICAN AND CHINESE COLLEGE STUDENT LIVES¹

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ABSTRACT

US and Chinese students in their home countries rated their life experiences since the advent of Covid-19 on various aspects of their lives, including academic performance, social life, and emotional, financial, and physical well-being. Input was also received about how Covid-19 has affected their communication, career planning, and post-graduate goals. To assess the impacts of these changes on college students, the authors created a questionnaire to ask students about their perceptions of these COVID-related impacts on their personal lives. The survey had 56 questions, with 1580 students responding, providing both objective input and subjective comments. Due to the volume of data, the authors split the study into three parts, with the first two parts published (Hamlin & Barney, 2022a, Hamlin & Barney, 2022b). This third article compares the US student responses to their Chinese counterparts. The analysis of the US and Chinese student responses shows that a marked difference exists in some areas between the two groups, while in other categories the perceptions were similar. Some of this may be due to cultural and geographic differences. Regardless of the reason, one major issue that warrants further investigation is that the level of stress has increased for both student groups since 2020 when Covid-19 began to spread. Also, there are some definite disparities in responses between the two that should also be the focus of further research.

Keywords: Covid-19, Cultural Differences, College Students, Country Comparison, Online Learning

INTRODUCTION

Universities did not know what to expect when the Covid-19 pandemic descended around the beginning of 2020. According to the U.S. Centre for Disease Control, the elderly and those who suffer from chronic diseases are most vulnerable to the virus (Haefner, 2020). Strangely, the virus largely spared the young as hardly any children and very few of the college-going population were affected (Bullock, 2020). However, the possibility of students being carriers of the virus may tend to make schools and colleges an epicenter of virus transmission (Haefner 2020). As a result, universities and colleges took drastic measures such as pivoting to online teaching across the globe

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with many US universities asking students not to return to college after spring break (Haefner, 2020).

The pandemic forced US students to change the social aspect of college life, learn remotely, experience stress and depression, and even face isolation (Birmingham et al., 2023). Research comparing students' motivations and skills after the stay-at-home order found that they preferred face-to-face over online learning, had lower motivation to learn online, reported reduced ability to complete assignments, and reported lower cognitive engagement in their online classes (Aguilera-Hermida, 2020). As a result, US college students were reporting a record number of depressions and anxieties since life, as they knew it until then, had changed (Dennon, 2022; Bullock, 2020). Students reported missing the college experience, were not motivated to do well in class, had to find resources to pay for an internet connection, and were afraid of punishment for not following Covid-19 social distancing rules (Pokhrel and Chhetri, 2021). Many US colleges issued eviction notices to students living in college dorms who had to find alternative accommodation in a hurry (Dennon, 2022). Thus, besides academic stress, students faced personal, social, and financial anxieties that may have impacted their mental faculties.

While college students from across the world suffered from depression, anxiety, and severe stress during the Covid-19 pandemic (Batra et al., 2021; Y. Li et al., 2021), a comparison of their behaviors across countries has not been done before. Batra et al. (2021) conducted a meta-analysis covering twenty-seven studies spread across fifteen countries to share some of the common causes of stress: uncertainty about the graduation timeline, a shift to online learning, and uncertainties about internship qualities. A comparison of students from different countries may help identify the underlying reasons for differences in psychological stress and point to possible interventions for helping students recover (Y. Li et al., 2021; Batra et al., 2021; Son et al., 2020). That gap is reduced with the research from this study, where the impact of Covid-19 on students at a US university is compared with students from a Chinese university. Multinationals may benefit from the findings as they develop strategies to motivate employees in different cultures (Kimhi et al., 2021). The findings from this research about how people from different cultures react to stress, and how they react to actions taken by academic leaders, may be useful to multinationals. Next, we review the literature, explain the methodology, and share the results. Tables presenting the numerical comparisons are found at the end of this article.

LITERATURE REVIEW

The Impact of Covid-19 on Students

Research has focused on explaining the differential effects of Covid-19 across different demographic profiles. However, these differences do not apply consistently across countries. For example, a study among US students indicated that women and those in fair or poor health experienced higher levels of stress (Browning et al., 2021). On the contrary, Chinese students showed higher levels of anxiety for males (versus females) and majors such as Arts and Science versus other majors (Wang and Zhao, 2020). Income did not seem to play a role in Covid-19 anxieties in China. In the US students from lower-income families experienced higher levels of stress than those who came from above-average-income families (Browning et al., 2021). In the US ethnicity might have shielded some students as non-Hispanic Whites suffered lower levels of stress in comparison to non-Hispanic Asians who suffered higher levels of stress (Browning et al.,

2021). The country of origin seems to have played a role in China since Li et al. (2021) found that the extent of depression and anxiety was higher in non-Chinese as compared to Chinese students.

Research has indicated contextual factors that could have affected student stress levels due to Covid-19. For example, US students who spent two hours outside every day, or were less than eight hours on electronic screens suffered lower levels of anxiety (Browning et al., 2021). Malaysian students reported that their virtual learning was hampered due to poor internet infrastructure (Thandavaraj, Gani, and Nasir, 2021). Students had to rely on their mobile phones for accessing online lessons which were not always reliable. The Philippine students seemed to be very knowledgeable about Covid-19 as they were active on the internet (Superio et al., 2021). However, the authors found that only one in ten students were able to separate facts from myths due to social-media misinformation. Students from China and Hong Kong preferred to stay in East Asia for higher studies since Covid-19 as compared to studying abroad in Australia, Canada, and New Zealand (Mok et al., 2021). Even the US graduate students had to manage disappointments, felt anxious and fearful, and felt a loss of power and control over their future (Kee, 2021). Thus, students from different countries had their unique learning challenges besides facing the general consequences of the Covid-19 epidemic.

Students may have also been affected due to online learning with many educators going through a steep learning curve as they create pedagogy relevant to digital learning (Pokhrel and Chhetri, 2021). Covid-19 required not just the modification in pedagogy but, in some cases, even the course content. For example, marketing courses had to reflect the changes in consumers' consumption process due to Covid-19 (Sheth, 2020). Consumers now work, entertain, and relax at home ordering groceries and food for home delivery. New customer interaction techniques and processes have evolved as a result. Students may feel dissatisfied with the content if such changes are not reflected in the curriculum. University systems were tested as students had higher satisfaction with the University if they could access recorded videos, if information on exams was made available to them in a timely fashion, and had engaging teaching staff. (Aristovnik et al., 2020).

The Possible Impact of Culture on Differing Responses

Research cited here shows differences in the effects of Covid-19 across countries. This research proposes that the country differences in students' risk perception may be a result of their cultural upbringing. Cultural factors may point to the root causes and help develop intervention protocols to manage the post-traumatic effects on students. Next, the theoretical framework of cultures applied in this study is discussed.

While both the US and Chinese cultures are cultures of achievement (Basáñez, 2016), there are similarities and differences based on Hofstede's cultural dimensions. US and Chinese cultures are similar in masculinity (US score 62; Chinese score 66) and uncertainty avoidance (US score 46; Chinese score 40) (Cultural, 2023). However, the US and Chinese cultures differ significantly on power distance (US score 40; Chinese score 80), individualism (US score 91, Chinese score 20), and long-term orientation (US score 29; Chinese score 118) (Cultural, 2023). These differences may have resulted in how students responded to Covid-19.

Support behavior during times of stress may be normative to the culture (Chen et al., 2015). The authors found that emotionally focused support behaviors for friends and relatives were more common in individualistic cultures (such as European Americans) than in collectivistic cultures (such as Asian Americans). Indirect support, such as spending time with friends and relatives, and worrying about them without discussing the stressor was more common among Asian Americans than European Americans.

Digital behaviors such as content sharing and eWOM may be influenced by cross-country cultural differences (Mattison, Thompson, and Brouthers, 2021). The authors found that societies high on uncertainty avoidance, high on masculinity, and high on long-term orientation may share content more than those from societies that are low in uncertainty avoidance, more feminine, and have a short-term orientation. However, people from cultures that are high on individualism or are high on power distance may not share the content as much as those who come from collectivistic societies or are low on power distance.

Culture may influence the relationship between subjective norms/self-efficacy and behavioral intentions (Zhao et al., 2021). Both subjective norms and self-efficacy are better predictors of behaviors in collectivistic societies. Subjective norms in a collective society are governed not just by confidence in themselves but also by social norms. Thus, the adoption of e-learning may be easier in collectivistic societies where students are expected to adapt to teaching styles. Zhao et al. (2021) find that collective cultures may be more confident in their self-efficacy to adopt e-learning. In contrast, Zhao et al. (2021) found that students from individualistic cultures displayed a more positive attitude toward e-learning practices because of their perceived usefulness and practicality in continuing their education. Individualism as well as high levels of uncertainty avoidance weakened the relationship between task-technology fit and individual performance inhibiting the use of mobile banking (Tam and Oliveira, 2019). Thus, cultural dimensions may influence the adoption of online learning practices. Next, we share the methodology used to conduct this study.

METHODOLOGY

Students from an American university (Southern Utah University, Cedar City, Utah - SUU) and a Chinese university (Wenzhou University, Wenzhou City, Zhejiang province - WZU) were surveyed. A total of 830 responses were received from SUU with 35.1% male, 67.9% single, and a median age of 21. A total of 750 responses were received from WZU with 62.9% male, 82.1% single, and a median age of 18. Around 92.7% of the SUU respondents were American citizens while the rest came from 28 different countries. WZU respondents were all Chinese nationals. A Qualtrics survey asking students about the impact of Covid-19 on their academic pursuits, financial condition, college social life, emotional well-being, the impact of physical health, and impact on their career goals was mailed out to students with permission from the college administration. Students from accounting, biology, and business management were surveyed at SUU while only management students were covered at WZU. The questionnaire is available online (see abstract). The questionnaire was translated into Chinese by WZU and was then re-translated back into English to check for consistency. The responses were checked for completeness and straight-lining. The responses were given on a five-point Likert scale with 1 = Much More Difficult and 5 = Much Easier. The data is presented for each question asked as a sum of the top two boxes (4= Difficult and 5 = Much More Difficult) and the bottom two boxes (1= Much Easier and 2 = Easier).

Differences between the top two boxes and the bottom two boxes represent the net impact on students. Differences between the net impact on American and Chinese students are presented. We also include the possible impact of Hofstede's cultural dimensions for each area. Lastly, the findings are discussed.

RESULTS

Academics

The Chinese students (as compared to American students) perceived improvements in access to classes, quality of instruction, quality of learning, study habits, and emotional, intellectual, and social attitudes. The greater reliance on technology since the move to online classes positively influenced their learning and comprehension. The American students reported worsening access to classes, a decline in the quality of instruction and learning, poorer study habits, a greater reliance on technology affecting their learning and comprehension, and a decline in emotional, intellectual, and social attitudes. However, both the American and Chinese students did not want to continue with their education if the learning continued only online. The responses are shown in Table 1.

Table 1 – Impact on Academics

S. No.	Area	American Students			Chinese Students			Differences
		Top Two Boxes (Improvement)	Bottom Two Boxes (Has Gotten Worse)	Net Impact (Top Two Boxes - Bottom Two Boxes)	Top Two Boxes (Improvement)	Bottom Two Boxes (Has Gotten Worse)	Net Impact (Top Two Boxes - Bottom Two Boxes)	
1	Access to classes required for graduation	8.20%	27.80%	-19.60%	43.60%	17.80%	25.80%	-45.40%
2	Quality of instruction	26.60%	46.70%	-20.10%	38.20%	23.90%	14.30%	-34.40%
3	Quality of student learning	11.30%	59.30%	-48.00%	38.80%	28.80%	10.00%	-58.00%
4	Study Habits	22.60%	39.10%	-16.50%	56.20%	21.90%	34.30%	-50.80%
5	Greater reliance on technology affects learning and comprehension	21%	46.70%	-25.70%	57.20%	17.80%	39.40%	-65.10%
6	Affected my attitude:			0.00%			0.00%	0.00%
	- Emotional	12.80%	54.80%	-42.00%	46.50%	22.10%	24.40%	-66.40%
	- Intellectual	16.50%	32.80%	-16.30%	31.80%	31.10%	0.70%	-17.00%
	- Social	8.50%	56.40%	-47.90%	46.60%	24%	22.60%	-70.50%
7	If the delivery of class content is changed permanently, it would affect my desire to continue my education	15.30%	39.40%	-24.10%	19.30%	55.20%	-35.90%	11.80%

Academic changes are instituted by the university administrators. Therefore, the influence on academic pursuits may be a result of the differences in power distance between the two cultures. China has a score of 80 on power distance while the US has a score of 40 (Cultural, 2023). Thus, according to Hofstede's power distance dimension, Chinese students have greater respect for authority as compared to US students and accept the superior ability and skills of the university authorities in responding to Covid-19. Being from a collectivist culture [China's Individualism score according to Cultural (2023) is twenty as compared to ninety-one for the US] Chinese students' e-learning adoption may have been influenced by subjective norms such as the opinions of others (Zhao et al., 2021). On the contrary, US students, coming from an individualistic culture

[US Individualism score according to Cultural (2023) is ninety-one], may assess e-learning based on its usefulness (Zhao et al., 2021). Given their low rating on the quality of e-learning, the US students' attitudes to e-learning show a worsening trend. A more holistic cognition as a result of the social orientation of the Chinese students suggests that they focused on functional relationships and attributed the shift to e-learning to external factors that may be a temporary situation to deal with (Varnum et al., 2010). This outcome is corroborated by their negative response to e-learning over the long-term agreeing with the US students. The US students may view the shift to online learning as more of a trend that might continue and therefore their responses may be guided from an analytic perspective based on their negative experience at present (Varnum et al., 2010).

College Social Life

Both the American and Chinese students agree that the way they socialize with friends has changed, their attitude towards socialization has changed, they frequently use technology for socialization, they may not go back to social events at the university even after they re-open those activities, and they would have reduced involvement with college clubs and events. The American students intend to use fewer college facilities such as the bookstore and cafeteria, while the Chinese students intend to use them more than before.

The married American and Chinese students shared that they have changed the way they socialize but they continue to support their partners' educational pursuits. While American married students' communication with their partners has become better, Chinese married students feel that their communication with their partners has become worse. The impact on students' social life is illustrated in Table 2.

Table 2 – Impact on College Social Life

S. No.	Area	American Students			Chinese Students			Differences
		Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	
1	Socialization with Friends has changed	81.40%	13%	68.40%	40.75%	27.90%	12.85%	55.55%
2	Changed attitude about attending social events due to government response to Covid-19 (masks, social distancing, travel restrictions)	76%	17.80%	58.20%	40.70%	27.90%	12.80%	45.40%
3	Frequent use of technology for social interactions	71.70%	16.30%	55.40%	40.70%	27.90%	12.80%	42.60%
4	Changed the likelihood of attending social events even after the university re-opens for activities	43.30%	36.20%	7.10%	40.70%	27.90%	12.80%	-5.70%
5	More limited involvement in college clubs and organization	38.50%	35.10%	3.40%	40.70%	27.90%	12.80%	-9.40%
6	Limited use of college facilities such as the bookstore, cafeteria	34.60%	42.60%	-8.00%	40.70%	27.90%	12.80%	-20.80%
For Married and long-term cohabitating Students								
7	Change how I and my partner socialize	80.10%	14.60%	65.50%	54.70%	27%	27.70%	37.80%
8	Communicate and socialize with partner	47.10%	30.50%	16.60%	20.40%	44.50%	-24.10%	40.70%
9	Support partners' educational pursuit	53.20%	13.40%	39.80%	43.10%	17.50%	25.60%	14.20%

The student's response to college social life indicates their stress due to an unknown future. One source measured the uncertainty avoidance score at 46 for the US and 40 for Chinese society. Thus, students from both universities were similarly stressed due to an uncertain future. According to Hofstede (2011), the uncertainty avoidance score indicates society's tolerance for ambiguity. Covid-19 was a black swan event with no known cure at the time it was discovered. There was rapid research as this one study counted 107 research papers on the Covid-19 impact on businesses over four and half months (Verma and Gustafsson, 2020). So, the student response indicates that they acknowledge the changes to their social interaction and are taking each day as it comes instead of trying to fight the threat.

Emotional Well-being

Both American and Chinese students have felt an increase in emotional stress since the pandemic. However, they have good emotional support through their partner, friends, and family due to which they can manage the challenges. They feel that they are emotionally strong enough to deal with academic and financial challenges. They have access to stress busters such as exercise and reading. Their partner, roommates, and friends support them with the extra household work that has resulted due to the pandemic. However, while American students report increased emotional stress due to the closure of daycare centers and schools, Chinese students don't feel any additional stress. The closure of daycare centers may affect American students more than Chinese students as there were

more married students at the US university than at the Chinese university. The difference in stress can possibly be explained since China as a collective society offers more family and friend support to students than the American society which is more individualistic. The emotional well-being of students is shown in Table 3. The student response to their emotional well-being may again be an indicator of the uncertainty avoidance scores of both countries which are similar.

Table 3 – Impact on Emotional Well-being

S. No.	Area	American Students			Chinese Students			Differences
		Top Two Boxes (Improvement)	Bottom Two Boxes (Has Gotten Worse)	Net Impact (Top Two Boxes - Bottom Two Boxes)	Top Two Boxes (Improvement)	Bottom Two Boxes (Has Gotten Worse)	Net Impact (Top Two Boxes - Bottom Two Boxes)	
1	In more emotional stress now than before the pandemic	81.30%	11.80%	69.50%	48.10%	23.20%	24.90%	44.60%
2	The closure of day-care centers and schools has led to emotional stress in the family	27.50%	47.10%	-19.60%	39.50%	28.20%	11.30%	-30.90%
3	My partner, family, and friends provide support to succeed through Covid challenges	73.80%	13.70%	60.10%	62.80%	14%	48.80%	11.30%
4	I feel emotionally able to deal with academic challenges	63.70%	17.80%	45.90%	58.90%	10%	48.90%	-3.00%
5	I feel emotionally able to deal with financial pressures	56.50%	22%	34.50%	50.60%	15.90%	34.70%	-0.20%
6	I have healthy outlets to deal with stress – exercise, reading, etc.	68.90%	19.20%	49.70%	66.50%	9%	57.50%	-7.80%
7	My friends, partner, and roommates help with additional household responsibilities arisen due to pandemic	49.90%	3%	46.90%	77.90%	3.10%	74.80%	-27.90%

Financial Well-being

Financially the American students felt that they were in a good place as their pay or working hours did not get reduced. But the Chinese students had their pay reduced as well as their working hours cut down. Both the American and Chinese students felt that they would need government support such as loans or grants to continue with their education. When asked if they had concerns about paying for necessities such as rent, food, or healthcare, the answer was a no. The responses about the financial well-being of students are illustrated in Table 4. The US salaries are indicated to have increased during Covid-19 (Statistics, 2022) whereas in China people may have difficulties getting paid (W. Li, 2022). That may explain the difference in response to salary reductions and reductions in work hours between the US and Chinese students. Despite not seeing reduced wages or work hours, American students indicate that they may need to work longer hours to pay for their education. Perhaps that is because of their short-term orientation. Cultural (2023) indicated a score of 29 for the US and a score of 118 for China on long-term orientation. That means that American

students are responding to the short-term crisis that they are facing due to Covid-19 and responding by planning to work longer and earn more.

Table 4 – Impact on Financial Well-being

S. No.	Area	American Students			Chinese Students			Differences
		Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	
1	My employer has reduced my wage or hourly pay	9.30%	78%	-68.70%	47.80%	25.60%	22.20%	-90.90%
2	My employer has reduced my weekly hours	27.30%	63.30%	-36.00%	43.30%	25.60%	17.70%	-53.70%
3	I will need to rely on government aid, loans, or grants for future education	38.10%	18.50%	19.60%	41.10%	25.60%	15.50%	4.10%
4	Will need to work more hours while going to college	45.30%	24.10%	21.20%	10.60%	47.70%	-37.10%	58.30%
5	I worry about my ability to pay for:							
	- Rent or Housing	20%	38.20%	-18.20%	15.40%	77.30%	-61.90%	43.70%
	- Food	14.40%	41.90%	-27.50%	15.40%	77.30%	-61.90%	34.40%
	- Health Care	21.50%	42%	-20.50%	18.30%	77.30%	-59.00%	38.50%

Physical Health

Students at either university have not gained weight or are sleeping less due to the Covid-19 changes. However, the American students seem to be getting less deep sleep. Their eating patterns have also gotten worse while the Chinese students are eating as well as before the pandemic. Both the university's students feel that their attitude to stay healthy has changed for the worse as they do not exercise as earlier. The impact on students' physical health is available in Table 5.

Table 5 – Impact on Physical Health

S. No.	Area	American Students			Chinese Students			Differences
		Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	
1	Gained weight since Covid-19	33.40%	51.60%	-18.20%	28%	48.30%	-20.30%	2.10%
2	Sleeping less since Covid-19	39.20%	46.20%	-7.00%	32.60%	38.70%	-6.10%	-0.90%
3	Getting less 'deep sleep'	49.80%	31.10%	18.70%	32.70%	37.80%	-5.10%	23.80%
4	My eating patterns have gotten worse	51.90%	32.70%	19.20%	27.20%	42.50%	-15.30%	34.50%
5	My attitude about staying healthy has declined	39.40%	46.90%	-7.50%	32.60%	37.90%	-5.30%	-2.20%
6	I do not exercise as much as I did before Covid-19	50.80%	38.20%	12.60%	38.80%	34.70%	4.10%	8.50%

Getting less deep sleep and poorer eating patterns may indicate that American students may be taking it upon themselves to cope with the stress of Covid-19 as compared to Chinese students. The cultural dimension of individualism may explain such behavior. According to Cultural (2023), the US scored 91 on the individualism dimension as compared to China which scored 20. Thus, even though students from both universities indicate that they have neither gained weight nor lost sleep since Covid-19, the American students are taking it more personally as that is impacting their deep sleep and eating patterns. A poorer health attitude may be reflective of the stress that students have due to Covid-19 uncertainties. With similar low scores on uncertainty avoidance, both societies are willing to live with ambiguity.

Communication

Interestingly while the Chinese students are confident about the information and guidance about the virus from their central government, the American students are not so confident about the information they receive from the Federal government. Students from both universities are satisfied with the communication from their universities. However, the students report that their communication with both the professors as well as fellow students has suffered since moving to online learning. The students' perceptions of changes in communication are indicated in Table 6.

Table 6 – Communication Perceptions

S. No.	Area	American Students			Chinese Students			Differences
		Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	
1	I feel confident in the information public receives from the Federal Government about the virus and what to do about it	32.30%	47.80%	-15.50%	80%	5.60%	74.40%	-89.90%
2	I am satisfied with the university's communications with students regarding classes, events, and scheduling	69.60%	17%	52.60%	70.70%	7.90%	62.80%	-10.20%
3	Communication with Instructors	21.90%	28.60%	-6.70%	31.40%	33%	-1.60%	-5.10%
4	Communication with fellow students	4.90%	68.70%	-63.80%	30.80%	38.70%	-7.90%	-55.90%

The Chinese students may be influenced by power distance as the Chinese society shows a higher score of 80 on that dimension as compared to the US score of 40 (Cultural, 2023). As a result, Chinese students are satisfied with the communication from their government as well as the university. The lower US score on power distance may have resulted in the American students' lack of confidence in the communication from the Federal government. Lower satisfaction with instructor communication may be due to the adjustments to online learning. Now there is less face-to-face dialogue and instruction. It is a similar concern with communication with fellow students.

Career Planning and Post-graduate Goals

Students from both universities perceive that their job prospects after graduation have become worse. They do desire to go to graduate school, but their financial ability to pay for graduate school has diminished, and they are disheartened as their desire to succeed in school and their career has gone down. The desire to pursue graduate studies makes sense as they both are cultures of achievement (Basáñez, 2016). The student responses about their career planning and post-graduate goals are shared in Table 7.

Table 7 – Career Planning and Post-graduate Goals

S. No.	Area	American Students			Chinese Students			Differences
		Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	Top Two Boxes (Agree)	Bottom Two Boxes (Disagree)	Net Impact (Top Two Boxes - Bottom Two Boxes)	
1	Negatively affected job prospects after graduation	51.20%	22.70%	28.50%	46.10%	11.90%	34.20%	-5.70%
2	Negatively affected my desire to go to graduate school	32.60%	35.10%	-2.50%	31.10%	42.80%	-11.70%	9.20%
3	Negatively affected my financial ability to pursue graduate school	41.50%	26.50%	15.00%	41.10%	15.20%	25.90%	-10.90%
4	Negatively affected my desire to succeed in school and career	45.50%	36.60%	8.90%	34.40%	18%	16.40%	-7.50%

Students from both universities may be affected due to uncertainty avoidance as the Covid-19 events were beyond their control. Both the US and China are low on their uncertainty dimension (Cultural, 2023). Thus, students may feel negative about job prospects after graduation, question their financial ability to pursue graduate school and experience a reduced desire to succeed at school as they are focusing on their day-to-day lives. Perceived usefulness for individualistic cultures and self-efficacy for collectivist cultures may influence e-learning adoption (Zhao et al., 2021). The negative perception about job prospects and desire to succeed at school may be due to the lack of usefulness of e-learning expressed by the US students and the self-doubt expressed by the Chinese students in their ability to learn if e-learning was going to be permanently maintained in their classes.

Based on the data above, it can be argued that American and Chinese students reacted differently to changes due to Covid-19 in the areas of academics, financial well-being, and communication perceptions. The data above also indicates that the similarities and differences in attitudes and behaviors in reaction to Covid-19 changes at the universities may be explained by country cultural scores as measured by Hofstede's dimensions (Cultural, 2023). The different academic experiences may be explained by power distance scores. The similarity in the effects of college social lives and emotional well-being could be due to similar uncertainty avoidance scores. The short-term orientation of American students may explain their decision to work more hours when they have not been impacted by lower wages or working hours. A higher score on individualism may explain why American students get less deep sleep. A higher score on power distance may explain the Chinese students' comfort with government communications. Low scores

on uncertainty avoidance for both cultures may explain the reduced job expectations after graduation and poorer financial ability perceptions to pay for graduate school.

DISCUSSION

The move to online learning due to the Covid-19 pandemic required an orchestration of the capabilities and skills of universities to meet student needs and expectations in a very short period (Mishra, Gupta, and Shree, 2020). This research investigated how well the student's learning, social life, and well-being progressed given all the constraints. With that objective in mind, this research collected survey data from students at a US university (SUU) and a Chinese university (WZU) about their experiences since switching to online learning. The survey asked the students about their academic pursuits, college social life, emotional well-being, financial conditions, physical health, communication, career planning, and post-graduate goals. We found differences in experiences between American and Chinese students in academics, financial well-being, and communication perceptions. Cultural similarities and differences between the American and Chinese societies may explain student responses as they shifted to online learning in the following ways:

A) The existence of large power distance and collectivist culture may have influenced Chinese students' approval of academic changes introduced by their university administration. As a result, the Chinese students felt that their access to classes, quality of instruction, quality of learning, study habits, learning due to greater reliance on technology, and their emotional, intellectual, and social attitudes had improved since the shift to online learning. The US students, possibly due to a combination of low power distance and individualism, felt that their academic pursuits had been affected negatively due to Covid-19.

B) Students from both universities felt that the way they socialized with friends, their attitude towards attending social events, the frequent use of technology to socialize, and the likelihood of attending university events had changed since shifting to online learning. Such a similar response may be attributed to a similar score on uncertainty avoidance across the US and Chinese societies. Students are aware of the challenges due to Covid-19 but are coping with them daily.

C) Financially the US students, as well as their Chinese counterparts, were not worried about paying for rent, food, and healthcare. However, they desired support in the form of government loans and grants to support their future education. Possibly due to a short-term focus, the US students felt that they had to work more hours while going to college. With a long-term focus, the Chinese students did not feel a need to work longer hours.

D) A high score on individualism may mean that US students took stress personally thus getting less deep sleep and experiencing poorer eating patterns. That was not the case with the Chinese students who come from a collectivist culture and felt they had social protection.

E) Power distance was again seen at play as the Chinese students believed in communication from their government as well as the university. The US students did not believe in the communication from the Federal government but were fine relying on the university communication.

F) Low scores on uncertainty avoidance for both the US and Chinese societies may have negatively influenced their expectations of job prospects after graduation, their ability to pursue graduate school, and their desire to succeed in their school career.

This study provides some practical insights for universities and therapists managing post-Covid-19 stress among students. They could utilize the tools presented by the underlying cultural phenomenon to help students cope with stress. For example, US students may be convinced of the efficacy of e-learning if they are given facts and figures that support such an assertion. The Chinese students with their confidence in authority figures are already convinced of the quality and extent of online learning. Therefore, having the university administration share the actions they are taking to manage the post-Covid-19 issues, not just academic but also social, physical, emotional, financial, and career goals, may help reduce stress for Chinese students. Hofstede (2011) suggests resilience of the cultural dimensions in the light of technological advancements. Therefore, changes in work practices (e.g., working from home), the introduction of AI techniques such as ChatGPT in learning (Zawacki-Richter et al., 2019), and better technology infrastructure overall (e.g., internet bandwidth improvements) may herald a new challenge for learning. However, since Hofstede's (2011) cultural dimensions are relative and have stood the test of time since they were first proposed in the 1960s, they could be used to help students with strategies to cope with stress.

LIMITATIONS AND FUTURE RESEARCH

The questions in this research were focused on a comparison of student experiences in the US and Chinese universities when they shifted to online learning post-Covid-19. Student perceptions may also be shaped by curriculum offerings, course content, students' prior experience with using technology in learning, and the systems designed to manage student experience. Future research could focus on additional factors that could influence student experience with online learning. While broad cultural theories that are representative of country cultures have been applied, individuals may not subscribe to such broad cultural dimensions. For example, people who move residences often may represent a more personal as compared to a collective set of identities (Varnum et al., 2010). Cultural dimensions represent differences relative to another country. With the rapid economic advancements in China and the increasing exposure to the rest of the world, their cultural dimensions might be changing. Perhaps for the student population, many of whom come to the US for higher studies and careers, the cultural dimension scores may be different from the scores for the whole country. Future studies need to keep a close watch on such possibilities. Covid-19 has resulted in changed business models, a greater reliance on local manufacturing, and a social-technical meta-transition such as the emergence of misinformation via social media may need to be considered as other factors that could exacerbate student stress.

Culture represents the way of life and Hofstede's (2011) five dimensions of culture provide an interesting representation of the values and beliefs that guide human behavior. This research explained students' coping behaviors post-Covid-19 using these cultural dimensions in this study. Culture is the fabric that binds national character and can be used to create coping strategies even with all the uncertainty presented by a unique event such as the Covid pandemic. So, a major issue that warrants further investigation is that the level of stress has been increased for both student groups since 2020, but in different areas.

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