# Health Information Seeking Behaviour during the Pandemic: Exploring the experiences of Chinese International Students

Guanyu Wang
*University of Melbourne*, guawang@student.unimelb.edu.au

Shanton Chang
*University of Melbourne*, shanton.chang@unimelb.edu.au

# Health Information Seeking Behaviour during the Pandemic: Exploring the Experiences of Chinese International Students

**Research-in-progress**

**Guanyu Wang**
School of Computing and Information Systems
University of Melbourne
Melbourne, Australia
Email: guawang@student.unimelb.edu.au

**Shanton Chang**
School of Computing and Information Systems
University of Melbourne
Melbourne, Australia
Email: shanton.chang@unimelb.edu.au

## Abstract

Many Chinese students choose Australia to study abroad. Studying abroad is a great opportunity, but it can also bring challenges for international students. In particular, during the Covid-19 pandemic, Chinese international students in Australian universities have new challenges in managing health information and misinformation across different platforms. There is currently a lack of research on Chinese international students' health information-seeking strategies. A deeper understanding of Chinese international students' social, cultural, and welfare support through online health information-seeking behaviour can be important. This can help support providers, educational institutions and governments to formulate better public health strategies for supporting international students. It will also help students better understand effective health information-seeking strategies. This study first synthesized relevant articles on information-seeking behaviour by international students. Then it identifies the gaps in studying Chinese international students' health information-seeking behaviour. Finally, recommendations are made to bridge the identified gaps.

**Keywords** Covid-19, health information-seeking behaviour, Chinese international students

# 1 Introduction

In Australia, there were 756636 international students in 2019. However, after the pandemic outbreak in 2020, it decreased to 686104. And currently, in 2022, the number of international students is 469,248. Nevertheless, it still makes up a sizable population (Department of Education, Skills and Employment 2022). They were an essential part of the Australian education market and have made Australian education the fourth-largest export market and the largest service industry (Wong et al. 2015). As a populous country, China was one of the largest sources of international students, although the number of Chinese international students in 2020 was roughly halved by the number in 2019 (Statista 2022). There are still 190926 Chinese international students going to Australia in 2020, far exceeding that of international students from other countries (Department of Education, Skills and Employment 2022). By 2022, Chinese students are still Australia's biggest international student group. New South Wales, Victoria, and Queensland are the top three states with the most Chinese international students (Department of Education 2022). As a result, they have made a massive contribution to the overall growth of the Australian student population (Guo 2010).

Australian education institutions have been interested in understanding the needs of international students from China since it has been one of the main international student groups (Martin and Rizvi 2014). Therefore, they hope to provide Chinese students with better information and services to improve their education and life experience, paving the way for a more positive reputation for transnational education (Wong et al. 2015). However, there are some differences between Chinese international students and other international students (Chang et al. 2021). Compared with students of different nationalities, most Chinese international students only have fewer online social networks and are focused on Chinese language platforms. They mostly use Chinese social media and keep in touch with Chinese friends. The frequent use of hometown-oriented social media may cause them to experience poor emotional adjustment (Chang et al. 2021). On the other hand, online social networking is one of the main ways most students establish and maintain interpersonal relationships. International students' diverse social networks may help them adapt to life in Australia more quickly. In contrast, Chinese students are less likely to diversify their social network, so it may be difficult for them to fully adapt to life in Australia (Chang et al. 2021). Therefore, a deeper understanding of information-seeking behaviour can provide valuable information for educational institutions and governments to plan and develop integrated services and resources. Some researchers have started researching Chinese students' information-seeking behaviour (Bukhari et al. 2018). However, there are still few studies in this area currently, and most research focuses on academic information (Chang and Gomes 2017; Chang et al. 2021; Gomes et al. 2014; Ling and Tran 2015). In particular, there is a lack of research on international students' health information-seeking behaviour, which is essential to improving social, cultural, and welfare (Ling and Tran 2015).

Additionally, there is research that shows the differences between Chinese international students and local Australian students (Douglass et al. 2020). For example, in terms of sexual health, local Australian students have a wealth of knowledge. In contrast, Chinese students have a minimal understanding of sexual health, and many Chinese international students come to Australia without sexual education (Douglass et al. 2020). Similarly, research also indicates some other differences; Chinese international students access mental health information, in that they are more likely to delay treatment until symptoms become quite severe (Zhuang et al. 2020), and in the area of wellbeing, in terms of what factors contribute to wellbeing and therefore what information they are looking for (Huang et al. 2022). Consequently, it is important to better understand the health information-seeking behaviour of Chinese international students.

Most importantly, the COVID-19 outbreak worldwide in 2019 has changed people's lifestyles tremendously. As Vandenberg et al. (2021) pointed out, Australia is one of several countries that have experienced multiple waves of COVID-19 cases. For this reason, the Australian government has formulated and implemented relevant prevention and control measures (Vandenberg et al. 2021). Under such a special circumstance, the pressure might change the ways in which information-seeking behaviour changes (Aldousari and Al-Sejari 2021). Chinese international students dealing with an overwhelming volume of information from Australia and China may cross multiple digital ecological health misinformation and face more risks from healthy misleading of multiple digital ecosystems (Bahl et al. 2022). In addition, many international students rely on their social networks for information (Chang et al. 2021). During the pandemic, while there is a lack of face-to-face interaction, it is arguable that many social networks students tend to be among students who they are most comfortable with or are from their cultural backgrounds (Chang and Gomes 2017; Chang et al. 2021; Gomes et al. 2014). Therefore, it may limit their access to various information (Chang et al. 2021). Furthermore, compared with the health information-seeking environment of other international students, Chinese students may

be disadvantaged and face more challenges because there is a large amount of health information on Chinese websites or social media from original English information. And it may include some translation errors and personal opinions (Zhang et al. 2021). Therefore, the following question arises: *In the context of the pandemic, what are Chinese international students' health information-seeking strategies while studying at Australian universities?*

The purpose of this article is to draw on the experiences of Chinese international students to better understand how students access and use health information. We will draw on the literature on health information searching behaviour, and more specifically Chinese students. Based on learnings from the literature, we will present several propositions about the health information search behaviour of Chinese international students studying in Australian universities during COVID-19. Finally, we will specify a research method to collect and analyze the data to draw new learnings to answer the research question.

## 2  Literature Review Methodology

During the literature review, this study firstly searched the following keywords through the University of Melbourne's online library in the databases of Google Scholar, ERIC (EBSCO), and IEEE Xplore Journals to obtain some articles and journals: Health information-seeking behaviour, Chinese students' wellbeing, information-seeking behaviour in COVID-19, Chinese international students in Australia, and Chinese students health information-seeking behaviour. Then classified and sorted these articles to determine the topic: Chinese international students' health information-seeking behaviour in Australia under COVID-19. After determining the topic, this study started a second-stage search and obtained some articles with higher relevance to Chinese international students' information-seeking behaviour in Australia. With the detailed analysis of a total of 31 articles, this study found that there is currently a lack of studies on Chinese international students' information-seeking strategies during COVID-19 in Australia, especially regarding information sources and fear of the pandemic. Finally, according to the analysis of these articles, this study generated four specific propositions.

## 3  Health Information-Seeking Behaviour

In recent decades, more and more people have begun to seek health information online with the development of information technology. However, because individuals' characteristics differ, their health information-seeking behaviour is quite diverse (Demirci et al. 2021). For example, regarding gender, women are more willing to search for more health information than men (Demirci et al. 2021). And in terms of educational attainment, people with higher education are more likely to search for more information because they have more access to it (Jaafar et al. 2017). At the same time, health information can prompt people to talk to their doctor and possibly lead them to treatment (Hogue et al. 2012). These findings on health information-seeking behaviour summarize people's performance to some extent (Demirci et al. 2021). However, it may vary among international students because international students may experience digital journeys. It happens when they move from relying on familiar forms of digital information used in their countries to access new and diverse sources of information in their host countries (Chang et al. 2021). The digital journey is the process by which international students accept and adapt to the digital environment of the country they are studying in. The digital environment is often culturally, socially, and linguistically different from the country they are from, which changes their information-seeking behaviour (Chang et al. 2021). While these broad understandings are useful, we also need to explore the specific context of the Chinese students' health information-seeking strategies to help answer the research question.

### 3.1  Information Source and Health Information Seeking Behaviour

In China, Chinese college students mainly use the Chinese Baidu search engine and WeChat social media application to obtain information (Astarita and Patience 2020; Ling and Tran 2015; Zhang et al. 2021). In addition, males are more concerned about general health, and female students are more likely to seek online health information for self-diagnosis and self-medication. At the same time, the judgment of information seekers on the quality of online health information is highly subjective and influenced by personal beliefs. As a result, college students who participate in various online health information may become providers of medical misinformation or even online opinion leaders (Huang et al. 2021; Shi et al. 2021; Zhang et al. 2021). It is worth noting that most health information hosted on Chinese websites or social media is translated and doctored versions of the original English information. This information may contain translation errors, personal opinions, and possible links to commercial interests with pharmaceutical companies and health-related suppliers. Therefore, people who use the internet to search for health information may face more potential risks in China (Shi and Luo 2019; Zhang et al.

2021). These findings match the conclusions of other articles (Hogue et al. 2012) that the quality of information on the internet varies in layers. While it is a convenient and anonymous resource, it also provides dangerous, fraudulent, or under-supported information (Albano et al. 2003). So today, information seekers are faced with a wealth of readily available information (Albano et al. 2003). And source credibility remains a significant determinant of search behaviour (Schoenherr and Thomson 2020).

Interestingly, in Australia, Chinese international students still maintain the habit of using information sources from their home countries. As pointed out by the articles (Chang and Gomes 2017; Chang et al. 2021), Chinese students in Australia may rely on a set of pre-existing online information sources and social networks. They are more likely to return to common digital information sources with which they are familiar. In addition, Bahl et al. (2022) pointed out that international students have a certain ability to identify health misinformation. Due to the fact that some international students may access multiple digital ecosystems, especially students who have digitally transitioned to the host country's ecosystem. They may detect discrepancies in information from households and host countries and then identify health misinformation by comparing information found across multiple digital ecosystems. Likewise, international students may defend against biases in a single digital ecosystem by being exposed to multiple digital ecosystems. However, this only happens if they use various sources of information from different countries. Most importantly, As long as the more variety of information sources they are exposed to, the more likely they are to identify health misinformation accurately. Therefore, we propose the following proposition:

**Proposition 1:** Chinese international students in Australia may frequently use the Baidu search engine and WeChat social media application to obtain health information during COVID-19.

**Proposition 2:** Chinese international students who use multiple international sources of information about Covid-19 are more likely to be able to differentiate health misinformation.

On the other hand, the article (Yoon and Kim 2014) states that the choice of some sources of health information varies by ethnicity and culture. For example, the Japanese rely on mass media and commercial sources, such as television, newspapers, and books, rather than human-to-human communication. Therefore, people tend not to talk about illness with others in Japanese culture. In contrast, the Chinese like human-to-human communication, and they see family members as one the important sources of health information. For Chinese international students, accessing information through direct communication with family elders/parents through digital technology is also a part of their daily life (Gomes et al. 2014). Guo et al. (2021) point out that elders/parents prefer to rely on television as a traditional source of information. In addition, they will get more information through news reports and news and TV shows. It is worth mentioning that television is one of the most trusted sources when people are looking for information (Superio et al. 2021). Therefore, we propose the following proposition:

**Proposition 3:** Elders/parents may be the major information source to help Chinese international students to deal with COVID-19 correctly.

## 3.2   Fear and Health Information-Seeking Behaviour

The pandemic outbreak can cause fear, which is the key factor in the booming psychological development of racism and revenge. For example, after COVID-19 broke out in Wuhan, China, the people of many countries increased their racism against the Chinese. In the Philippines, neighbors will even attack a patient's house with stones (Superio et al. 2021).

Not surprisingly, Chinese international students may use the internet to learn about these incidents and understand the current uncertain environment and the danger they may face. Previous research (Superio et al. 2021) found that uncertain environments or unfavorable situations often trigger people's need for information. It enables them to get enough knowledge about the situation and make wise decisions, usually not only for themselves but also to help others. Moreover, when threatened, individuals usually seek information to eliminate or avoid threats. Therefore, during the outbreak of Covid-19, Chinese students in Australia may start searching for health information, even if some do not have the habit of searching for health information. Another explanation of this phenomenon is that most people passively obtain health information in daily activities and new environments. But when it directly affects their health issues, they will turn to active strategies (Albano et al. 2003), such as COVID-19's global outbreak bringing a health threat to everyone. After that, the search volume about COVID-19 on the Internet increased significantly (Schoenherr and Thomson 2020).

At the same time, because most Chinese students mainly depend on search engines and social media to seek information (Chang and Gomes 2017), their fear may become huge after frequent access to these places (Superio et al. 2021). It is because much misinformation spreads among all media types, especially on social media. Similarly, social media is filled with many negative emotions in the face of pandemic threats, exacerbating people's fear (Superio et al. 2021). After the huge fear Chinese students face, they may take exaggerated prevention measures based on the health information obtained to protect themselves or minimize the opportunities of infecting diseases. However, the degree of fear will gradually decrease under two situations: 1. When people gradually understand the current situation. 2. Through trusted information sources to get related education on pandemics (Superio et al. 2021). Therefore, we propose the following proposition:

**Proposition 4:** Fear may lead Chinese international students to search for lots of health information and over-implement their advice during COVID-19.

## 4  Proposed Research Methodology

The propositions we highlight demonstrate how Chinese international students' health information search behaviour may be affected in the context of COVID-19. To address these propositions, we will conduct one-on-one semi-structured interviews with Chinese international students studying at Australian Universities, similar to the article (Bahl et al. 2022), to capture their health information-seeking behaviour during COVID-19. We aim to recruit 12 Chinese students in China studying online and 12 Chinese students in Australia studying offline or in hybrid mode. One-on-one interviews in Mandarin will be conducted, allowing the students to express their opinions more freely and comfortably (Ling and Tran 2015). Finally, researchers will translate the final interview data with Chinese students from Chinese into English.

In terms of data analysis, thematic analysis is a method of identifying, analyzing, and reporting patterns (themes) in data. It minimally organizes and describes the collected data set with rich details (Braun and Clarke 2006). Therefore, this research will adopt a thematic analysis method similar to the article (Gomes et al. 2014). The identified themes can allow us to summarize relevant experiences and develop some potential theories based on these experiences. Then this research will begin to solve the gap. In the future, researchers can research to test the accuracy of these theories.

## 5  Conclusion

There is little research on Chinese international students' health information-seeking in response to the pandemic in the current special environment (Ling and Tran 2015). So, this research will enable Australian educational institutions to understand Chinese students' health information-seeking strategies more comprehensively. Similarly, considering the possible continuity of COVID-19, this research will bring more targeted help to Australian educational institutions and the government. The result of this research will help Australian educational institutions and governments to understand the Chinese international students' health information-seeking preferences in such a special environment, as well as relevant decision-making, thereby providing more suitable measures to help them cope with the current high-pressure environment. Also, it might provide insights for international students about how they may need to improve their health information-seeking behaviour.

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