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Health inequalities and the COVID-19 pandemic: A qualitative study of Chinese people returning to China and diagnosed with COVID-19

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ABSTRACT

Purpose: We aimed to describe the experiences of Chinese citizens who returned home during the COVID-19 pandemic and the COVID-19 infection experiences they had in China. A further aim was to explore health inequalities in healthcare and access to services as a consequence of the COVID-19 pandemic.

Design: This qualitative study used in-depth interviews with 20 participants with confirmed COVID-19 upon returning to China.

Methods: Purposively sampled participants were recruited from a COVID-19 designated facility in Shanghai, China, from June to July 2020. Semi-structured, in-depth interviews were conducted and a thematic analysis approach was used to analyze the data.

Findings: Three main themes emerged from the interview study: access to services, COVID-19-related health care, and COVID-19-related stigma and discrimination. Regarding access to services, participants shared their experience of school closures and community shutdowns, and the difficulties encountered during their journey home to China. Regarding their experience with COVID-19-related health care, participants shared their experiences in foreign environments and access to COVID-19 care in China. In addition to experiencing discrimination overseas, similar discrimination from their networks in China was encountered by the study participants.

Conclusions: Participants experienced health inequalities in accessing healthcare services and nursing during the COVID-19 pandemic and experienced stigma and discrimination related to COVID-19. Future studies should focus on developing culturally sensitive interventions to decrease public discrimination and provide suggestions to government policy makers on how to mount a public policy response during epidemics that does not increase health inequalities.

Keywords: COVID-19, Health inequality, Overseas, China, Qualitative study

1. Introduction

Since December 2019, when the outbreak of coronavirus disease (COVID-19) was first reported in Wuhan, Hubei Province, China, the disease has spread around the world.[1] The COVID-19 outbreak was declared a public health emergency by the World Health Organization on Jan. 30, 2020.[2] During the COVID-19 outbreak, strict prevention and control strategies, including lockdowns, travel restrictions, and quarantines for people with symptoms who might be contagious, were implemented in different countries.[3-5] These strict measures effectively mitigated the spread of COVID-19 during the first year of the pandemic, but also threatened lives, triggered a wide variety of psychological and emotional implications, and potentially increased health inequalities worldwide (Bambra et al., 2020).[6-8]

Health inequalities are common in pandemics. Sydenstricker found significant inequalities in the 1918 Spanish influenza pandemic, reporting a significantly higher incidence among the working class.[9] In addition, the same inequalities in prevalence and mortality rates were also observed during the 2009 H_1N_1 influenza pandemic and COVID-19 pandemic.[8,10-12] Krieger defines social inequalities in health as, "health disparities, within and between countries, that are judged to be unfair, unjust, avoidable, and unnecessary…and that systematically burden populations rendered vulnerable by underlying social structures and political, economic, and legal institutions".[13(p698)] In Bambra's health inequalities model, social determinants of health include healthcare, access to services, the work environment, education and others.[8] Health inequalities between categorical social groups (eg, ethnicity or nationality) are caused by social structures and political and economic forces.[14]

Studies have shown that air travel can increase the risk of exposure to COVID-19.[15,16] In-flight transmission of infectious diseases has been well-noted, as people traveling in compact spaces have contracted respiratory pathogens, such as influenza, tuberculosis, severe acute respiratory syndrome (SARS), as well as COVID-19.[17-22] Therefore, travel restrictions are often used to decrease such exposure.[23] During the first year of the COVID-19 pandemic, many countries issued travel advisories and decreased air travel in response to the disease.[16,24,25] For example, during the COVID-19 outbreak, all designated international airports in China established screening sites to conduct epidemiological surveys and temperature measurements and collect oropharyngeal specimens for PCR testing. In addition, several hotels were designated as 14-day quarantine sites for all overseas travelers.[26] Individuals who tested positive for COVID-19 infection were immediately transported to designated medical facilities, where they stayed in negative pressure isolation rooms.[27]

Government policies potentially increased health inequalities for people who were outside of the country and traveled back home, as they faced more challenges than those who remained in the country.[28] First, during the early days, the COVID-19 outbreak was not well-controlled in many countries, making returning persons more susceptible to potential COVID-19 infections.[29] Second, they faced discrimination and stigma in many of the countries they had travelled to, as well as back home, due to being deemed potential COVID-19 carriers.[30,31] Third, the rigorous prevention and control strategies, such as the "Five-One" policy in China, which included the stipulation that only one China-based airline could fly to one airport per country per week.[32] Additionally, all foreign-based airlines could only fly into one airport in China. These travel restrictions left many Chinese people trapped overseas, with many facing visa expiration and overstays in the foreign countries they were in. Fourth, some mass media outlets in China used derogatory headlines to describe those returning to China from overseas, for example, by stating that they were poisoning the homeland and killing their fellow Chinese.[33] These reports fueled public fear and discrimination

and created anxiety and stress for Chinese people who found themselves abroad.

Although governments, along with health departments, are implementing various policies and strategies to tackle it, COVID-19 is neither controlled nor limited in terms of spread.[34] Apart from its transmission, vaccination, and treatment, there are a multitude of additional concerns that merit attention, including the pressing issue of health inequalities. There has been a lack of studies exploring health inequalities during the COVID-19 pandemic. To better explore the phenomenon of health inequalities during the COVID-19 pandemic, we describe the experiences of Chinese citizens who, upon returning to China from overseas, were diagnosed with COVID-19. We explored the potential consequences of health inequalities resulting from lockdown measures implemented internationally as a response to the COVID-19 pandemic, focusing on the likely unequal impacts of the pandemic. Using the Bambra health inequalities model as our theoretical framework, this study aimed to examine the experiences of returning Chinese citizens' access to services and healthcare to begin to explore the health inequalities created by the COVID-19 pandemic.

2. Methods

2.1 Aim

The aim of this study was to describe the experiences of how Chinese citizens who were overseas decided to return home during the COVID-19 pandemic and the COVID-19 infection experiences they had in China. A further aim was to explore health inequalities in healthcare and access to services as a consequence of the COVID-19 pandemic.

2.2 Study Design and Setting

A qualitative design was used to explore the study participants' decision to return to China and their experiences during their journey home. The qualitative in-depth interviews were conducted by cell phone using WeChat, an instant messaging app in China. Participants were recruited from a designated infectious disease hospital in Shanghai, China. This was the only facility that treated COVID-19 cases in Shanghai, including airline passenger cases that landed in the Southeast region of China. As of April 2021, more than 1,900 COVID-19 confirmed patients from abroad had been cared for at this hospital. The guidelines for good reporting of a qualitative study (SRQR) were used in this paper (Supplementary File 1).[35]

2.3 Participants

A purposive sampling method was used to recruit patients diagnosed with COVID-19 from the study site. The inclusion criteria for participants were (a) had confirmed COVID-19 infection, (b) were Chinese citizens, (c) had traveled from outside of China, (d) were treated at the study site facility in Shanghai, (e) were discharged from the hospital, and (f) were at least 18 years of age. The invited participants were identified through the hospital's electronic medical system. Recruitment was conducted between June and July 2020. The recruitment process included inviting eligible participants to volunteer for the study and explaining the objectives of the study by telephone. After electronic written consent was obtained, the research staff scheduled a time for the in-depth interview. All participants were informed that they could withdraw from the study at any time without any consequences. Study participants were given a small reimbursement for their time and participation.

2.4 Qualitative Data Collection

The data was collected through semi-structured, in-depth interviews that were conducted between June and July 2020. All interviews were audio-recorded and conducted by two research nurses. The investigators were trained on how to follow the interview guide and two participants were pilot interviewed. Demographic data were obtained from participants via online survey. The interview focused on the participants' experiences of how and why they

decided to return home to China and their COVID-19 testing and treatment experiences in China. Sample interview prompts are shown in Table 1. Each interview took approximately 40–60 minutes and was carried out in a private setting. After interviewing 20 participants, the study database was closed because a saturation point was reached beyond which no new information was expected to be obtained.[36]

Table 1: Interview prompts

Number	Question
1	Please tell me when and why you decided to come back?
2	How did you come back?
3	Please describe the process you went through during your return.
4	Can you share with me when and how you think that you might have been infected with COVID?
5	What was your experience after your infection?

2.5 Ethical Considerations

The study was approved by the relevant institutional review boards of the affiliated university (IRB#20-000832) and hospital (YZ-2020-S037-01). Participants were presented with a Participant Information and Consent Form, which they were encouraged to review thoroughly. Those who willingly chose to take part provided their consent in writing by signing the designated electronic consent form.

2.6 Data Analysis

We used Atlas.ti software (Scientific Software Development, Version 7.0, 2012) to code the data and conduct the thematic analysis.[37] First, the audio recordings were transcribed by transcription software and then verified by two interviewing researchers who reviewed the transcriptions line-by-line by comparing the audio recordings to the written transcripts. Second, interviewers independently read the transcripts to get an overall sense of the content, met with the research team to discuss the content, and developed a preliminary codebook related to the participants' decision-making process with regard to returning to China, their travel experiences, and their COVID-19 treatment in China. Third, the research team inspected two transcripts individually, assigned codes from the codebook, and compared them. When coding discrepancies arose among researchers, they discussed the issue until consensus was achieved. Fourth, each researcher took half of the remaining transcriptions and coded them separately. Fifth, after completing the coding, the research team examined the codes and grouped them by themes and sub-themes. Sixth, quotations related to participants' experiences during their journey home and their COVID-19 diagnosis were selected from the transcriptions. Lastly, direct quotations were translated into English by a bilingual researcher for publication purposes.

2.7 Validity and Reliability/Rigor

The criteria of credibility, dependability, confirmability, and transferability were used in this study to ensure data trustworthiness.[38] First, the heterogeneity of the investigators, eg, research experience, enhanced the credibility of the study. In addition, all investigators were trained with the interview guide and did pilot practice. Second, to guarantee confirmability and dependability, data collection and data analysis were independently conducted by two investigators. Group meetings with all the investigators were held to discuss discrepancies in how the data were coded until a consensus was reached. Third, the research approach, sample, methods and results were described in detail to enhance transferability.

3. Results

3.1 Participant Characteristics

Twenty participants ranging in age from 19 to 68 years old were included, with a mean age of 30 years. Thirteen participants were male (65%) and seven were female (35%). Seventeen (85%) participants had a bachelor's degree or higher, and more than half of the participants were unmarried (65%, n=13). These participants intended to return to one of 13 different provinces in China: 3 (15%) were local Shanghainese, 3 (15%) were returning to Zhejiang Province, 3 (15%) to Sichuan Province, 2 (10%) to Henan Province, and the other 9 (45%) were bound for various other provinces–Fujian, Guangdong, Ningxia, Anhui, Shandong, Hunan, Guizhou, Liaoning, and Shanxi.

Since under China's "Five-One" policy, the travelers were not able to pick their landing destination, they were content to land at any airport in China. Regarding their reasons for traveling overseas, 12 (60%) were studying abroad, 6 (30%) were working in other countries (and their offices had closed), and 2 (10%) were visiting family members abroad. Seven (35%) of the participants traveled back from the United Kingdom, 3 (15%) from the United States, 2 (10%) from France, 2 (10.0%) from South Sudan, and the remaining (n=6; 30%) from Italy, Canada, Iran, Mexico, Zambia, or Ethiopia. The detailed demographic characteristics of the study participants are presented in Table 2.

Table 2: Demographic Characteristics of the Participants (N=20)

Characteristic	N	Mean (SD) or %
Gender (%)		
Male	13	65.0
Female	7	35.0
Education (%)		
Bachelor's or higher	17	85.0
Home municipality in China (%)		
Shanghai	3	15.0
Zhejiang Province	3	15.0
Sichuan Province	3	15.0
Henan Province	2	10.0
Other*	9	45.0
Marital status (%)		
Unmarried	13	65.0
Married	7	35.0
Age (years, mean)		
Age		30
Age range		19-68
Reason for living abroad (%)		
Study	12	60.0
Work	6	30.0
Visiting family	2	10.0
Host country (%)		

United Kingdom	7	35.0
United States	3	15.0
France	2	10.0
South Sudan	2	10.0
Other**	6	30.0

*Other home provinces included Fujian, Guangdong, Ningxia, Anhui, Shandong, Hunan, Guizhou, Liaoning, and Shanxi.
** Other countries included Italy, Canada, Mexico, Iran, Zambia, and Ethiopia.

3.2 Thematic results

Three main themes emerged from the analysis: access to services, COVID-19-related health care, and COVID-19-related stigma and discrimination. The "access to services" theme was divided into two sub-themes of school closures/community shutdowns and difficulties encountered during the return to China. The "COVID-19-related health care" theme was divided into two sub-themes of COVID-19-related health care in foreign environments and access to COVID-19 care in China (see Table 3).

Table 3: Themes and Sub-Themes

Theme	Sub-theme
Access to services	- School closure and community shutdown - Difficulties encountered during the return to China
COVID-19-related health care	- COVID-19-related health care in foreign environments - Access to COVID-19 care in China
COVID-19-related stigma and discrimination	

Theme 1: Access to services

1.1 Sub-theme: School closure and community shutdown

COVID-19 policies implemented across different countries, such as school closures and city shutdowns, have posed significant impediments to participants' access to a wide array of services. A substantial proportion of the participants were students or individuals engaged in overseas work, making them particularly susceptible to disruptions caused by school closures and work-from-home policies, which substantially impact their daily lives.

A 19-year-old woman who had been living in the United States said, "*Our school was closed because of the epidemic, including the dormitory. I was in a boarding school in America, without a place to stay.*"

1.2 Sub-theme: Difficulties encountered during the return to China

Many participants shared that the limited number of flights and expensive airfare made their return home from other countries extremely difficult. To better control the COVID-19 epidemic, many countries' public health authorities placed restrictions on international departures and arrivals; as such, leaving and entering countries became difficult. The study participants shared that the process of confirming flight tickets frustrated them. One 27-year-old woman who had been living in South Sudan said,

> *We originally planned to return to China in May 2020. However, the airport closest to my home was closed. So, the returning date was delayed.... Then, we bought a ticket for July 2020; it was cancelled. Finally, we bought a*

plane ticket through "special channels," as there were no available tickets on the official websites of the China-owned airlines during this time. The flight tickets were 4 times more expensive than the usual airfare.

A 38-year-old man who had been living in Zambia said,

The first flight ticket (April 24) I bought was cancelled; then I changed to May 1. Unfortunately, the ticket was cancelled again. At that time, I was very worried and afraid that I would be unable to go back home. If I was infected with COVID, I definitely could not get on the flight. Time was running out!

Even if they were lucky enough to get a flight, many participants recalled that it was a tiring and stressful journey. Knowing that they would be squeezed into a compact space for a long period of time on the plane, many participants equipped themselves with alcohol pads, handwashing gel, masks, goggles, protective suits, and gloves. Even though wearing protective equipment was deemed one of the most effective ways to prevent infections, it was very uncomfortable and inconvenient to wear for extended periods of time, especially in tight spaces.[16,39] As one 28-year-old man who had been living in Ethiopia stated,

I fully armed on the returning flight from Ethiopia to China. I had the protective suit on, wore goggles, two layers of masks, and gloves. It was very hot and uncomfortable to wear masks and protective clothing that is non-breathable. To reduce the risk of infection, I didn't eat or drink, and avoided using the lavatory on the long transcontinental flight. When I think about this journey, I just felt sick.

A 35-year-old woman who had been living in France said,

I boarded at a French airport. Although I only wore one mask and a pair of goggles, it was very uncomfortable. My ears got pulled from the straps of the goggles and it was hard to breath with the mask on. Besides, the flight was fully booked! For fear of contacting the virus, I only drank a few sips of water during the whole journey.

In addition, several participants passed through several continents and countries, which increased the uncertainty of the journey. Changing flights increased the risk not only of possible exposure to COVID-19, but also of missing connecting flights.

One 21-year-old man who had been living in the UK said,

I had three [flight] segments to go back to China. I needed to transit several countries before I landed in China. My first flight was from London to Doha in Istanbul, then to Hong Kong, and finally to Shanghai. Throughout the journey, I was very concerned about the airport's disinfectant policies, and felt anxious when I heard the news that some airports were closed…My original flight was from London to Brunei. However, when I started boarding, I was told that I could not board because only Brunei citizens were permitted to get on. I broke down at that time. I didn't know what I should or could do. I could not go back to my London apartment! So, I stayed at the London airport alone for more than 10 hours and, luckily, was able to buy a ticket to Doha.

Theme 2: COVID-19-related health care

2.1 Sub-theme: COVID-19-related health care in foreign environments

Overseas Chinese people faced gut wrenching choices during the global COVID-19 epidemic: stay put or return home. Study participants mentioned several motivations for returning home and many felt insecure in the foreign country they were in. Participants perceived a greater risk of contracting COVID-19 if they stayed abroad.

One 24-year-old woman who had been living in the United Kingdom (UK) stated,

> *In fact, it was already very serious in the UK at that time. However, no matter [where], in school or in the communities, it was rare to see people wearing masks. The London mayor still held the marathon in such a situation. I felt very insecure in such an environment.*

Additionally, many participants identified barriers to accessing local healthcare as one of their motivations to return home. Many of those who were born and raised in China said they were unfamiliar with their host country's medical system and faced cultural and language barriers. As one 38-year-old man who had been living in Zambia said, "*I felt that if I became infected with COVID in Zambia, I could only rely on myself or wait to die.*"

A 24-year-old woman who had been living in the UK said,

> *Before returning home, there was one day that I felt sick and contacted the student health center. The student health center told me if I have any symptoms, including fever or cough, I cannot enter the health center but [had to] go to an outside clinic. However, the outside clinic only prescribed cold medicine, and that wouldn't work. Then, I called a hospital emergency room for help. However, they told me that as an international student, I could only stay home and isolate myself, as I do not have insurance to cover any medical bill.*

A 38-year-old woman who had been living in the United States said,

> *We didn't know where we could go if we got sick. Would we get timely medical attention as we were foreigners?*

2.2 Sub-theme: Access to COVID-19 care in China

Upon landing in China, travelers at the airport needed to complete an epidemiological survey, temperature measurement, a COVID-19 PCR test, and quarantine for 14-days in a designated hotel. Individuals who tested positive for COVID-19 during the quarantine period were sent to the designated hospital closest to the airport to continue their quarantine in a negative pressure room and receive treatment, if needed.

Compared with other countries, China gained valuable experience in COVID-19 treatment during the early stages of the pandemic. At the time of this writing, the Chinese government claims that the spread of COVID-19 has successfully halted in China, with only sporadic community transmission. It follow that, even when participants were diagnosed with COVID-19, they were confident in the treatment system in China.

One 24-year-old woman who had been living in the UK shared,

> *China accumulated lots of experience in the treatment of COVID-19. There were many COVID-19 infected patients who have been cured and discharged from hospitals. China must have the secret of COVID treatment.*

A 68-year-old man who had been living in the UK said:

> *Now that I was diagnosed with COVID in China, I was not worried anymore. I had returned to my home county and I was no longer afraid. The confirmed cases were slowing down in China, [which is] proof the epidemic in the country is under control. China is leading the world in controlling and treating COVID-19.*

Theme 3: COVID-19-related stigma and discrimination

The labeling of SARS-CoV-2, the virus that causes COVID-19, as the "China virus" led to participants living in fear as the virus spread. Racial prejudice and discrimination toward Asians made situations unsafe. One 24-year-old man who had lived in Iran said, "*When we walk on the street, the Iranians will use their language to say that we are virus.*"

A 23-year-old man who had lived in the UK said,

> *When we took the subway, people next to me covered their mouths and noses with a scarf,*

and then walked away. Also, reports on social media and on TV stated that Asians who wear face masks were attacked. Although I wasn't personally attacked, I was alert when I was outside.

Although China was a familiar environment for participants, some of them felt stressed in their home country. Derogatory remarks regarding those who had traveled back to the country included, "returned to China to add chaos" and, "poisoned thousands of miles along the way." As COVID-19 patients, study participants expressed perceived stigma and felt guilty about potentially transmitting COVID-19 to others. As one 54-year-old woman who lived in Italy said,

After I was diagnosed with COVID, I suffered from insomnia. I experienced stigma and discrimination from the community, and always worried about possibly being redetected as COVID-positive, as the media was reporting cases of reactivation of the COVID virus. In that case, I might transmit it to others. So, I isolated myself and avoided contact with others, including my husband. We lived on different floors and ate separately. Sometimes I regretted coming back. If I knew how I was going to be treated in China, I would not have returned.

Some participants were not allowed to board planes to return to their home provinces in China. Many were required to stay at home and isolate within their communities even after being discharged from the hospital and finishing their 14-day quarantine periods. One 21-year-old man who had lived in the UK said, *"When I was discharged from the designated hospital and [wanted to] return to Guangdong, airlines refused to let me board flights. The airline companies had the record that I was confirmed with COVID. I was forced to change by several airlines."*

A 24-year-old man who had been living in Iran said,

One of the COVID patients who stayed in the same ward with me in the hospital told me that he was blamed by his neighbors when he was walking in the community. Neighbors were very afraid to see him. I also had the similar experience of being discriminated against. On the domestic flight in China, when the flight attendant knew that I had COVID, she asked me to move to the end seats of the flight and separated me from others. I felt strange looks from other passengers and some passengers even took pictures of me on their mobile phones. One passenger even threatened me, [saying] that if I infected others, I would be sent to jail.

4. Discussion

After the virus surfaced, COVID-19 spread globally, with the center of the epidemic shifting from China to other countries.[1] When the situation became more prevalent worldwide, some marginalized groups, such as overseas Chinese, became more vulnerable to the effects of the pandemic, as they had insufficient or no healthcare insurance abroad and/or difficulties accessing services under the strict policies of the time. Reduced access to healthcare before and during the outbreak contributed to inequalities in health and likely to led to worse outcomes from COVID-19. During the COVID-19 pandemic, individuals who traveled globally, especially people returning to their home countries, are underrepresented in the scholarly literature. The present study confirmed that health inequalities were experienced among Chinese citizens who returned to China from overseas during the pandemic, with negative experiences in the areas of access to services and COVID-19-related healthcare as well as COVID-19-related stigma and discrimination prevailing. To date, this study represents one of few studies that explore health inequalities among Chinese people returning to China from overseas during the COVID-19 pandemic.

This qualitative study presented the experiences of participants who decided to travel back to China during the beginning of the pandemic and were

found to have COVID-19 immediately upon their return, or within the mandated 14-day quarantine period. Our findings highlight how people traveled with fear and uncertainty and ended up with a COVID-19 diagnosis. Future studies should provide suggestions for updated policies to decrease the difficulties of traveling during pandemics driven by highly transmittable diseases. Focus should also rest on decreasing COVID-19-related stigma against Asian populations.

As described by the study participants, during the beginning of the pandemic, the world shut down while China was one of the few countries still functioning as usual. Friends and relatives asked their loved ones to return home, as other countries did not have the same strict policies for COVID-19 cases to be isolated. In their host countries, foreign Chinese experienced school closures, community shutdowns, barriers to accessing local healthcare, and racial prejudice.

The COVID-19 pandemic forced foreigners to face not only acculturation stress but also more challenges, including discrimination.[29] As the global epidemic spread, some people chose to return home to escape the apparent lack of control over the virus in their host countries. The study participants stated that they were less concerned about becoming infected with COVID-19 in China than in the countries in which they were living due to their unfamiliarity with foreign health systems, language barriers, and lack of medical insurance in their host county, all of which limited their access to healthcare.[29] Many felt that if they were diagnosed with COVID-19 in their host country and needed medical care, they would be on their own.[40] Returning home, even when diagnosed with COVID-19, meant that friends and family would use all possible means to take care of them. Additionally, especially in the early days of the epidemic in China, several media outlets and political leaders used inappropriate headlines or language, which fueled hostility and racial prejudice toward Asians.[41,42] In the years since, many Chinese people have faced continued scrutiny and stress.

Some governments took measures to control the surge of imported COVID-19 cases, aiming to stem the possibility of community outbreaks.[43,44] To some extent, these mitigation strategies have proven efficacious in controlling the spread of COVID-19 in the country. However, the negative influence of these policies should not be overlooked. As reported in this study, study participants experienced unbearable psychological distress (eg, fatigue, stress, and uncertainty) during the process of returning home due to strict travel policies, including hard-to-book tickets, long flights while wearing uncomfortable protective gear, and a series of tedious procedures, including COVID-19 PCR testing for every passenger after landing. Study findings imply that the government should adjust COVID-19 screening policies that differentiate "foreign" citizens from "local" citizens to minimize discrimination and stigma for those who return home for safety reasons.

As participants conveyed in this study, psychological and emotional implications from the stigma and discrimination that came from the general population that targeted returning Chinese people was experienced. Similar to the findings of previous studies of other infectious diseases, stigma is a prominent issue associated with COVID-19 and is related to social panic and misconceptions about the disease.[45] Although some reports discussed re-detected positive cases of COVID-19 in previously infected patients, there is no evidence showing that those who have been cured of COVID-19 can infect others.[42,46] However, recovered individuals have been perceived as potential COVID-19 carriers and, therefore, have experienced isolation and discrimination by the public. This finding suggests that timely and widespread health education for the general public to foster an accurate understanding of COVID-19 transmission is important.

On the other hand, misleading social and mass media statements regarding COVID-19 affect the general public's attitudes and perceptions toward people returning home, which leads to unpleasant social hostility.[33] In times of global pandemics, the main channel through which the general public can obtain updated information is media, particularly social media platforms.[47] As such, mass media should provide the public with trustworthy information.[48] Additionally, culturally sensitive interventions to decrease public discrimination are urgently needed to lessen the perceived stigma of people who choose to return to their home country during a pandemic.

4.1 Limitations

There were several limitations to this study. First, all of the study participants were interviewed via cellphones using an app, i.e., WeChat. As participants were discharged from the hospital, phone interviews were convenient for both participants and interviewers. However, using this method, non-verbal communication could not be observed. Second, study participants were recruited from one designated hospital in Shanghai, a population that may not be representative of all the people who decided to return to China during the pandemic. Third, the higher education level of the study participants may also introduce bias to this study because they might have better coping strategies than less educated Chinese people. Moreover, people who study or work overseas are usually bilingual and able to adapt to different situations more easily. Last, as the original study did not plan for another follow-up study, we do not know whether the participants would make the same choice to return home as many Chinese people chose to leave China after the lockdown of 2022.

5. Conclusions

This qualitative study provides insights into how people experienced health inequalities during the COVID-19 pandemic, experienced access to services and health care, and experienced stigma and discrimination related to COVID-19. Historically, higher rates of infection and mortality are found among special groups during pandemics. The results of this study suggest that these inequalities are mirrored during the COVID-19 pandemic. Thus, future studies should focus on developing culturally sensitive interventions to decrease public discrimination and provide suggestions to government policy makers on how to mount a public policy response during epidemics that do not increase health inequalities.

Conflict of Interest statement:

All the authors declare no conflicts of interest.

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Author contributions:

This study is the result of a collaboration among Wei-Ti Chen, and Lin Zhang, who are the corresponding authors of this study and responsible for designing, planning, organizing, and guiding this study. Wenxiu Sun was responsible for the qualitative data analysis and manuscript writing. Siyue Ma and Qing Zhang were responsible for quantitative data collection and data analysis.

Data availability statement:

The data that support the findings of this study are available on request from the first author.

Ethics statement:

The study was approved by the relevant institutional review boards of the affiliated university (IRB#20-000832) and hospital (YZ-2020-S037-01).

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