SYSTEMATIC REVIEW

Mental health of Chinese international students: narrative review of experiences in the UK [version 1; peer review: 2 approved with reservations]

Erla Magnusdottir,1,2 Graham Thornicroft1,2

1Centre for Global Mental Health and Centre for Implementation Science, Institute of Psychiatry, Psychology & Neuroscience, Kings College London, London, UK
2Institute of Psychiatry, Psychology and Neuroscience, Kings College London, London, UK

Abstract

Background: Chinese international students are the largest group of international students in the UK. Although there is considerable research into acculturation and acculturation stress of these students, little is known about their mental health experiences.

Methods: A narrative review of the literature was conducted looking at literature published between 2009 –2019 in order to learn more about the mental health experience of Chinese international students in the UK.

Results: It is difficult to confirm whether Chinese international students in the UK experience heightened risk of psychological distress, as argued by studies on other countries. However, these students do seem less likely to seek formal mental health support compared to home students, but rather rely more on informal support from friends. While Western mental health models are likely to be favoured by these students, certain cultural beliefs around prevention and cause of mental ill health might be present.

Conclusion: Chinese international students in the UK are diverse and we still do not understand enough about their mental health experiences, which is a concern given the continued growth of their numbers. Caution is necessary when interpreting how some cultural factors are reported. China has undergone vast changes in recent years so drawing on studies that date back too far might not accurately capture Chinese youth today. The literature acknowledges that there will be new aspects to the experiences of mental health of these students, including new societal pressures relating to studying abroad. This paper also discusses gaps in our knowledge and practical steps that can be taken to support Chinese international students’ psychological wellbeing while studying in the UK.
Keywords
mental health, international students, acculturation stress, mental health support, higher education

Corresponding authors: Erla Magnusdottir (erla.magnusdottir@gmail.com), Graham Thornicroft (graham.thornicroft@kcl.ac.uk)

Author roles: Magnusdottir E: Conceptualization, Investigation, Methodology, Project Administration, Writing – Original Draft Preparation, Writing – Review & Editing; Thornicroft G: Conceptualization, Supervision, Validation, Writing – Review & Editing

Competing interests: No competing interests were disclosed.

Grant information: This project is funded by the National Institute for Health Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number R01MH100470). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

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How to cite this article: Magnusdottir E and Thornicroft G. Mental health of Chinese international students: narrative review of experiences in the UK [version 1; peer review: 2 approved with reservations] NIHR Open Research 2022, 2:52 https://doi.org/10.3310/nihopenres.13268.1

First published: 10 Oct 2022, 2:52 https://doi.org/10.3310/nihopenres.13268.1
Plain language summary

Although Chinese students are the largest group of international students in the UK we know very little about their mental health experiences. A review of the key literature published between 2009 –2019 was conducted in order to understand better present knowledge about the mental health experiences of this group in the UK. From the results it is difficult to confirm whether these students are at greater risk of mental illness, as has been suggested by some studies of Chinese students in other countries. However, Chinese international students in the UK do seem less likely to seek formal mental health support compared to British home students and rather turn to friends when in need of support. It appears that the understanding of mental illness of Chinese international students in the UK often aligns with Western mental health models, although particular Chinese cultural beliefs do also sometimes influence students. However, there will also be new aspects to their experience of mental health, including new pressures relating to studying abroad. Our paper also discusses gaps in our knowledge and practical steps that can be taken to support Chinese international students’ psychological wellbeing while studying in the UK.

Introduction

In the UK, students are reporting more mental health problems than ever before (Macaskill, 2013). This comes at a time when the student body in higher education is increasingly diverse, which calls for a better understanding of the particular needs of different student groups.

The number of students arriving from the People’s Republic of China (PRC) at UK universities exceeds any other nationality. There has been an incremental growth in Chinese international students studying in the UK over the past years as can be seen in Figure 1. Between 2017 to 2018 for example, it was estimated that there were 105,530 Chinese students enrolled in higher education in the United Kingdom (HESA). Furthermore, recently the UK Universities Minister announced plans to expand the number of international students by 30% by 2030 (Skidmore, 2019) which is likely to result in the further growth in Chinese students in the coming years.

Studies from the USA and Australia have highlighted a need to better understand the mental health of Chinese international students, with findings showing them to have relatively high rates of mental distress (Chen et al., 2015; Han et al., 2013; Lu et al., 2014). At the same time, it has been found that international Asian and Chinese students in these countries under-utilize student support services (Constantine et al., 2005; Kim & Lee, 2014; Raunic & Xenos, 2008; Yoon & Jepsen, 2008), and prefer seeking help from friends and family when experiencing mental health problems (Constantine et al., 2005; Han et al., 2018). There appears to be a growing global concern about the mental wellbeing of Chinese international students, reflected also by global media (Chen, 2018; Clarke, 2018; HuaWen, 2018; Liu, 2018).

Rapid transitions in China

It is well documented that China has undergone rapid economic development in recent decades. Less known is that important mental health reforms have taken place in recent years in the PRC, which might have had some impact on the attitudes of Chinese youth. For example, an important milestone was the passing of the first Mental Health Law in 2012, in which article 16 calls for an increase in the provision of mental health services in schools (Yip, 2004) and increased focus on psychological support for university students (PRC, 2001). In 2012, a survey conducted across 38 universities in Beijing found all to have counselling services available (Liu et al., 2017). This demonstrates how systems that are in place in Chinese universities today are becoming more similar to that of services in western countries such as the UK. However, despite

![Figure 1. Number of International Chinese Students Enrolled in Higher Education in the UK, broken down by academic years. Source: HESA.](image-url)
significant progress, there remain large gaps in practice and most people with mental illness in China will never have had contact with formal mental health services. This is particularly true in rural areas (Liu et al., 2017; Patel et al., 2016). Uptake of counselling services in universities in China is still relatively low (Kou et al., 2012), although a cohort study from 2005 to 2011 did see a modest increase in help-seeking from counselling services by first year students (Liu et al., 2017).

Mental health and Chinese cultural factors

Academics have studied specific cultural aspects that relate to mental health in China. One famous instance of such cultural factors is ‘somatization’, the presentation of more physical symptoms, such as insomnia or headache, when presenting with depression (Lee et al., 2007; Lee & Kleinman, 2007; Zhou et al., 2016). Though such somatization is not exclusive to China, it has been reported more commonly in China than elsewhere. This manifestation of somatic symptoms is relevant when studying international students because if healthcare providers are unfamiliar with the way students may present with mental illness, it can lead to their mental illness not being identified. In recent years academics have contemplated how somatization might have changed as China has become increasingly open to western cultural influences, and ordinary people have more western contact through media, academic exchanges, travel etc. which might influence the way they understand mental health.

One study that looked at Chinese-American students’ conception of depression, for example, found it to be more similar to that of White Americans, more so than when comparing to general immigrant Chinese communities in the US (Ying et al., 2000). The authors concluded that the Chinese-American students were likely to have assimilated more to US society and culture and hence were less likely to report somatization. It has also been debated whether somatization occurs as a result of a real difference in manifestation of the illness, or whether stigma means Chinese people find it easier to report physical symptoms as opposed to psychological ones that might be associated with more stigma. (Yang et al., 2007; Zhou et al., 2016).

Stigma is recognized globally as an important barrier to help-seeking for mental health (Thornicroft, 2008). Understanding stigma in China and how that may affect Chinese students’ attitudes to mental health while studying abroad is important. Some have argued that the prevalence and strength of stigma in China is related to the collective character of Chinese society. Because stigma will not only affect an individual with mental illness but equally their families and even wider networks. In China, relationships, or guanxi, are key to success. The family can experience ‘loss of face’ and be completely isolated from their network, or loss of guanxi if someone has a mental illness. Quoting Lang, Lee & Kleinman (2007), “Stigma threatens what matters most” (Yang et al., 2007). Consequently, people have an interest in keeping their mental illness a secret, and this can make help-seeking very difficult (Yu et al., 2018).

A study in the USA looked at a random sample of 5,555 students (including both home and international students) and considered the association between help-seeking and both perceived public stigma and personal stigma. Personal stigma is when a person with mental illness believes perceived stigmatizing attitudes about themselves. Although this study did not look at Chinese students specifically, Chinese students are the largest group of international students in the US, so are likely to be represented in this study. Interestingly, both being ethnically Asian and international were risk factors for higher personal stigma which was found to be significantly related to not seeking help (Eisenberg et al., 2009).

There are other cultural factors that have often historically been reported as influencing mental health experiences in China. Yip argues that Taoism still impacts mental health experiences of Chinese people and is linked to tendencies to keep emotions to oneself and to accept hardship (Yip, 2004). A qualitative study that looked at academic adaptation of East Asian international students in a US University found they depended mainly on themselves when faced with academic stress and so might support this argument (Li et al., 2018).

However, for Chinese students in higher education today there will also be new distinctive factors that go beyond more traditional cultural explanations that influence their mental health experiences, some of which is discussed here below.

Prior to arrival in the UK

A recent publication emphasised the importance of understanding Chinese students’ experiences prior to arriving in the country where they are studying (Chen et al., 2015). Though often overlooked this factor is particularly important since it may be that the majority of mental illness in university students manifests in the years prior to arriving at university. Findings from the WHO world mental health survey of college students in 21 countries showed that 83.1% of mental illness had onset before entering university (Auerbach et al., 2016).

China has undergone vast changes in the last few decades. The Chinese students who are preparing to study abroad today will have had very different life experiences from their parents. The numbers of Chinese people who go to university has increased in recent years, with increasing competition to get into universities. What characterises the secondary school years for many Chinese students is preparation for the notorious ‘gao kao’ entrance examinations for university (Kirkpatrick & Zang, 2011). For many Chinese students prior to studying abroad their life will have been characterised by studying, with every minute of their day carefully planned for them - in the case of an only child often by a team of six adults (two sets of grandparents and the parents).

It is important to note that Chinese students studying in the UK today, like home students, are diverse, both in their academic ability and financially (Bright Futures, 2018). There is often a misconception that Chinese students are extremely wealthy, but today there are more children of ordinary middle class families (often an only child) studying abroad for whom there can be tremendous pressure for the students not to fail given the financial sacrifices often made (Heng, 2018; Liu, 2018).
Although we know that experiences prior to going overseas for study will greatly influence the mental health of Chinese international students, overwhelmingly the literature on Chinese international students’ psychological health has focused on the acculturation they experience abroad.

**Acculturation and acculturation stress**

Acculturation stress was described by Berry, as ‘related to individuals’ cross cultural encounters that can produce physical, psychological and social problems’ (Berry et al., 1987). Many scholars have reported on various acculturation stressors associated with studying abroad. A frequently cited study from the US, by Yeh and Inose (2003), found that European international students experienced less acculturative stress than other international students, including students from Asia (Yeh & Inose, 2003). Similarly, others have also reported that East Asian international students experience high levels of acculturative stress (Li et al., 2014).

Language deficiencies, lack of social interactions, and perceived discrimination, are all factors commonly reported to contribute to acculturative stress experienced by Chinese and Asian sojourners (Bai, 2016; Cheng et al., 2019; Constantine et al., 2005; Spencer-Oatey & Xiong, 2006; Zheng, 2015). Furthermore, adjusting to a new climate, less daylight hours, and new classroom norms can all be daunting (Li et al., 2018; Minds, 2005).

Some of these challenges ease over time (Heng, 2018), or are also coupled with positive personal developments for the students (Gu, 2009; Lillyman & Bennett, 2014). However, the link between acculturation and health is important to understand, as acculturation challenges can threaten psychological well-being (Mori, 2000). A study by Swami et al. (2010) that looked at Malaysian international students in Britain, showed that students that reported better sociocultural adjustment also self-reported better health (Swami et al., 2010). Furthermore, Zhang & Godson (2011) found, from a web-based survey of 508 Chinese students in four universities in Texas, that reporting more social contact with the host country was a protective factor for depression. This study further concluded that those that both rejected their home culture and had little contact with US culture were most at risk of depression (Zhang & Goodson, 2011). Findings from another study from a large US university also found that more assimilation to the US was linked to better psychological wellbeing of Chinese student, though they did not find that strong links with Chinese cultural heritage influenced psychological wellbeing (Li et al., 2013).

**Aim of the literature review**

The aim of this review is to investigate the mental health experiences and needs of Chinese international students studying in higher education in the UK. ‘International Chinese student’ is defined for the purpose of this review as a mainland Chinese citizen who is undertaking an undergraduate, graduate, or post graduate degree in the UK. The international student is not an immigrant and does not have permanent residence in the UK. The paper will focus on students arriving from the People’s Republic of China (PRC) and will summarise recent literature from January 2009 to April 2019. The authors decided it was important not to focus on literature that dated back too far in order to take into account the vast changes that have taken place in the PRC in recent years.

**Methods**

For this narrative review, a literature search was conducted between November 2018 to May 2019. Databases searched included PsychInfo, Medline, Pubmed, Embase, Google Scholar, and the Chinese Web of Knowledge [CNKI]. Databases were searched using a combination of index terms, such as “Chinese International Students Mental Health” and key search terms and their synonyms. Key search terms included “mental health” (mental*, depression, psychological*, emotional experiences, anxiety disorder*, mood disorder*, suicide*, neurotic disorder*, phobia) and “International Students” (Overseas students, Sojourner*, Sojourning, Foreign Students, Study Abroad, Student Sojourner*) and “UK” (England, United Kingdom, Northern Ireland, Scotland, GB, Great Britain, Brit*, Wales). Articles were then screened for eligibility.

Inclusion criteria were articles published between 2009 to 2019, in either English or Chinese. The studies had to include Chinese students from the PRC. A secondary search was also conducted of reference lists of records retrieved from databases, PhD theses were also searched for and other ‘grey literature’ identified through interviews with reputable stakeholders (staff in student welfare offices) that worked closely with Chinese international students. The exclusion criteria included books, book chapters, non-primary data papers, or study protocols.

Figure 2 summarises how many sources were identified from each database and Table 1 summarises key sources that were identified and used for the narrative review. Since there was limited literature identified that directly looked at the research topic in the UK context, findings at times have been supported with reference to other international studies although the focus was on the key sources listed in Table 1.

**Results**

**Acculturation stress**

In the literature included in the review, over half of the papers examine acculturation stress in some form. Most commonly studies have reported themes of language, social interactions and academic adjustments as main stressors. Though as discussed by Cao et al. (2016) in a study of 463 Chinese students in six European countries, acculturative stressors were found to not exist independently but rather influence one another. With language difficulties and perceived cultural differences reported to influence all other stressors (Cao et al., 2016). Therefore, the themes below that have derived from key literature sources on acculturation are likely to interact with one another, in addition to different cultural elements that intervene through all the topics discussed below.
Figure 2. Records Obtained from literature search.

Table 1. Studies on Mental Health Experiences & Acculturation Stress of Chinese International Students in the UK.

<table>
<thead>
<tr>
<th>Author (Year)</th>
<th>Design</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheng et al., (2019)</td>
<td>Semi structured interviews</td>
<td>33 Chinese postgraduate students</td>
</tr>
<tr>
<td></td>
<td>Qualitative</td>
<td></td>
</tr>
<tr>
<td>Tian &amp; Lowe (2013)</td>
<td>Longitudinal over 12 months</td>
<td>12 Chinese students from PRC</td>
</tr>
<tr>
<td></td>
<td>– Qualitative</td>
<td></td>
</tr>
<tr>
<td>Wang (2012)</td>
<td>Three phase in depth interviews</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Qualitative</td>
<td></td>
</tr>
<tr>
<td>Quan et al. (2016)</td>
<td>Qualitative in depth interviews</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>post graduate Chinese students</td>
<td></td>
</tr>
<tr>
<td>Cao et al. (2016)</td>
<td>Web based survey</td>
<td>Sample of 463 Chinese students in six EU countries (UK, Germany, France, Netherlands, Spain and Belgium)</td>
</tr>
<tr>
<td>Yu &amp; Moskal (2019)</td>
<td>Mixed Method</td>
<td>501 students quantitative</td>
</tr>
<tr>
<td></td>
<td>15 students Qualitative</td>
<td></td>
</tr>
<tr>
<td>Liu &amp; Winder (2014)</td>
<td>Qualitative</td>
<td>In study total 5 participants (2 of which were from China)</td>
</tr>
<tr>
<td>Zhou &amp; Todman (2009)</td>
<td>Three stage Questionnaire</td>
<td>257 Chinese postgraduate students</td>
</tr>
<tr>
<td>Chang et al., 2015</td>
<td>Cohort Study</td>
<td>Total sample 23,294</td>
</tr>
<tr>
<td></td>
<td>Chinese ethnicity 97</td>
<td></td>
</tr>
<tr>
<td>Zheng, 2017a</td>
<td>Ethnographic Study</td>
<td>13</td>
</tr>
<tr>
<td>Tang et al., 2012</td>
<td>Questionnaire</td>
<td>323 undergraduate students</td>
</tr>
<tr>
<td>Ngai et al., 2014</td>
<td>Questionnaires</td>
<td>UK students (106)</td>
</tr>
<tr>
<td></td>
<td>Chinese students (111)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chinese students studying in the UK (101)</td>
<td></td>
</tr>
<tr>
<td>Bishop et al., 2009</td>
<td>Questionnaire</td>
<td>170 Ethnically Chinese students</td>
</tr>
<tr>
<td>Bright Futures (2018)</td>
<td>Report</td>
<td>Total 3,195</td>
</tr>
<tr>
<td></td>
<td>Survey</td>
<td>CH: 1,317</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jap: 290</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Home: 1,588</td>
</tr>
</tbody>
</table>
Language confidence

Findings from this literature review consistently show that language poses challenges for Chinese students, as well as being linked to other acculturation stressors as mentioned above. In a qualitative study that explored international students’ experience of university, two students from mainland China both discussed language frustrations at different points. For example, one participant in the study described arriving at the airport and how disheartening it was not to understand the passport controller (Liu & Winder, 2014). Similarly, Wang (2017) reported findings from qualitative interviews with Chinese international students in the UK that lack of English confidence could be problematic. For example, one student reports attending a Christmas party, but being unable to participate in jokes or conversations which left him feeling unhappy (Wang, 2017).

In an ethnographic study of thirteen Chinese masters students in the UK, Zheng (2017a) also finds that students struggle with language, such as not catching the meaning when seeking help from foreigners, implying both challenges with grasping the language but it might also be that unfamiliarity with cultural references lead to students finding it difficult to follow (Zheng, 2015). A study that looked at adaptation of Chinese postgraduate students in the UK through a three stage questionnaire (pre-departure, shortly after arrival, and six months after arrival), found that the students anticipated less English challenges pre-departure than what they then experienced. In contrast, they expected more academic difficulties than reported once they arrived (Wang, 2012).

Social interaction

Chinese students want to socialize with locals but can feel disappointed when that does not happen. For example, in a qualitative study by Liu & Winder (2014), a Chinese student reflected that, despite efforts to make local friends, it was not easy and left him feeling upset (Liu & Winder, 2014). In another qualitative study, a student remarks that the majority of his classmates were from China, almost 95%, leaving few opportunities to meet foreigners (Cheng et al., 2019). In a study by Bright Futures (2018) it was found that 54% of the 1,317 Chinese students surveyed reported mainly or only socializing with other Chinese students in the UK (Bright Futures, 2018). Several studies reported attempts by students to interact more broadly beyond the Chinese students, but not succeeding and perhaps giving up (Cheng et al., 2019). However, not all gave up. It appears that growing numbers of Chinese students in the UK turn to churches to get an opportunity to integrate with locals. In a sample of 501 Chinese students, 35.5% had been to a Christian church in the last six months. The main motivation reported for going to church was making friends, followed by increasing cultural knowledge and opportunities to practice English (Yu & Moskal, 2019).

In ethnographic interviews conducted by Zheng (2017a) Christianity and religion also came up, though in this case religion was the factor that the student found brought about an intimate friendship between her and a British student (Zheng, 2017b). Although, as noted above, Chinese students can experience difficulties in social integration, they have been reported to have strong relationships with each other. These relationships are very important and, as Cao et al. (2016) reported, can provide important emotional support (Cao et al., 2016). Zheng’s (2017a) findings also echo this, and that Chinese international students often have to prioritise friendships with other Chinese students because the emotional support they can obtain from those relations are crucial to their overall well-being (Zheng, 2017b).

Educational adjustment

The literature shows that adapting to studying in the UK can be stressful for Chinese international students. They often

<table>
<thead>
<tr>
<th>Author (Year)</th>
<th>Design</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zheng (2017a)</td>
<td>Doctoral Thesis Focus Group Randomised Control Trial</td>
<td>14 Chinese speaking international students (focus group) 45 took part in randomised control trial</td>
</tr>
<tr>
<td>Tan (2009)</td>
<td>Project Report</td>
<td>40 clients assessed project (including 3 students)</td>
</tr>
<tr>
<td>Nottingham University (2011)</td>
<td>Report Mixed Methods</td>
<td>Data from University of Nottingham Student Services. 5 Case Studies. 36 stakeholders questionnaires or interviews</td>
</tr>
</tbody>
</table>
have to adjust to new ways of working such as increased group work (Wang, 2012). Cultural interacting with lectures has been found to be difficult to adjust to (Cheng et al., 2019), and receiving written feedback from assignments can be unfamiliar and a source of stress, as opposed to constructive at the beginning (Tian & Lowe, 2013). Furthermore, academic stress may lead to students having to re-think their broader goals associated with studying abroad, such as giving up on engaging more with local culture (Zheng, 2017a). Academic stress can be felt strongly, and go beyond critical self-reflection, or even pressure to meet family’s expectations, but students even reported feeling pressure to represent well their country, and not wanting to ‘lose face’ in that undertaking (Zheng, 2017a).

Active coping strategies with stressors
Many studies demonstrated how Chinese students faced challenges when they come to the UK to study, but they also all demonstrated at some level how Chinese students actively coped with these stressors (Cao et al., 2016; Cheng et al., 2019; Liu & Winder, 2014; Quan et al., 2016; Tian & Lowe, 2013; Wang, 2012; Yu & Moskal, 2019; Zhou & Todman, 2009). For example, Cheng et al. (2019) reported many strategies that Chinese students used to regulate their emotions. Here findings went against the view that Chinese students are passive and just suppressed emotions, but rather showed resourcefulness in the way they coped with challenges. For example, it could be that a Chinese student chose to be silent when another student made an ignorant comment about China, nevertheless it was an active choice and should not be interpreted as passive.

Furthermore, as reported above, Chinese students often have to adjust to new ways of working such as increased group work (Wang, 2012). However, importantly, findings from these studies showed how Chinese students adapted over time (Wang, 2012). Perhaps an interesting example of actively coping is the high number of Chinese who engage with Churches, also discussed above. Considering that China is not culturally Christian, this can be rather surprising, however the students’ choices for taking part in church activities had very practical origins. The church was reported to be meeting needs that the student had, but the university was failing to provide. (Yu & Moskal, 2019)

Perceptions of mental health symptoms, causes & prevention
Historically mental health has often been perceived differently by Chinese people, with unique cultural elements that may influence their mental health understanding. Key literature which had been identified (see Table 1) was looked at to see if this was also the case with the Chinese international student population in the UK.

A study conducted by Ngai et al., (2014) looked at three groups of students, Chinese international students in the UK, Chinese students in China, and British students in the UK and analysed their attitudes towards common mental disorders. Findings were that all three groups favoured the more westernised model of understanding symptoms of mental health, e.g., aligned with the Diagnostic and Statistical Manual of Mental Disorders (DSM). However, both Chinese groups did also have specific cultural mental health references that differed significantly from the UK group. For example 9.4% British against 31.7% Chinese International Students and 45% Chinese students in China described symptoms of depression as blockage of blood vessels in neck and limbs (Ngai et al., 2014). Furthermore, in qualitative interviews by Wang (2017), Chinese international students did refer to distinctive ways of understanding psychological distress, for example referring to losing hair as symptoms of psychological distress (Wang, 2017).

In one qualitative study from the UK (not students) where Chinese carers were interviewed, findings were similar to that of Ngai et al., (2014), or that interviewees largely described symptoms of depression consistent with western (DSM) models. However, the causes of depression were understood to be more aligned with Chinese perceptions around social isolation (Koo, 2012). Other literature also suggested that cultural elements can be important when understanding causes of mental illnesses and prevention. For example, Wang (2017) discusses findings from qualitative interviews with students explaining the significance of maintaining a balanced diet and eating food that correctly matches the season, as a way to maintaining overall health including psychological health (Wang, 2017).

Prevalence of mental health problems among international Chinese students in the UK
There are limited data from the UK on the mental health distress of international Chinese students and it is not consistent. A recent study by Bright Futures, used the Kessler (K6) scale and found 16% of Chinese studying in the UK to be showing signs of severe distress, a similar level to UK students (Bright Futures, 2018). The same study also measured mental distress of Chinese students in China which was found to be six percentage points lower. A study conducted by Nottingham University (unpublished) used the Short Depression Happiness Scale, where Chinese students scored lower than White British students (from PRC 17.73 vs. 19.27) (Nottingham, 2011). However, with limited, inconsistent data it is difficult to draw conclusions from these two studies, and hard to determine whether Chinese international students are more vulnerable to mental illness compared to British home students.

However, it is noticeable that there have been several studies in the USA and Australia that have found Chinese students to have an alarmingly high rate of mental health distress. For example, a widely cited study conducted in Yale University which found that through a survey of 130 Chinese international undergraduate and graduate students at Yale, 45% had symptoms of depression (score >5 on 9 item patient Health Questionnaire) and 29% had symptoms of anxiety (score > 5 7 item Generalized Anxiety Disorder Instrument) (Han et al., 2013). Although a different scale was used, authors noted that the Yale study could be compared to a study that was conducted in Harbin, a province of China, where the Black Depression Inventory (BDI) was used to predict depressive
symptoms, and found 11.7% of students in China to have depression, being much lower than findings from the Yale study (Chen et al., 2013).

Despite media reporting concerns regarding recent suicides of Chinese international students (Chen, 2018), there is no empirical data on the student population from either the UK or internationally. However, a cohort study conducted in Manchester looked at suicide attempts made by people of Chinese origin compared to the white population. This study looked at ethnically Chinese people but the sample did include a large Chinese student population, making it relevant for the purpose of this review. People of Chinese origin had less than one fifth the incidence of self-harm compared to white people (Chang et al., 2015). Being a student was an increased risk factor of self-harm among the Chinese group (Chang et al., 2015). The authors speculated whether this observed difference was a true difference or whether post episode reactions might differ, and there could be reluctance to present at hospital.

Help seeking
Chinese international students in the UK do seem to be less likely to seek mental health support from formal services and will rely mainly on co-international Chinese students if they need support. Though contrary to predictions, one study of 323 UK University students found no difference between Chinese and British home students’ attitudes towards seeking psychological help, stigma tolerance, or confidence in mental health professionals (Tang et al., 2012). A study conducted in Australia had similar findings in relation to intentional help seeking behaviour, though the same was not true in relation to stigma tolerance (Han et al., 2018).

However, it appears that when it comes to actually seeking help as opposed to attitudes as described above, Chinese students are reluctant to seek help. Authors of the Evaluation of the Chinese Mental Health Advocacy and Support Project reported that Chinese students were disproportionately underrepresented in student mental health services (Tan, 2009). A study from Nottingham university also found that Chinese students were less likely to use counselling service for one to one support (4.2% of home students vs. 1.9% of Chinese Students). This was echoed by key stakeholders who said that Chinese students tended to delay help seeking until in crisis. Only 52% of Chinese students were registered with a GP, and only 10% had consulted a GP in the last 12 months compared to 96% and 70% retrospectively for white British students (Nottingham, 2011). As part of a doctoral study, Wang conducted qualitative interviews with twenty Chinese international students on their health and wellbeing. For medical emergencies many reported going directly to A & E, but if minor problems arose they would rely on medicine they had brought with them from China, or consulted parents and friends (Wang, 2017).

Chinese international students in the UK do seem to rely mainly on co-international Chinese students if they need support, more than their family. Findings from Nottingham University study found that Chinese international students rely mainly on support from other Chinese international students (Nottingham, 2011). These results are consistent with findings from a study conducted in Australia, where of those students who had sought any form of psychological help in the past years, 86% reported Australia, where of those students who had sought any form of psychological help in the past years, 86% reported any form of psychological help in the past years, 86% reported Australia, where of those students who had sought any form of psychological help in the past years, 86% reported Australia, where of those students who had sought any form of psychological help in the past years, 86% reported Australia, where of those students who had sought any form of psychological help in the past years, 86%. However, findings from qualitative interviews, Wang (2017) reported on several students that reported seeking TCM while studying in the UK when they felt let down by their GP, though no examples mentioned were directly related to mental health (Wang, 2017).

Barriers to help seeking
Findings from the literature show that there are different barriers to accessing mental health care for Chinese international students while in the UK. These can be divided into structural barriers, such as language and knowledge, and cultural barriers, including stigma.

Structural barriers
English level and confidence has been found to be a predictor of using western health services for international Chinese students in the UK (Bishop et al., 2009). Dongshuo Wang’s findings from qualitative work as part of her PhD, were that Chinese international students were often frustrated when vising the GP because they could not describe to them adequately what was troubling them. These findings are consistent with research that has looked at the general Chinese community and identified that those that spoke less English were less likely to consult health services, including the GP (Sproston et al., 2001; Yeung et al., 2012). Another structural barrier can be general knowledge of mental illness. During focus group discussions conducted by Zheng Mengyi as part of her doctoral thesis she reported that Chinese international students seemed to have limited knowledge of mental illness (Zheng, 2017a). Chinese international students are also navigating a new health system, in which the role of the GP can seem unclear. As was noted above, findings from the Nottingham study showed very low rates of GP registration 52%, with only 10% having consulted a GP in the last 12 months (Nottingham, 2011).

Cultural barriers
As might be predicted, cultural barriers are complex and deserve careful consideration without simplification. Zheng’s
findings from focus group meetings indicated that few Chinese international students when experiencing mental health problems would seek help from others and rather kept difficulties or emotional problems to themselves (Zheng, 2015). Likewise, findings from a large UK university were that Chinese international students had significantly lower scores on interpersonal openness than when compared to British home students when looking at attitudes towards help seeking (Tang et al., 2012). This way of coping has been described by some scholars as being influenced by Taoism, where self-endurance and acceptance are highly valued and could influence mental health help seeking (Yip, 2004).

Findings from our key literature sources are not consistent regarding mental health stigma and international Chinese students in the UK. For example, in a study that compared UK home students (106), Chinese international students (101), and Chinese University students (111), using the Opinion About Mental Illness in Chinese Community Scale (OMICC), both Chinese groups showed more stigmatizing attitudes towards mental health problems, including more stereotyping (Ngai et al., 2014). By contrast, a study by Tang et al., (2012) that compared 237 British home students to 86 Chinese (PRC) international undergraduate students using the Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS; Fischer & Turner, 1970), found no difference between stigma held by the two groups (Tang et al., 2012).

In a study by Nottingham University (2011), stigma was reported as a barrier to seeking mental health care for Chinese international students. For example, one student reported being worried about being labelled when seeing a counsellor (Nottingham, 2011). However stigma is an important barrier for all students when seeking mental health support and it might be difficult to conclude from the literature available whether stigma is particularly severe among Chinese international students.

Limitations
There are only a few peer reviewed publications on the subject of mental health of Chinese international students in the UK context. And some key sources used in this review, such as the report from Nottingham University are unpublished. This is one major limitation of the study. Studies were included in the review only if they included students from the PRC. However, a few studies included students from the PRC as part of a broader group, either other international students, other ethnically Chinese students, or as part of a broader Chinese community group. Another limitation is that only one Chinese database was searched, the Chinese Web of Knowledge (CKKI), and in the end the articles that were identified from CNKI did not meet inclusion criteria because they were either not focused on the UK or were literature reviews - the main author is not a native Chinese speaker/reader and could have missed search terms that would have generated more results.

Conclusion
There is limited research on the mental health of international Chinese students in the UK, despite this being the largest group of international students and likely to continue to grow (Skidmore, 2019). This is concerning because some literature from the US and Australia indicate that this group of students could be particularly vulnerable to mental distress and are less likely to seek help when experiencing mental ill health (Han et al., 2013; Lu et al., 2014). The purpose of this article is to synthesise recent literature, including grey literature, on this subject from the UK, in order to review what we understand at the present time. As well as to facilitate further dialogue around this important topic that needs further investigation.

Literature on acculturation stress experienced by Chinese international students in the UK shows that language challenges and social interaction are common sources of stress (Cheng et al., 2019). There are often not enough opportunities for students to mix with locals, either because the majority of the students are Chinese on their course, or because they do not engage in the same social activities as home students. Furthermore, the literature stresses the importance of preparation of Chinese students before they arrive, as many students report being surprised and not having expected some of the challenges they face (Wang, 2012). However, findings from the literature also present a positive picture, in that Chinese students use many ways to actively cope with stress associated with acculturation (Cheng et al., 2019; Zheng, 2017b). They will often find solutions, whether it is to rely more on co-nationals for emotional support, or to use outlets such as the church, to satisfy longings to have more social and cultural interactions with the UK (Yu & Moskal, 2019).

Chinese students’ perception of mental health symptoms might be more similar than often assumed to that of British home students. For example, Ngai et al., (2014) reported from their study that surveyed both Chinese students in the UK, in China, and British home students, that both Chinese groups did favour more westernized models of common mental disorders (Ngai et al., 2014). Similarly, Koo (2012) found from qualitative interviews with Chinese carers in the UK (not students), that they described symptoms of depression more consistent with western models (Koo, 2012). However, there were still distinctive cultural factors that characterised their understanding of the symptoms of mental health. For example, both studies mentioned reporting more physical symptoms, or somatization, but this was not what dominated their understanding around the symptoms, and as the case with Koo’s (2012) findings, carers often after describing more physical symptoms pulled the symptoms back to the western model. These findings warn against, when working with Chinese students, putting too much focus on how mental health symptoms were perceived in the past in China, and failing to recognize that western mental health models have significantly influenced young Chinese people.

Although emphasised above that western ideas around mental health are often favoured by Chinese international students,
it does not mean that traditional Chinese beliefs do not have a strong influence on students. From the literature, there might be stronger support that traditional medicine plays a bigger role in their understanding of prevention of mental illness. As was evidenced by the work of Wang’s doctoral thesis, traditional attitudes around food and climate featured strongly in students descriptions regarding maintaining mental health and overall health (Wang, 2017). Further, the study by Koo (2012) found causes of mental health to be more aligned with perceptions around social isolation that can be interpreted as associated with Chinese cultural beliefs around a collective society, and that social interaction with others plays a crucial role in maintaining psychological health (Koo, 2012). This finding might have particular significance for Chinese sojourners because they might perceive themselves as being more socially isolated than before.

Evidence on experiences with mental health among international Chinese students in the UK is limited and not uniform. A recent study indicates that although Chinese international students in the UK had higher rates of mental distress than their counterparts in China, it was similar to the rate of home British students (Bright Futures, 2018; Clarke, 2018). By contrast, an unpublished study conducted by Nottingham University did find Chinese students to score lower than white British students on the Short Depression Happiness Scale, but it is not clear whether the difference was significant or not. Furthermore, though there have been studies from the US and Australia which show Chinese students to have a heightened risk of mental illness, these findings are not consistent either (Wang et al., 2012).

However, as indicated above, though we are unsure about prevalence of mental health problems among Chinese international students in the UK and internationally, they do appear to be less likely to seek out formal mental health support compared to home students (Nottingham, 2011). This is of great concern, and is also consistent with findings from the US and Australia, as well as echoing findings from the general Chinese community in the UK (Cowan, 2001). It would be wrong to conclude that these findings are because they are seeking help from traditional Chinese medicine practitioners. A study that looked at the use of TCM by Chinese international students in the UK found that they favoured formal health services over TCM (Bishop et al., 2009). The same has been found by studies looking at the general Chinese community (Koo, 2012). Rather than seeking care from medical services, whether students services, NHS or TCM, Chinese students are most likely to turn to informal support from other Chinese international student friends (Zheng, 2015). That they favour support from friends over family has also been reported by studies internationally. It is important to note that students in China also have low rates of seeking formal mental health support, despite increase of provision in services in recent years. This is perhaps important to consider as we discuss barriers to care below, some of these barriers will not only pertain to being sojourners.

From reviewing the literature, we can start to make important conclusions regarding the type of barriers to care that Chinese international students experience. These barriers to seeking formal help can be divided into structural and cultural factors. It seems clear that there are important structural barriers, perhaps the most obvious one being language difficulties. Findings from the literature show that perceived language challenges can affect mental health in different ways. For one, it might increase overall stress and therefore make a student more psychologically vulnerable. Likewise, lack of confidence in English can limit a Chinese student’s social interactions, and that may affect overall mental wellbeing and is perhaps particularly important given the Chinese collective perspective. And considering language as a barrier to care, perceived English difficulties seems very clearly an important barrier to seeking mental health care in the UK both from student services or medical services. Other important structural barriers include lack of knowledge of the health system in the UK and lacking general mental health knowledge.

Although the picture drawn from the literature around cultural barriers can be complex, important conclusions can be drawn that enhance once ability to understand Chinese international students. Common themes found in the literature were that students preferred to keep emotional problems to themselves (Zheng, 2017b). Findings were not consistent regarding whether stigma might be felt particularly severely among Chinese students and needs further exploration.

In summary, findings from this review reveal that Chinese international students in the UK are diverse and we still do not understand enough about their mental health experiences. It has been emphasised that China has undergone vast changes in recent years, and therefore one needs to be careful about how some cultural factors are reported, or even basing evidence on studies that date back too far because this might not accurately capture Chinese youth today. Therefore, in order to understand the mental health experiences of Chinese international students one might have to go beyond the traditional descriptions around somatization, Confucian values or collective culture, and acknowledge that there will be new elements added to the experiences of this student group, including increasing western influences, new societal pressures as a result of changes in family structure, and perhaps increased family expectation to succeed (Heng, 2018). Basically, as one might expect, it is a rather mixed picture with many competing influences in the lives of Chinese sojourners which all might affect their mental health experiences. However, it is concerning that Chinese international students seem reluctant to seek mental health care, and here below are some important recommendations for both actions and future research.

**Recommendations**

The authors recommend that university staff, both welfare staff and academic staff, receive training to be better equipped to
understand Chinese international students. The relationship with academic staff and mentors can be of great importance and can facilitate accessing mental health support if there is sufficient trust established. The authors further recommend translation into Chinese of important informative materials whenever possible. They further recommend more opportunities for Chinese students to gain confidence with their English and to have opportunities to socially interact with non-Chinese students. Although it is understood that many universities are already engaging in some of these activities.

It is also recommended that students are made better aware of university support services and health services in the UK, including emphasis that these are anonymous and will not affect their studies. In addition, discrimination came up several times in different studies, so it is recommended that Chinese students are made aware of actions they can take if they feel discriminated against. Finally, it is important that Chinese students are better prepared prior to arriving in the UK. It is common for families in China to use agencies to help with higher education applications when looking at studying abroad but there can be lost opportunities for the students and their families to familiarize themselves with the host country when using agencies since they can be quite removed from the process (Quan et al., 2016).

Implications for further research

More research is needed into the mental health prevalence of Chinese international students, including suicide behaviour. There is an obligation to understand more about the psychological health of Chinese international students particularly as it is planned to increase further the number of such students coming to study in the UK.

Findings were not conclusive regarding mental health stigma and international Chinese students. A qualitative study looking at mental health stigma among Chinese international students would be useful to gain further insight.

The literature around mental health of Chinese international students globally does appear to show that Chinese students studying abroad have a heightened mental health prevalence compared to their peers in China. It would be beneficial for there to be more collaboration on research with Chinese universities to understand why there might be differences between students in China and those studying abroad.

Data availability

Underlying data
No data are associated with this article.

Reporting guidelines

Figshare: PRISMA checklist and flow diagram for ‘Mental health of Chinese international students: narrative review of experiences in the UK’.

https://doi.org/10.6084/m9.figshare.20234064.v1 (Magnusdottir & Thornicroft, 2022)

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Acknowledgements

GT is supported by the National Institute for Health and Care Research (NIHR) Applied Research Collaboration South London (NIHR ARC South London) at King’s College Hospital NHS Foundation Trust. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care. GT is also supported by the UK Medical Research Council (UKRI) for the Indigo Partnership (MR/R023697/1) awards. For the purpose of open access, the author has applied a Creative Commons Attribution (CC BY) licence (where permitted by UKRI, ‘Open Government Licence’ or ‘Creative Commons Attribution-No-derivatives (CC BY-ND) licence’ may be stated instead) to any Author Accepted Manuscript version arising.

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Data availability

Underlying data
No data are associated with this article.

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Current Peer Review Status: ? ?

Version 1

Reviewer Report 21 October 2022

https://doi.org/10.3310/nihopenres.14387.r28825

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Melvyn Freeman
University of Stellenbosch, Stellenbosch, South Africa

This review analyses the mental health of Chinese international students in the UK. This is important as Chinese students form the highest number of international students studying in the UK and, for various reasons discussed in the article such as language differences, isolation and acculturation issues, may struggle to cope psychologically. Understanding of the prevalence of mental health conditions relative to the UK student population, reasons why they may be struggling emotionally and help seeking behaviours are important partly from a theoretical perspective but perhaps more importantly so that the "correct" assistance can be put in place if required.

But, while not questioning the importance of conducting a review of Chinese students, I kept wondering in reading the article how much of what is said also applies to other international students - some of whom may have similar language differences, challenges with adapting to the dominant culture, they may fear seeking help for various complex reasons - and therefore experience many of the same adaption issues as the Chinese students. What I would have found particularly interesting would have been to find out what Chinese students share in common with other international students and what specific differences there might be (if any). This would provide pointers as to what may need to be done to assist international students as a whole and then what Chinese students in particular might need. For example the way Taoist philosophies may impact on students is touched upon or coming from a less individualistic culture, but without knowing the differences between how Chinese and other international students react/cope with being a student in a foreign country, its very difficult to assess such impact.

I can understand that there needed to be a cut off for reviewing the literature, but for an article published in 2022 not to have any cited literature beyond 2019, even in the sections prior to the analysis of the literature that was analysed, makes this feel somewhat dated. For example the article refers to the WHO World College Survey but there has been an updated survey in 2022. (Even though this did not include China it is still relevant). There also seems to be some outdated language used such as mental illness. This can be stigmatizing and the use of "mental Health condition" or even (at worst) "mental disorder" would make this article feel more up to date with
current thinking and terminology.

I do understand that going back and reviewing mental health in all international students studying in the UK and then the specifics for Chinese students would be beyond a mere revision of this paper, but I would like to see some recognition of the challenges faced by any young person leaving their home and studying in what is to them a "strange and foreign" country. And then to look at why things may be different for Chinese students in particular given their specific background and culture.

Personally I would not like to see different programmes developed for every cultural or ethnic group that comes to study in the UK. This may further divide already divided people. What I would like to see though is mental health programmes and support for students, and then to identify specific stress related areas that may need to be addressed to assist specific groups or individuals. This would include of course specific programmes/support for people studying in the UK that come from the PRC. I would be quite happy to have the authors disagree with this, but I do think this issue should be addressed so that we recognize and value difference, but we are not part of emphasizing difference - and planning services based on difference rather than commonality when there is probably more in common than is different.

Are the rationale for, and objectives of, the Systematic Review clearly stated?
Partly

Are sufficient details of the methods and analysis provided to allow replication by others?
Yes

Is the statistical analysis and its interpretation appropriate?
Not applicable

Are the conclusions drawn adequately supported by the results presented in the review?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Public mental health

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 13 October 2022

https://doi.org/10.3310/nihopenres.14387.r28829

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This review investigated Chinese international students' mental health. The findings of this study are important since different cultures may affect international students' mental health. I found some revision points and listed them below.

1. In the Background section, the rationale for this study was unclear. I suggest that the authors clearly state what evidence is missing before the aim of this review. Clarifying the rationale will help readers understand the novelty of this review.

2. In the Methods section, I would recommend that the authors describe the detailed process of database searching, screening, and data extraction. If only one author worked on each step of the review process, I also suggest that the authors mention such methodological weaknesses in the limitations section. The PRISMA 2020 guidelines\(^1\) may also help the authors to identify the necessary information in the methodology section.

3. There is no information on the evidence synthesis methods in the Methods section. The authors can describe how they synthesised the evidence from each study.

4. The authors describe the characteristics of each study in the Methods section, but such information is usually presented in the Results section.

5. Fig. 2 can be revised based on The PRISMA 2020 statement.

6. In Table 1, I would suggest that the authors make columns such as author (year), design, the characteristics of the participants (e.g. postgraduate students or undergraduate), sample size, primary outcome measure and so on.

7. I would suggest that the authors create a Discussion section and present the summary of the findings in the first paragraph of this section. Then, the authors explain their thoughts and insights based on the results of this review.

References

Are the rationale for, and objectives of, the Systematic Review clearly stated?
No

Are sufficient details of the methods and analysis provided to allow replication by others?
No

Is the statistical analysis and its interpretation appropriate?
Not applicable

Are the conclusions drawn adequately supported by the results presented in the review?
Partly

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Stigma, employment services, and community mental health services

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.