Mental health-related stigmas and help-seeking intentions among international and domestic Australian university students

Beibei Wang

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DECLARATION

This is to certify that to the best of my knowledge, the content of this thesis is my own work. This thesis has not been submitted for any degree or other purposes.

I certify that the intellectual content of this thesis is the product of my own work and that all the assistance received in preparing this thesis and sources have been acknowledged.

Signature:

Name: Beibei Wang

AUTHORSHIP ATTRIBUTION STATEMENT

Chapter 2 of this thesis is submitted as:

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The MPhil candidate is the principal author of this manuscript and codesigned, collected and analysed the data and wrote the draft manuscript for this study.

Beibei Wang

MPhil candidate

Date: 28/06/24

As supervisor for the candidature upon which this thesis is based, I can confirm that the authorship attribution statements above are correct.

Professor Nick Glozier

Primary supervisor

Date: 28/06/24

ABSTRACT

The objective of this thesis was to investigate the (1) differences in stigma and mental health help-seeking intentions, and (2) determinants of help-seeking among domestic and international students in Australian universities. The rationale for this thesis was that the prevalence and severity of mental ill-health in university students in Australia and internationally is a growing concern, but many university students underutilised mental health services. This research consisted of two quantitative studies which collected data on mental health-related stigma and help-seeking among domestic and international students, and students from a Chinese background in Australian universities, respectively.

More specifically, the first study comprehensively compared the mental health-related stigmas, beliefs, help-seeking intentions and behaviours between domestic and international students. A total of 119 international and 223 domestic Australian university students attending a preventative mental health program at the University of Sydney completed an online survey. The results showed that both domestic and international students had high intentions to seek help from informal sources rather than formal or online supports. International students were less likely to have sought parental help and had higher intentions to seek help from university counsellors than domestic students. They also felt that mental illness attracted greater personal stigma and were less likely to rely on informal social supports. These findings suggested the need to offer targeted training for university staff and counsellors to address the stigma surrounding mental ill-health among international students.

The second study specifically targeted university students from a Chinese background ($N_{domestic}$ =95, $N_{international}$ =215) – the aim was to identify the determinants of help-seeking intentions in the context of cultural factors, particularly for online and face-to-face forms of support. The analysis revealed that, while the majority of participants had experienced mental health problems and had sought help in the past, being an international student was associated with higher intentions to seek help from both face-to-face and online supports. Prior help-seeking experience and mental health knowledge were facilitators to seeking face-to-face help. While English language proficiency, having spent less time in Australia, and mental illness personal

stigma were barriers to seeking online help for Chinese-background students. Approaches designed to improve help seeking amongst students from a Chinese background should focus on less acculturated international students and addressing the broader aspects of language, personal stigma and knowledge.

Taken together, this thesis revealed the unique patterns and challenges in seeking help for mental ill-health among international and domestic students, especially those with a Chinese background. The findings also highlighted the complex relationships that exist between acculturation, stigma, mental health knowledge, and the intention to seek online and face-to-face help. To better support these student groups, universities need to provide targeted training and support programs for international students that impart knowledge about mental health and are designed to address mental illness personal stigma.

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TABLE OF CONTENTS

DECLARATION…. 2

AUTHORSHIP ATTRIBUTION STATEMENT 3

ABSTRACT…… 4

ACKNOWLEDGEMENTS..... 6

TABLE OF CONTENTS 7

LIST OF ABBREVIATIONS 10

OVERVIEW OF THE THESIS 11

CHAPTER 1 INTRODUCTION..... 13

1.1 Mental ill-health among university students 13

1.1.1 Definitions 13

1.1.2 Mental ill-health – Age of onset and impact 14

1.1.3 The prevalence of mental ill-health among university students 15

1.2 Underuse of mental health services among university students 19

1.2.1 Help-seeking among university students 20

1.2.2 Help-seeking among international students 21

1.2.3 Help-seeking among Chinese-background students 21

1.2.4 Barriers to seeking professional help 23

1.3 The role of stigma 24

1.3.1 Stigmas toward mental ill-health 26

1.3.2 Stigmas toward help-seeking 27

1.4 Stigmas and help-seeking outcomes 29

1.4.1 Summary 42

1.5 Factors affecting stigma and help-seeking among Chinese-background students 42

1.5.1 Asian cultural beliefs 42

1.5.2 Acculturation 44

1.5.3 Mental health literacy 45

1.6 Digital mental health interventions and stigma 46

1.7 Aims and objectives 47

CHAPTER 2 STUDY 1 – A COMPARISON OF STIGMAS TOWARD MENTAL ILL-HEALTH AND HELP-SEEKING IN UNIVERSITY STUDENTS 49

2.1 Abstract 50

2.2 Introduction 51

2.3 Methods 53
2.3.1 Design 53
2.3.2 Study context and participants 54
2.3.3 Procedure 54
2.3.4 Measures 55
2.3.5 Data Analysis 56
2.4 Results 57
2.4.1 Differences in past help-seeking behaviour 59
2.4.2 Differences in help-seeking intentions 61
2.4.3 Differences in stigmas and beliefs 63
2.5 Discussion 65
2.5.1 Differences in help-seeking behaviours 65
2.5.2 Differences in help-seeking intentions 67
2.5.3 Differences in stigma towards mental ill-health 68
2.6 Limitations 69
2.7 Conclusion 69
2.7.1 Appendix A.1 71
CHAPTER 3 STUDY 2 – HELP-SEEKING INTENTIONS IN CHINESE -BACKGROUND STUDENTS 72
3.1 Abstract 73
3.2 Introduction 74
3.3 Methods 77
3.3.1 Design 77
3.3.2 Participants and procedure 78
3.3.3 Measures 78
3.3.4 Translation 80
3.3.5 Data analysis 81
3.4 Results 82
3.4.1 Sample characteristics 82
3.4.2 Help-seeking intentions 84
3.4.3 Associations with help-seeking – face-to-face help 88
3.4.4 Associations with help-seeking – online help 90
3.5 Discussion 93
3.6 Limitations 95
3.7 Conclusions 96

CHAPTER 4 DISCUSSION 97
4.1 Review of overall objectives 97
4.2 Discussion of the main findings 97
4.2.1 Summary of major findings 97
4.2.2 Help-seeking among students 98
4.2.3 The role of stigmas 100
4.2.4 Other facilitators and barriers to help-seeking 102
4.3 Study limitations 103
4.3.1 Selection bias and generalisability 103
4.3.2 Cross-sectional research design 104
4.3.3 Measurement issues 105
4.4 Study strengths 106
4.5 Future research 106
REFERENCES..... 108
Appendix A..... 129
Appendix B..... 131
Appendix C..... 132

LIST OF ABBREVIATIONS

ANOVA	Analyses of variance
CI	Confidence interval
GP	General practitioner
M	Mean
MHFA	Mental health first aid
MAKS	Mental health knowledge scale
OR	Odds ratio
SD	Standard deviation
SDS	Social distance scale (measures the personal stigma toward mental illness)
SSOMI	Self-stigma of mental illness scale (measures the self-stigma toward mental illness)
SSOSH	Self-stigma of seeking help scale (measures self-stigma toward seeking help)
SSRPH	Social stigma of receiving psychological help scale (measures personal stigma toward seeking help)
WHO	World Health Organization
WMH-ICS	World Mental Health International College Student

OVERVIEW OF THE THESIS

This thesis focuses on the mental health and help-seeking intentions of domestic and international students in Australia, including an introduction and review of the literature (Chapter 1) and two quantitative research manuscripts (Chapters 2 and 3 submitted for publication), followed by an overall discussion of the research findings and implications (Chapter 4).

The first chapter reviews key research in the field of mental health along with help-seeking among university students. Section 1.1 focuses on the prevalence of mental ill-health among university students, especially international students and those from a Chinese background. Section 1.2 highlights their underuse of professional help and the barriers to help-seeking among those groups. Sections 1.3 and 1.4 provide an overview of the multifaceted nature of stigma and its relationships to help-seeking outcomes. Section 1.5 explores other determinants that influence stigma and help-seeking among Chinese-background students, such as cultural beliefs, acculturation processes, and mental health literacy. Section 1.6 explores the potential of digital mental health interventions to overcome stigma and promote help-seeking.

Chapter 2 consists of a paper titled "Mental health-related beliefs, stigma and help-seeking: findings from a web-based survey of domestic and international university students in Australia" that has been submitted for publication in the *Journal of Mental Health.* The paper reported the findings of an online survey among students at the University of Sydney who attended a mental health prevention program (the batyr@uni program) between January and June 2022. The survey explored the beliefs and stigmas surrounding people with mental ill-health – personal stigma, self-stigma, recovery and empowerment, as well as their past help-seeking behaviours and intentions to seek help for any personal or emotional problems that might arise. The participants were grouped into international (n = 119) and domestic (n = 223) clusters via self-reporting, and the responses were compared between the two groups. The Human Research Ethics Committees (HRECs) of the University of Sydney approved the study (Appendix A). I was the paper's primary author, designing this cross-sectional study, which sits

within the broader project. I also analysed the data and wrote the manuscript. Notably, I did not play a role in designing the batyr@uni program or collecting the associated data. As such, the efforts of those associated with the batyr@uni study must be acknowledged: Nick Glozier, Alyssa Milton, Tom Riley, Valerie Elser, Amy Brown, India Smith, Dana Jordan, Jordan Roods, Risha Degamia, Deborah Davis, Olivia Urbaniak, Lily Flynn, Gemma Biggs, Risha Degamia, and Sarea Bhar.

Chapter 3 also consists of a paper. Titled "Factors associated with intention to seek face-to-face and online mental health supports among Chinese-background students in Australia", this manuscript has been submitted for publication in the *Journal of Cross-Cultural Psychology*. The paper examined the association of different stigmas with the intention to seek help, both online and face-to-face, in the context of the cultural factors affecting university students with a Chinese- background in Australia. The students, who were recruited via social media and campus posters, completed an anonymous online cross-sectional survey on: the personal and self-stigmas associated with mental illness; the personal and self-stigmas associated with help-seeking; mental health knowledge, and their intentions to seek help from online and face-to-face sources for psychological problems. The study was approved by the HREC of the University of Sydney (Appendix B). I was the primary author of this manuscript and took the lead in study design, data collection, statistical analysis, and writing the manuscript. Professor Nick Glozier and Dr Isabella Choi contributed to the study design and provided critical revisions to the manuscripts.

Chapter 4 summarized and discussed the major findings, limitations and strengths of the overall research, implications, and future research directions.

CHAPTER 1 INTRODUCTION

1.1 Mental ill-health among university students

1.1.1 Definitions

Mental health is an integral component of one's overall health. The World Health Organization (WHO) defines mental health as "a state of well-being in which an individual realises his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community" (Galderisi et al., 2015). This definition implies that good mental health encompasses more than just the absence of mental diseases or disabilities; it is about ongoing wellness and happiness. Good mental health also provides people with the skills and resilience to face and productively deal with abnormal and potentially destructive stressors (Fusar-Poli et al., 2020).

Mental ill-health is a broad term that is often used to refer to both mental illness and mental health problems. Just as heart disease refers to a range of diseases and disorders that affect the heart, mental illness refers to a group of disorders. According to the American Psychiatric Association (APA, 2013), mental illnesses and disorders involve changes in emotion, thinking, or behaviour (or a combination of these) that cause the person distress and difficulty in functioning. Mental disorders are accompanied with distress and/or problems with social, occupational, and familial activities. As such, they tend to affect all aspects of an individual's life. Mental health problems refer to emotional and psychological difficulties that can affect the normal quality and continuity of daily life (Gusha et al., 2017), which is a broader and less severe spectrum of phenomena within mental illness (Tse & Haslam, 2023). However, it is important to note that, if left untreated, mental health problems may develop into mental disorders. Thus, mental health problems and mental disorders are not the same although the terms are often used interchangeably. In this thesis, we use the terms mental illness and mental ill-health as umbrella terms to refer to both mental health problems and mental disorders.

1.1.2 Mental ill-health – Age of onset and impact

Good mental health is vital at all stages of life (Otto et al., 2021; Schlack et al., 2021). The median age-of-onset for common mental disorders, such as mood and anxiety disorders, is in the late teens to early thirties (Solmi et al., 2022). The Australian National Survey of Mental Health and Wellbeing found that the prevalence of 12-month mental disorders (met the criteria for one mental health condition over 12 months) was highest among young people aged 16-24 years (about 40% of the respondents), and that many suffered from more than one type of mental disorder (e.g., anxiety disorders, affective disorders, and substance use disorders) (ABS, 2020-2021). A recent large-scale global epidemiological meta-analysis reported that more than half of patients with a mental disorder (62.5%) experienced onset of that disorder before the age of 25 years, while 73.3% of those experiencing anxiety/fear-related disorders reported onset prior to 25 years, and 34.5% reported the same for mood disorders (Solmi et al., 2022).

The onset of mental disorders in young people is known to be a significant social and public health concern. It has been associated with treatment delays, more severe symptoms, and poorer functional outcomes (Clayborne et al., 2019; França et al., 2022; Vaingankar et al., 2021). Moreover, mental ill-health is a risk factor for suicide in young people (Menon & Bhagat, 2022) – suicide was the second greatest cause of death among people aged 24 or younger in the US (Ehlman et al., 2022). In Australia, it is the leading cause of death (Drummond et al., 2022). According to a recent national retrospective research project, 57% of 3,027 Australian youths who died by suicide between 2006 and 2015 had either a diagnosed or probable mental disorder. Yet more than two-thirds of those youths had not received professional mental health care before their death (Hill et al., 2021).

The university years frequently coincide with the critical period when mental ill-health is most likely to develop in young people – this being aged 17 to 25 (Vivienne et al., 2017). Mental health has also been identified as a key predictor of academic engagement and success in higher education (Thomas et al., 2021). Several studies have documented the negative impact of mental ill-health on university student outcomes, such as completing one's degree and grade point averages (GPAs). For example, Australian undergraduate students who have been

treated for a mental disorder were 1.77 times more likely to drop out of university than their healthy counterparts (Zając et al., 2023). Moreover, a study of 4,921 college freshmen in the US reported that students with mental disorders experienced a 0.2-0.3 drop in their final GPA compared to those without such disorders (Bruffaerts et al., 2018). Given that university students are a critical population in determining a country's economic development and success, supporting them to maintain good mental health is not only important on a personal level, but also vital for a healthy workforce and a strong society.

1.1.3 The prevalence of mental ill-health among university students

Multiple studies have found that university students have significantly higher levels of psychological distress than the general population in Australia (Cvetkovski et al., 2012; Larcombe et al., 2016; Leahy et al., 2010; Lovell et al., 2015; Stallman, 2010; Yang et al., 2019). A 2017 Australian survey on the mental health of tertiary students aged 16-25 years found that 65% of respondents reported experiencing high or very severe levels of psychological distress, while 35.4% expressed thoughts of self-harm or suicide (Browne et al., 2017). According to another survey of Australian university students, about 30% of students reported experiencing moderate to severe levels of psychological distress, and 23% reported experiencing moderate to severe anxiety in the past two weeks (Sanci et al., 2022). This is similar to the prevalence reported for university student populations in other nations. The WHO World Mental Health International College Student project (WMH-ICS) surveyed 14,348 students at 19 universities across eight nations (Australia, Belgium, Germany, Mexico, Northern Ireland, South Africa, Spain, and the United States). They found that around one-third (31.4%) of students reported having a common 12-month mental disorder (an anxiety, mood, or substance use disorder) (Auerbach et al., 2018). Using the same sample, Bruffaerts et al. (2019) reported that 17.2% of the students had suicidal thoughts and behaviours in the past year.

Moreover, the COVID-19 pandemic further exacerbated the prevalence of mental ill-health among university students. One study in the early stages of COVID-19 reported the prevalence of high stress at 61.3%, depression at 40.3%, and generalised anxiety symptoms at 30.0% among students in nine countries (mostly in Europe) (Ochnik et al., 2021). A recent systematic

review of 36 studies from 17 different countries reported the prevalence of anxiety among university students at 41% during the middle stages of the pandemic, with a prevalence of 33% in Asia, 51% in Europe, and 56% in the US (Liyanage et al., 2021). International students, in particular, experienced an increase in ill mental health and psychological distress during this period (Alam et al., 2021; Kivelä et al., 2022; Maleku et al., 2022). As observed in Australia, there was a higher risk of depression among international students compared to their domestic counterparts during the pandemic (Russell et al., 2023), as well as greater anxiety about the future (Dodd et al., 2021).

1.1.3.1 Mental ill-health among international students

As the number of international students continues to grow, Australia is expected to overtake the UK as the world's second most popular destination for international students (Marginson, 2018). The international education market was worth $37.4 billion to the Australian economy in 2020, making it Australia's fourth largest export (Ferguson & Spinks, 2021). Although the decline in international students as a result of the pandemic has had a significant impact on Australian higher education (Welch, 2022), recent data from the Department of Education suggested that the number of international students is expected to rebound and continue growing (Austrade, 2023).

International students are known to be a vulnerable group for developing mental ill-health due to the unique challenges they face. Adapting to a new culture and a different educational system, establishing a support network in an unfamiliar environment, mismatched expectations of university life with their actual experience, lack of social support, language barriers, academic stressors, financial pressures, accommodation concerns, isolation, and homesickness can all contribute to their increased vulnerability (Brunsting et al., 2018; Forbes-Mewett & Sawyer, 2016; Khawaja & Dempsey, 2008; Newton et al., 2021a; Orygen, 2020). Indeed, some Australian studies have found that international students have a higher prevalence of mental health problems (Maleku et al., 2022); were more likely have depressive symptoms; and were at a higher risk of both depressive symptoms and suicide attempts than domestic students, though these findings lacked controls for confounding variables (Yeung et al., 2021). At one Australian university, it was estimated that 24% of international students

had elevated levels of depression, 32% had elevated anxiety, and 9% of students reported suicidal thoughts (Rosenthal et al., 2008). The recent scoping review revealed a concerning trend: the number of international students who died by suicide in Australia increased from 27 in 2015 to 47 in 2019 (McKay et al., 2023). According to a cohort study by Russell et al. (2023), there was a significant increase in probable major depression among international students during the pandemic (from 21.7% to 36.7%), the prevalence of which was 1.5 times higher than that reported by domestic students, even after adjusting for age, gender and baseline differences.

Contrary to the suggestion that international students are at higher risk, epidemiological studies from Australia suggest international students have similar or lower levels of mental ill-health compared to domestic students, and that this was the case even during the pandemic (Dingle et al., 2022; Dodd et al., 2021). However, it is important to note that, while numerous cross-sectional studies on this topic have been conducted across Australian universities, many reported low survey response rates and may be subjected to a non-response bias. For example, Said et al. (2013) and Farrer et al. (2016) both found a higher prevalence of depression and anxiety among domestic students compared to international students, but the response rates of those studies were only 25% and 11.6%, respectively. Similarly, other studies also reported no difference in psychological distress among international and domestic students, with response rates between 4.6% to 26% of the university student population (Sanci et al., 2022; Skromanis et al., 2018; Stallman, 2010). Given the low response rates, there was a high likelihood of self-selection bias, such that international students who were unwell may not have completed the survey or not wished to disclose their mental illness. Conversely, it is also plausible that those who were unwell were more likely to respond, a pattern often seen in studies of mental ill-health.

1.1.3.2 Mental ill-health among students with a Chinese background

Chinese international students are by far the largest group of international students in Australia (Ferguson & Spinks, 2021). Over 0.52 million international students were enrolled in Australian universities in June 2021, 29% of whom were from China. Chinese immigrants are also one of the largest and most lively ethnic communities in Australia. More than 1.2 million

Australians (5.6% of the total population) are of Chinese ancestry, according to 2016 Australian Census data (Liu & Gallois, 2021).

While some Australian studies suggested that international students may not be at higher risk of mental ill-health, the few studies that have examined the psychological symptoms of ethnic minority students such as Chinese international students in Australian tertiary education contexts seem to indicate that they may face more mental health challenges, consistent with the previously discussed vulnerable group of international students. In a survey of Chinese-speaking international university students in Australia, Lu et al. (2014) found that over half (54%) reported high or very high levels of psychological distress. This prevalence was comparable to that reported by Chinese international students studying in New Zealand (59%) (Atherton & Cornwall, 2022). Redfern (2016) found that the Chinese international students at one Australian university demonstrated moderate levels of stress and anxiety – these levels were significantly higher than for domestic students. Redfern attributed these results to culture, i.e., the stereotypical high expectations and pressure Chinese parents placed on their children to succeed academically. A recent review of Chinese international students studying in Australian universities before COVID-19 supported this finding (Zhao et al., 2022). The review noted that Chinese international students routinely reported increased levels of fear, stress, anxiety, depression, and psychological distress due to: language barriers; cultural barriers; social, academic, and financial issues; and differences in learning styles. These students also tended to shy away from the mental health services designed to help them. The authors suggested the cultural distance between China and Australia may contribute to Chinese international students being at greater risk of experiencing mental ill-health than other international student groups (Zhao et al., 2022). These factors were also mentioned in recent interviews with 19 Chinese international students who had pursued postgraduate or higher studies in Australia (Zhao et al., 2023).

Further, the COVID-19 pandemic created significant challenges for these Chinese international students, contributing to increased levels of stress, anxiety and depression (Ke et al., 2023; Lin et al., 2022; Yu et al., 2023). These students experienced higher levels of panic, fear, and racism during the COVID-19 outbreak (Lai et al., 2021; Zhai & Du, 2020). Onshore Chinese

students were unable to return to their home country, while offshore students were unable to return to Australia during this period due to closed borders, reduced international flights, and potential exposure to COVID-19 during travel (Chen et al., 2020). Ke et al. (2023) found that Chinese international students living in Australia reported more major depression and anxiety symptoms than those living in China during the pandemic. Stressors such as difficulty connecting with university peers and friends, finding paid jobs, managing studies, and decreased confidence in future employment opportunities contributed to this trend (Ke et al., 2023). As a result, we urgently need to pay attention to the mental health needs and help-seeking of Chinese-background students attending Australian universities.

1.2 Underuse of mental health services among university students

Despite the high level of distress and mental illness among university students, there is a pattern of mental health services being under-used among student populations (Osborn et al., 2022). In the WMH-ICS survey of mental health, only 25.3% students with a common 12-month mental disorder had used mental health services in the past year (Bruffaerts et al., 2019). This underuse is broadly consistent with a survey of 1168 students across three Australian universities, where 83.9% of students experienced elevated psychological distress, out of whom only 34.3% had engaged in help-seeking behaviours (Stallman & Shochet, 2009). Leahy et al. (2010) found in a survey of 955 Australian university students that nearly half of them experienced psychological distress, while only 11% of all students had received treatment. Similarly, another survey of 1378 Australian university students by Wynaden et al. (2013) found that 83.4% of students self-reported having a mental disorder, yet more than half had not sought professional help. A recent cohort study of Australian youth (including university students) also suggested that, while symptoms of depression and anxiety worsened during the pandemic, there was no corresponding increase in help-seeking behaviours (Upton et al., 2021).

Over the past two decades, it has been well documented that international students typically do not avail themselves of mental health services (Forbes-Mewett, 2019). A report from the Victorian Coroner highlighted that in the cohort of international students who died by suicide, the victims have a lower prevalence of diagnosed mental illness and were less likely to have

attended a mental health service within six weeks of their death than their Australian-born counterparts (Coroners Court of Victoria, 2019). A large cross-sectional online survey of 1,395 university students in Australia found that 55% of domestic students have used a mental health service in the past, compared to only 17% of international students (Skromanis et al., 2018). A similar survey by Clough et al. (2019) revealed that among a sample of 357 Australian students, almost three times as many domestic students had received mental health treatment than international students (21% vs 58% domestic). Another cross-sectional study reported that only 9% of those experiencing high levels of distress sought professional help among 144 Chinese international students surveyed (Lu et al., 2014). This was consistent with the reported use of on-campus counselling services (12.3%) by Chinese international students in New Zealand (Atherton & Cornwall, 2022). More recently, Francis-Taylor et al. (2023) investigated the use of on-campus health services by Australian students (including general practitioners (GPs), and mental health counselling services), finding that although international students have greater access to GPs than domestic students, only 32.5% had used mental health counselling compared to 64.4% of domestic students.

1.2.1 Help-seeking among university students

Despite universities providing free and low-threshold on-campus counselling and mental health services, many students suffering from mental ill-health were reluctant to seek treatment from these sources (Clements & Paramova, 2023; Zochil & Thorsteinsson, 2018). The large volumes of cross-national data collected from the WMH-ICS surveys (Auerbach et al., 2018) indicated that only 24.6% of the 13,984 students in the total sample were willing to seek treatment for emotional problems (Ebert et al., 2019). In a survey of 298 psychology students in Australia, Thomas et al. (2014) found that less than one quarter of them reported an intention to seek help from mental health services if they developed psychological distress. Similar findings were reported in a study involving telephone interviews with 774 students at a large Australian university, with only 10% reporting intentions to seek help from the student counselling service or a counsellor, only 8% from a psychologist, and only 3% from a psychiatrist (Reavley et al., 2012).

1.2.2 Help-seeking among international students

Several qualitative studies conducted over recent years indicated that international students in Australia, on the whole, exhibited low intentions to use mental health services or seek professional help. For instance, in interviews with the professional staff who work with international students, they indicated that students were typically reluctant to seek professional help for mental ill-health and frequently delayed formal help-seeking until they reached a 'disaster point' (Forbes-Mewett & Sawyer, 2016). Similar findings have been noted in interviews with health and support service staff at another Australian university (Newton et al., 2021b). Khawaja and Stallman (2011) also reported that international students in Australia listed self-reliance and talking to friends or peers as their primary strategies for coping with psychological distress.

There are few quantitative studies examining help-seeking intentions among international students in Australia in comparison with their domestic counterparts. Several studies have found that international students were less willing to seek mental health services than domestic students (Clough et al., 2019; LaMontagne et al., 2023; Reavley et al., 2012). From telephone interviews with 774 students at an Australian university, researchers found that students born outside of Australia were less likely to seek help from other professional sources than those born in Australia (Reavley et al., 2012). Meanwhile, Clough et al. (2019) discovered something interesting when they did a cross-sectional online survey of 357 students at another Australian university: despite reporting similar levels of psychological distress as domestic students, international students showed poorer help-seeking attitudes and lower intentions to seek help for suicidal ideation. However, neither group of students showed any significant differences in their intentions to seek help for emotional problems.

1.2.3 Help-seeking among Chinese-background students

Students of ethnic minorities, such as those with a Chinese background, have even lower intentions of mental health service access. For example, Hsu and Alden (2008) found that students of Chinese heritage in North America were less willing to seek mental health treatments for social anxiety of a moderate severity than students with a European heritage. It appeared that students of Chinese descent only sought help when their condition was more

severe. Li et al. (2016) surveyed a sample of 109 Chinese students studying in America and found that Chinese ethnic identity negatively predicted help-seeking attitudes. This meant that international students with a strong Chinese identity were less likely to seek help from a professional counselling service than those international students with a weak Chinese identity. However, the findings of this study did not control for potentially confounding factors, such as age, gender, and mental health status, which may have influenced the results. Further, other studies have reported that Chinese international students in the US with emotional and personal problems were more likely to seek assistance from individuals they are familiar with and trust, such as intimate partners, friends, parents, and school faculty/professors. They also preferred GPs over mental health professionals (Lian et al., 2020).

Similarly, in Australia, a cross-sectional survey involving 407 students from five Australian universities found that university students from ethnic Chinese backgrounds were more likely to seek help for depression from non-professionals, such as acupuncturists, religious people, naturopaths or herbalists, personal trainers, and traditional healers, compared to their domestic counterparts (Hickie et al., 2007). It should be noted, however, that the findings of this study did not account for potential confounding factors, such as demographic characteristics. Another cross-sectional survey conducted by Han et al. (2018) of 208 Chinese and 128 Australian university students reported that nearly half of the Chinese university students were unwilling to seek professional help if they had suicidal ideation. Further, around 50% reported that informal support from family and friends could be a substitute for professional help compared to 10% of domestic Australian students. Lu et al. (2014) also found that Chinese-speaking international students in Australia preferred to resolve their psychological distress through self-reliance or via informal social networks (e.g., friends or parents), rather than through professionals.

While existing research indicated that international students are vulnerable in terms of help-seeking, it is important to note that help seeking has changed over the past two decades. There has been a marked preference for seeking support from social networks, university sources, or even a GP over recent years. This may be attributed to the development of the internet and new media. Various online mental health campaigns, seminars and digital

interventions have had a positive impact on mental health awareness, promoting more open attitudes and discussions about mental health, especially among the younger generation (Tam et al., 2024).

1.2.4 Barriers to seeking professional help

Seeking professional help is essential if students are to access appropriate mental health services. Barriers such as stigma, embarrassment, a preference to handle the problem alone, poor mental health literacy or problems with identifying symptoms, a lack of awareness about services, and negative beliefs about the effectiveness of treatments are some of the reasons why students were generally reluctant to seek help from formal counselling services (Dunley & Papadopoulos, 2019; Ebert et al., 2019; Lui et al., 2022).

These cultural, linguistic, financial, and knowledge barriers can be more pronounced among international students. Many international students reported stigma surrounding mental health issues in their home countries, which makes them reluctant to discuss their emotional experience with others. Seeking psychological help is often culturally stigmatised due to fear of losing face or reputation (Newton et al., 2021a). Further, international students may have trouble expressing their mental ill-health to peers, university staff, and service providers due to English language barriers. Concerns about not being understood, embarrassment and shame can present difficulties around communicating health concerns, especially among students who speak English as a second language (Orygen, 2020).

International students may also lack knowledge around mental health and the supports available in Australia. For example, Chinese international students in Australia were less likely to seek help because they either do not perceive their condition to be severe or are unaware that treatment services exist for them (Lu et al., 2014). International students may also have a limited understanding of the Australian health care system and be unaware of the benefits and levels of their compulsory health insurance – Overseas Student Health Cover (Orygen, 2020). This can mean they do not seek treatment due to cost concerns (Forbes-Mewett & Sawyer, 2016). Moreover, lack of time to attend treatment, long wait-times, and lack of culturally sensitive services can also deter help-seeking (Lu et al., 2014; Newton et al., 2021a).

In particular, stigma was the most endorsed barrier among university students in three systematic reviews of the obstacles to accessing professional help for mental ill-health (Dunley & Papadopoulos, 2019; Gulliver et al., 2010; Lui et al., 2022), which will be examined in more detail next.

1.3 The role of stigma

The WHO defines stigma as "a mark of shame, disgrace or disapproval which results in an individual being rejected, discriminated against, and excluded from participating in a number of different areas of society". Stigma is a set of negative and often unfair beliefs against a group of people with a certain characteristic, e.g., mental illness, race, or gender (Corrigan et al., 2009). Stigma can ultimately preclude an individual from full acceptance by society (Brown et al., 2010; van Brakel et al., 2019). Health conditions that are contagious, dangerous, or incurable are often associated with stigma, including AIDS and skin conditions such as psoriasis. However, the stigma related to mental ill-health is particularly severe and widespread (Chen et al., 2014). As a result, people can feel threatened by the stigma of being labelled as mentally ill.

Stigma has been well studied, but it can also be a complex and confusing construct. One of the main reasons for this confusion is the fact that stigma is a multidimensional concept (Jorm & Oh, 2009). The literature identifies multiple dimensions or types of mental health-related stigma, including:

- stigma toward mental ill-health: which can be further divided into public stigma (the public's attitude towards people with mental ill-health), personal stigma (an individual's own attitude towards people with mental ill-health), self-stigma (the negative attitudes of an individual to his/her own mental ill-health), and perceived stigma (an individual's belief about the attitudes of others towards people with mental ill-health);
- stigma toward help-seeking: which can be further divided into personal stigma (an individual's own attitudes towards people seeking psychological help), and self-

stigma (the reduction in self-worth one experiences or anticipates experiencing when they themselves seek professional help); and

- stigma by healthcare providers (unfair treatment against people with mental ill-health that is perpetrated by social institutions or organisations) (Brenner et al., 2022; Clement et al., 2015; Jorm & Oh, 2009; Schnyder et al., 2017; Subu et al., 2021).

A way through this complexity is to focus on some of the specific aspects of stigma. This thesis focuses on the personal- and self- stigmas around mental ill-health and seeking psychological help as they relate to university students (as defined in Table 1.1). In this thesis, the terms 'mental illness personal-and self-stigma' and 'help-seeking personal-and self-stigma' are used collectively to refer to personal and self-stigmas around mental ill-health and seeking psychological help. This is done in order to avoid confusion.

Table 1.1*: Key stigma types relevant to this thesis.*

Type	Definition	Example
Mental illness personal stigma	An individual's personal attitudes and reactions towards people with a mental ill-health	*"I would stay away from them/I wouldn't hire them because people with mental ill-health are violent".*
Mental illness self- stigma	An individual internalises stereotypes and applies stigmatising beliefs to themselves	*"I am a weak person because of my mental ill-health, so I am not worthy of a good job/house/friend".*
Help-seeking personal stigma	An individual's stigmatising attitudes towards people seeking psychological help	*"I would stay away from them because I think people who see a psychologist for psychological help is a sign of personal weakness".*
Help-seeking self- stigma	The reduction in self-worth one experiences or anticipates experiencing when they themselves seek professional help	*"I would feel inadequate if I went to a therapist for psychological help".*

1.3.1 Stigmas toward mental ill-health

According to Link et al. (1989), mental ill-health is associated with devaluing, denigrating, discriminatory labels, or stereotypes of those who are labelled as mentally ill. As such, people may be less likely to seek treatment because of some stigma toward mental illness. Indeed, people with mental illness face societal stereotypes; they are called dangerous, unpredictable, untrustworthy, incompetent, difficult to talk to, weak of character, and unlikely to fully recover (Arboleda-Flórez, 2008; Coppens et al., 2013; Mak et al., 2014; Reavley & Jorm, 2011). These pejorative stereotypes lead to prejudice, which is the acceptance of unfavourable beliefs and the elicitation of negative emotional responses towards people with mental illness (e.g., anger, fear). Eventually, prejudice leads to discrimination through a behavioural response (e.g., refusing accommodation or work to the individual with mental illness) (Corrigan et al., 2009). For example, if one perceives people with mental illness as dangerous and violent, one may feel fearful to interact with them and keep their distance socially – that is mental illness stigma (Chien et al., 2014; Lam & Sun, 2014; Mellor et al., 2013; Xu et al., 2018; Yang et al., 2013; Zhuang et al., 2017).

Research has shown that stigma toward mental illness can be detrimental to individuals who are labelled as mentally ill in a variety of ways. This can impact on the opportunities of people with mental illness to find and keep jobs and maintain their relationships with friends, family, and partners – all of which are critical to achieving one's life goals. In the case of persistent schizophrenia, for example, 40% of people reported they would be less willing to hire or vote for that individual (Reavley & Jorm, 2011). Similarly, a study examining job acquisition among people with severe mental illness found that only 56% of participants were successful in obtaining competitive work (Corbière et al., 2011). Thus, people may attempt to keep their mental illness secret and not seek help to avoid the label of mental illness and the potential harm it brings (Corrigan, 2004).

As mentioned above, mental illness stigma can be further broken down into personal stigma and self-stigma:

1.3.1.1 Mental illness personal stigma

Mental illness personal stigma refers to the *negative beliefs, attitudes, and reactions that an individual has to other people with a mental illness* (Calear et al., 2011; Griffiths et al., 2006). Three components make up personal stigma: stereotypes ("*People with a mental illness are violent*"), prejudice ("*They all scare me*") and discriminative behaviour in response to prejudice ("*I would stay away from them/I wouldn't hire them*") (Corrigan & Watson, 2002). Hence, individuals with pronounced personal stigma might support stigmatising beliefs about people with mental illness and try to avoid contact with the stigmatised group (Parcesepe & Cabassa, 2013).

1.3.1.2 Mental illness self-stigma

Mental illness self-stigma refers to *the perception of an individual who has internalised public stigma and believes that their mental illness is socially unacceptable* (Corrigan, 2004). Like personal stigma, self-stigma also includes similar components: the individual agrees with the prejudices and stereotypes held by others ("*People with a mental illness are weak*") and they apply those traits to themselves ("*I am a weak person because of my mental illness*"). Then, self-prejudice leads to negative emotional reactions, such as low self-esteem and self-efficacy, and impacts on their behaviour ("*Why try? I am not worthy of it*") (Corrigan et al., 2009; Corrigan & Watson, 2002; Corrigan et al., 2006). In other words, self-stigma involves becoming aware of the labels others attribute to mental illness, identifying with those stereotypes, and then applying those stereotypes and prejudices to oneself to ultimately view oneself as incompetent and unworthy. They may feel they should not even apply for a job or get treatment due to their incompetence. Hence, individuals with pronounced mental illness self-stigma may be less likely to seek psychological help and have lower treatment adherence (Hughes et al., 2020).

1.3.2 Stigmas toward help-seeking

Stigma toward help-seeking refers to the *stereotyping of prejudice against, and discrimination experienced by someone who seeks help, or is considering seeking help, from a mental health professional* (Vogel et al., 2006). People who seek help may be labelled as awkward,

inadequate, emotionally unstable, weak and a failure (Ben-Porath, 2002; Vogel et al., 2009; Vogel et al., 2006). Tucker et al. (2013) distinguished between stigma toward mental illness and stigma toward help-seeking. For example, those seeking counselling or psychotherapy for distress, such as those seeking help with marriage or relationship troubles, may not perceive themselves to be "mentally ill". On the other hand, those who accepted the label of having a mental ill-health may not view themselves as help-seekers or patients or may even avoid counselling to avoid another stigmatising label.

Over the past two decades, research has demonstrated that stigma toward help-seeking was a phenomenon that reduced the likelihood of Australian adults seeking support for depression from any professional source including GPs, counsellors, psychologists, psychiatrists, and complementary practitioners (Barney et al., 2006). Individuals who held stigmatising attitudes about seeking professional help generally reported they would not seek professional help but, instead, preferred to deal with it on their own (Coppens et al., 2013). Similar to mental illness stigma, help-seeking stigma can be further divided into personal and self-stigma.

1.3.2.1 Help-seeking personal stigma

Paralleling mental illness personal stigma, help-seeking personal stigma is an external type of stigma that refers to *an individual's opinion that people who seek help are undesirable or socially unacceptable* (Vogel et al., 2006). These views are frequently detrimental, since they contribute to stereotyping, prejudice, and discrimination towards persons seeking psychological help (Vogel et al., 2013; Vogel et al., 2006). Help-seeking personal stigma has been linked to factors related to seeking treatment such as negative attitudes towards seeking professional help and reduced intentions to seek counselling. It has also been observed in countries such as Australia, Brazil, China, Turkey, the UAE, and the US (Heath et al., 2016; Komiya et al., 2000; Mellor et al., 2013; Sartorius & Schulze, 2005; Vogel et al., 2009). The negative associations between help-seeking personal stigma and help-seeking intention and attitudes have also been confirmed in college student samples (Kim et al., 2020; Kim & Zane, 2016; Pheko et al., 2013; Wahto & Swift, 2016).

1.3.2.2 Help-seeking self-stigma

Paralleling mental illness self-stigma, help-seeking self-stigma refers to an *individual's belief that obtaining help would make themselves undesirable or socially unacceptable* (Vogel et al., 2006). Individuals may be fearful of losing their self-esteem or self-respect if they sought treatment (Wade et al., 2011). Help-seeking self-stigma has also been observed in countries such as England, Greece, Israel, Turkey, Taiwan, and the US (Lannin et al., 2015; Vogel et al., 2013; Vogel et al., 2010).

Help-seeking self-stigma has been found to have a negative impact on help-seeking outcomes. Those who endorse higher levels of help-seeking self-stigma tend to have worse attitudes toward seeking psychological help, weaker intentions to engage in psychological treatment, and a lower likelihood of actually seeking help (Lannin & Bible, 2022). Also, studies have found that people with high help-seeking self-stigma were less likely to seek counselling information, especially among those with relatively high levels of psychological distress (Lannin et al., 2016). People who endorsed a higher level of help-seeking self-stigma have worse attitudes toward seeking psychological help and weaker intentions to engage in psychological treatment (Lannin & Bible, 2022). This relationship has also been confirmed in samples of college students (Andoh–Arthur et al., 2015; Bathje & Pryor, 2011; Cheang & Davis, 2014; Cheng et al., 2018; Choi & Miller, 2014; Kim et al., 2020; Kim & Zane, 2016; Kosyluk et al., 2021; Lannin et al., 2015; Li et al., 2017, 2018; Topkaya, 2014; Topkaya et al., 2017; Tucker et al., 2013; Vally et al., 2018; Vogel et al., 2017; Wahto & Swift, 2016).

1.4 Stigmas and help-seeking outcomes

A number of systematic reviews and meta-analyses have found that higher perceptions of stigma are associated with poorer help-seeking attitudes, a reduced willingness to seek help, and poorer help-seeking behaviours. Further, the strength of this association appears to depend on the type of stigma (Clement et al., 2015; Schnyder et al., 2017). For example, Clement et al. (2015) conducted a systematic review of quantitative and qualitative studies that included both the general population and clinical samples. They found that mental illness and help-seeking self-stigma has a small-to-moderate-sized negative association with help-seeking intentions and attitudes, whereas mental illness personal stigma was only weakly

negatively associated with help-seeking intentions and attitudes. On the other hand, a meta-analysis by Schnyder et al. (2017) found that in the general population, mental illness personal stigma was negatively associated with help-seeking attitudes and help-seeking behaviours, but there was no association between mental illness self-stigma and help-seeking behaviours. Another meta-analysis showed that help-seeking self-stigma was strongly negatively associated with help-seeking attitudes and moderately negatively associated with help-seeking intentions (Lannin & Bible, 2022).

Studies focusing on samples of university students have reported inconsistencies about the role different types of stigma have on help-seeking outcomes, and the magnitude of these associations remains unclear. Tables 2.1A, B and C summarises the associations of key stigma types with help-seeking attitudes, intentions, and behaviours in studies of university students. Most studies examining help-seeking self-stigma reported it to be associated with lower help-seeking intentions (Cheng et al., 2015; Choi et al., 2019; Currier et al., 2017; Dagani et al., 2023; Karaffa & Hancock, 2019; Ma et al., 2022; Wang et al., 2020) and unfavourable help-seeking attitudes (Cheang & Davis, 2014; Cheng et al., 2018; Karaffa & Hancock, 2019; Li et al., 2017; Vally et al., 2018; Wu & Street, 2023). However, one large study of mostly male and relatively unwell college students in mainland China found that help-seeking self-stigma was positively associated with help-seeking intentions. This was after adjusting for attitudes towards seeking psychological help, subjective norms, perceived behavioural control and biopsychosocial variables such as gender, Asian values, perceived stigma, social support, evaluated need, perceived need, and the anticipated benefits and risks of receiving mental health treatment (Li et al., 2017). Hence, it was thought that, while self-stigmatisation may reduce self-esteem and self-confidence, Chinese students also believed that using mental health services can increase positivity and self-confidence, which may motivate them to seek help (Li et al., 2017). However, other studies on Chinese-background students with smaller sample sizes (Cheang & Davis, 2014; Ma et al., 2022) found a negative association between help-seeking self-stigma and help-seeking intentions and attitudes. These studies generally adjusted for demographic characteristics, including mental health status, perceived language discrimination, loss of face, and perceived stigma.

Relatively few studies have examined the relation between mental illness stigma and help-seeking. The results consistently revealed that students with high mental illness personal stigma have negative attitudes toward seeking help (Arora et al., 2016; Conceição et al., 2022; Gulliver et al., 2022; Wang et al., 2015) or were less likely to seek help for their mental illness in three large cross-sectional studies (Amarasuriya et al., 2018; Maeshima & Parent, 2022; Singh et al., 2021). This was even after adjusting for demographic characteristics, exposure to mental illness, exposure to counselling, and perceived stigma.

Studies examining help-seeking personal stigma have also reported significant negative associations with intentions to seek psychological help among university students (Lally et al., 2013), after adjusting for history of mental illness and exposure to mental illness. However, mixed findings have been found for help-seeking personal stigma in studies that have examined multiple stigmas. For example, some studies showed a negative association between both personal and help-seeking self-stigma and students' intention to seek psychological help (Kim & Zane, 2016; Pan & Hao, 2023; Shahidi & Johnson, 2023). These results come after adjusting for basic demographics, mental health literacy, attitudes towards seeking psychological help, and the respective stigmas. Yet other studies on university students only observed that help-seeking self-stigma, but not help-seeking personal stigma, was negatively associated with help-seeking intentions (Andoh–Arthur et al., 2015; El-Hachem et al., 2023); help-seeking attitudes (Choi & Miller, 2014; El-Hachem et al., 2023; Topkaya, 2014; Topkaya et al., 2017; Vogel et al., 2017); and help-seeking behaviours (Hilliard et al., 2022). Notably, however, these studies gave no consideration to the impact of mental health literacy when adjusting for confounders that may have influenced the direction of the results. However, studies by Pheko et al. (2013) and Shannon et al. (2022) found that help-seeking self-stigma was not associated with intentions to seek help among students from African backgrounds. These studies reported mixed directions on the association between help-seeking personal stigma and help-seeking intentions, where Shannon et al. (2022), with a primarily male sample, report a positive association.

In studies that have examined the relationships between multiple mental illness and help-seeking stigmas, there were no associations or mixed associations of mental illness personal

stigma, or mental illness self-stigma, or help-seeking personal stigma on intentions to seek help (Lannin et al., 2015; Tucker et al., 2013; Wallin et al., 2018) or help-seeking attitudes (Ibrahim et al., 2019; Kosyluk et al., 2021). Most studies supported a negative association between help-seeking self-stigma and help-seeking after adjusting for demographic characteristics, psychological distress levels, treatment expectancy, familiarity with mental illness, mental health literacy, and the other stigmas (Andoh–Arthur et al., 2015; El-Hachem et al., 2023; Lannin et al., 2015; Pan & Hao, 2023; Shahidi & Johnson, 2023; Tucker et al., 2013; Wallin et al., 2018). That said, Tucker et al. (2013) reported that help-seeking self-stigma has a negative association with help-seeking intentions among students experiencing clinical levels of psychological distress, while mental illness personal stigma was positively related to help-seeking attitudes.

Only one study has examined the association between three types of stigma -mental illness self-stigma and both stigmas toward help-seeking (self and personal) on help-seeking attitudes and intentions in a sample of relatively well undergraduates (Lannin et al., 2015). This study found that only help-seeking self-stigma was associated with negative help-seeking intentions, after adjusting for demographic characteristics, psychological distress, previous counselling experience, self-esteem, and the other stigmas (Lannin et al., 2015). To the best of our knowledge, no studies so far have examined the relationship between the four types of stigma on help-seeking intentions in university students.

Table 2.1A: *The associations of key stigma types with help-seeking attitudes in studies focused on samples of university students*

Author (year)	Sample size	Participants	Mental illness personal stigma	Mental illness self-stigma	Help-seeking personal stigma	Help-seeking self-stigma	Confounders
Studies examining a single stigma							
Cheang and Davis (2014)	391	University students in Macao (180 males, 211 females)	/			Negative association	Adjusted for age, gender, academic year, group (Macao vs. Mainland), loss of face, psychological distress, help-seeking intention, and perceived stigma
Cheng et al. (2018)	1,535 (response rate = 19%)	American domestic students (63.3% females)					Adjusted for gender, race, MHL, past help-seeking, depression level
Vally et al. (2018)	114	Female undergraduates who were psychology/ education majors in the United Arab Emirates					Controlled for public stigma in mediated model
Wu and Street (2023)	456	Students at an American University (199 males, 223 females)					Controlled for gender, mental health status, efficacy, family conformity and conversation, online support, patient-centred communication in structural model
Karaffa and Hancock (2019)	573 (response rate = 8%)	Veterinary medical students in America (86.9% females)					Controlled for gender, perceived stigma in mediated model
Arora et al. (2016)	160	South Asian students in America (76males, 84 females)	Negative association	/			Adjusted for gender, generational status, perceived stigma
Conceição et al. (2022)	969(response rate = 23.3%)	First-year students in Porto (343 males, 626 females)					Adjusted for gender, previous counseling experience, family mental illness, perceived stigma

Wang et al. (2015)	357	Chinese undergraduates in China (173 males, 184 females)			Controlled for somatic symptoms, perceived stigma in structural model
Gulliver et al. (2022) *	165	First-year undergraduates in Australia (36 males, 119 females)			Adjusted for age, gender, student status (international), living situation (on campus), moved for university, proportion of online classes, engagement with university life, belongingness and psychological distress

Studies examining multiple stigmas							
Author, year	**Sample size**	**Participants**	**Mental illness personal stigma**	**Mental illness self-stigma**	**Help-seeking personal stigma**	**Help-seeking self-stigma**	**Confounders**
Kim et al. (2020)	200 (response rate = 94.7%)	Korean college students (92 males, 107 females)	/		Negative association	Negative association	Controlled for MHL, perceived barriers to care, social support, HS personal and self-stigma in structural model
Wahto and Swift (2016)	165 males	Male psychology college students at an American University					Adjusted for gender-role conflict, HS personal and self-stigma
Shahidi and Johnson (2023)	1,000	Thai Undergraduate Students in Bangkok (527 males, 390 females)					Adjusted for MHL, ATSPPH, HS personal and self-stigma
Topkaya et al. (2017)	520	Undergraduates in Turkey (172 males, 347 females)			No association	Negative association	Controlled for perceived stigma, and HS personal stigma in mediated model
Vogel et al. (2017)	3,276	College students from Australia, Brazil, Canada, Hong Kong, Portugal, Romania, Taiwan, Turkey, the UAE, and the U.S. (14%-42%males, 58-82% females)					Controlled for HS personal and self-stigma in mediated model
Choi and Miller (2014)	278 (response rate = 14.2%)	Asian, Asian American, and Pacific Islanders undergraduate and graduate students from an American University					Controlled for cultural values, generational status, help-seeking perceived stigma, and HS personal stigma in mediated model

		(85 males, 190 females)					
Topkaya (2014)	362	University students in Turkey (95 males, 218 females)					Adjusted for gender, HS personal and self-stigma
El-Hachem et al. (2023)	420 (response rate = 52%)	University students in an Arabic country (214 males, 204 females)					Adjusted for age, gender, awareness of free of charge mental health services, fear of what relatives, friends might think and being looked down on, HS personal and self-stigma
Kosyluk et al. (2021)	153	Students at an American University (97 males, 54 females)	No association	/		Negative association	Controlled for familiarity with mental illness, and MI personal stigma and HS self-stigma in hypothesised mode
Ibrahim et al. (2019)	202	University and secondary school students from low-income households (65 males, 137 females)					Adjusted for MHL, MI personal stigma and HS self-stigma
Tucker et al. (2013)	217	Undergraduates with clinical levels of psychological distress at an American University (80 males, 137 females)	/	Positive association	/	Negative association	Adjusted for MI self -stigma and HS personal stigma

Table 2.1B: *The associations of key stigma types with help-seeking intentions in studies focused on samples of university students*

Author(year)	Sample size	Participants	Mental illness personal stigma	Mental illness self-stigma	Help-seeking personal stigma	Help-seeking self-stigma	Confounders
Studies examining a single stigma							
Lally et al. (2013)	735 (response rate = 77%)	Students from the National University of Ireland Galway (195 males, 540 females)	/		Negative association	/	Adjusted for history of mental illness, personal contact with someone with a history of mental illness and perceived stigma
Li et al. (2017)	1,128	Mainland Chinese college students (630 males,498 females)	/			Positive association	Controlled for gender, perceived stigma, Asian values, social support, evaluated need, perceived need, anticipated benefits and risks of receiving mental health treatment, ATSPPH, subjective norms and perceived behavioral control in structural model
Li et al. (2018)	611 (response rate = 70%)	Australian domestic students (209 males, 402 females)				No association	Controlled for gender, perceived stigma, Asian values, social support, evaluated need, perceived need, anticipated benefits and risks of receiving mental health treatment, subjective norms, perceived behavioral control and ATSPPH in structural model
Cheng et al. (2015)	1,682 (response rate = 19%)	American university students (65% female)				Negative association	Controlled for gender, past help seeking, attachment, and mental health status in structural mode

Choi et al. (2019)	276	Mexican American college women at a large Hispanic-serving university in the America				Controlled for religious cultural values, spiritual etiology beliefs in path model
Currier et al. (2017)	502 (response rate = 14%)	Veteran undergrads and gender-matched non-vets undergrads at one American University (367 males, 135 females)				Adjusted for gender, age, ethnicity, mental health status, veteran status
Karaffa and Hancock (2019)	573 (response rate = 8%)	Veterinary students at American University (498 females)				Controlled for gender, ATSPPH, perceived stigma in mediated model
Dagani et al. (2023)	3,754 (response rate = 27.1%)	Students at an Italian university (1569 males, 2179 females)				Controlled for coping strategies, perceived stigma in structural mode
Wang et al. (2020)	440	Undergraduate students at American University (167 males, 273 females)				Adjusted for gender, past counselling experience
Ma et al. (2022)	433	Chinese international students in American universities (183 males, 231 females)				Controlled for ace concerns, mental health status, perceived language discrimination and English proficiency in structural model
Maeshima and Parent (2022)	2,071	Asian American college students and Asian international college students from the 2018-2019 dataset on the mental	Negative association	/		Controlled for gender, student status (international vs domestic), perceived stigma in path model

		health of college student populations across the Americas (785 males, 1286 females)					
Amarasuriya et al. (2018)	4,461	Undergraduates at a Sri Lankan university (1358 males, 3099 females)					Adjusted for age, gender, religion, residence, language of response, faculty of study, year of study, ability to recognise the problem, mental health status, exposure to problem through family and friends, previous counseling experience
Singh et al. (2021)	557	Undergraduates at an American University (109males, 448 females)					Adjusted for age, gender, ethnicity, race, year in college, country of birth, residence, living status, discrimination experiences, perceived stigma
Studies examining multiple stigmas							
Author, year	**Sample size**	**Participants**	**Mental illness personal stigma**	**Mental illness self-stigma**	**Help-seeking personal stigma**	**Help-seeking self-stigma**	**Confounder**
Kim and Zane (2016)	656	American undergraduate psychology students with elevated psychological distress (71.0% female)	/		Negative association	Negative association	/
Pan and Hao (2023)	319	Mainland Chinese college students with anxiety symptoms and psychological distress Slightly more than half of the participants were female (183 females)					Controlled for gender, ATSPPH, coping efficacy, HS personal and self-stigma in nested model

Shahidi and Johnson (2023)	1,000	Undergraduates in Thailand (52.7% male, 39.0% female)					Adjusted for MHL, ATSPPH, HS personal and self-stigma
El-Hachem et al. (2023)	420 (response rate = 52%)	University students in an Arabic country (51.2% female)			No association	Negative association	Adjusted for age, gender, awareness of free mental health services in the infirmary and services available, cost of services, HS personal and self-stigma
Andoh–Arthur et al. (2015)	270	Psychology undergraduates at a Ghanaian university (132 males, 138 females)					Adjusted for perceived social support, ATSPPH, HS personal and self-stigma
Pheko et al. (2013)	519	Students from the University of Botswana (236 males, 283 females)			Negative association	No association	Adjusted for ATSPPH, HS personal and self-stigma
Shannon et al. (2022)	116 (response rate= 14.5%)	African American male undergraduates			Positive association	No association	Adjusted for religious affiliation, level of education, institutional region, previous counselling experience, MHL, HS personal and self-stigma and self-construal
Wallin et al. (2018)	267	Undergraduates at Swedish university (210 females)	/	No association	/	Negative association	Adjusted for age, gender, country of birth, psychological distress, treatment expectancy, MI and HS self-stigma
Tucker et al. (2013)	217	Undergraduates with clinical levels of psychological distress at an American University (37.0% male, 63.0% female)					Adjusted for MI self-stigma and HS personal stigma
Lannin et al. (2015)	448	Undergraduates at an American University (61.7% female)	/	No association	No association	Negative association	Controlled for gender, psychological distress, previous counselling experience, self-esteem, MI self-stigma, HS personal and self-stigma, perceived stigma in mediated Model

Table 2.1C: *The associations of key stigma types with help-seeking behaviours in studies focused on samples of university students*

Author(year)	Sample size	Participants	Mental illness personal stigma	Mental illness self-stigma	Help-seeking personal stigma	Help-seeking self-stigma	Confounders
Studies examining a single stigma							
Gulliver et al. (2022) *	165	First year undergraduate students in Australia (36 males, 119 females)	No association	/			Adjusted for age, gender, student status (international), living situation (on campus), moved for university, proportion of online classes, engagement with university life, perceived knowledge of how to seek help, willing to disclose at university, belongingness and psychological distress
Studies examining multiple stigmas							
Hilliard et al. (2022)	328	Student-athletes from three universities (224 males, 101 females)	/		No association	Negative association	Adjusted for gender, help-seeking attitudes and intentions, perceived stigma, HS personal and self-stigma

Note. / denotes not examined, * denotes longitudinal study, all others are cross-sectional. MHL: mental health literacy, ATSPPH: attitudes towards seeking psychological help, MI : mental illness, HS : help-seeking.

1.4.1 Summary

These studies have provided valuable insights into the associations between the stigmas surrounding mental ill-health and help-seeking among university students. Most consistently showed that help-seeking self-stigma and mental illness personal stigma were negatively associated with help-seeking, but there was no association between mental illness self-stigma and help-seeking. There were also mixed findings for help-seeking personal stigma, with some studies showing a positive or negative association, while others not. However, it is important to recognise the limitations of the existing research. Much of the evidence to date has been based on quantitative studies primarily from Western developed countries, which focus on undergraduate student populations, have primarily female samples, and use cross-sectional research designs. Many studies did not report the response rate and representativeness of their samples to the university population. Some studies reported low response rates, which may suggest recruitment bias of students with a greater knowledge of or interest in mental health, or more favourable attitudes towards people with mental ill-health or help-seeking. Moreover, there are differences in terms of the confounders that have been adjusted for, such as demographic variables, e.g., age, gender, and ethnicity, alongside psychosocial variables. Certain studies carefully controlled for these confounders, while others did not, which may not only influence how the results were interpreted but may also limit their reliability. It is, therefore, important to extend the current findings to young people from different cultural backgrounds and educational levels, specifically to those from Asian cultures, while adjusting for the appropriate confounders.

1.5 Factors affecting stigma and help-seeking among Chinese-background students

1.5.1 Asian cultural beliefs

The stigma associated with mental health varies across cultures (Abdullah & Brown, 2011; Yu & Mak, 2022). In many Asian cultures, mental illness is seen as the result of punishment for wrongdoings committed in previous lives, a lack of moral character or poor ideals (Lam et al., 2010; Yee et al., 2020), weakness or poor spiritual strength (Yip, 2004), genetic flaws or coming from a ‘bad’ family (Shu et al., 2022; Yang et al., 2013). All these perceptions are thought to

contribute to the stigmatisation of mental illness in Asian countries. Mental illness is also frequently attributed to supernatural causes in China (Wong & Li, 2012). For example, it has long been thought that mental illness is due to evil spiritual forces, prompting many families with a member suffering from mental illness to seek help from shamans (Phillips et al., 2002). Additionally, Chinese culture has a highly developed sensitivity for “saving face” (Chen et al., 2014). For many Chinese people, “face” is an important part of social identification, serving as a representation of power and standing in the social hierarchy, which is akin to the concept of reputation in Western values (Lam et al., 2010). The diagnosis of mental illness not only results in "loss of face" for the individual but also brings shame to the family (Li et al., 2013), as revealing personal distress to outsiders is perceived as shaming one’s entire family (Kung, 2003).

Stigma has been shown to be higher in Asian or international students than in White American students due to these cultural beliefs (Eisenberg et al., 2009; Lally et al., 2013). For example, a study comparing university students in the UK and Hong Kong on their views toward people with schizophrenia found that the students in Hong Kong perceived people with schizophrenia as more dangerous and more likely to act abnormally in public (Furnham & Chan, 2004). Many studies on university students have confirmed that Asian university students held greater stigmas and less favourable attitudes towards help-seeking, along with weaker help-seeking intentions compared to other ethnic groups (Bornschlegl et al., 2020; Brownson et al., 2014; Cheng et al., 2018; Choi & Miller, 2014; Kam et al., 2019; Kim & Zane, 2016). A recent Australian study also showed that those born in Sri Lanka have significantly higher stigma towards people with mental illness. They also reported less value in seeking professional psychological help than those born in Australia (Mudunna et al., 2022). However, there is a lack of research documenting stigma and help-seeking among Chinese students in Australia.

There is also suggestion that international students have higher stigmas than domestic students. For example, Maeshima and Parent (2022) contended that international student status was associated with stronger personal stigma and less of an intention to seek help. Similarly, in a study of Melbourne university students, international students (with about half

born in Asian countries) held higher mental illness personal stigma and were less likely to seek professional help for depression compared to domestic students (LaMontagne et al., 2023).

1.5.2 Acculturation

Acculturation refers to the extent to which people adopt the cultural norms of the dominant or host culture in their environment, as opposed to the extent to which people retain the norms of their heritage culture (Blume, 2017). Prior research has suggested an inverse relationship between acculturation and stigma (Li, 2021). For instance, Mellor et al. (2013) conducted a cross-cultural investigation of the relationship between acculturation and stigma by comparing Chinese immigrants in Australia with Anglo Australians, Australian-born Chinese, and Taiwanese people. They found that Chinese immigrants to Australia and Taiwanese people held more stigmatising attitudes than Australian-born Chinese, suggesting that acculturation to Western culture was associated with reduced stigma. More recently, Shu et al. (2022) reported that second-generation Chinese immigrants did not hold the same levels of mental illness stigma as their parents. Rather, they generally held positive perceptions of people with ill mental health.

Therefore, those who are more acculturated to Western culture have a higher likelihood of seeking professional help for mental ill-health (Kim & Lee, 2022). For example, one study showed that second-generation Asian American community college students were more likely to seek professional help than their first-generation counterparts (Han & Pong, 2015). Likewise, a study aimed at investigating the relationship between acculturation and help-seeking attitudes among Chinese international students found that the students who more closely retain the norms of their heritage culture were less likely to seek professional counselling (Li et al., 2016). Another study also revealed that Australian university students who endorsed Asian values were less likely to seek professional help (Li et al., 2018). This was supported in a recent review by Bornschlegl et al. (2020), which found a positive relationship between the level of acculturation and help-seeking among university students. Overall, this indicates that enhanced assimilation to the dominant culture is associated with increased help-seeking.

1.5.3 Mental health literacy

Mental health literacy refers to "the knowledge and beliefs regarding mental health that aid in recognition, management and prevention of mental health issues" (Jorm et al., 1997, p. 184). Specifically, mental health literacy entails the ability to recognise specific disorders, one's knowledge and beliefs about self-help interventions and the professional help available, and beliefs that facilitate recognition and appropriate help-seeking (Casañas et al., 2018). Previous studies have consistently found that Chinese people have lower levels of mental health literacy compared to other cultural groups (Wong et al., 2017; Wong & Xuesong, 2011; Wong et al., 2011; Zhuang et al., 2017). For example, only 8% of Chinese people in Shanghai could correctly identify schizophrenia described in a vignette, and only and 12.2% could identify depression. Alarmingly, these figures were close to or slightly lower than the figures observed in the Chinese Australian sample (Wong & Xuesong, 2011; Wong et al., 2011; Wong et al., 2009) but much lower than that of Anglo Australians at 37.9-74.0% for schizophrenia, and 58.3-73.9% for depression (Reavley & Jorm, 2012a, 2012b; Wong et al., 2017). Similarly, Hickie et al. (2007) found that non-ethnic students in Australia demonstrated better knowledge of the symptoms of depression than those from ethnic Chinese backgrounds. Another study on suicide-specific knowledge and beliefs in Chinese and Australian university students also showed lower levels of suicide literacy in Chinese compared to their Australian counterparts (Han et al., 2018).

Further, there is cumulative evidence to show that better mental health literacy is associated with reduced stigma, more positive attitudes towards seeking professional help, and higher intentions and actual use of mental health services among university students (Cheng et al., 2018; Rafal et al., 2018; Smith & Shochet, 2011; Tariku Seboka et al., 2022). One study showed that Chinese-speaking international students in Melbourne developed increased mental health-related knowledge and less stigmatising attitudes towards mental ill-health after receiving Mental Health First Aid (MHFA) training (Zhuang et al., 2020). Similar findings were reported in a recent systematic evaluation of MHFA training for university students (El-Den et al., 2020). Other studies conducted by Kim et al. (2020) and Kim (2021) in Korean universities also suggested that mental health literacy decreased the help-seeking personal and self-

stigmas and eventually improved a person's attitudes toward and intentions to seek professional help.

1.6 Digital mental health interventions and stigma

Digital mental health interventions (also known as e-mental health) are one potential strategy to help university students overcome stigma and prompt them to seek help (Ryan et al., 2010). Currently, there are a number of intervention programs and initiatives in Australia that focus on reducing stigma among university students using digital mental health interventions (Morgan et al., 2021). These interventions involve providing a broad range of digital resources, services, and programs in a non-face-to-face environment through online or phone-based platforms (Wallin et al., 2018). Such interventions can deliver health literacy, health promotions, screening, prevention, early intervention, treatment, support, or a combination of these things to people who may be affected by a mental health issue (Riper et al., 2010). E-mental health has received a great deal of attention due to its convenience, accessibility, anonymity, and flexibility in terms of time and location (Hadler et al., 2021; Wallin et al., 2016). According to recent research, calling a helpline or using the Internet was the second-most commonly reported method of getting help (Fang et al., 2019).

Although digital mental health interventions provide many potential benefits, research has shown that college students reported significantly more favourable attitudes towards face-to-face counselling than online counselling, and this translated to higher help-seeking intentions (Bird et al., 2020; Wang et al., 2020). As an example, Bird et al. (2019) found that college students had lower expectations that an online treatment will be helpful, and they found online services far more uncomfortable than face-to-face treatments. Another study of a student sample in Korea reported that participants showed more favourable attitudes toward face-to-face treatments over online counselling (Bathje et al., 2014). However, there is encouraging support that, while Chinese international students studying in Australia preferred face-to-face treatments, many were also willing to participate in online mental health services (Lu et al., 2014).

Digital mental health interventions may be a better alternative for those who are hesitant to seek face-to-face support because of stigma. For instance, Levin et al. (2018) indicated that greater help-seeking self-stigma was associated with lower intentions to seek face-to-face professional help, but it did not affect their intention to seek online help. Another study reported that higher levels of help-seeking self-stigma were associated with greater intentions to seek treatment online than face-to-face, suggesting that online treatment may overcome self-stigma (Wallin et al., 2018). However, there have been mixed findings about the impact of stigma on online help-seeking attitudes. A study by Wang et al. (2020) found that university students have more negative attitudes toward online counselling modalities (videoconferencing and telephone), especially when help-seeking self-stigma was high. Bird et al. (2019) also reported a negative association between help-seeking self-stigma and attitudes toward online help, but the strength of the association was weaker compared to face-to-face help. Similarly, Ballesteros and Hilliard (2016) found a weaker negative association between help-seeking self-stigma and attitudes toward online counselling compared to that of face-to-face counselling. These studies suggest that help-seeking self-stigma has less of an influence on student attitudes toward online treatment compared to face-to-face help.

1.7 Aims and objectives

There is an urgent need to address the mental health needs of domestic and international students. Currently, there is limited literature on the association between different stigmas and help-seeking using digital mental health interventions, particularly in the context of higher education and for international students. Although previous research has examined the association of stigmas on help-seeking intentions for both face-to-face and online treatments, mixed findings within the literature indicate a need for a more nuanced understanding of the roles of each type of stigma on both modalities of help-seeking among university students.

The aim of the first study (Chapter 2) was to examine the current state of stigmas and beliefs related to mental health, the help-seeking behaviours, and the health-seeking intentions of domestic and international students in an Australian university, and compare the differences between the two.

We hypothesised that:

1) both international and domestic students in Australia preferred to rely on informal networks for mental health needs rather than use formal mental health services;
2) international students were less likely to have sought help and have lower intentions to seek help for mental health problems than domestic students; and
3) international students have higher mental illness personal and self-stigmas than domestic students.

The aim of the second study (Chapter 3) was to explore the demographic, mental health knowledge, and stigmas associated with the intention to seek online and face-to-face help among students with a Chinese background.

CHAPTER 2 STUDY 1 – A COMPARISON OF STIGMAS TOWARD MENTAL ILL-HEALTH AND HELP-SEEKING IN UNIVERSITY STUDENTS

Paper title:

"Mental ill-health-related beliefs, stigma and help-seeking: findings from a web-based survey of domestic and international university students in Australia"

Author names and affiliations:

Beibei Wang[1,2]; Isabella Choi [1,2]; Nicholas Glozier [1,2]; Tom Riley[3]； Valerie Elser[3]； Alyssa Milton [1,2]

1. *Central Clinical School, Faculty of Medicine and Health, University of Sydney, Sydney, Australia*
2. *ARC Centre of Excellence for Children and Families over the Life Course*
3. *batyr, Sydney, Australia.*

Correspondence to: Alyssa Milton, Central Clinical School, Faculty of Medicine and Health, University of Sydney, NSW, Australia

2.1 Abstract

Purpose: The prevalence and severity of mental ill-health in university students in Australia and internationally is a growing concern. University students display low rates of help-seeking from formal mental health services, and this is more pronounced among international students, often due to mental health-related beliefs and stigma. This study compared the mental health-related stigma, beliefs, help-seeking behaviours and intentions of domestic and international students at an Australian university.

Methods: A total of 119 international and 223 domestic Australian university students attending a preventative mental health program at the University of Sydney (batyr@uni) completed an anonymous voluntary online survey on their personal- and self-stigma toward mental illness, beliefs about recovery and empowerment, and help-seeking behaviours and intentions. A comparative analysis of international and domestic students was conducted, while adjusting for demographic factors.

Results: Both groups of students reported similar help-seeking patterns, with informal sources of help being the most common type of support used (*n*=98/111; 84.7%). International students were less likely to have sought parental help and had lower intentions to seek help from their social networks but had higher intentions to seek help from university counsellors, after adjustment for demographic factors. International students also exhibited greater personal stigma. Domestic students were more likely to rely on their social contacts for support, including intimate partners, friends, and family.

Conclusions: Both international and domestic Australian university students attending a preventative mental health program had high levels of prior mental health help-seeking and help-seeking intentions. International students had higher intentions to seek help from university counselling services than informal supports and had greater reported stigma. This underscores the need to offer targeted training for university personnel to provide mental health support and address stigma within international student populations.

Keywords: help-seeking; mental health; stigma; Australian students; international students; university students

2.2 Introduction

There is a high prevalence of mental ill-health among university students (Forbes-Mewett, 2019; Orygen, 2017). For example, in 2017, one-third of Australian university students rated their mental health as poor (Rickwood et al., 2016). Further, a pre-pandemic WHO survey reported that 31% of first-year university students globally, and up to 43% in Australia, met the criteria for one mental health condition over a 12-month period (Auerbach et al., 2018). Then, during the pandemic, the global prevalence of depression among university students rose to 31.2%, while 39.4% reported anxiety (Batra et al., 2021). Among Australian university students, there was also a significant increase in probable major depression (from 21.7% to 36.7%) and anxiety (from 32.3% to 47%) (Russell et al., 2023).

Compounding this issue is an observable trend of underusing mental health services among student populations (Osborn et al., 2022). A multinational survey of college students reported that only 30% of students had used mental health services in the past year for any 12-month psychiatric diagnosis (Bruffaerts et al., 2019). Other studies found that only 10% of Australian university students had intentions to seek help from student counselling services, 8% from a psychologist, and 3% from a psychiatrist (Reavley et al., 2012). Barriers such as stigma, embarrassment, preference for self-reliance, low mental health literacy and awareness of services, and negative beliefs about effectiveness of treatments were some reasons for their reluctance to seek professional help and tendency to rely on informal sources for support (Dunley & Papadopoulos, 2019; Ebert et al., 2019; Lui et al., 2022).

This low rate of help-seeking is more pronounced among international students. Australian studies suggested that international students were less likely to seek professional help for mental ill-health than domestic students (Clough et al., 2019; Lu et al., 2014; Skromanis et al., 2018). This disparity in help-seeking was highlighted in the Victorian Coroner's report, which found that international students who died by suicide had a lower prevalence of diagnosed mental health conditions and were less likely to have engaged with mental health services within six weeks before death compared to Australian-born students who died by suicide (Coroners Court of Victoria, 2019). Compared to domestic students, international students in

Australia used fewer on-campus (Francis-Taylor et al., 2023) and off-campus mental health services (LaMontagne et al., 2023). International students had poorer help-seeking attitudes and lower intentions to seek professional help for suicidal ideation (Clough et al., 2019). Rather, they preferred to rely on informal networks for support or delayed formal help-seeking until the problem reached a crisis point (Forbes-Mewett & Sawyer, 2016). Reported barriers to seeking help in international students included culturally-implanted stigmas or fear of 'losing face', limited knowledge of the healthcare system, poor insurance cover, concerns about cost, transportation inconvenience, lack of time, long wait-times, lack of culturally sensitive services, and language difficulties (Lu et al., 2014; Newton et al., 2021a; Orygen, 2020).

Stigma and negative beliefs about mental ill-health were among the most reported barriers to help seeking among university students in the literature (Dunley & Papadopoulos, 2019; Lui et al., 2022). This includes personal stigma and self-stigma. Personal stigma refers to an individual's personal attitude and reactions to people with mental ill-health (for instance, thinking "*people with mental ill-health are violent → they all scare me → I would stay away from them*") (Calear et al., 2011; Griffiths et al., 2006). Self-stigma is when an individual internalises these stereotypes and applies stigmatising beliefs to themselves ("*I am a weak person because of my mental ill-health → why try? I am not worthy of good job*") (Corrigan, 2004; Corrigan et al., 2006). Evidence from (Bornschlegl et al., 2020) systematic review indicated a negative association between stigma toward mental health and intentions to seek professional help among university students. More specifically, the review reported that university students with higher levels of personal stigma were less likely to use mental health services (Amarasuriya et al., 2018; Maeshima & Parent, 2022). There was also some suggestion that there may be a negative association between self-stigma and help-seeking attitudes (Tucker et al., 2013). Studies had shown that being an international student was associated with higher personal stigma and lower help-seeking intentions (LaMontagne et al., 2023; Maeshima & Parent, 2022). To date, however, no study has examined whether being an international student is associated with self-stigma.

Numerous studies have reported negative beliefs in university students about people experiencing mental ill-health; including viewing people as dangerous, weak of character, and being unlikely to fully recover from their symptoms (Kamimura et al., 2018; Murat et al., 2020; Puspitasari et al., 2020). However, there is a dearth of research comparing student groups in terms of their negative beliefs about empowerment and personal recovery, which are factors that influence help-seeking. Empowerment refers to the confidence and capacity to control one's own life and to influence the community and social structures in which one lives (Walker et al., 2010). Personal recovery involves hope and finding meaning in life (Leamy et al., 2011). Hence, doing more to understand the beliefs university students hold toward empowerment and personal recovery, and how such beliefs may affect their help-seeking, is important.

The aim of this paper was to compare the stigmas, beliefs, and help-seeking behaviours and intentions of domestic and international students in Australia toward mental ill-health. Based on the available evidence, we hypothesised that: 1) both international and domestic students rely on informal networks for their mental health needs rather than formal mental health services; 2) international students were less likely to have sought formal help and had lower intentions to seek professional help for mental ill-health than domestic students; and 3) international students had higher personal-stigma, self-stigma, and more pronounced negative beliefs about the empowerment and personal recovery of people with mental ill-health than domestic students.

2.3 Methods

2.3.1 Design

A cross-sectional anonymous online survey was conducted in the first half of 2022 at the University of Sydney among international and domestic students participating in the batyr@uni program. The study was approved by the University of Sydney Human Research Ethics Committee (HREC approval number：**2022/022**).

2.3.2 Study context and participants

This study was undertaken as part of a wider mixed methods evaluation of the batyr@uni program at the University of Sydney. Batyr is an Australian charity that focuses on preventative mental health for young people. It delivers the batyr@uni program (https://www.batyr.com.au/batyr-uni) in universities across Australia with the aim of reducing the stigma around mental ill-health and empowering university students to seek help. The program is a knowledge-based, contact-based intervention involving young people with lived experience who share their personal mental health journey with a focus on hope, resilience, and recovery. The batyr@uni program was promoted from January to June 2022, targeting all domestic and international, undergraduate and postgraduate, part-time and full-time, on-campus and online-based students at the University of Sydney. In this study, recruitment was conducted using a combination of opt-in and opt-out approaches. The program was offered as a replacement for compulsory class slots arranged by the faculties. Students in those classes automatically attended the program but they could choose to opt-out of either the program or the evalaution at any time. Alternatively, students could opt-in to attend ‘open programs', which were promoted through university channels, including faculty emails, CANVAS (the University's online learning platform), social media (e.g., Yammer), lecture announcements, and snowballing.

All students attending the batyr@uni program were invited to complete the online surveys as part of the wider evaluation. Data were collected at baseline (prior to batyr program delivery), immediately post intervention, and at a one-month follow-up. This study only reports on the baseline data. The participants had to be able to participate in English and provide informed consent. Additionally, the student characteristics in the obtained sample were compared to university student enrolment data in 2022 (see Appendix A.1).

2.3.3 Procedure

All potential attendees of the batyr@uni program were notified of the study at least one week before the workshop via a participant information flyer and a participant information statement. Those students who attended the batyr@uni program in their usual lecture were

invited to voluntarily participate in this cross-sectional study. After providing informed consent, participants completed a battery of questions on a web-based survey platform.

2.3.4 Measures

Demographics

All participants completed questions on their international/domestic student status, age, gender, country/place of birth, language background, Aboriginal or Torres Strait Islander background, sexual orientation, and level of study.

Help-seeking behaviour

The Actual Help Seeking Questionnaire (AHSQ) (Rickwood & Braithwaite, 1994) was used to assess past actual help-seeking behaviour. Participants who indicated that they had previously sought help for a personal or emotional problem or mental ill-health were provided a list of help-seeking sources and asked to indicate which source they had used. In line with Rickwood and Thomas (2012), the sources were categorised into formal (doctor, mental health professional, or university counselling service with the specific role of providing mental health care), non-face-to-face (online support services and phone helplines), and informal (friend, intimate partner, parent, other family member, tutor, spiritual leader).

Help-seeking intentions

The General Help Seeking Questionnaire (GHSQ) (Wilson et al., 2005) was used to assess the students' intentions to seek for personal or emotional problems across a variety of contexts. This GHSQ was adapted to include relevant supports relevant to a student population. A total of 12 items queried their intentions to seek help from formal sources, non-face-to-face sources, informal sources or not to seek help at all, rated on a 7-point Likert scale ranging from 1 (extremely unlikely) to 7 (extremely likely). Consistent with Thomas et al. (2014), we dichotomised the responses into low intentions (1-4) and high intentions (5-7) for analysis.

Mental illness self-stigma

The 10-item Self-stigma of Mental Illness scale (SSOMI) (Tucker et al., 2013) was used to assess the reduction in self-esteem and self-efficacy that results from being labelled with a mental illness. The items include statements such as "*I would feel inadequate if I had a mental*

illness", rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), with higher scores representing greater self-stigma. The SSOMI scale has demonstrated good internal consistency and reliability in previous research (α = .91-.93) (Lannin et al., 2015; Tucker et al., 2013). Internal consistency in the current study was high at α = .85.

Mental illness personal stigma

The 5-item Social Distance scale (SDS) (Livingston et al., 2013) was used to assess the students' willingness to have social contact with mentally ill people as a measure of personal stigma. The items include statements such as "*I would be happy to go out on the weekend with someone who has a mental health issue*", rated on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated greater willingness to interact with people who have mental ill-health or lower personal stigma. The SDS has good internal consistency (α = .90) (Livingston et al., 2013), and yielded a Cronbach's alpha of 0.91 with the current sample.

Beliefs

The Recovery Scale 3 (RS-3) (Corrigan et al., 2004) was used to evaluate the perceptions of people recovering from mental illness. The RS-3 is *a* 3-item metric consisting of three domains: confidence and hope; goal and success orientation; and no domination by symptoms. Sample items of the RS-3 include "*People with mental illness are hopeful about their future*", rated on a 9-point Likert scale from 1 (strongly disagree) to 9 (strongly agree), with higher total scores indicating better perceived personal recovery. Internal consistency in the current study was high (α = .80).

The 3-item Empowerment Scale 3 (ES-3) (Rogers et al., 2010) was used to assess beliefs about the social worth of people with mental ill-health. Items include statements such as "*I feel people with mental illness are persons of worth, at least on an equal basis with others*", rated on a 9-point Likert scale from 1 (strongly disagree) to 9 (strongly agree). Higher total scores indicate higher empowerment. Internal consistency in the current study was high (α = .82).

2.3.5 Data Analysis

All statistical analyses were conducted using SPSS version 28. Summary measures were computed as appropriate to the measure (e.g., frequencies for categorical, means for

numeric). As described above, items in the GHSQ and AHSQ were categorised into groups: a) informal sources; b) non-face-to-face sources; and c) formal sources. Differences in demographic characteristics between domestic and international students were analysed using chi-square or t-tests, with two-sided *p*-values reported and a significance level criterion of 0.05. Multivariable logistic and linear regression were used to assess the differences between domestic and international students, and adjusting for age, gender, degree, sexual orientation, and home language background.

2.4 Results

Of the 453 students who consented to taking part in the baseline survey, 342 participants provided data. There were no data on program attendees who did not consent to participation in the research to assess selection bias. The sample is representative of the student population based on comparisons with the University of Sydney enrolment data (see Appendix A.1), as the proportions of key demographic characteristics generally matched the student population, particularly in terms of gender, home language background, and indigenous identity. However, domestic students (65.2% sample vs. 56.1% enrolment) and undergraduate students (76.6% sample vs. 57.1% enrolment) were over-represented in the sample.

The demographics of the 342 participants are provided in Table 2.1. The mean age of the participants was 20.6 years (*SD* = 4.09; range = 17-47), with roughly equal representation of female and male students (51.2% vs. 46.8%, respectively). The majority (*n*=223; 65.2%) identified as domestic students, while 119 (34.8%) were international students. International students from mainland China comprised 42.0% of the total international sample. Compared to domestic students, the international students were older ($t_{(336)} = 2.04$, $p = 0.04$), more likely to speak a non-English language at home ($\chi^2_{(1, 341)} = 86.68$, $p < 0.01$), more likely to be studying a postgraduate degree ($\chi^2_{(2, 342)} = 9.40$, $p < 0.01$), and less likely to have experience with a close personal contact with mental illness ($\chi^2_{(2, 249)} = 7.83$, $p = 0.02$). There were no other significant differences between domestic and international students.

Table 2.1: *Demographic characteristics of the sample*

Variable	All students (*N*=342)	International students (*N*=119) 34.8%	Domestic students (*N*=223) 65.2%	χ^2 / *t-test* (Intl vs Dom)	*p* value
Age (years)					
M (SD)	20.64 (4.09)	21.26 (3.08)	20.31 (4.51)	2.04	**0.04**
Range	17- 47	17 - 35	17 - 47		
	***n* (%)**	***n* (%)**	***n* (%)**		
Gender					
Male or man	160 (46.8)	59 (49.6)	101 (45.5)	3.52	0.17
Female or woman	175 (51.2)	60 (50.4)	115 (51.8)		
Other or non-binary	6 (1.8)	0	6 (2.7)		
Degree					
Undergraduate	262 (76.6)	80 (67.2)	182 (81.6)	9.40	**<0.01**
Postgraduate	77 (22.5)	37 (31.1)	40 (17.9)		
None selected	3 (0.9)	2 (1.7)	1 (0.4)		
Place of birth					
Australia	144 (42.2)	0	144 (64.5)		
Mainland China	72 (21.1)	49 (42.0)	22 (9.9)		
Hong Kong	7 (2.0)	5 (4.2)	2 (0.9)		
Taiwan	5 (1.5)	5 (4.2)	0		
India	18 (5.3)	11(9.2)	7 (3.1)		
Malaysia	11 (3.2)	11 (9.2)	0		
Republic of Korea (South)	5 (1.5)	3 (2.5)	2 (0.8)		
Other	80 (23.2)	35 (28.7)	46 (20.8)		
Language spoken at home				86.68	**<0.01**
English	183 (53.5)	23 (19.3)	160 (71.7)		
Language other than English	158 (46.2)	96 (80.7)	62 (27.8)		
None selected	1(0.3)	0	1 (0.4)		
Sexual Orientation					
LGBTQIA+	47 (13.7)	14 (11.8)	33 (14.8)	5.94	0.05
Heterosexual	281 (82.2)	96 (80.7)	185 (83.0)		
Prefer not to say	14 (4.1)	9 (7.6)	5 (2.2)		
Previously sought help (*n*= 247)					
Yes	111 (44.9)	29 (37.2)	82 (48.5)	4.32	0.12
No	115 (46.6)	39 (50.0)	76 (45.0)		
Other (unsure/ rather not say)	21 (8.5)	10 (12.8)	11 (6.5)		
Family / close friend with mental ill-health (*n*= 249)				7.83	**0.02**
Yes	157 (63.1)	40 (50.6)	117 (68.8)		
No	45 (18.1)	20 (25.3)	25 (14.7)		
Prefer not to say	47 (18.8)	19 (24.1)	28 (16.5)		

M: mean; SD: standard deviation; LGBTQIA+: lesbian, gay, bisexual, transgender, queer, intersex, asexual; OR: odds ratio; CI: confidence interval. Two-sided p values < 0.05 are indicated in bold.

2.4.1 Differences in past help-seeking behaviour

Of the students who responded to the question about seeking help in the past for a personal, emotional or mental health problem, almost half (*n*=111/247; 44.9%) reported having sought help. Table 3.2 shows that most respondents sought help from informal sources (84.7%), followed by non-face-to-face sources (65.8%), then formal sources (45.0%). Drilling down, phone helplines (64.0%) were the most common source of help, followed by friends (55.9%), then parents (54.1%). About one-third had sought help from a mental health professional (36.9%), but online support services were rarely used (10.8%).

There was no statistically significant difference between domestic and international students on prior help-seeking from formal, informal, or non-face-to-face sources (Table 2.2). However, international students were far less likely than domestic students to have sought help from a parent (OR=0.17, 95%CI [0.07, 0.46]) and this remained statistically significant after adjusting for demographic characteristics (OR=0.19, 95%CI [0.06, 0.60]).

Table 2.2: *Comparison of past help-seeking behaviours for a personal, emotional, or mental health problem between international and domestic students*

Sources of help	Overall (*N*= 111)	International students (*N* =29)	Domestic students (*N* =82)	Unadjusted bivariate comparison (Intl vs Dom)		Demographic factors adjusted comparison (*N=106)*	
	n (%)	*n* (%)	*n* (%)	OR	95% CI	OR	95% CI
Formal	50 (45.0)	12 (41.1)	38 (46.3)	0.79	0.33,1.88	0.70	0.25,2.02
Mental health professional	41 (36.9)	8 (27.6)	33 (40.2)	0.56	0.22,1.43	0.76	0.24,2.39
Doctor or GP	18 (16.2)	7 (24.1)	11 (13.4)	2.30	0.77,6.90	1.50	0.41,5.50
University counsellor	7 (6.3)	2 (6.9)	5 (6.1)	-	-	-	-
Non-face-to-face	73 (65.8)	16 (55.2)	57 (69.5)	0.59	0.25,1.42	0.61	0.169,1.94
Phone helpline	71 (64.0)	16 (55.2)	55 (67.1)	0.67	0.28,1.60	0.62	0.19,2.00
Online support services	12 (10.8)	0	12(14.6)	-	-	-	-
Informal	94 (84.7)	24 (82.8)	70 (85.4)	0.93	0.30,2.92	0.70	0.17,2.99
Friends	62 (55.9)	15 (51.7)	47 (57.3)	0.82	0.35,1.93	1.04	0.37,2.92
Parents	60 (54.1)	7 (24.1)	53 (64.6)	**0.17****	0.07,0.46	**0.19****	0.06,0.60
Intimate partner	53 (47.7)	13 (44.8)	40 (48.8)	0.81	0.34,1.92	0.64	0.22,1.84
Other relative or family member	20 (18.0)	1(3.4)	19 (23.2)	-			
Lecturer or tutor	2 (1.8)	0	2 (2.4)	-			
Spiritual or religious leader	3 (2.7)	1 (3.4)	2 (2.4)	-			

Note. - indicates **logistic regression** not analysed due to low response rate. OR: odds ratio, CI: confidence interval. ** p<0.01, *p<0.05, two-tailed, p values < 0.05 are indicated in bold. Bivariate (unadjusted) comparison of international versus domestic students (reference). Multivariate (adjusted) comparison of international versus domestic students: Odds ratios (logistic regression), adjusted for age, gender, degree, sexual orientation, home language background. For questions related to sexual orientation, the option of "prefer not to say" (n=1), and for questions related to the gender, the option of "other" (n=4) were not included in the analysis.

2.4.2 Differences in help-seeking intentions

The majority of respondents (*n* = 308/333; 90.1%) indicated they would seek help if experiencing a personal, emotional or mental health problem. Table 2.3 shows that most of the respondents would prefer to seek help from informal sources (89.2%), followed by formal sources (50.3%) and then non-face-to-face sources (20.5%). The most common sources of potential help would be from an intimate partner (75.4%), friends (66.7%), parents (53.8%), followed by a mental health professional (41.2%) then a GP (34.8%). Spiritual or religious leaders, lecturers or tutors, and phone helplines would be the least likely options.

International students were over twice as likely to report they would seek help from lecturers (OR=2.42, 95%CI [1.24,4.70]) and university counsellors (OR=2.39, 95%CI [1.40,4.06]). After adjusting for demographic factors, there was a significantly higher likelihood among international students to report intention to seek help from university counsellors (OR=2.73, 95%CI [1.40,5.33]), but the difference for lecturers was no longer significant, and there was a borderline significance for intentions to seek help from mental health professionals (OR=1.84, 95%CI [1.00,3.36]) compared to domestic students (Table 2.3). International students were also less likely than domestic students to report intention to seek help from an intimate partner (OR=0.26, 95%CI [0.13,0.53]), friends (OR=0.38, 95%CI [0.20,0.71]), and other family members (OR=0.52, 95%CI [0.27,0.98]), after adjusting for demographic factors. However, international students were less likely than domestic students to report no intention to seek help from anyone (OR= 0.46, 95%CI [0.24,0.89]), even after adjusting for demographic factors.

Table 2.3*: Comparison of intentions to seek help for a personal, emotional or mental health problem from different sources between international and domestic students*

Sources of help	All students (*N*=342)	International students (*N*=119)	Domestic students (*N*=223)	Unadjusted bivariate comparison (Intl vs Dom)		Demographic factors adjusted comparison *(N=318)*	
	n (%)	*n* (%)	*n* (%)	*OR*	95% CI	*OR*	95% CI
Formal	172 (50.3)	58 (52.3)	114(51.4)	1.19	0.74,1.92	1.16	0.65,2.09
Mental health professional	141 (41.2)	51 (45.1)	90(40.5)	1.45	0.90,2.33	**1.84***	1.00,3.36
Doctor or GP	119 (34.8)	41 (36.6)	78 (35.1)	1.14	0.69,1.87	0.95	0.52,1.73
University counsellor	86 (25.1)	39 (34.8)	47(21.2)	**2.39****	1.40,4.06	**2.73****	1.40,5.33
Non-face-to-face	70 (20.5)	24 (21.1)	46 (20.7)	1.31	0.73,2.34	1.32	0.66,2.65
Online support services	58 (17.0)	19 (16.7)	39 (17.6)	1.32	0.70,2.48	1.47	0.69,3.13
Phone helpline	43 (12.6)	11 (9.6)	32 (14.4)	0.77	0.36,1.68	0.96	0.38,2.38
Informal	305 (89.2)	99 (90.8)	206 (94.9)	0.51	0.21,1.21	0.41	0.14,1.21
Intimate partner	258 (75.4)	76 (66.7)	182 (82.4)	**0.49***	0.28,0.84	**0.26****	0.13,0.53
Friend	228 (66.7)	65 (57.0)	163 (73.8)	**0.45****	0.27,0.73	**0.38****	0.20,0.71
Parent	184 (53.8)	59 (51.8)	125 (56.3)	0.75	0.47,1.21	0.60	0.34,1.07
Other relative or family member	102 (29.8)	29 (25.9)	73 (33.0)	0.65	0.38,1.11	**0.52***	0.27,0.98
Lecturer or tutor	44 (12.9)	23 (20.5)	21 (9.5)	**2.42****	1.24,4.70	1.72	0.78,3.80
Spiritual or religious leader	36 (10.5)	15 (13.3)	21 (9.5)	1.30	0.60,2.79	0.41	0.14,1.22
I would not seek help from anyone	72 (21.1)	16 (14.3)	56 (25.2)	**0.46***	0.24,0.89	**0.42***	0.20,0.90

OR: odds ratio, *CI*: confidence interval. ** $p<0.01$, *$p<0.05$, two-tailed, p values < 0.05 are indicated in bold. Bivariate (unadjusted) comparison of international versus domestic students (reference). Multivariate (adjusted) comparison of international versus domestic students: Odds ratios (logistic regression), adjusted for age, gender, degree, sexual orientation, home language background. For questions related to the gender, the option of "other" (n=6), for questions related to the sexual orientation, the option of "prefer not to say" (n=14), and for questions related to the degree, the option of "none selected" (n=3), was not included in the analysis. For mental health professionals, the adjusted odds ratio was significant with a p value of 0.049.

2.4.3 Differences in stigmas and beliefs

As shown in Table 2.4, there were significant differences between the student groups in terms of both personal stigma (β= -2.41*,SE* =0.43 , *t*(296) =-5.56 , 95%CI [-3.27, -1.56]) and empowerment (β= *-1.95,SE* =0.51 , *t*(292) =-3.82 , 95%CI [-2.96, -0.95]), but the differences for empowerment was no longer significant after adjusting for demographic factors. International students were less willing to interact with people with a mental illness (β = -1.23*, SE* =0.50, *t* (291) =-2.65 , 95%CI [-2.30, -0.34]) compared to their domestic counterparts. No significant differences were observed between student groups in terms of self-stigma (β= -0.08*, SE* =0.08, *t*(280) =-1.01 , 95%CI [-0.24,0.06]) or recovery scores (β= -0.76*,SE* =0.59 , *t*(297) = -1.29, 95%CI [-1.91, 0.34]).

Table 2.4*: Comparison of mental health-related stigma and beliefs between international and domestic students*

Variable	All students (*N*=342)	International students (*N*=119)	Domestic students (*N*=223)	Unadjusted bivariate comparison (Intl vs Dom)		Demographic factors adjusted comparison *(N=318)*	
	M (SD)	*M (SD)*	*M (SD)*	*β*	95% CI	β	95% CI
Stigmas							
Self-stigma	3.27 (0.64)	3.21 (0.71)	3.30 (0.60)	-0.08	-0.24,0.08	0.12	-0.31, 0.73
Personal stigma	20.82 (3.71)	19.11 (3.94)	21.70 (3.26)	**-2.41****	-3.27, -1.56	**-1.23****	-2.30, -0.34
Beliefs							
Empowerment	20.67 (4.89)	22.07 (5.17)	24.01 (3.68)	**-1.95****	-2.96, -0.95	-1.91	-2.385, 0.00
Personal recovery	23.38 (4.32)	20.15 (5.27)	20.93 (4.68)	-0.76	-1.93, 0.41	-0.20	-1.61,1.20

M: mean; *SD*: standard deviation; *β*: coefficients, *CI*: confidence interval. *** p<0.01, *p<0.05, two-tailed, p* values < 0.05 are indicated in bold. Bivariate (unadjusted) comparison of international versus domestic students (reference). Multivariate (adjusted) comparison of international versus domestic students: coefficients (linear regression), adjusted for age, gender, degree, sexual orientation, home language background. For questions related to the gender, the option of "other" (n=6), for questions related to the sexual orientation, the option of "prefer not to say" (n=14), and for questions related to the degree, the option of "none selected" (n=3), were not included in the analysis.

2.5 Discussion

This study compared the mental health-related stigma, beliefs about empowerment and personal recovery, help-seeking behaviours and intentions of domestic and international students at an Australian university. The participants were recruited from a voluntary mental well-being program and, therefore, it is safe to assume that they have a predisposed interest in mental health. From this sample, we found that both domestic and international students most commonly turn to informal channels of help for their problems, and had higher intentions to seek help from informal sources than formal or non-face-to-face sources. Compared to domestic students, international students were less likely to have sought parental help but had higher intentions to seek help from university counsellors. Furthermore, international students were more likely to harbour greater personal stigma, but not self-stigma. Domestic students, on the other hand, were more likely to intend to rely on their social contacts for support, such as friends, intimate partners, or other family members. Interestingly, they also had higher intentions of not seeking help from anyone.

2.5.1 Differences in help-seeking behaviours

Our findings indicated that both international and domestic students who had previously sought help for mental ill-health had similar help-seeking patterns. Again, informal sources (82.8% vs. 85.4%) were the most frequently relied upon, followed by non-face-to-face sources (55.2% vs. 69.5%), then formal supports (41.1% vs. 46.3%). This relatively narrow gap between the two student groups contrasts with the findings of previous studies at other Australian universities, which have reported a far greater difference in the use of professional counselling (17% international vs. 51% domestic students in Tasmania) (Skromanis et al., 2018) and other professional sources (50% international vs. 86% domestic students in a 2019 Melbourne study) (LaMontagne et al., 2023). Notably, these Melbourne students reported overall greater use of community- and university-based professional sources than in our study (LaMontagne et al., 2023). By contrast, our findings suggested that the rate of sought help among international students was similar to that of domestic students. This difference might be

attributed to the extra efforts made by universities to promote formal mental health services during the pandemic. However, caution should be applied when interpreting this comparison as our study was not longitudinal. Additionally, our sample were students who attended a preventative mental health program, thus they may be more likely to report higher previous service use than in previous studies. Further, as our sample under-represented international students compared to the university's enrolment data (Appendix A.1), those international students who completed the survey may be more willing to disclose previous help-seeking than those who did not attend the program or complete the survey.

Compared to domestic students, we also found that international students were less likely to have sought help from parents. Outside of physical proximity making it more challenging to seek parental support, it is possible that international students do not want to burden their families, especially during the pandemic when so many families have been impacted (Gayatri & Puspitasari, 2022). Students studying abroad are often seen as the pride of their family, possibly making it harder to share problems with family (Yasui et al., 2022). By contrast, Australian parents have been found to have better mental health literacy and were more willing to listen, talk with, and support their child (Jorm et al., 2007).

Interestingly, in both groups, over half had used a phone helpline when seeking help in the past, but only 20% reported an intention to use this kind of help if they hypothetically needed it. The considerable use of helpline services we observed might be attributed to the lockdown measures implemented during COVID-19, such as campus closures. While helpline usage increased significantly during the pandemic in Australia (Chatterton et al., 2022), especially among young adults (Batchelor et al., 2021), post-pandemic trends indicated that there remains a preference for face-to-face counselling among youth, including university students (Van Rooij et al., 2023).

None of the international students in this study had accessed online support services. Despite the willingness of international students in Australia to access internet-based interventions, barriers like limited knowledge of symptoms and available treatments, and concerns about

confidentiality and the quality of online resources might have prevented them from seeking help (Chan et al., 2016). Clearly, raising awareness of the digital resources available among the international student population is a priority. One such intervention that attempts to address these issues is an online help-seeking application targeting Chinese-speaking international students (Choi et al., 2023). Findings by Choi et al. (2023) suggested that the students who signed up to the intervention were at risk of mental ill-health, had experienced mental ill-health in the past but had relied on informal support, and wanted information in their native language. This suggested that international students do want to access digital mental health interventions, as long as it is tailored to meet their needs. The provision of tailored supports is an important consideration for universities and mental health organisations when developing policies, procedures, and resources to support mental health in international students.

2.5.2 Differences in help-seeking intentions

There were strong intentions to seek informal help from both groups, but domestic students appeared more likely to not seek help from anyone (25% vs 14% international). The endorsement rate for domestic students (25%) is consistent with a study by LaMontagne et al. (2023); however, their findings indicated that international students (35% vs 24% of domestic students) were more likely to deal with problems on their own. The likely reason for international students reporting higher overall intentions to seek help in our study may be because they experienced greater psychological distress than domestic students during the pandemic (Mihrshahi et al., 2022; Russell et al., 2023). This may be particularly so for Chinese international students residing in Australia (Ke et al., 2023), which accounted for about half of our international student sample. It is also possible that the international students attending the baytr program in our study were more willing to disclose help-seeking intentions, compared to those surveyed in the LaMontagne et al. (2023) study.

Specifically, compared to domestic students, international students were more likely to report an intention to seek help from university counsellors and less willing to seek support from

their social contacts. This is in line with previous research indicating that international students in Australia had higher intention to seek help from university-based professionals and lower intentions to seek help from other professionals (LaMontagne et al., 2023). The preference for university-based professionals help may reflect the unfamiliarity of international students with the Australian healthcare system or a lack of understanding about their Overseas Student Health Cover and what services are covered by policy (Orygen, 2020). This highlights the importance of universities increasing their efforts to support the mental health needs of international students. Resources and training need to be provided to university counselling services in order to provide accessible and culturally-sensitive support services for international students.

2.5.3 Differences in stigma towards mental ill-health

Our results showed that international students held more stigmatising attitudes towards individuals with mental ill-health than their domestic counterparts. Prior studies have found that greater personal stigma is associated with lower intentions to seek help for mental problems from informal sources, and more negative perceptions about the helpfulness of this kind of support (Yap et al., 2011). Indeed, we found that international students reported lower intentions to seek help from partners, friends, and family members. This might be because over half of the international students in this study come from a Chinese background, where the stigmas surrounding mental health and concerns about “loss of face” are more severe (Xu et al., 2018). Another possibility is that the domestic students in our study reported a significantly higher frequency of a close personal contact experiencing mental ill-health, which has been associated with higher help-seeking rates, better recognition of mental ill-health, and fewer stigmatising attitudes (Tan et al., 2021). Indeed, social contact is considered to be an effective intervention in reducing the personal stigma toward mental ill-health and increasing tendencies to seek help in university students (Brown, 2020). Furthering this rationale, future researchers, policymakers, and practitioners should consider developing targeted contact-based initiatives designed to reduce the stigmas surrounding mental ill-health along with help-seeking interventions specifically tailored for international students.

2.6 Limitations

This study has several limitations. First, although the participants were recruited from a mix of opt-in and opt-out approaches, the possibility of self-selection bias does exist in this study since the sample comprised students with greater interest in mental health issues. This may have contributed to the over-representation of students with higher help-seeking intentions. Moreover, the under-representation of international (34.8%) and postgraduate students (22.5%) in our sample compared to the university's enrolment data (43.9% international, 42.9% postgraduate) also suggests that there may be a selection bias. It is reasonable to assume that international students who were already interested in mental health or seeking help for a problem self-selected to participate in our survey. If so, this would explain the relatively small differences in help-seeking behaviours among the two student groups. Second, there is a degree of over-representation of Chinese international students (42%), and considerable under-representation of students from India (5.3%) and Nepal (0%) in our study relative to the national international student data (38% from China, 19% from India, 8% from Nepal) (Ferguson & Spinks, 2021). Hence, caution must be exercised when generalising the results to international university students from other cultural backgrounds. Third, we did not investigate the potential link between stigma and help-seeking given our primary objective was to look at the differences between the two student groups. Nevertheless, this study provides a foundation for future research to investigate the relationship between stigma and help-seeking in greater depth.

2.7 Conclusion

In summary, our findings revealed that both domestic and international students would prefer to seek help for mental and emotional problems from their social networks, over professional or online services. The international students in this study were more likely to report intention to seek help from university counsellors than domestic students. They also had higher personal stigma and were less likely to rely on parents or other social supports than domestic students. These findings highlight that targeted training and resources for university counsellors to meet the specific needs of international students is a priority. There is also a

need to develop anti-stigma interventions and strategies for this cohort of students, such as contact-based interventions and tailored digital interventions.

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Competing interests

The authors declare that they have no competing interests.

2.7.1 Appendix A.1

Supplementary Table 1*: Demographic characteristics of the total university population (N=69,200) vs the survey respondents (N=342)*

Variable	Survey sample (*N*=342)	Student population (*N*=69,200)
	n (%)	*n (%)*
Gender		
Male or Man	160 (46.8)	29,412(42.5)
Female or Woman	175 (51.2)	39,693 (57.4)
Other (non-binary/ use a different term)	6 (1.8)	95(0.1)
Student status		
Domestic	223(65.2)	38,852(56.1)
International	119(34.8)	30,348(43.9)
Degree		
Undergraduate	262 (76.6)	39,507(57.1)
Postgraduate	77 (22.5)	29,693(42.9)
None selected	3 (0.9)	
Home language		
English	183 (53.5)	40,782(58.9)
Language other than English	158 (46.2)	28,418(41.1)
None selected	1(0.3)	
Indigenous		
Indigenous	6 (1.8)	473 (0.7)
Non-Indigenous	296 (86.5)	68,727 (99.3)
None selected	40 (11.7)	

CHAPTER 3 STUDY 2 – HELP-SEEKING INTENTIONS IN CHINESE -BACKGROUND STUDENTS

Paper title:

"Factors associated with intention to seek face-to-face and online mental health supports among Chinese-background students in Australia"

***Author names and affiliations**:*

Beibei Wang[1, 2]; Nicholas Glozier [1, 2]; Isabella Choi [1, 2]

1. *Central Clinical School, Faculty of Medicine and Health, University of Sydney, Sydney, Australia*
2. *Australian Research Council Centre of Excellence for Children and Families over the Life Course*

Correspondence to: Beibei Wang, Central Clinical School, Faculty of Medicine and Health, University of Sydney, NSW, Australia. Email: bwan9633@uni.sydney.edu.au

3.1 Abstract

Purpose: Students with a Chinese background in Australian universities tend to underuse both face-to-face and online mental health services. This study aimed to explore the associations between mental health knowledge, different types of stigmas and the help-seeking intentions of Chinese-background students.

Methods: Students of Chinese ethnicity were recruited from three Australian universities to complete an online cross-sectional survey on mental illness personal- and self- stigmas, help-seeking personal- and self-stigmas, mental health knowledge, and intentions to seek help from online and face-to-face sources for psychological problems.

Results: A total of 310 students completed the survey. The majority were female (65%), and most were international students (69%). A substantial proportion of the sample self-reported current mental ill-health (69.4%) and that they had previously sought help for their condition (85.8%). Overall, there were high intentions to seek help from online (69.7%) and face-to-face (77.7%) sources. Multivariate analyses revealed that international student status, a longer length of stay in Australia, better English proficiency, and lower mental illness personal stigma were associated with higher intentions to seek help online; whereas international student status, prior help-seeking experience, and mental health knowledge were associated with greater intentions to seek face-to-face help.

Conclusions: The results suggested that, among these relatively unwell Chinese-background students, being an international student was associated with higher intentions to seek help. Strategies to promote help-seeking in Chinese-background students in Australia should therefore focus on supporting domestic and the less acculturated students, as well as addressing the broader aspects of mental health, such as increasing knowledge and reducing mental illness personal stigma.

Keywords: help-seeking, mental health, stigma, mental health literacy, Chinese Australian students, Chinese international students, university students.

3.2 Introduction

Mental ill-health is highly prevalent among university students. For example, a WHO survey reported that 31% of first-year university students globally, and up to 43% in Australia, met the criteria for suffering from one mental health condition over a 12-month period (Auerbach et al., 2018). Yet only 30% of students with a 12-month psychiatric diagnosis had used mental health services in the past year (Bruffaerts et al., 2019). Other studies have shown that international students and students of ethnic minorities have even lower rates of service access (Forbes-Mewett, 2019; Hsu & Alden, 2008; Lu et al., 2014). For instance, only 17-32.5% of international students in Australia have used mental health services compared to 55- 64.4% of domestic students (Clough et al., 2019; Francis-Taylor et al., 2023; Skromanis et al., 2018).

According to data from the Australian Bureau of Statistics (2021), students with a Chinese background are one of Australia's largest ethnic groups (5%; ranking among the top five ancestries). Moreover, in 2021, international students in Australia accounted for 29% of all enrolled students (Ferguson & Spinks, 2021). However, the literature also suggested that Chinese students are reluctant to seek help for mental health problems. One study found that only 9% of students with a Chinese background and heightened mental distress had used any type of formal help (Lu et al., 2014). Additionally, students of Chinese heritage were more likely than students of other ancestries to delay seeking treatment until their condition became quite severe (Hsu & Alden, 2008). Even more alarmingly, around 50% of Chinese university students who expressed a reluctance to seek professional help for suicidal ideation reported that informal support from family and friends could be a suitable substitute for professional help. By comparison, only 10% of domestic Australian students felt the same way (Han et al., 2018).

In recent years, there has been growing interest in using e-mental health to prompt help-seeking among university students. E-mental health refers to the provision of digital services and resources in a non-face-to-face environment through online or phone-based platforms. These programs can deliver a range of supports related to mental health, including health

literacy, screening, prevention, early intervention, treatment, support, self-help, or a combination of these things (Apolinário-Hagen et al., 2017). It has been suggested that people who are reluctant to seek face-to-face treatment may find e-mental health more acceptable due to its accessibility, anonymity, and flexibility (Hadler et al., 2021). There is also some evidence that students from a Chinese background might be willing to engage in e-mental health. For example, in a study by (Lu et al., 2014), over 75% of Chinese students studying in Australia expressed willingness to engage in online mental health treatment. Similarly, Choi et al. (2015) found that 88% of Chinese Australians would be willing to try an e-mental health service.

However, to increase the use of mental health support in students with a Chinese background, we need to develop a better understanding of the factors associated with help-seeking, especially in terms of face-to-face and online supports. The theory of planned behaviour posits that help-seeking intentions are the most proximal determinants of actual behaviours (Ajzen, 1991). Prior studies of university students have found that being older, being female, and having a lower level of tertiary education (undergraduate vs. graduate students; masters vs. doctoral students) was associated with higher help-seeking intentions (Lemma et al., 2022; Lian et al., 2020; Zeng et al., 2023). Additionally, students who have sought help in the past or knew someone with mental illness were more likely to seek help themselves (Disabato et al., 2018; Niegocki & Aegisdottir, 2019; Seyfi et al., 2013). Further, students with mental health concerns, such as high levels of anxiety and depression, reported being more likely to seek help (Lee & Shin, 2022; Zeng et al., 2023).

It is also important to note that ethnic students may experience additional factors that influence their help-seeking. Students from non-English speaking backgrounds may have difficulties expressing their mental health concerns, which deters them from seeking help (Ma et al., 2022). Being an international student has also been associated with lower help-seeking intentions (after adjusting for age and sex) (LaMontagne et al., 2023). However, Clough et al. (2019) reported that being an international student was only associated with reduced help-seeking intentions for suicidal ideation, not for emotional problems, after adjusting for

previous mental health service use and years at university. In addition, students who were more acculturated to Western culture have a higher likelihood of seeking formal help for mental health concerns (Bornschlegl et al., 2020; Kim & Lee, 2022). For example, Chinese international students who retained the norms of their heritage were less likely to seek professional counselling services (Li et al., 2016). Similarly, Australian university students who endorsed Asian values were also less likely to seek professional help (Li et al., 2018).

The literature also identifies mental health knowledge and stigma as key factors associated with low help-seeking intentions (Magnusdottir & Thornicroft, 2022), and these may be particularly relevant to help-seeking in Chinese students. Mental health literacy is defined as "knowledge and beliefs regarding mental health that aid in recognition, management and prevention of mental health issues" (Jorm et al., 1997). Among university students, low mental health literacy may contribute to challenges with identifying the early signs and symptoms of mental health problems and, in turn, seeking professional help when needed (Dombou et al., 2023). Previous studies have found that Chinese people have lower levels of mental health literacy compared to other cultural groups. For example, only 14% of Chinese people were able to correctly identify major depression, compared to 68% of Australians and 23% of Japanese in the sample (Wong et al., 2011; Wong et al., 2010). Chinese university students also reported that limited knowledge of mental health services, difficulties recognising the symptoms of mental disorders, and a belief that their distress was not severe enough stopped them from seeking professional help (Lu et al., 2014).

Stigma refers to stereotypes, prejudice, and discrimination against someone because of a certain characteristic, such as race, gender, or mental illness (Corrigan & Watson, 2002). In traditional Chinese culture, mental health problems are often viewed as the result of moral defects, weakness, punishment for past misdeeds, or genetic flaws (Yang et al., 2013; Yee et al., 2020). Under these cultural influences, Chinese people with a mental illness may internalise these stigmatising beliefs, which is known as mental illness self-stigma (Young & Ng, 2016). Chinese people have strong concerns about how others perceive them, and they may avoid disclosing personal problems or mental ill-health to save face from embarrassment

and public shame (Ma et al., 2022; Tan et al., 2020). Also, they may fear being labelled as mentally ill because that might mean they are excluded from their social networks (Yin et al., 2020). These beliefs, known as mental illness personal stigma (Calear et al., 2011; Griffiths et al., 2006), may deter individuals from seeking help for their symptoms.

Likewise, help-seeking personal stigma refers to an individual's stigmatising attitudes towards people seeking psychological help, while help-seeking self-stigma refers to the reduction in self-worth one experiences or anticipates experiencing when they themselves seek professional help (Vogel et al., 2013; Vogel et al., 2006). Studies have suggested that help-seeking self-stigma may have a stronger association in university student populations with help-seeking intentions than mental illness personal- and self- stigma (Lannin et al., 2015; Tucker et al., 2013). In a study on Chinese international students, stigma for seeking psychological help was also found to be associated with lower help-seeking intentions (Lian et al., 2020).

Given that Chinese/international students are the largest ethnic minority group in Australia, there is a strong need to better understand how to improve their use of mental health services. This study aimed to explore the demographics, mental health knowledge, and stigmas associated with one's intentions to seek online and face-to-face help among students from a Chinese background.

3.3 Methods

3.3.1 Design

An online cross-sectional survey was conducted among Chinese-background university students during April 2022. Participants completed an anonymous online survey via REDCap. The study was approved by the University of Sydney Human Research Ethics Committee (HREC approval number: **2021/960**).

3.3.2 Participants and procedure

Participants had to be from a Chinese-speaking background or Chinese ancestry, aged 18 years and above, currently enrolled in an Australian university, with access to reliable internet connection. The participants were recruited via social media posts and paid advertisements on WeChat, Instagram, and Facebook posted by the University of Sydney and the student associations of three Australian universities (the University of Sydney, Deakin University, and the University of New South Wales). Posters were also placed across the university campuses. Recruitment materials referred to the study as about understanding intentions to seek online and face-to-face help for mental ill-health in Chinese-background students. Interested persons were directed to the survey website hosted on REDCap and asked to provide informed consent before completing the survey. All study material was available in both English and Chinese. After completing the survey, participants could opt into a prize draw to win one of ten $20 shopping gift cards as reimbursement for their time.

3.3.3 Measures

Demographics

All participants completed questions on their age, gender, international/domestic student status, home country, length of time in Australia, English proficiency, number of years of university completed, self-reported mental ill-health in the past month, and whether they had previously sought help for mental ill-health.

Help-seeking intentions

The General Help Seeking Questionnaire (GHSQ) was used to assess the respondents' intentions to seek help for personal and/or emotional problems (Wilson et al., 2005). The GHSQ was adapted to include relevant supports to the university student population. Participants were asked to rate their intention to seek help from face-to-face source (e.g. doctor or mental health professional) and online service (e.g., online information websites, e-Mental Health programs, or Chinese online forums) on a Likert scale ranging from "1=extremely unlikely" to "7= extremely likely". The responses were then dichotomised into

low intentions (1-4) and high intentions (5-7) for analysis. The adapted Chinese version of GHSQ was used in a recent study of Chinese and Australian university students (Han et al., 2018). The GHSQ yielded a Cronbach's alpha of 0. 78 in this study.

Mental Health Knowledge

The 12-item Mental Health Knowledge Schedule (MAKS) (Evans-Lacko et al., 2010) was used to measure mental health-related knowledge. The participants rated each item on a 5-point Likert scale from "1 = strongly disagree" to "5 = strongly agree", with higher scores representing more knowledge. MAKS has demonstrated adequate internal consistency (α = .71) (Evans-Lacko et al., 2010). The Chinese version has been validated and previously used among Chinese people in Hong Kong (Mind HK, 2018). Internal consistency in the current study was adequate (α = .71).

Help-seeking personal stigma

The 5-item Social Stigma of Receiving Psychological Help Scale (SSRPH) (Komiya et al., 2000) was used to assess the respondents' perceptions about seeking professional help for mental health problems. The items include statements such as: "*It is a sign of personal weakness or inadequacy to see a psychologist for emotional or interpersonal problems.*" These were rated on a 4-point Likert scale from "1= strongly disagree" to "4 = strongly agree", with higher scores representing greater help-seeking personal stigma. The internal consistency of the scale has been demonstrated in the Chinese population (α =.81) (Chen et al., 2021). The reliability coefficient for this study was 0.82.

Mental illness personal stigma

The 7-item Social Distance Scale (SDS) (Link et al., 1987) was used to assess the degree of avoidance toward individuals with a mental illness. The items include statements like: "*How would you feel about renting a room in your home to someone with a mental illness?"* These were rated on a 4-point Likert scale ranging from "0 =definitely unwilling" to "3 =definitely willing". All items were reverse scored, with higher scores representing a greater desire to distance oneself from people with mental illness. The SDS has good internal consistency (α

= .75) (Penn et al., 1994).We used an adapted Chinese version of the SDS (Chen et al., 2021), which yielded a Cronbach's alpha of 0.85 with the current sample.

Help-seeking self-stigma

The 10-item Self-stigma of Seeking Help Scale (SSOSH) (Vogel et al., 2006) was designed to quantify the perception that seeking psychological help would threaten one's overall worth as an individual, regardless of whether or not has already been diagnosed with a mental illness. The items, which include statements like "*I would feel inadequate if I went to a therapist for psychological help*", were rated on a 5-point Likert scale from "1 = strongly disagree" to "5 = strongly agree", with higher scores representing greater help-seeking self-stigma. The Chinese version of the scale has demonstrated good internal consistency (α = .81)(Shi et al., 2020). In the current study, internal consistency was adequate (Cronbach's alpha = .71).

Mental illness self-stigma

The 10-item Self-Stigma of Mental Illness Scale (SSOMI) (Tucker et al., 2013) was used to measure the reduction in self-esteem and self-efficacy that people think may result from being labelled as mentally ill, even if they do not have an illness. This scale was developed to parallel the SSOSH (Vogel et al., 2006). Hence, references in the items to "seeking psychological help" have been simply replaced with "mental illness". The items include statements such as: *"I would feel inadequate if I had a mental illness*." These were rated on a 5-point Likert scale from "1 = strongly disagree" to "5 = strongly agree", with higher scores representing greater mental illness self-stigma. The SSOMI scale has demonstrated good internal consistency in previous research (α = .91-.93) (Lannin et al., 2015; Tucker et al., 2013). In this study, we used a Chinese translation of the SSOMI scale, adapted from the Chinese version of the SSOSH scale (Shi et al., 2020). Internal consistency in the current study was high at α = .84.

3.3.4 Translation

All materials were available in English with Chinese translations, using the validated Chinese language versions of standardised measures where possible. For content that had no previously translated Chinese versions, a Chinese first-language international student

studying a medical degree translated the English content into Chinese, and two Chinese Australians back translated it to English independently. This was revised by a bilingual Master student (BW) and bilingual clinical psychologist (IC) until all translated items were equivalent in meaning to the English original.

3.3.5 Data analysis

All statistical analyses were conducted using SPSS version 28. Descriptive statistics were reported for the demographic items. Years in Australia was used as a proxy of acculturation to examine any differences in demographic characteristics. Differences in demographics, mental health knowledge and stigmas between high and low intentions to seek online and face-to-face help were assessed using chi-square tests, independent sample t-tests, or ANOVAs.

Prior to examining the associations between mental health knowledge or stigmas and help-seeking intentions, we used separate preliminary logistic regression models to evaluate the impact of demographic factors as potential confounders. Then two separate multivariate logistic regression models were used to assess exposures associated with the intention to seek online and face-to-face help, respectively (our two outcome variables). In both models, demographic variables (age, gender, student status, English proficiency, previously help-seeking experience, and mental health condition) were included in Step 1. Years in Australia was entered in a separate regression at Step 2 and Step 3 (mental health knowledge and stigmas) in the presence of control variables. Then all variables were entered into a final logistic regression. Also, backward stepwise regressions were conducted to test the most parsimonious models associated with the two modalities of help-seeking intentions.

Finally, we tested the full model for multicollinearity using variance inflation factor (VIF) diagnostics, focusing on mental health-related variables. The VIF for each variable in our model was well below the norm of 5 with a mean VIF of 1.31, indicating that collinearity did not represent a threat. We consider regression to be appropriate for the present analysis, with the significance of the regression coefficients considered to be interpretable.

3.4 Results

3.4.1 Sample characteristics

The final sample consisted of 310 participants. As shown in Table 3.1, the mean age of the participants was 24.07 years (*SD* = 4.00; range = 19 – 34), and the majority were female (64.8%). Most participants (69.4%) identified as an international student; 30.6% identified as a domestic student (either as a Chinese immigrant or an Australian-born Chinese). As the study was conducted during the Australian COVID-19 border closures, 13.6% of participants had never visited Australia, 25.8% had spent less than one year in Australia, 36.1% had spent between one and four years here, and 24.5% had lived in Australia for over four years. Most participants (69.4%) self-reported experiencing mental ill-health, while 85.8% had previously sought help for their condition.

Participants who had never been to Australia or had lived here for less than four years were more likely to be international students than domestic ($p < .001$). Those who had lived in Australia for less than four years did not speak English as well as those who had lived in Australia for more than four years ($p < .001$). Those who had never visited Australia were more likely to: be in their first year of study; have not sought help for mental ill-health; and completed the survey in Chinese (all $p's < .001$). There were no other significant differences across acculturation levels.

Table 3.1*: Demographic characteristics of the participants*

Variable	Total (*N*=310)		Never been to Australia (*N*=42)		Less than 1 year in Australia (*N*=80)		1-4 years in Australia (*N*=112)		4+years in Australia (*N*=76)		Significance statistics
	M	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	
Age (years)	24.07	4.00	22.83	3.00	24.10	3.81	24.70	4.25	23.82	4.17	*F*=2.39
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	
Gender											χ^2=2.32
Male	109	35.2	14	33.3	32	40.0	34	30.4	29	38.2	
Female	201	64.8	28	66.7	48	60.0	78	69.6	47	61.8	
Student status											χ^2=36.29**
Domestic	95	30.6	0	0.0	22	27.5	33	29.5	40	52.6	
International	215	69.4	42	100	58	72.5	79	70.5	36	47.4	
Year of study											χ^2=58.94**
1st year	78	25.2	22	52.4	24	30.0	9	8.0	23	30.2	
2nd year	126	40.6	16	38.1	41	51.2	53	47.3	16	21.1	
3rd year or above	106	34.2	4	9.5	15	18.8	50	44.6	37	48.7	
English proficiency											χ^2=79.20**
Very good	65	21.0	1	2.4	9	11.3	14	12.5	41	53.9	
Good	176	56.8	23	54.8	48	60.0	73	65.2	32	42.1	
Not good	69	22.3	18	42.9	23	28.7	25	22.3	3	4.0	
Self-reported mental ill-health											χ^2=2.22
No	95	30.6	17	40.5	23	28.7	33	29.5	22	28.9	
Yes	215	69.4	25	59.5	57	71.3	79	70.5	54	71.1	
Previously sought help											χ^2=16.50**
No	44	14.2	14	33.3	8	10.0	10	8.9	12	15.8	
Yes	266	85.8	28	66.7	72	90.0	102	91.1	64	84.2	
Language used in survey											χ^2=19.93**
English	116	37.4	4	9.5	28	35.0	46	41.1	38	50.0	
Chinese	194	62.6	38	90.5	52	65.0	66	58.9	38	50.0	

M, mean; SD, standard deviation. Significant statistical differences are indicated by *p<0.05 and ** p<0.01.

3.4.2 Help-seeking intentions

Most participants indicated that, if they were experiencing a personal or emotional problem, they would seek help online (69.7%) or face-to-face (77.7%). As shown in Table 3.2, international students and younger students were more likely to seek both online and face-to-face help. In addition, participants with high intentions to seek face-to-face help were more likely to be female, have lived in Australia for over four years, had previously sought help, and reported current mental ill-health *(all p's<0.05).* Those who reported high intentions to seek help online were more likely to have lived in Australia longer and had very good English proficiency *(all p's<0.05)*.

Table 3.3 also shows that the participants reporting high intentions to seek online and face-to-face help had significantly greater mental health knowledge, lower mental illness personal stigma and lower help-seeking self-stigma (*all p's<0.01*). Participants who reported high face-to-face help-seeking intentions also reported significantly lower help-seeking personal stigma than those with low intentions (*p<0.01*). After adjusting for demographic factors, mental health knowledge (OR = 0.91, 95%CI [1.04,1.17]), mental illness personal stigma (OR = 1.10, 95%CI [0.84, 0.99]) and help-seeking self-stigma (OR = 0.9, 95%CI [0.83, 0.97]) were significantly associated with face-to-face help-seeking intentions. After adjusting for demographics, only mental illness personal stigma (OR = 0.91, 95%CI [0.84, 0.98]) was significantly associated with the intention to seek online help, while mental health knowledge was found to be borderline significant (OR = 1.05, 95%CI [1.00, 1.10]).

Table 3.2*: Demographics, mental health knowledge, and stigmas associated with help-seeking*

Variable	Face-to-face					Online				
	Low intention (*N*=69)		High Intention (*N*=241)		Significance statistics	Low intention (*N*=94)		High Intention (*N*=216)		Significance statistics
	M	*SD*	*M*	*SD*		*M*	*SD*	*M*	*SD*	
Age(years)	26.3	4.91	23.5	3.46	***t*=5.38****	25.3	4.50	23.5	3.64	***t*=3.66****
	n	%	*n*	%		*n*	%	*n*	%	
Gender					***χ²=11.27****					χ^2=2.37
Male	36	52.2	73	30.3		39	41.5	70	32.4	
Female	33	47.8	168	69.7		55	58.5	146	67.6	
Student status					***χ²=41.89****					***χ²=18.84****
Domestic	43	62.3	52	21.6		45	47.9	50	23.1	
International	26	37.7	189	78.4		49	52.1	166	76.9	
Years in Australia					***χ²=11.40****					***χ²=19.91****
Never	7	10.0	35	14.5		17	18.1	25	11.6	
<1 year	25	36.2	55	22.8		36	38.3	44	20.4	
1-4 years	29	42.0	83	34.4		30	31.9	82	38.0	
4+ years	8	11.6	68	28.2		11	11.7	65	30.1	
Degree					χ^2=1.23					χ^2=1.97
Undergraduate	28	40.6	116	48.1		38	40.4	106	49.1	
Higher degree	41	59.4	125	51.9		56	59.6	110	50.9	
Year of study					χ^2=2.96					χ^2=2.35
1st year	12	17.4	66	27.4		28	29.8	50	23.1	
2nd year	32	46.4	94	39.0		39	41.5	87	40.3	
3rd year or above	25	36.2	81	33.6		27	28.7	79	36.6	
English proficiency					χ^2=2.18					***χ²=10.01****
Very good	11	15.9	54	22.4		11	11.7	54	25.0	
Good	39	56.5	137	56.8		54	57.4	122	56.5	
Not good	19	27.5	50	20.7		29	30.9	40	18.5	

Self-reported mental ill-health					**χ^2=5.82***					χ^2=1.66
No	13	18.8	82	34.0		24	25.5	71	32.9	
Yes	56	81.2	159	66.0		70	74.5	145	67.1	
Previously sought help					**χ^2=20.84****					χ^2=1.40
No	42	60.9	74	30.7		10	10.6	34	15.7	
Yes	27	39.1	167	69.3		84	89.4	182	84.3	
Language used in survey					χ^2=0.01					χ^2=0.52
English	10	14.5	34	14.1		38	40.4	78	36.1	
Chinese	59	85.5	207	85.9		56	59.6	138	63.9	

*** p*<0.01, ***p*<0.05*, two-tailed, p* values < 0.05 are indicated in bold.

Table 3.3*: Preliminary logistic regression models*

Variable	Face-to-face							Online						
	Low intention (*N*=69)		High intention (*N*=241)		Unadjusted bivariate comparison (Low vs High)	Demographic factors adjusted comparison (*N*=310)		Low intention (*N*=94)		high intention (*N*=216)		Unadjusted bivariate comparison (Low vs High)	Demographic factors adjusted comparison (*N*=310)	
	M	SD	M	SD	*t*	*OR*	95% CI	M	SD	M	SD	*t*	*OR*	95% CI
MAKS	37.55	5.80	44.3	6.45	**-7.93****	**1.10****	1.04,1.17	39.90	7.16	44.16	6.42	**-4.96****	**1.05***	1.00,1.10
SDS	11.54	3.16	9.78	4.28	**3.73****	**0.91***	0.84,0.99	11.48	3.50	9.61	4.25	**4.05****	**0.91****	0.84,0.98
SSOMI	3.14	0.41	3.196	0.81	-0.83	0.93	0.57,1.52	3.20	.67	3.18	0.77	0.29	0.80	0.54,1.18
SSOSH	29.19	4.30	24.68	5.63	**7.14****	**0.90****	0.83,0.97	27.68	5.27	24.81	5.64	**4.20****	0.95	0.90,1.00
SSRPH	6.55	1.86	5.24	3.37	**4.19****	0.90	0.81,1.00	5.99	2.76	5.34	3.28	1.68	0.97	0.88,1.06

MAKS: mental health knowledge, *SDS:* mental illness personal stigma, *SSOMI: mental illness self-stigma, SSOSH:* help-seeking self-stigma, *SSRPH:* help-seeking personal stigma, *OR:* odds ratio, *CI:* confidence interval. *** p*<0.01, **p*<0.05, *two-tailed, p* values < 0.05 are indicated in bold. Multivariate (adjusted) comparison of low versus high help-seeking intention students: Odds ratios (logistic regression), adjusted for age, gender, student status, English proficiency, self-reported mental health status, prior help seeking experience, and years in Australia.

3.4.3 Associations with help-seeking – face-to-face help

Table 3.4A shows the results of the hierarchical binary logistic regression model exploring demographic factors, mental health knowledge, and the stigmas associated with face-to-face help. Step 1 accounted for a significant amount of the total variance ($F_{7, 310}$ = 77.16, p < .001, R^2 = 0.34). Here, younger, female, international students, and previous experience of seeking help was positively associated with high help-seeking intentions, but "good" and "not good" English proficiency was negatively associated with the intention to seek face-to-face help. Step 2 added time spent in Australia, which resulted in a small but significant change, with age no longer being significant. Variance here accounted for $F_{(10,310)}$ = 88.31, p < .001, R^2= 0.38. In Step 3, mental health knowledge and mental illness personal stigma were significant and explained a significant amount of the variance beyond the control variables ($F_{(10,310)}$ = 102.05, p < 0.01, R^2 = 0.43). Step 4 remained statistically significant when all variables were entered, with international student status at OR= 4.82, 95% CI [1.93, 12.06], previous help-seeking experience at OR= 3.32, 95% CI [1.21,9.08], and mental health knowledge at OR= 1.09, 95% CI [1.02,1.15], explaining 45% of the variance ($F_{(13,310)}$ = 108.57, p < .001).

Table 3.4A*: Hierarchical logistic regression analysis - face-to-face help-seeking*

Variables	Step 1 (*N*=310)		Step 2 (*N*=310)		Step 3 (*N*=310)		Step 4 (*N*=310)	
	OR	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Age	**0.91***	0.84, 0.99	0.93	0.85, 1.01	0.93	0.86, 1.02	0.93	0.85, 1.02
Female	**2.38***	1.25, 4.55	**2.46***	1.25, 4.81	1.90	0.95, 3.83	1.89	0.92, 3.86
International student	**9.24****	4.22, 20.24	**11.72****	5.03, 27.35	**4.59****	1.95, 10.79	**4.82****	1.93, 12.06
English proficiency								
Very good	1.00		1.00		1.00		1.00	
Good	**0.20****	0.08, 0.50	0.39	0.14, 1.07	0.41	0.16, 1.08	0.61	0.22, 1.70
Not good	**0.10****	0.03, 0.29	**0.22***	0.06, 0.73	**0.21***	0.07, 0.66	0.35	0.10, 1.16
Mental ill-health	0.69	0.32, 1.48	0.72	0.33, 1.57	0.74	0.31, 1.73	0.81	0.34, 1.91
Previously sought help	**2.91***	1.19, 7.15	**3.07***	1.21, 7.82	**3.11***	1.19, 8.14	**3.32***	1.21, 9.08
Years in Australia								
Never been			1.00				1.00	
< 1 year			0.78	0.26, 2.32			0.57	0.17, 1.93
1-4 years			1.08	0.36, 3.18			1.01	0.31, 3.33
4+ years			**4.64***	1.13, 19.00			2.42	0.56, 10.37
MAKS					**1.09***	1.03, 1.15	**1.09***	1.02, 1.15
SDS					0.91*	0.83, 0.99	0.92	0.84, 1.01
SSOSH					0.93	0.86, 1.00	0.93	0.86, 1.00
Constant	**12.60***		2.80		4.80		2.28	

MAKS: mental health knowledge, *SDS:* mental illness personal stigma, *SSOSH:* help-seeking self-stigma, *SSRPH:* help-seeking personal stigma, *OR:* odds ratio, *CI:* confidence interval. *** p*<0.01, **p*<0.05, *two-tailed. p* values < 0.05 are indicated in bold.

3.4.4 Associations with help-seeking – online help

A similar hierarchical binary logistic regression model was estimated for the intention to seek help online (see Table 3.4B). Step 1 accounted for significant variance ($F_{(7,310)}$= 51.42, $p < 0.01$, $R^2 = 0.22$), again by way of international student status and "good" or "not very good" skills in English. In Step 2, adding the variables "1-4 years" and "over 4 years in Australia" increased the accounted-for variance to 29% ($F_{(10,310)} = 72.12$, $p < 0.01$). In Step 3, mental illness personal stigma was associated with intentions to seek online help and together with the other significant control variables, explained 27% of the variance ($F_{(9,310)}$= 64.45, $p < 0.01$). Step 4 remained statistically significant, with international student status (OR= 4.94, 95%CI [2.16,11.27]), speaking "not very good" English (OR= 0.26, 95%CI [0.09, 0.76]), living 1-4 years (OR= 4.20, 95%CI [1.70,10.34]) and over 4 years (OR= 5.64, 95%CI [1.83, 17.34]) in Australia, mental illness personal stigma (OR = 0.91, 95%CI [0.85, 0.98]) accounting for 33% of the variance in intentions to seek online help ($F_{(12,310)} = 84.07$, $p < 0.01$).

Table 3.4B*: Hierarchical logistic regression analysis - online help-seeking*

Variables	**Step 1 (*N*=310)**		**Step 2 (*N*=310)**		**Step 3 (*N*=310)**		**Step 4 (*N*=310)**	
	OR	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Age	0.94	0.88, 1.01	0.95	0.88-1.02	0.95	0.89, 1.03	0.95	0.88, 1.02
Female	1.42	0.81, 2.49	1.32	0.74-2.37	1.31	0.73, 2.34	1.22	0.67, 2.22
International student	**5.10****	2.54, 10.25	**7.40****	3.44-15.93	**3.71****	1.75, 7.89	**4.94****	2.16, 11.27
English proficiency								
Very good	1.00		1.00		1.00		1.00	
Good	**0.20****	0.08, 0.46	0.34	0.13, 0.86	**0.29***	0.12, 0.70	0.44	0.17, 1.14
Not good	**0.09****	0.03, 0.24	**0.19***	0.07, 0.57	**0.14****	0.05, 0.37	**0.26***	0.09, 0.76
Mental ill-health	1.04	0.57, 1.92	**1.06***	0.56, 1.98	0.99	0.52, 1.89	1.03	0.53, 2.00
Previously sought help	1.12	0.49, 2.54	0.94	0.39, 2.24	1.06	0.46, 2.45	0.84	0.34, 2.06
Years in Australia								
Never been			1.00				1.00	
< 1 year			1.31	0.57, 3.01			1.34	0.56, 3.17
1-4 years			**3.67***	1.54, 8.77			**4.20***	1.70, 10.34
4+ years			**7.27****	2.36, 22.37			**5.64***	1.83, 17.34
MAKS					1.04	1.00, 1.09	**1.05***	1.00, 1.10
SDS					**0.90***	0.84,0.97	**0.91***	0.85, 0.98
Constant	**10.97***		0.95		3.72		0.94	

MAKS mental health knowledge, *SDS* mental illness personal stigma, *SSOSH* help-seeking self-stigma, *SSRPH* help-seeking personal stigma, *OR* odds ratio, *CI* confidence interval *** p*<0.01, ** p*<0.05*, two-tailed, p* values < 0.05 are indicated in bold.

The backward stepwise regression (Table 3.5) aligns with and confirms the trends observed in the hierarchical stepwise models. The parsimonious model indicated that being an international student, having greater mental health knowledge and lower help-seeking self-stigma were significantly associated with the intention to seek face-to-face help. Additionally, international student status, speaking English "not very well", a longer length of stay in Australia, and lower mental illness personal stigma were significantly associated with the intention to seek help online. These associations are consistently observed across Table 3.4B.

Table 3.5 *Backward stepwise logistic regression - face-to-face and online help-seeking*

Variables	**Face-to-face (*N*=310)**		**Online (*N*=310)**	
	OR	**95% CI**	**OR**	**95% CI**
Female	1.81	0.91, 3.57		
International student	**5.03****	2.22, 11.44	**6.08****	2.79, 13.23
English proficiency				
Very good			1.00	
Good			0.45	0.18, 1.11
Not good			**0.27***	0.09, 0.77
Years in Australia				
Never been	1.00		1.00	
< 1 year	0.60	0.18, 2.01	1.27	0.55, 2.95
1-4 years	1.07	0.33, 3.46	**3.85***	1.61, 9.19
4+ years	3.60	0.88, 14.81	**5.80***	1.89, 17.80
Previously sought help	2.44	0.94, 6.31		
MAKS	**1.09***	1.03, 1.15	**1.05***	1.00-1.10
SDS	0.92	0.85, 1.01	**0.91***	0.85, 0.98
SSOSH	**0.92***	0.85, 0.99		
Constant	0.30		0.22	

MAKS: mental health knowledge, *SDS:* mental illness personal stigma*, SSOSH:* help-seeking self-stigma, *SSRPH:* help-seeking personal stigma, *OR:* odds ratio, *CI:* confidence interval. *** p*<0.01, **p*<0.05*, two-tailed, p* values < 0.05 are indicated in bold.

3.5 Discussion

The present study examined the associations between demographic factors, mental health knowledge, stigmas, and intentions to seek help from face-to-face and online sources among Chinese-background students in Australia. We found that being an international student, longer time spent in Australia, better English proficiency, and lower mental illness personal stigma, were all associated with a greater intention to seek help online. In terms of seeking help face-to-face, being an international student, having sought help in the past, and greater mental health knowledge were the driving factors.

Common significant factors associated with seeking both forms of help

Among this sample of relatively mentally unwell Chinese students, being an international student was positively associated with a willingness to seek both face-to-face and online help, even after controlling for all other variables. This is contrary to previous studies, which showed that international students typically have significantly lower help-seeking intentions than their domestic counterparts (LaMontagne et al., 2023). This unusual finding may be explained by our comparison group being Chinese immigrants and Australian-born Chinese, rather than domestic students from the majority culture. Studies have also suggested that Chinese immigrants to Australia have a clear preference not to acclimate to the host culture. Thus, they may retain Chinese values indefinitely (Lu et al., 2016). The stigmatising beliefs and attitudes of these students' parents may have a contagion effect, contributing to either delayed help-seeking or avoiding it altogether (Yasui et al., 2022). The Chinese students in our sample likely reported higher help-seeking intentions because most are away from parents, diminishing the impact of the contagion effect. Further, the students living in China have limited access to mental health services (Xu et al., 2022), whereas the students living in Australia not only have access to mental health services, they also have compulsory health insurance to cover at least part of the cost. Although e-mental health services have grown in China, many staff lack the skills to provide such services, and most e-mental health tools have not been evaluated in rigorous clinical trials (Zhang et al., 2022). This may explain why Chinese international students were more likely to seek both face-to-face and online mental health support in Australia than domestic students with a Chinese background.

Other factors associated with the intention to seek face-to-face help

Beyond international student status, having sought help in the past and greater mental health knowledge were also associated with higher intention to seek face-to-face help among our sample of Chinese students, which is congruent with previous research (Disabato et al., 2018; Kim et al., 2020; Niegocki & Aegisdottir, 2019; Seyfi et al., 2013; Zeng et al., 2023). Many students in our sample had previously sought help, and unsurprisingly, previous help-seeking was associated with the intention to seek help from traditional face-to-face sources. This may be because those students have more experience with the processes of accessing mental health services (Gulliver et al., 2010) and have more confidence in mental health practitioners (Zhang & Dixon, 2003).

Consistent with prior studies among university students (Kim et al., 2020; Zeng et al., 2023), we found a small positive association between mental health literacy and help-seeking intentions for face-to-face help among Chinese-background students. Given that most Chinese students in Australia have very limited knowledge of the symptoms of mental ill-health or the mental health services available to them (Lu et al., 2014), higher education institutions would be wise to invest in resources that improve mental health literacy among this student population.

Other factors associated with intentions to seek online help

Interestingly, we observed that several factors were associated with the intention to seek online help but not for face-to-face help. For instance, those who have been in Australia for longer had higher intentions to seek online help was consistent with previous studies, suggesting a positive association between acculturation and help-seeking intentions (Bornschlegl et al., 2020). As noted by Pretorius et al. (2019), Chinese students who have never visited Australia and new arrivals may be unfamiliar with the online mental health resources and services available and thus may have weaker intentions to seek help online.

English language proficiency also remained a barrier to seeking online help for these students. There is a need to develop and promote online mental health interventions specifically for students of Chinese heritage in their native language, especially first-year students, as the

major Australian mental health websites lack translation tools (Murray et al., 2022). It is highly likely that a Chinese-language web application providing tailored feedback and help will attract Chinese-speaking university students who were at risk of mental ill-health and have not yet sought professional help (Choi et al., 2023).

Furthermore, mental illness personal stigma was relatively weak but significantly associated with online help-seeking, even after adjusting for demographics and years in Australia. This suggests that online mental health supports do not necessarily overcome mental illness personal stigma for Chinese students, even among those are mentally ill and have previously sought help. This may be explained by the culture of stigma toward mental illness that is deeply entrenched in China (Yang et al., 2013; Yee et al., 2020). Chinese students who are mentally unwell and have previously sought help may fear being isolated from their social networks if they reveal their mental condition when seeking online help. As such, universities offering digital mental health interventions to students should highlight the privacy policies associated with the initiative, while ensuring anonymity and confidentiality. Another crucial step in increasing access to online mental health support for Chinese students in Australia is to develop tailored interventions that address mental illness personal stigma.

3.6 Limitations

This study has several limitations. First, our results may not generalise to all students with a Chinese background. Our advertisements mentioning mental ill-health and help-seeking appeared to have attracted a high proportion of individuals who are mentally unwell and have previously sought help. Nonetheless, it is important to understand the factors associated with help-seeking among those who are unwell and interested in getting help for their condition. Second, we used a broad definition of online supports, which may have overlooked the unique differences between e-mental health interventions and information websites. Also, acculturation was oversimplified by using years in Australia as a proxy instead of validated measures of acculturation. Finally, the cross-sectional design of the study does not allow for inferences of causality between the exposures and help-seeking intentions. Hence, future studies should use a qualitative approach to investigate the facilitators and barriers to seeking face-to-face or online help among students of Chinese ethnicity.

3.7 Conclusions

This study was the first to explore the association between demographics characteristics, knowledge of mental health, different stigmas, and intentions to seek face-to-face and online help among Chinese university students in Australia. Our results suggested that, among our sample of relatively unwell students with previous help-seeking experience, international students, those with previous help-seeking experience and greater mental health knowledge were more likely to seek face-to-face support. Conversely, domestic students with limited English proficiency, new arrivals, and concerns about mental illness personal stigma were less likely to seek online support. This suggests that universities need to develop early interventions aimed at both reducing the mental illness personal stigma and language barriers and increase mental health knowledge among this student population to promote increased help-seeking.

Conflicts of Interest

The authors have no financial interests or conflicts of interest to declare.

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CHAPTER 4 DISCUSSION

4.1 Review of overall objectives

The overarching objective of this thesis was to examine the stigmas surrounding mental health along with the intentions to seek help among international and domestic students in Australia. With this objective in mind, we conducted two studies. The first study in Chapter 2 explored the stigmas, beliefs, help-seeking behaviours, and help-seeking intentions of students at an Australian university, with a focus on comparing the differences between international and domestic students. The second study in Chapter 3 explored the demographics characteristics, mental health knowledge, and stigmas associated with help-seeking from both online and face-to-face modalities in students of Chinese origin. The next section discussed the key findings and the limitations of the thesis.

4.2 Discussion of the main findings

4.2.1 Summary of major findings

A summary of the key findings from this thesis follows.

1) Both domestic and international students were more likely to have sought informal help and had higher intentions to seek help from informal sources.
2) International students were less likely to have sought parental help and were more willing to seek help from university counsellors than domestic students.
3) Domestic students had higher intentions to rely on their friends or intimate partners for support.
4) International students were more likely to harbour personal stigma toward mental ill-health than domestic students, but there was no difference between the two groups in terms of mental illness self-stigma.
5) Among a relatively unwell sample of students with a Chinese heritage in Australia, being an international student, prior experiences of seeking help, and greater knowledge of mental health were associated with higher intentions to seek face-to-face help

6) Being an international student, time spent in Australia, better English proficiency, and lower personal stigma toward mental ill-health were associated with a higher intention to seek help online.

4.2.2 Help-seeking among students

Chapter 2 compared the help seeking patterns of international and domestic students attending a preventative mental health program at a large Australian university through a cross-sectional survey. We hypothesised that university students would rely on informal networks for their mental health needs rather than using formal mental health services. Further, we hypothesised that international students would be less likely to have sought help in the past and would be less likely to seek help for mental health-related problems than domestic students should the need arise.

The results found that, among students attending a mental health awareness program, those who had previously sought help tended to have sought informal help, such as that from friends, parents, or an intimate partner. Overall, both domestic and international students attending the program had stronger intentions to seek help from informal sources than to access formal professional help or online help. These results were consistent with that reported in the WMH-ICS cross-national sample of college students (Ebert et al., 2019). Given the preference for informal support among university students, it may be important to consider how to harness a person's social networks to support their mental health. A recent scoping review suggests that peer support is associated with improvements in mental health outcomes among university students (Richard et al., 2022). Peer support programs can help peers identify signs of distress, offer appropriate support, and improve access to formal mental health services. Thus, universities may want to consider incorporating peer support programs into interventions, especially those that target domestic students as they are more likely to rely on their friends or intimate partner for support.

Further, contrary to our hypothesis that international students would have lower help-seeking intentions, both studies found that domestic students were less likely have intentions to seek help. In Chapter 2, one-quarter of domestic students indicated that they would not seek help

from anyone, which was similar to the endorsement rate of domestic students in LaMontagne et al.'s (2023) study. Yet we found that international students were more likely to report intentions to seek any help, contrary to LaMontagne et al. (2023)'s previous findings that international students (35%) were more likely to deal with their problems on their own. Similarly in Chapter 3, international student status, rather than domestic student status, was more closely associated with the intention to seek help from face-to-face or online sources among Chinese students, even when adjusting for demographics and years spent in Australia. This indicates that domestic students may face specific challenges or barriers when it comes to seeking mental health support. Overall, it is clear that there is a need for further research to understand the underlying reasons for why university students might be reluctant to seek help.

Encouragingly, the results provided evidence that international students were willing to seek help and were open to both face-to-face and online services to support their mental health. These findings run counter to the results obtained from a recent study at a Melbourne university (LaMontagne et al., 2023), which found that international students have significantly lower intentions to seek help from professional sources than their domestic counterparts. A potential reason for the discrepancy between the two studies was that our two samples were surveyed during the pandemic. There is evidence to suggest that international students experienced greater psychological distress than domestic students during the outbreak (Mihrshahi et al., 2022; Russell et al., 2023), particularly Chinese international students residing in Australia (Ke et al., 2023). Notably, poor mental health among university students has also been associated with increased help-seeking behaviours during this time (Burns et al., 2023). Therefore, higher levels of mental ill-health may have increased help-seeking intentions among our international student samples compared to the pre-pandemic samples in previous studies. However, the finding must be interpreted with caution as the differences may alternatively be due to sampling differences (discussed further in Section 4.3).

Another interesting finding was that international students were more likely to seek help from university counsellors if they were to experience mental ill-health. This suggests high trust and

awareness of university services among international students for mental health support, but also reflects lower reliance upon social networks compared to domestic students. The preference for university-based support may be because international students were less aware of the mental health services available off-campus, concerned about the cost and time required for external services, and convenience of counselling services on campus. Given this, Australian higher education institutions should recognise the important role they play in supporting the mental health needs of international students. Specifically, a range of enhancements should include basic mental health awareness and empathetic training in communication skills to enable university staff to better recognise the signs of distress in students and provide appropriate referrals to counselling services. Specialised training, like cultural competency training for university counsellors, could help these practitioners to better understand and address the unique challenges faced by international students. Additionally, it may be necessary to increase the levels of funding and resources allocated to university counselling services. Such endowments could be used to increase the number of professional staff, particularly those who are multilingual, or be used to develop tailored programs to meet the needs of international students. Further, government and universities can develop educational programs tailored to international students to increase their knowledge about external mental health services and the costs, benefits, and levels of compulsory health insurance to strengthen their intentions to utilise external pathways to seek professional help.

4.2.3 The role of stigmas

A second aim of this thesis was to explore the factors associated help-seeking from online and face-to-face modalities among both domestic students and international students with a Chinese background.

Our results indicated that mental illness personal stigma was most relevant to help-seeking among international students and Chinese-background students. The analysis in Chapter 2 revealed that international students were more likely to exhibit mental illness personal stigma than domestic students, after adjusting for demographics. Chapter 3 revealed that mental illness personal stigma was the only stigma associated with the intentions to seek help online

(after adjusting for demographics). Although this association was relatively weak, mental illness personal stigma still played a role in reducing intentions to seek help online. Therefore, it is necessary to develop interventions that address this type of stigma to promote students' the use of mental health services, especially e-health interventions. Some studies found that social contacts can be an effective intervention to reduce personal stigmas toward mental illness in general while improving help-seeking outcomes among university students (Brown, 2020; Wong et al., 2018). As such, universities should consider including the social contacts as a component of help-seeking promotion interventions.

We found no difference between in mental illness self-stigma between domestic and international students (see Chapter 2), nor between high and low intentions to seek help (see Chapter 3). This suggests that, while students may hold mental illness self-stigma, this is comparable between international and domestic students, and it appeared to not influence their intention to seek treatment. This is in line with previous findings (Lannin et al., 2015; Tucker et al., 2013; Wallin et al., 2018), which reported that mental illness self-stigma was not associated with intentions to seek help.

The preliminary analysis in Chapter 3 also revealed that, among a relatively unwell sample of Chinese-international students who have previously sought help, those with low help-seeking personal stigma had high intentions to seek help from face-to-face sources, while those with low help-seeking self-stigma were more likely to seek help from both face-to-face and online sources. However, contrary to previous studies (Bird et al., 2020; Ma et al., 2022; Wallin et al., 2018), neither kind of help-seeking stigma were associated with the intentions to seek help once we controlled for demographics, acculturation, and other types of stigmas. This suggested that help-seeking stigmas would not deter the intention to use either face-to-face or online sources of help for emotional problems among our sample of predisposed help-seekers. It appeared that students of Chinese ethnicity may fear social isolation due to being labelled with a mental illness, but perceptions around seeking psychological help for one's problems would not deter their help-seeking intentions. This might be because Chinese culture has a propensity to 'somaticise' mental health concerns (Ryder & Chentsova-Dutton,

2012; Xiong et al., 2017), which may not lead to feelings of inferiority or incompetency if they sought help for “non-mental” problems.

4.2.4 Other facilitators and barriers to help-seeking

As Chapter 3 outlined, past experiences of seeking help were generally associated with the intention to seek face-to-face help in future, even among those already strongly inclined toward help-seeking. Those who had previously sought help may have more experience with the processes of accessing mental health services (Gulliver et al., 2010) and, therefore, hold more confidence in mental health practitioners (Zhang & Dixon, 2003). This finding suggests that universities may need to provide additional resources to help students who lack experience in seeking help. This could include providing comprehensive guidance on the steps of the help-seeking process along with information to address their concerns about help-seeking.

Moreover, our results showed that greater knowledge of mental health was associated with increased intentions to seek face-to-face help. Given that Chinese-background students in Australia might have limited knowledge of the mental health services and systems available to them (Lu et al., 2014), higher education institutions still should invest more into improving these knowledge levels, especially to those who might be mentally ill. Mental health first aid (MHFA) training has been shown to have potential in this regard (El-Den et al., 2020). For example, Zhuang et al. (2020) demonstrated that MHFA training can enhance mental health literacy and decrease stigmatising attitudes towards mental illness among Chinese-speaking international students in Melbourne. Therefore, MHFA training may be a valuable strategy for higher educational institutions.

Encouragingly, about 70% of the Chinese-background students with a mentally unwell condition in Study 2 expressed a willingness to seek help online. This demonstrates the viability of universities to provide online mental health support services to meet the diverse needs and preferences of students. However, as found in Chapter 2, few domestic students and none of the international students had actually used online support services. It is therefore important for more research into the barriers to using digital mental health

interventions among these groups before universities implement any online strategies. The analysis in Chapter 3 indicated that poor proficiency in English was a barrier for Chinese-background students, while more time spent in Australia was a facilitator. This is reasonable since longer time in Australia may provide greater exposure to digital mental health interventions. One notable point is that, currently, very few translated materials on e-mental health services are available in Australia (Murray et al., 2022). In this respect, it is crucial for universities to prioritise the development and dissemination of Chinese-language online mental health resources and interventions for Chinese-background students, especially freshmen students who likely have a low proficiency in English. Such initiatives would help to overcome language barriers and improve the students' understanding and awareness of the support available online.

4.3 Study limitations

4.3.1 Selection bias and generalisability

Given our participants self-selected to attend the batyr@uni program workshops (Chapter 2) and complete the online surveys (Chapter 3), selection bias may limit the representativeness of our results. Although the batyr@uni program replaced usual lectures, students could opt out of the program. It is possible this recruitment method may have attracted students with a greater knowledge of or interest in mental health or more favourable attitudes towards the people with mental ill-health to participate in the survey. Hence, it is entirely plausible that our sample over-represented students with higher help-seeking intentions and/or lower stigmas, as well as international students who were more interested in mental health and likely to seek help. It is also possible that international students with low help-seeking intentions or greater levels of stigma may have opted out of the study. Indeed, comparison to the university's enrolment data shows the sample used in Chapter 2 over-represented domestic and undergraduate students.

Similarly in Chapter 3, the sample recruitment ads focussed on mental health problems and help-seeking. This appeared to have attracted Chinese participants reporting recent mental health problems/emotional distress that have previously sought treatment. It is therefore

likely that our findings may not generalise to the overall Chinese-background student population in Australia.

Further, while there was diversity within the sampled international student population in Chapter 2, most were from China (42%), India (9.2%) and Malaysia (9.2%). By comparison, national international student data reflects 38% Chinese, 19% Indian, and 2.7% Malaysian (Ferguson & Spinks, 2021). This over-representation of Chinese and under-representation of other Asian background students in the batyr sample may reflect the international student distribution from the University of Sydney rather than that nationally, and caution needs to be taken when generalising the results to international university students from wider cultural backgrounds.

4.3.2 Cross-sectional research design

There are also some limitations to the designs of both studies. The cross-sectional nature of Chapters 2 and 3 does not allow any inference to be made about the causal effects between variables. Moreover, we only measured help-seeking intentions rather than actual help-seeking behaviour due to the nature of the study design. Nonetheless, studies have shown that help-seeking intention is a good predictor of actual help-seeking behaviour (Conner & Norman, 2022). Additionally, it was also outside the scope of this thesis to investigate any causal effects of whether further interventions would have altered their help-seeking intentions and stigmatising attitudes and beliefs.

Further, while the primary aim of the thesis was to compare international and domestic students, we were unable to directly compare international students and with Australian-born Chinese students in Chapter 3 because, as the exploratory analysis indicates, nearly half of the domestic students had been in Australia for less than four years. As such, we considered acculturation instead when presenting the demographics, but entered both acculturation and student status into the regressions. The results showed that international student status was associated with help-seeking intentions, even when adjusting for acculturation.

4.3.3 Measurement issues

Although careful attention was given to selecting appropriate and psychometrically sound measures for this research, some of the selected measures have various limitations that should be acknowledged. The Social Distance Scale (SDS) used in Chapter 2 (e.g., *"I would be happy to go out on the weekend with someone who has a mental health issue"*) and Chapter 3 *(*e.g., *"How would you feel about renting a room in your home to someone with a mental illness?")* were different measures, which meant that direct comparisons between the two studies was not possible. Although both versions of the SDS were validated measures, differences in the wording and the item composition may have led to variations in how the students perceived and responded to the scale.

In Chapter 3, we used a broad definition of online support for the General Help Seeking Questionnaire, which included but was not limited to digital mental health services. This may explain why our findings may be different to previous studies that have focused on online counselling (Bird et al., 2020; Lannin et al., 2016; Levin et al., 2018). Also, years in Australia was used in Chapter 3 as a proxy for acculturation, instead of validated measures of acculturation. While this provides some insight into students' exposure to the host culture, it was a simplified measure that may not reflect the full complexity of the acculturation experience.

Finally, the main variables of interest in Chapters 2 and 3 were the different types of stigma, which are complex constructs and can be difficult to measure. While we used validated measures of stigma to capture these perceptions, it is possible that each measure captured dimensions of stigma similar to another stigma measure. It is for this reason that we additionally conducted a factor analysis to determine how each stigma relates to the others, and whether they clustered together to form distinct factors or dimensions (see Appendix C). We found that 5 factors explained most of the variability in the stigma measures. Of these, SSOSH had large positive loadings for factor 1; SDS had large positive loadings for factor 2, SSOMI had large positive loadings for factor 3 and large negative loadings for factor 4; and SSRPH had large positive loadings for factor 5 (see Appendix C). All this suggests that the measures used captured each of the distinct constructs of stigma were appropriate.

4.4 Study strengths

Notwithstanding these limitations, this research has several strengths. To the best of our knowledge, over the past decade, only four studies have compared the help-seeking intentions and perceptions of stigma in Australian students – either international or domestic (Clough et al., 2019; Han et al., 2018; LaMontagne et al., 2023; Lu et al., 2014; Skromanis et al., 2018). Given the large numbers of international students studying in Australia, and their increased risk of developing mental health problems, this thesis contributes to this limited body of literature by finding that international students were less likely to have sought parental help and were more likely to rely on university counsellors for support. They were also less likely to rely on social networks and held greater mental illness personal stigma than domestic students.

Moreover, Chinese international students are by far the largest group of international students in Australia (Ferguson & Spinks, 2021). Yet very few studies examine the factors affecting their intentions to seek help for mental or emotional problems. Chapter 3 is the first study to explore the determinants of intentions to seek face-to-face and online mental health help in a large sample of Chinese-background students.

4.5 Future research

As discussed, mental illness personal stigma is a barrier for international students and Chinese-backgrounds students alike to seeking help, particularly in seeking support online. Hence, more research is required to examine the efficacy of contact-based interventions in reducing this mental illness personal stigma and increasing help-seeking among international and Chinese-background students, with a particular focus on online supports. Future studies should consider a qualitative study design to explore the perceptions and reasons for seeking help from specific sources among different student groups. For example, it is important to explore: the reasons a sizeable proportion of domestic students are reluctant to seek help from anyone; the barriers for international students to seek help from external formal sources; and the role of mental illness personal stigma in deterring Chinese students from seeking help online. Such studies would enable a deeper understanding of the complex factors influencing the decisions of both domestic and international university students to seek help. These

studies could also be used to guide the development of targeted interventions to support these groups.

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Appendix A

HREC approval for Study 1 - Chapter 2

THE UNIVERSITY OF SYDNEY

Research Integrity & Ethics Administration
HUMAN RESEARCH ETHICS COMMITTEE

Tuesday, 18 January 2022

Dr Alyssa Milton
Central Clinical School: Medicine; Faculty of Medicine and Health
Email: alyssa.milton@sydney.edu.au

Dear Alyssa,

The University of Sydney Human Research Ethics Committee (HREC) has considered your application.

I am pleased to inform you that after consideration of your response, your project has been approved.

Details of the approval are as follows:

Project No.:	**2022/022**
Project Title:	**Mixed methods evaluation of the batyr@uni program to promote help-seeking behaviours and reduce mental health stigma at the University of Sydney.**
Authorised Personnel:	**Milton Alyssa; Glozier Nicholas; Elser Valarie; Riley Tom;**
Approval Period:	**18/01/2022 to 18/01/2026**
First Annual Report Due:	**18/01/2023**

Documents Approved:

Date Uploaded	Version Number	Document Name
18/01/2022	Version 1.2	correspondence_from Uni Course Coordinator V1.2
18/01/2022	Version 1.2	correspondence_researcher contact with coordinator v1.2
18/01/2022	Version 1.2	email correspondence for participants v1.2
18/01/2022	Version 1.2	flyer v1.2
18/01/2022	Version 1.2	Focus group_Qual Topic Guide Executive__v1.2
18/01/2022	Version 1.2	Focus group_Qual Topic Guide Staff__v1.2
18/01/2022	Version 1.2	Focus group_Qual Topic Guide Students__v1.2
18/01/2022	Version 1.2	PCF quali focus groups online V1.2
18/01/2022	Version 1.2	PCF quali focus groups V1.2
18/01/2022	Version 1.2	PIS - quali focus groups V1.2
18/01/2022	Version 1.2	PIS - quantitative survey V1.2
18/01/2022	Version 1.2	reminder correspondence V1.2
18/01/2022	Version 1.2	Study Protocol V1.2
22/11/2021	Version 1	7d. Letter of research engagement from batyr
22/11/2021	Version 1	4a. batyr@uni Program Evaluation Questionnaire - Students
22/11/2021	Version 1	3a. Example batyr@uni flyer that is usually sent to students
22/11/2021	Version 1	3c. batyr@uni Program Evaluation Flyer Focus Groups_all
22/11/2021	Version 1	7a. Non-clinical trial status of research - application
22/11/2021	Version 1	8a. Research management log
22/11/2021	Version 1	8b. batyr@uni_SOP qualitative interviews

Research Integrity & Ethics Administration
Research Portfolio
Level 3, F23 Administration Building
The University of Sydney
NSW 2006 Australia

T +61 2 9036 9161
E human.ethics@sydney.edu.au
W sydney.edu.au/ethics

ABN 15 211 513 464
CRICOS 00026A

Human Ethics: Change in Personnel Outcome

Dear Dr Milton,

Project Title: Mixed methods evaluation of the batyr@uni program to promote help-seeking behaviours and r
Project number: 2022/022

Thank you for submitting a change in personnel form for the above project. Your request has been processed and the change/s approved.

The current approved researchers are as follows:

Internal Investigators: Dr Milton Alyssa ; Dr Choi Isabella ; Prof Glozier Nicholas ; Ms Wang Beibei

External Investigators: Elser Valarie ; Riley Tom

Contact us if you have any queries or if there is an error in the above list.

Regards,
The Ethics Office
The University of Sydney
Research Integrity & Ethics Administration, Research Portfolio
Level 3, Michael Spence Building, F23 I The University of Sydney I NSW I 2006
+61 2 9036 9161 I human.ethics@sydney.edu.au I intranet.sydney.edu.au/ethics

Appendix B

HREC approval for Study 2 - Chapter 3

THE UNIVERSITY OF SYDNEY

Research Integrity & Ethics Administration
HUMAN RESEARCH ETHICS COMMITTEE

Thursday, 23 December 2021

Dr Isabella Choi
School of Medical Sciences: Brain and Mind Centre; Faculty of Medicine and Health
Email: isabella.choi@sydney.edu.au

Dear Isabella,

The University of Sydney Human Research Ethics Committee (HREC) has considered your application.

I am pleased to inform you that after consideration of your response, your project has been approved.

Details of the approval are as follows:

Project No.:	**2021/960**
Project Title:	**Mental Health- Related Knowledge, Stigmas, and Intentions Toward Seeking Online and Face-to-Face Help: A Cross-Cultural Study of Chinese University Students.**
Authorised Personnel:	**Choi Isabella; Glozier Nicholas; Wang Beibei;**
Approval Period:	**23 December 2021** to **23 December 2025**
First Annual Report Due:	**23 December 2022**

Documents Approved:

Date Uploaded	Version Number	Document Name
21/12/2021	Version 2	CF v2
21/12/2021	Version 2	Recruitment notice v2
21/12/2021	Version 2	Recruitment Poster V2
05/11/2021	Version 1	Participant Information Statement
05/11/2021	Version 1	Study protocol
05/11/2021	Version 1	Main Measures

Condition/s of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted to the Ethics Office on or before the anniversary of approval and on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
  - Serious or unexpected adverse events (which should be reported within 72 hours).
  - Unforeseen events that might affect continued ethical acceptability of the project.
- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).
- Personnel working on this project must be sufficiently qualified by education, training and experience for their role, or adequately supervised. Changes to personnel must be reported and approved.
- Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Data and primary materials must be retained and stored in accordance with the relevant legislation and University guidelines.

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Appendix C

Factor analysis of stigma measures (SDS, SSOMI, SSOSH and SSRPH) (Chapters 3)

Item	Pattern coefficients					Structure coefficients				
	Components					Components				
	1	2	3	4	5	1	2	3	4	5
SSOSH_6	**.742**					**.810**		.316		.508
SSOSH_8	**.703**					**.749**				.408
SSOSH_3	**.689**					**.758**		.329		.502
SSOSH_1	**.669**		.327			**.721**		.403		.480
SSOSH_7	**.620**			-.339		**.647**			-.398	
SSOSH_9	**.620**			-.430		**.592**			-.489	
SSRPH_2	.475				.475	**.610**				.579
SSOSH_4	-.474					-.550		-.335		-.490
SSOSH_2	.463			-.390		.512			-.423	
SDS_7		**.783**					**.780**			
SDS_1		**.772**					**.768**			
SDS_3		**.770**					**.787**			
SDS_5		**.764**					**.731**			
SDS_6		**.721**					**.730**			
SDS_2		**.695**					**.729**			
SDS_4	-.504	.524				-.454	.491			
SSOMI_6			**.836**					**.816**		
SSOMI_4			**.822**					**.809**		
SSOMI_10			**.771**					**.810**		
SSOMI_8			**.708**					**.711**		
SSOMI_3			**.706**					**.681**		
SSOMI_1			**.698**					**.738**		
SSOSH_10			.554					.577		
SSOMI_2				**-.774**					**-.771**	
SSOMI_9				**-.765**					**-.760**	
SSOMI_5				**-.749**					**-.732**	
SSOMI_7				**-.677**					**-.711**	

SSOSH_5	.352	-.544		.341	-.598	
SSRPH_3			**.852**			**.821**
SSRPH_1			**.800**			**.805**
SSRPH_4			**.751**			**.732**
SSRPH_5			**.749**	.312		**.796**

Note : factor loadings above .60/-.60 appear in bold, and are considered large loadings; factor loadings above .30 / - .30 are considered significant

Certain items loaded on different factors, suggesting multidimensional associations. For instance, items SSOSH_6, SSOSH_3, and SSOSH_1 loaded significantly on factors 1, 3, and 5. This overlap pattern is also observed in other items, reflecting the complexity of the stigma constructs being measured. However, the pattern coefficients suggest that these measures were able to distinguish between different dimensions of stigma. For instance, SSOSH _3, 6, 7, 8, 9 have large positive loadings on factor 1, the SDS_1,2,3,5,6, 7 have large positive loadings on factor 2, the SSOMI_1, 3, 4,6,8, 10 have large positive loadings on factor 3 and large negative loadings (SSOMI_2,5,7,9) on factor 4, SSRPH_1,3, 4, 5 have large positive loadings on factor 5, indicating a high degree of discriminant validity among the measures. Thus, despite some items having overlapping relationships with various factors, the stigma measures used captured distinct constructs of stigma and were appropriate in our study.