Title: Understandings of mental health, disclosure, help-seeking and psychological adaptation among Asian international students studying in Scotland: a sequential multi-method study

Abstract

International students often face psychosocial, academic, financial and adaptation challenges within the Higher Education (HE) environment that may impact on their mental health. The current study explored the understandings and experiences of Asian international students (AISs) in terms of mental health, disclosure, help-seeking and adaptation specific to cultural relocation within Scotland. A sequential multi-method approach was adopted consisting of two studies: (1) a qualitative study using individual semi-structured interviews with AISs (n=10) (Study 1) and (2) a cross-section survey comparing AISs and non-AISs (n=172) in terms of mental health literacy and psychological adaptation within the Scottish context (Study 2). Qualitative data were audio-recorded, transcribed, and analysed using a thematic approach. Quantitative data were analysed using regression and mediation analysis. Study 1 revealed three themes: (1) Negative beliefs, stigma and fear of judgment impacting on understandings and disclosure of mental health issues, (2) Adaptation and acculturation difficulties (lack of sense of belonging), and (3) Barriers in communication and social disconnection. Study 2 showed that AISs reported lower levels of mental health literacy, which in turn resulted in poorer psychological adaption compared to non-AISs. Supporting AISs in HE institutions involves challenging negative judgements surrounding mental health, increasing mental health literacy and addressing barriers in overcoming adaptation, acculturation and communication difficulties that may inhibit

disclosure and help-seeking behaviour. The importance of mental health policies, supports and services in embracing culturally diverse understandings of mental health, challenging stigma and having culturally competent staff supporting student mental health within a multicultural learning environment is emphasised.

Introduction

It is estimated that the number of students studying in higher education in the UK exceeds 2,383,970 (Higher Education Statistics Agency [HESA], 2020). UK Higher Education (HE) institutions have attracted 485,645 international students in the 2018-2019 academic year, and over 46% of them were from Asian countries (HESA, 2020). Scotland has been highly successful in attracting international students; over a third of non-EU international students being from Asian countries (Scottish Government, 2018). Asian international students (AISs) not only contribute a significant proportion of the income of UK HE institutions, but also enrich the diversity of the higher education student population and strengthen the workforce. Many studies have documented the various psychosocial, academic, and financial challenges in the University environment (Furnham, Cook, Martin, & Batey, 2011; Ryan, Shochet, & Stallman, 2010). The impact of the COVID-19 pandemic may further complicate the picture in both reducing student mobility and increasing concerns about health, safety and mental wellbeing (Chen et al, 2020; Mok et al, 2021; Rzymski & Nowicki, 2020). However, to date, no research has specifically explored the unique perspectives and understandings of mental health, disclosure, help-seeking and psychological adaptation of AISs studying in Scotland.

Unique sources of stress of international students

Psychological distress has been commonly identified among HE students (Cooke, Bewick, Barkham, Bradley, & Audin, 2006; Khawaja & Dempsey, 2008), yet relatively little research has been carried out with AISs studying in the UK (Lu, Dear, Johnston, Wootton, & Titov, 2014; Tang, Reilly, & Dickson,

2012). Besides the normal developmental concerns that every student may have, AISs studying in Western countries are likely to experience acculturative stress in their cross-cultural adaptation process (Berry, 2008; Kung, 2004; Lam et al, 2006; Lu et al., 2014; Soorkia, Snelgar, & Swami, 2011; Tang, Reilly, & Dickson, 2012). A recent systematic review on the psychological wellbeing of East AISs confirmed this finding, although of the 18 studies reviewed the vast majority were conducted in the US and no UK studies were included [CITATION LiJ14 \l 2057]. AISs may encounter a range of acculturative stressors, such as language difficulties, intensified academic stress associated with academic adaptation, social isolation and/or having to form and maintain a new social networks, financial and practical difficulties, homesickness and perceived discrimination (Constantine, Kindaichi, Okazaki, Gainor, & Baden, 2005; Spencer-Oatly & Xiong, 2008; Smith & Khawaja, 2011; Wong, Wang, & Maffini, 2014; Zhang & Brunton, 2007). These stressors are likely to have an adverse impact on AISs' mental health and wellbeing. For example, previous research has demonstrated an association between acculturative stress and depression in AISs (Wei, Ku, Russell, Mallinckrodt, & Liao, 2008; Dao et al., 2007; Pan, Wong, Joubert & Chan, 2007). Existing studies have also found that the level of acculturation is positively associated with psychological help-seeking attitudes (Hamid, Simmonds, & Bowles, 2009; Miller, Yang, Hui, Choi, & Lim, 2011; Sun et al, 2016), and length of stay in the host country is positively correlated with level of acculturation [CITATION Kuo06 \l 2057].

Disclosure and helping-seeking of International students

Disclosure is a multidimensional construct, including the amount, depth, honesty, intent and valence of information shared about one's mental health challenges. Weighing up the costs of benefits of disclosure and obtaining peer support through the disclosure process has been found to be beneficial (Anonymous, 2013; Zhang, 2017). Yet, limited research has examined mental health disclosure or help-seeking among AISs studying in the UK. Despite AISs having been identified as a high-risk group for developing psychological distress (Han, Han, Luo, Jacobs, & Jean-Baptiste, 2013; Lu et al., 2014; Rahman & Rollock, 2004), wellbeing services have been reported to be significantly underused by this population (Cheng, Wang, McDermott, Kridel, & Rislin, 2018; Frey & Roysircar, 2006; Li, Wong, & Toth, 2013). Relative to domestic students, AISs have been found to have lower rates of mental health care utilisation yet higher rates of suicidal ideation, suicide attempts and completed suicide (Chen et al, 2019). Mental health literacy, which is defined by Jorm et al. (1997, p.182) as "knowledge and beliefs about mental disorders which aid their recognition, management or prevention", is commonly found to be a barrier to disclosure and help-seeking in university students (Gorczynski, Sims-Schouten, Hill, & Wilson, 2017; Furnham et al., 2011; Hunt & Eisenberg, 2010). AISs appear to have a low level of mental health literacy, which could be explained by their cultural values and beliefs about mental health problems (Altweck, Marshall, Ferenczi, & Lefringhausen, 2015; Fan, 1999; Sheikh & Furnham, 2000; Soorkia, Snelgar, & Swami, 2011; Tang, Reilly, & Dickson, 2012). For example, it has been reported that Asian people's values advocate emotional self-control, which has been identified by researchers as one of the most salient dimensions in Asian people's values that might lead to negative attitudes towards seeking

professional psychological help (Lee, Ditchman, Fong, Piper, & Feigon, 2014; Soorkia, Snelgar, & Swami, 2011; Wei, et al, 2008). AISs who adhere to this value may not be comfortable with expressing feelings and emotions and view emotional inhibition as a virtue (Kim & Omizo, 2003; Wong et al., 2014; Zhang, 2017). This may lead to more self-reliant ways of dealing with mental health problems and the avoidance of personal disclosure (Carr et al., 2003).

Some researchers report that Asian people with more traditional cultural values/beliefs are more likely to view having mental health problems and seeking help as a “loss-of-face" (Carr et al., 2003; Russell, Thomson, & Rosenthal, 2008; Zhang & Dixon, 2003). Loss-of-face is a cultural concept related to shame and embarrassment, which can be briefly defined as “the deterioration in one's social image” (Kam & Bond, 2008, p.175). A range of empirical studies carried out in Asian or Asian American populations support that loss-of-face may be a barrier to help-seeking (Bathje, Kim, Rau, Bassiouny, & Kim, 2014; Kim & Yon, 2019; Zane, Ku, Song, Saw, & Leong, 2014). However, in a study conducted with AISs in the US, loss-of-face was positively associated with intentions to seek counselling (Yakunina & Weigold, 2011). The researchers interpreted this finding as showing that AISs might be reluctant to share psychological problems with significant others or someone from their community and prefer counselling as an option for “saving face” to deal with mental health problems, due to the confidential nature between counsellor and client. It can be observed that problems associated with the effect of “saving face” on AISs’ disclosure and help-seeking decisions is complex and factors such as perceived confidentiality need to be explored in further research.

Indeed, previous work with student populations has reported on the distrust in confidentiality and feared consequences of disclosing mental health difficulties resulting in reputational damage (Winter et al, 2017).

Other cultural factors that may inhibit mental health help-seeking include lack of confidence in English proficiency, fear of burdening others with personal problems and tendencies to somatise psychological problems (Carr et al., 2003; Chen, Stevens, Wong, & Liu, 2019; Heppner et al., 2006; Ra & Trusty, 2015; Smith & Khawaja, 2011, Wei et al, 2008). In addition to cultural factors, several systemic factors may also be inhibiting the accessibility of existing mental health support to AISs. For instance, university mental health services need to be culturally appropriate and sensitive in order to effectively respond to the psychological needs of AISs, but how to achieve this in the UK context is under-researched (Barletta & Kobayashi, 2007; Bradley, 2000). Lack of familiarity and awareness of available mental health services has also been identified as a barrier to seeking help (Russell et al., 2008).

The Current Study

There is a lack of in-depth understanding, from the perspectives and experiences of AISs concerning mental health understandings, disclosure, help seeking and psychological adaptation to relocation within the Scottish context. Most existing studies were conducted in the United States and Australia. Little work has sought to incorporate the views and experiences of AISs' studying within the UK; no work has explored their experiences within the Scottish context. The current study aimed to address this apparent gap through: (1) gaining insight into AISs' understandings of mental health, disclosure of mental

health issues and help-seeking behaviour, and (2) exploring how understandings of mental health (mental health literacy) impact on how AISs psychologically adapt to cultural relocation within the Scottish context compared to non-AISs. Study 1 provided rich examples of how AISs understood mental health and how this influenced their decisions to disclose mental health challenges and seek help. It, thus, mainly answered the first research aim and provided guidance for answering the second research question in the subsequent study. The results of the first study, thus, feed the purpose and design of the second, consistent with sequential designs (Mingers, 2001). Study 2 allowed for the extent to which understandings of mental health (mental health literacy) impacted on psychological adaptation, for a wider range of AISs compared to non-AISs studying within the Scottish context, mainly answered the second research aim. Both studies were analysed separately.

Method

A sequential multi-method approach was adopted whereby a qualitative study preceded a quantitative one (Creswell and Clark, 2011). The multi-method design allowed different aspects (Mingers, 2001) of AISs' perspectives concerning understandings of mental health, disclosure, help-seeking behaviour and psychological adaptation to come together.

Ethics

The research was carried out in accordance with the British Psychological Society's ethical code of conduct (BPS, 2014) for research

involving humans, and was ethically approved by the University Ethics Committee.

Study 1: Interview study

The first study sought to gain an in-depth understanding of the perspectives of AISs in terms of their understandings of mental health, experiences of disclosure and help-seeking while studying within one HE institution in Scotland.

Participants

A purposive sample of participants (n =10) was obtained whereby the data collection process was monitored according to both theoretical and pragmatic grounds (Morgan, 2007). As is recommended for interview research that has an ideographic aim (Malterud *et al*, 2016), this sample size was considered sufficient for individual participants to have a locatable voice within the study, allowing for an intensive analysis of each case to be conducted. Participants were considered eligible for the study if they were: aged 18 or over; an AIS; studying full-time at the HE institution in Scotland; lived in the UK for at least 3 months; scored 5.5 (modest) or above on the International English Language System; and were able to provide informed consent to their participation in the study. The mean age of the participants was 25 (SD= 3.64). There was a gender split of 6 females to 4 males. Participants' ethnic origin included Chinese, Indian, Hong Kong and Malaysian (see Table 1).

TABLE 1 HERE

Recruitment and procedure

Participants were recruited through adverts for the study which were posted on mail boards around campus, social media platforms and websites including WeChat, Instagram, Facebook and Twitter. The recruitment period for the study commenced from November 2019 to February 2020. Those who responded to study advertisements contacted the chief investigator (NC) through their university contact details to convey their interest in the study. Potential participants were offered the opportunity to ask questions about the study. An initial screening interview with one of the chief investigators (NC, XL & SK), each of whom were also trained mental health practitioners. The CORE-10 (Barkham et al, 2013), which is mental health monitoring tool with items covering anxiety, depression, trauma, physical problems, functioning and risk to self, was also conducted with each participant prior to engaging in the qualitative interview. The aim here was to ensure participants met the criteria for taking part in the study and to safeguard any concerns raised concerning mental health (e.g. risk to self) raised during the screening interview. In the event, all participants who were pre-screened were then interviewed for the study. With permission from participants, their contact details were forwarded on to the research interviewer (CC). The research interviewer then contacted the participant by email to discuss the study and their participation. A participant information sheet was then sent electronically to each participant; each of whom were given a period of a week to read information and to ask any questions, to ensure informed consent. Participants were then sent a consent form to

complete and a suitable time and date to conduct the interview was arranged. All one-to-one interviews were conducted in a safe and secure office in the University during regular working hours.

Interview schedule

An inductive, qualitative design with semi-structured, individual interviews was used in accordance with a pragmatist methodology [CITATION Nar17 \l 2057]. The interview schedule consisted of 11 open-ended questions which were developed by the research team, in partnership with an international student stakeholder group. This stakeholder group included AISs who were undertaking research concerning student mental health and also had lived experience of some of challenges associated with studying abroad. The questions developed were piloted before agreement of the final interview schedule. It included questions which aimed to explore participant's experiences of mental health, help seeking, disclosure and help seeking behaviour. For example, "If you were to experience mental health issues, do you feel you could talk to someone about it?" and "What do you think others might think about you going to seek help?".

Interviews ranged from 28 minutes to 1 hour and 36 minutes (mean of 58 minutes, SD = 21.35). Prior to commencing interviews, audio equipment was tested to ensure both interviewee and interviewer voices were audible. Upon conclusion of the interviews audio equipment was switched off and participants received written debriefs and a £20 gift voucher as a thank you for their participation. Audio-recorded interviews were individually transcribed in full

verbatim. The primary interest was in the content of the interviews, therefore it was sufficient to transcribe what was being said (the words), although selective transcription notation was found to be useful. This allowed inclusion of non-verbal communication and behaviour of the participants during the interviews that may have been relevant in the wider analysis of the research findings. Having conducted ten interviews, data saturation occurred after nine analysed transcripts; the final transcript was used to substantiate the themes outlined (Ando, *et al*, 2014; Braun & Clarke, 2019; Guest *et al*, 2006).

Analysis

Quality criteria were used for the reporting of the qualitative data (Shaw, 2019) to improve the transparency, trustworthiness, quality and credibility of the data collection and analytical process (Nowell *et al*, 2017). The data were analysed in accordance with a theoretical thematic analysis (Braun and Clarke, 2006; 2012; Braun, Clarke & Rance, 2014) in order to address the exploratory nature of the study. This approach is a useful method for identifying, analysing and reporting patterns within data through the use of an in-depth, description of themes. First, this involved becoming closely familiar with the data by reading and re-reading the interview transcripts. Following this close reading, initial codes were generated through focusing on what the participants were saying in relation to their understandings and experiences of mental health, disclosure and help seeking behaviour. This consisted of identifying meaningful extracts and codes accordingly. At the end of this step, the codes were organised into preliminary themes that seemed to say something specific in relation to the research questions. The data associated with each preliminary theme was read

and re-read and considered as to whether it really did support it. The themes were then examined in order to ascertain whether they worked in the context of the entire data set. The themes were then refined; all the data relevant to each theme were extracted and a process of defining and naming the master themes commenced (Clarke & Braun, 2018). Each master theme and associated sub-theme was actively created by the lead qualitative researcher (CC). Each theme unites data that, captured implicit meaning beneath the data surface (Braun *et al*, 2014, Braun & Clarke, 2020).

The final strategy adopted was through a process of triangulation, whereby preliminary themes developed by the lead researcher (CC) were cross-checked by the co-researchers (NC & XL) who also had expertise in qualitative research. Themes were discussed among the research team and the wider student stakeholder group until a consensus had been met on the definitions of each theme. Reflexivity throughout the research process was adopted through the lead researcher maintaining reflective journals (Braun and Clarke, 2019) and by the research team holding regular reflexive meetings to help manage pre-assumptions and identify 'blind spots' in the interpretation of the themes (MacIntyre *et al*, 2018). This procedure resulted in three master themes and associated sub-themes that addressed the aims of the study and were present within all ten interviews.

Findings

The challenges experienced by the participants of Study 1 were found to be complex and multidimensional. The three themes and associated sub-

themes identified were: (1) Negative beliefs, stigma and fear of judgment impacting on understandings and disclosure of mental health issues (unhelpful coping mechanisms), (2) Adaptation and acculturation difficulties (lack of sense of belonging), and (3) Barriers in communication and social disconnection (see Figure 1).

FIGURE 1 HERE

Negative beliefs, stigma and fear of judgement impacting on understandings and disclosure of mental health issues (unhelpful coping strategies)

When describing their understandings of mental health, all the participants emphasised the negative connotations and perceptions that often surround their understandings of mental health. Mental health was largely associated with negative beliefs such as “weakness” (Jenny), “being mad” (Alan) or as “bad emotions” (Vivian). The sense that it was something “shameful” (Eric) was widely acknowledged, and often internalised, among the participants. All participants described how studying abroad had presented challenges to their mental health, yet they expressed their concerns about disclosing such difficulties through fear of being “negatively judged” (James) by their peers in their host country (Scotland) and by their social circles (Asian friends and family) back home. Jack described his personal thoughts and fears about acknowledging and addressing his mental health issues:

> I didn't perceive that was problematic at all. In fact, I think I was scared to seek help, that I was scared to be aware of the problem…I worried how others would react (Jack).

James recalled being told "the way I'm thinking is wrong" when he had disclosed his mental health challenges to a family member. Similarly, Amy expressed "fear" that she would be sent to (psychiatric) hospital if she expressed concerns about her mental health or sought help within her university. Concern that disclosing personal struggles with mental health could negatively "impact on (my) education…I could get sent home" (James) was also raised. Due to these unfavourable perceptions of mental health (problems), participants were of the view that students from similar cultures were likely to have a lack of awareness and have limited knowledge about mental health; as captured in May's account:

> Our culture, we do not have the environment that encourages people to have a talk with other people, you know, because we think it is very private (May).

As a result, all participants emphasised their apprehension to disclose their mental health concerns with others over fear of judgment and consequence. This often prompted feelings of vulnerability, doubt and the development of unhelpful coping strategies. These included "keeping problems" (Vivian) to themselves, "suppression of depressive feelings" (Jack) and choosing to instead "endure" (Amy) their issues by themselves. Some of

these issues included constantly “feeling very low” (Emily) and coping with the “really stressful” (Jack) environment of socio-cultural and lifestyle differences in Scotland (e.g. differences in food, currency, weather and understanding different Scottish dialects and accents). Participants also described how they tended to downplay the severity of their mental health issues so as to “not bother” (Vivian) their peers or family. For Emily, there was a sense that talking about her mental health issues would result in them being amplified:

> I think if I go to seek help… I’m just bringing up some, small issue… I’m making it look like that is quite a big problem. Why do that when everyone here is going through the same thing? (Emily).

Adaptation and acculturation difficulties adversely impacting on mental health (lack of sense of belonging)

Whilst discussing the arising and/or ongoing mental health challenges experienced by the participants throughout their adaptation to studying and living in Scotland, several overlapping issues surrounding their transition to the cultural, lifestyle and social differences were highlighted. Upon reflecting on their earlier memories in Scotland, most participants could relate to feelings of uncertainty and unfamiliarity, seeming as though “everything has changed” (Eric). The noticeable difference in the culture between their home country and Scotland was observed by Alisha:

> The culture tends to get very individualistic… you just go around, do your own thing… some people like that lifestyle, or they get used to it… but for some people it just doesn't work out…It's been hard for me (Alisha).

However, the most prominent change highlighted by most participants was the change in reception towards mental health by the host university in Scotland, in comparison to their observations of the mental health culture back home. Participants described how there appeared to be a great deal of "promotion around mental health and seeking help" (James) at their host university in Scotland. This noticeable "culture-shock" (Alisha) proved to be difficult for some participants to adapt to, as mental health disclosure and help seeking were often perceived negatively and regarded as "wasting time" (Amy) or "viewed negatively" (Vivian) in their home countries. James also questioned whether the focus on student mental health was an indication that their host institution had concern for their mental well-being:

> It's just new to me, as in the university actually caring about people's personal lives…It's not something I have experienced before (James).

This appeared to influence most of the participants' initial hesitation towards openly discussing their mental health concerns and their inclination to seek help. A common concern raised by some participants was their lack of "trust" (Eric) in the confidentiality of the university well-being services. Moreover, a couple of the participants believed that it was not the institution's "responsibility or their obligations" (Jenny) to care for students' wellbeing.

These feelings of uncertainty and challenges in adapting to the host university's approach to mental health appeared to increase some of the participants' reluctance to act upon seeking mental health support:

> I don't even know where to start… I don't even know what it is… they are supposed to help you, giving advice to us… I'm afraid to go, cause I don't know what to expect…it's just different to what I know (Emily).

Barriers in communication and social disconnection.

A prominent factor found to inhibit participants from disclosing their problems and seeking help was their experience of communication barriers; both verbal and non-verbal communication issues were emphasised. Alan described his internal struggles associated with the language barrier inhibiting his ability to properly convey his feelings in English, thus contributing to his hesitation about expressing his mental health issues:

> You are very shy, even though you know English, you don't know how to express your feelings… so sometimes it will be very embarrassing. I don't know how to say it (Alan).

Alongside this, the problems presented by language barriers appeared to affect participants on multiple levels, including difficulties with expression to negatively impacting their "self-confidence" (May) and self-identity, as emphasised by Eric:

> I don't feel the same, because when I switch my language to English, I am another person… I am not who I was before because of another language. It's then hard to say what I feel (Eric).

For many participants this led to a sense of social disconnection with their peers, as reflected in their perceived struggle to form strong social networks due to feeling unable to "fit in" (James) and form "connections" (Emily). Despite their attempts at developing new interpersonal relationships throughout the duration of their studies, the participants reported communication with peers was further limited by underlying cultural differences, as explained by May:

> I don't know, I cannot engage in it… after all I am a Chinese student… and I don't know the culture… I just listening and at that moment I feel very lonely because I cannot engage to the talking (May).

As a result, participants found it difficult to be open and authentic with their peers, as Vivian stated she struggled to be her "true self". In turn, participants often felt conflicted as they did not want to "give any pressure" (Jenny) to their friends and viewed help-seeking or support for their mental health as a burden. Instead, they often withheld their problems and expressed their reluctance to make social contact or seek-help. May described how this led to her avoiding others:

> In the past I was scared to ask other people questions… I tried to solve the problems on my own and then I found that I cannot… I tried and tried my best to avoid contact with other people…I got really lonely and depressed (May).

Study 2: Online survey study

Given the findings from Study 1 and that the previous research suggests that AISs may experience increased mental health challenges when studying in a Westernised context (Lu et al., 2014; Soorkia, Snelgar, & Swami, 2011; Tang, Reilly, & Dickson, 2012), Study 2 aimed to gain a more general understanding of AISs' knowledge on mental health (mental health literacy) and its impact on psychological adaptation; a cross-sectional online survey was used to collate these data. The research team were interested in understanding whether the difficulties described by AISs in Study 1, were prevalent among AISs studying within the wider Scottish context. For Study 2 it was hypothesised that being in the AIS group would predict lower levels of psychological adaptation compared to non-AISs, and that this relationship would be mediated by their understandings of mental health.

Participants

A power analysis for linear regression was conducted using G*Power 3.1 (Faul, Erdfelder, Buchner, &Lang,2009). Setting alpha at .05, power at .95, and to detect a medium sized effect, the power analysis indicated that 138 participants were required. All participants were asked to provide demographic information, including age, gender, study stage, and country of domicile.

According to their country of domicile, the participants were divided into two categories for data analysis: AIS and non-AIS. Data were obtained from a total of 172 international students studying in Scottish HE institutions. The sample comprised 50 AISs and 122 non-AISs (see table 2 & 3). Among the AISs, 28 were males and 22 were females, with ages ranging from 18 to 31 (M=21.77, SD=2.80). Among the non-AISs, 41 were male, 80 were female, 1 reported as non-binary and 1 as other. Their ages ranged between 18 to 45 (M= 23.95, SD= 5.00).

TABLE 2 HERE

TABLE 3 HERE

Recruitment and procedure

An online questionnaire was developed on the Qualtrics online survey platform. Participants were recruited to this study through posters on campus, social media, word of mouth and the psychology participant pool at the University of Strathclyde between October 2019 and July 2020. Participants first provided online informed consent, and then answered questions about demographics, mental health literacy, and psychological adaptation. It took approximately 10-15 minutes (M = 11.26, SD = 1.43) to complete the questionnaire. A debrief page was shown at the end of the questionnaire, which contained contact details of the research team and provided information on possible sources of support.

Measures

Mental Health Knowledge Schedule (MAKS; Evans-Lacko et al., 2010)

The Mental Health Knowledge Scale (Evans-Lacko et al., 2010) is a 12-item self-report questionnaire. It comprises six items that assess stigma-related mental health knowledge areas (e.g., "Most people with mental health problems go to a healthcare professional to get help."), and six items that inquire about knowledge of mental health conditions (e.g., Stress; Schizophrenia). Responses were rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Three items were reverse coded (6, 8, 12) so that higher scores indicated greater mental health knowledge. A sum score was calculated (possible score range 12-60). The Cronbach's alpha in the current study was 0.82.

Brief Psychological Adaptation Scale (BPAS; Demes & Geeraert, 2014)

The Brief Psychological Adaptation Scale (Demes & Geeraert, 2014) is an 8-item scale designed to measure psychological adaptation specific to cultural relocation. In this measure, participants were asked about their experiences of living in a new cultural environment. An example item is "In the last 2 weeks, how often have you felt lonely without your family and friends in your home country around you?". A 7-point Likert scale was used for the measurement (1=Never, 7= Always). Six items were negatively worded (Items 2-7) and reversed for the statistical analysis. The possible score range is 8-56, with high scores indicating better psychological adaptation. The Cronbach's alpha was 0.82.

Analysis

Analyses were conducted using SPSS version 25.0. Missing data was observed across variables. However, only two items had more than 5% of missing values (items 1 and 5 from MAKS, 7.6% and 8.1%). Little's Missing Completely at Random Test (MCAR; Little,1988) was not significant ($\chi^2(490) = 516.66$, $p = .195$), indicating that data was missing completely at random (MCAR). Missing values were replaced using the expectation-maximization algorithm in SPSS 25.0. Descriptive statistics were computed for all studied variables. The inferential analyses consisted of: 1) a hierarchical linear multiple regression model assessing the influence of student group and mental health literacy on psychological adaptation; 2) a mediational model to test whether the relationship between student group and psychological adaptation is mediated by mental health literacy.

Findings

Descriptive statistics are shown in Table 3. Non-AISs reported higher levels of mental health literacy and psychological adaptation than AISs. In a hierarchical multiple regression (Table 4), potential predictors of psychological adaptation were entered in three blocks.

TABLE 4 HERE

Age, gender (1=male, 2=not male) and study stage (dummy coded 1-8) were entered first, then student group (1=Asian, 0=non-Asian) was entered in the second block, and mental health literacy was added in the final block. Model 1 and Model 2 were not statistically significant ($p > .05$). However, student group was a significant predictor in Model 2. Model 3 was significant and explained

5% of the variance in psychological adaptation, F (5, 166) =2.85, p=.02. R^2 and adjusted R^2 for the model were 0.08 and 0.05, respectively. In the final model, the only significant predictors were gender and mental health literacy. The significant coefficient of student group in Model 2 became non-significant in Model 3.

The mediating effect of mental health literacy was examined using Model 4 (mediation model) from Hayes' (2013) PROCESS macro in SPSS (Figure 2). Psychological adaptation was entered as outcome variable, student group was entered as predictor variable, and mental health literacy was entered as mediator. Age, gender and study stage were included as covariates. Results from the simple mediation analysis indicated that student group was indirectly related to psychological adaptation through its relationship with mental health literacy. A 95% confidence interval based on 10,000 bootstrap samples showed that the indirect effect (β = -0.37) was entirely below zero (-0.71 to -0.07). The results supported the hypothesis that being in the AIS group was associated with lower levels of psychological adaptation compared to non-AIS, and this relationship was mediated by mental health literacy.

FIGURE 2 HERE

Integrative findings

The process of integrating the research findings involved systematically listing and comparing the qualitative and quantitative data in order to explicitly detail what each component added to the research area to allow additional insights to emerge (Creswell & Clark, 2011). Study 1 found that AISs

emphasised how negative beliefs, stigma and fear of judgment impacted on their understandings and willingness to disclose mental health issues, unhelpful coping strategies, adaptation and acculturation difficulties and how barriers in communication and a sense of social disconnection adversely impact on help-seeking behaviour. The findings from Study 2 showed that AISs reported lower levels of mental health literacy, which in turn resulted in poorer psychological adaption compared to non-AISs. Together, the findings from both studies generate novel insights into the perspectives and experiences of a relatively diverse sample of AISs studying within a unique cultural context, highlighting the additional challenges that may be experiences by AISs compared to other international students when studying in Scotland.

Discussion

The purpose of this sequential multi-method study was to provide an in-depth exploration of the unique perspectives and experiences of AISs studying in Scotland; specifically, concerning their understandings of mental health, disclosure, help seeking behaviour and psychological adaptation within the Scottish context.

In terms of Study 1, which has a more specific focus drawing upon the perspectives of AISs studying at one HE institution in Scotland. Negative beliefs, stigma and fear of judgement towards mental health was evidence among AISs' accounts. The stereotypes and pre-conceived negative beliefs surrounding mental health as a form of weakness and as something shameful were widely acknowledged and often internalised by AISs in the study. These findings are consistent with previous research which has found that students from ethnic minorities are less likely to seek help for mental health issues due to

fear of negative judgement and stigma (Heath, Vogel, & Al-Darmaki, 2016; Soorkia, Snelgar, & Swami, 2011). Specifically, the adherence to traditional Asian cultural values of the collectivist nature which advocate emotional self-control, loss-of-face and humility have been found to negatively correlate with help-seeking intentions and attitudes (Bathje et al, 2014, et al, 2008; Hamid, Simmonds & Bowles, 2009, Zane et al, 2014). In relation to the current study, this could suggest that participants who referred to their mental health concerns as a burden and shameful, considered help-seeking as a possible form of self-expression, which counteracts their belief of self-restraint, therefore attaching a high level of stigma against it (Constantine et al, 2005; Vogel et al, 2017; Wong et al, 2014; Yakunina & Weigold, 2011). It is worth considering how this may also impact of AISs' ways of coping, for example, through keeping problems to themselves, suppression, withdrawal and denial, which have been found in previous research to impair mental health, increase psychological distress and led to feelings of vulnerability (Bjorck, Cuthbertson, Thurman & Lee, 2001; Cao, Zhu, & Meng, 2018; Ra & Trusty, 2015). These findings suggest that seeking to creating a stigma-free environment among the community of AISs could be a focus of mental health outreach within HE institutions (Glass & Westmont, 2014; Masuda and Boone 2011; Slaten, Elison, Lee, Yough, & Scalise, 2016). The current findings reveal that perceived personal weakness may be a core feature of participants' experience of stigma. Gaining insight from lay experiences can help researchers and educators better understand observed differences between AISs and Scottish cultures and, thus, provide a means of comprehending and reducing confusions and uncertainty surrounding mental health among diverse student populations. As well as education as a means of

challenging mental health stigma, research suggests that purposeful, contact based anti-stigma programmes are effective (Anonymous et al., 2003 Anonymous , 2005; Anonymous et al, 2010).

The negative impact of adaptation and acculturation difficulties on mental health, with participants emphasising the lacking sense of belonging within the Scottish context, was an important and novel finding in Study 1. Participants described their experiences with stressors including cultural clashes, communication and language barriers, alienation, loneliness and difficulties forming strong, interpersonal networks. This is consistent with existing research, involving AISs studying in other Western countries (e.g. US, Canada, Australia) reporting feeling of distress and alienation due to the unfamiliarity of their new environment (Newsome & Cooper, 2015), and lack of sense of belonging (Khawaja & Dempsey, 2008; Rao et al, 2010; Yeh & Inose, 2003).The importance of social connection and overcoming acculturative stress has been found to be important in facilitating AISs' sense of belongingness (Glass & Westmont, 2014; Slaten et al, 2016; Ma, Pitner, Sakamoto & Park, 2020).

A further distinctive difference noted by participants in Study 1 was the perceived positive reception towards mental health held by the Scottish university, which contrasted with the comparatively unfavourable perceptions observed back in their home country. This could partly explain why studies have found international students to underutilise support services such as counselling, as the perceived negative perception of mental health may impede awareness and confidence in these services (Ang & Liamputtong, 2008; Clough, Nazareth, Day & Casey, 2019; Lu et al, 2014). Indeed, recent work

reported that AISs may have unique but unspoken concerns and expectations about student counselling and mental health support services, emphasising the utility in openly encouraging the discussion of such perspectives during intake to mental health supports and services [CITATION Liu20 \l 2057]. The importance of providing culturally congruent explanations of mental distress has been found to increase therapeutic working alliances, decrease drop out and improve mental health outcomes among AISs (Benish, Quintana, & Wampold, 2011; Lambert, 2013).

The impact of communication barriers (both verbal and non-verbal) on inhibiting disclosure and help-seeking behaviour and the consequential social disconnection that AISs' experienced among their domestic peers was a further important finding to emerge from Study 1. Similar to a growing body of research, participants discussed how language barriers not only made it difficult for them to effectively engage within the new culture and with local people, but it also negatively impacted on their ability to express their mental health concerns (Newsome & Cooper, 2016; Zhang & Brunton, 2007). Indeed, Study 2 revealed that AISs reported lower levels of mental health literacy, which in turn resulted in poorer psychological adaption compared to non-AISs. The practical and emotional challenges experienced by the lack of confidence in English proficiency has been widely explored within acculturation research (Wang, Schwartz & Zamboanga, 2010; Xing, 2017). Experiencing difficulties with the host language and culture has been found to lead to decreased levels of self-esteem, self-identity, superficial levels of friendships and lack of knowledge to make sense of social situations (Lu et al, 2018; Spencer-Oatly & Xiong, 2008; Yeh & Inose, 2003). It could be suggested that without the ability to form

strong, meaningful relationships with domestic peers, AISs experience the loss of their close-knit relationships from back home. This can be detrimental to the mental health and adaptation of AISs, as social connectedness has been found to buffer the adverse impact of marginalisation (Glass & Westmont, 2014; Ng, Wang & Chan, 2017) and mediate links between adherence to the host culture and psycho-social adjustment (Zhang & Goodson, 2011; Yu, Vyas, & Wright, 2020). This corresponds with previous studies which found that over time, international students reportedly experienced lower levels of stress which could coincide with their integration, acceptance and the development of coping strategies as they adapt to the host country (Gebhard, 2012; Tang, 2018; Zhou, Zhang, & Stodolska, 2018). This suggests that identification with the host culture may be a beneficial coping strategy for facilitating the management of acculturative stressors and with improving psychological well-being (Zhang & Goodson, 2011). Similarly, it may also explain why non-AISs within Study 2 conveyed increased understandings of mental health literacy and improved psychological adaptation compared to AISs. Therefore, it could be suggested that to enable effective socio-cultural adaptation, institutional acceptance and cultural sensitivity is required to enable AISs to successfully confront the changing values, beliefs and behaviors which differentiate from their cultural norm in order to minimise the negative impact of acculturative stressors (Demes, Geeraert, & King 2015; Johnson & Sandhu, 2007).

Study 2 found that mental health literacy mediated the relationship between being an AIS and lower psychological adaptation. The results support the findings of previous research that AISs tend to report low levels psychological adaptation (Bethel, Ward, & Fetvadjiev, 2020; O’Reilly, Ryan, &

Hickey, 2010; Wang et al., 2018).The distance or difference between two cultures is an important predictor of international students' adaptation, mental health and wellbeing (Demes & Geeraert, 2014; Galchenko & van de Vijver, 2007; Fritz et al., 2008). AISs' countries of origin are considered culturally distant from their Western host countries, which means they are likely to face greater challenges when adapting to the cultural context (Lee & Ciftci, 2014; Wang et al., 2018). Larger differences in values, attitudes and beliefs place higher demands on adjustment and coping, and thus may result in lower levels of psychological adaptation in AISs (Bethel, Ward, & Fetvadjiev, 2020; Slaten et al., 2016). Previous studies in the US and Australia have found that compared to AISs, other international student groups (e.g., European and South American students) reported better sociocultural adjustment and fewer psychological symptoms such as depression (Zhang & Goodson, 2011; Rosenthal, Russell, & Thomson, 2008). However, as indicated by previous research, AISs are less likely to utilise mental health services when they need them, and poor mental health literacy is one of the most significant barriers (Cheng et al., 2018; Soorkia et al., 2011; Tang et al., 2012). To the knowledge of the authors, Study 2 is the first to investigate the role of mental health literacy in psychological adaptation of AISs compared to non-AISs within the UK context. The results showed that AISs had lower levels of mental health literacy than non-AISs, which is consistent with existing studies (Altweck, et al., 2015; Fan, 1999; Sheikh & Furnham, 2000). The mediating role of mental health literacy suggests that interventions designed to increase mental health literacy may facilitate AISs' psychological adaptation. Better knowledge of mental health and help services could improve AISs' ability to cope with the challenges they face and

promote their help-seeking behaviour. However, to date there is no published study focused on culturally sensitive mental health literacy interventions for AISs. In addition, more research is needed on how to measure AISs' mental health literacy given that current available mental health literacy measures have been developed based on Westernised notions of mental health which may not capture AISs' understanding and perspectives on mental health (Clough, Nazareth, & Casey, 2020; Reis, Saheb, Moyo, Smith, & Sperandei, 2021).

While it is not possible to make causal assumptions based on the current study's findings given that it is a multi-method, cross-sectional study, the rich and in-depth insights to have emerged from AISs' perspectives and experiences provide a novel contribution to the existing evidence base and will inform the development of future longitudinal work. Further research would benefit from a sub-group analysis of the socio-cultural experiences of Asian students from diverse ethnic origin identities as it is recognised that there is significant heterogeneity within the Asian student population. The majority of Asian countries are home to a diversity of different ethnic groups, often with their own distinct languages, cultures, and styles of dress. Many of these groups have their own systems of religious belief and practice as well. Further work adopting a larger scale, mixed method, community participatory approach exploring differences as well as commonalities among AISs would provide an even deeper understanding of the mental health issues, challenges and opportunities for learning how best to inform mental health policy and support services in HE institutions moving forward and to enhance inter-cultural relations among diverse student populations.

Implications

This study has implications for mental health support workers and policy makers in HE institutions. Arguably, Universities could be more proactive in supporting the adaptation of AISs and mitigating acculturative stressors. For example, many universities have established peer support/buddy programmes between home and international students using social media platforms that are more familiar to AISs (e.g. WeChat for Chinese students). To reduce the language and communication barriers faced by AISs, HE institutions could provide more support for English learning and aim to build diverse student wellbeing teams. Culturally sensitive training workshops on relevant topics (e.g., introducing university wellbeing service, improving mental health literacy, reducing stigma, coping skills trainings, seeking help for mental health) could be offered to AISs to support their wellbeing and facilitate their disclosure and help seeking when needed. This is particularly pertinent given the context of the COVID-19 outbreak and its consequent impact on student mental health and wellbeing [CITATION Van21 \l 2057].This may be particularly challenging for AISs given that the pandemic has been found to have triggered xenophobic reactions towards students of Asian-origin, including prejudice, violence and discrimination related to COVID-19 leading to feelings of isolation (Litam, 2020; Rzymski & Nowicki 2020). These findings underscore the importance of HE institutions being aware of these challenges and taking responsibility in overcoming and preventing discriminatory attitudes and behaviours which may adversely impact on student mental health. In addition, it is important to make sure that counsellors, psychological support staff, teaching staff, researchers and other staff members supporting student mental health have appropriate

awareness, knowledge and skills to work effectively with AISs. Mental health policy makers are encouraged to address the need for supporting AISs and enhancing mental health support workers' cultural competences.

Conclusion

This study reported on a sequential, multi-method study and analysis of understandings of mental health, disclosure, help-seeking and psychological adaptation among AISs studying in Scotland. The importance of understanding the negative beliefs, stigma and fear surrounding mental health and how this can lead to unhelpful ways of coping with the stressors associated with adaptation and acculturation difficulties are emphasised. Recognising how the barriers in communication (both verbal and non-verbal) may lead to AISs feeling socially disconnected from HE institutions is essential, particularly for mental health supports and services which seek to help students gain a sense of integration and acceptance within the host institution in which they are students. Addressing the barriers that may inhibit disclosure and help seeking for mental health issues including increasing mental health literacy, providing coping skills training and improving inter-cultural relations among diverse student populations is paramount within mental health policies, supports in HE institutions and psychological and counselling services which seek to embrace culturally diverse understandings of mental health within a multicultural environment.

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Table 1.

Participant's characteristics

Participant	Name	Gender	Age	Ethnicity
1	Jenny	Female	31	Chinese
2	Amy	Female	24	Chinese
3	Eric	Male	28	Chinese
4	Jack	Male	26	Chinese
5	Alisha	Female	28	Indian
6	Vivian	Female	20	Chinese
7	Alan	Male	23	Hong Kong, Chinese,
8	James	Male	20	Indian
9	May	Female	25	Chinese
10	Emily	Female	30	Malaysian

Figure 1.

Schematic diagram of the themes for study 1

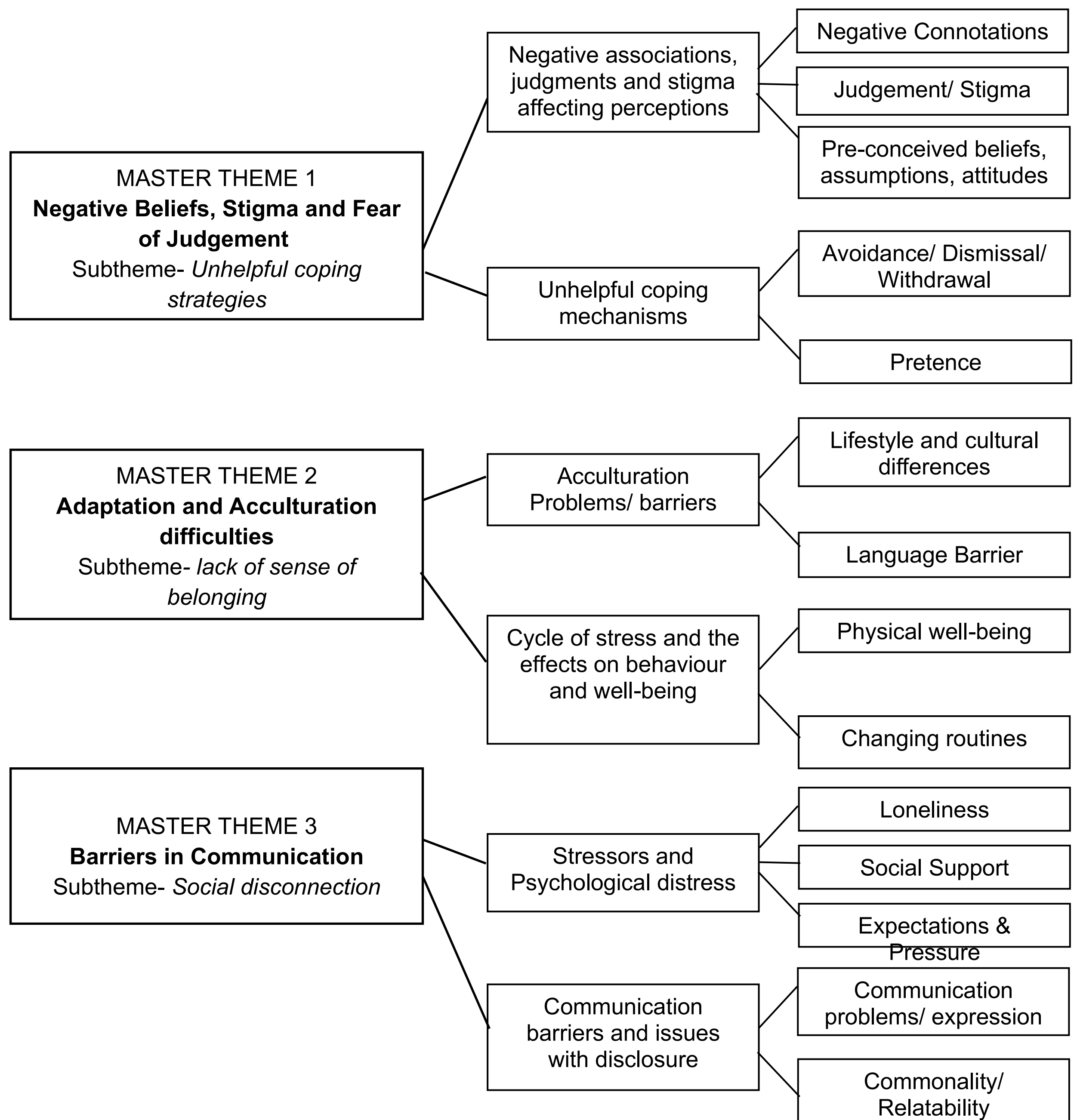


Table 2

Country of Domicile of the Participants

Asian International Students Country of Domicile: n (%)	Non-Asian International Students Country of Domicile: n (%)	
Thailand: 1 (2%)	US: 26 (21.3%)	Netherlands: 1 (0.8%)
Singapore: 3 (6%)	Nigeria: 3 (2.5%)	Middle East: 1 (0.8%)
Malaysia: 2 (4%)	Canada: 6 (5%)	Mexico: 2 (1.6%)
Laos: 1 (2%)	Germany: 8 (6.6%)	Lithuania: 1 (0.8%)
India: 24 (48%)	Italy: 3 (2.5%)	Latvia: 1 (0.8%)
Hong Kong: 3 (6%)	France: 7 (5.7%)	Kuwait: 1 (0.8%)
China: 13 (26%)	Ireland: 2 (1.6%)	Kenya: 1 (0.8%)
Yemen: 1 (2%)	Greece: 4 (3.3%)	Hungary: 1 (0.8%)
Sri Lanka: 1 (2%)	Trinidad and Tobago: 1 (0.8%)	Guyana: 1 (0.8%)
Pakistan: 1 (2%)	Australia: 2 (1.6%)	Ghana: 11 (9%)
	Zimbabwe: 1 (0.8%)	Finland: 6 (5%)
	Sweden: 2 (1.6%)	Equator: 1 (0.8%)
	Spain: 4 (3.3%)	Egypt: 3 (2.5%)
	South Africa: 1 (0.8%)	Croatia: 1 (0.8%)
	Saudi: 1 (0.8%)	Cameroon: 1 (0.8%)
	Russia: 3 (2.5%)	Bulgaria: 3 (2.5%)
	Portugal: 1 (0.8%)	Brazil: 1 (0.8%)
	Poland: 3 (2.5%)	Austria: 2 (1.6%)
	Oman: 1 (0.8%)	Ukraine: 1 (0.8%)
	Norway: 3 (2.5%)	

Table 3

Demographic and descriptive statistics: survey data

	Asian International Students M(SD)/n(%)	Non-Asian International Students M(SD)/n(%)
Age	21.77(2.80)	23.95 (5.00)
Gender		
Male	28 (56%)	41 (33.6%)
Female	22 (44%)	79 (64.8)
Non-binary	0	1 (0.8%)
Other	0	1 (0.8%)
Study Stage		
HNC/HND	15 (30%)	1 (0.8%)
1st Year Undergraduate	3 (6%)	17 (13.9%)
2nd Year Undergraduate	5 (10%)	20 (16.4%)
3rd Year Undergraduate	5 (10%)	19 (15.6%)
4th Year Undergraduate	4 (8%)	13 (10.7%)
Postgraduate Masters	14 (28%)	34 (27.9%)
Postgraduate PhD	2 (4%)	16 (13.1)
Other Postgraduate	2 (4%)	2 (1.6%)
Metal Health Literacy	34.94(10.03)	48.52 (4.06)
Psychological Adaptation	35.07 (9.51)	38.35 (9.55)

Table 4

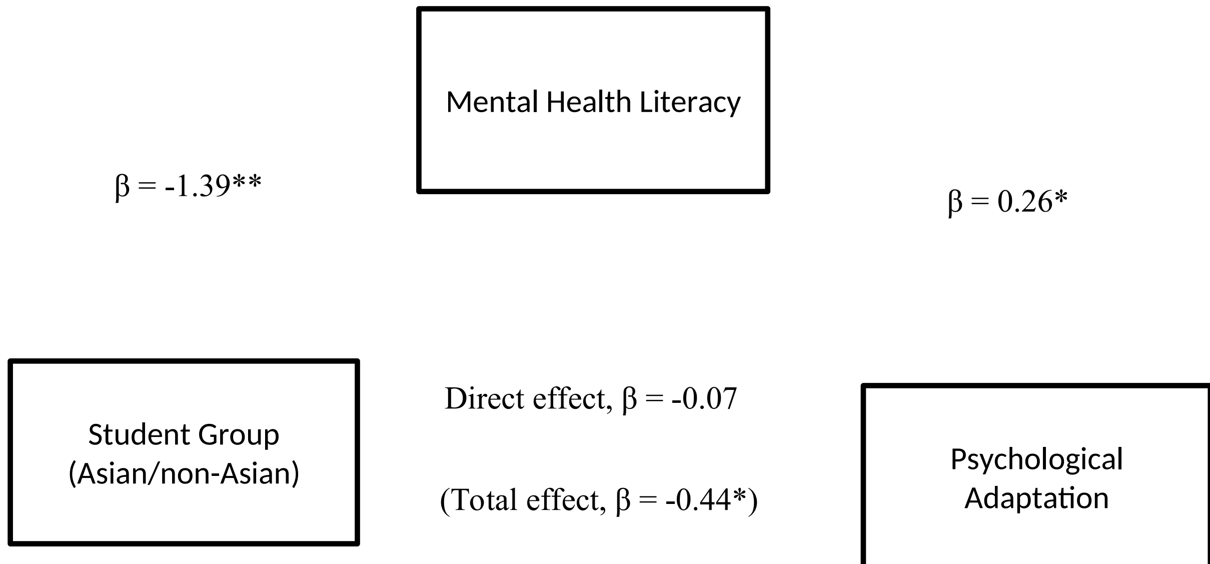
Hierarchical multiple regression of demographic variables, student group and mental health literacy on psychological adaptation

Predictors	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Constant	42.18	4.40		46.47	4.65		34.18	6.92	
Age	-0.01	0.20	-0.47	-0.16	-0.20	-0.08	-0.12	-0.19	-0.06
Gender	-1.70	1.39	-0.94	-2.40	1.40	-0.13	-3.27	1.42	**-0.18***
Study Stage	0.06	0.46	0.12	-0.03	0.46	-0.01	-0.31	0.46	-0.06
Student Group (Asian/ non-Asian)				-4.26	1.68	**-0.20***	-0.71	2.23	-0.34
Mental Health Literacy							0.29	0.12	**0.27***

Note: N=172; *p<.05.

Figure 2

The mediating effect of mental health literacy in the relationship between student group and psychological adaptation



Note: **p*<.05, ***p*<.001; All presented effects are standardised.