International Students at American Universities: Mental Health Needs and Assessing the Barriers to Accessing Mental Health Services

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Author Note

The project was approved by the University's Institutional Review Board (IRB).

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The author was solely responsible for the expenses accrued during the process.

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Abstract

Objective: Mental health illnesses are complex conditions that afflict many university students. International students are uniquely vulnerable to these conditions due to challenges such as adjusting to the new environment and culture of American universities. They are also less likely than domestic students to receive mental health services. Research indicates that there are obstacles for international students when it comes to seeking mental health services, but these obstacles are typically over-generalized and less applicable to each specific university setting. The purpose of this paper was to assess the barriers in seeking mental health services by international students. **Participants:** International students at a large university located in Southwestern United States. Students 18 years of age or older, enrolled as an international student, proficient in English, exhibiting mental health symptoms, and refusal of primary care physician's referral to mental health services. **Method:** Physicians at Health Services verbally recruited the participants during routine visits. Participants did not provide any personal information, and completion of the questionnaire indicated their consent. This project was guided by the model of mental health help-seeking, where a questionnaire was administered to students, allowing them to identify what specifically prevents them from receiving mental health services. **Result:** Due to the COVID-19 pandemic, only 1 questionnaire was completed, but it was rejected as it was filled by domestic student. **Conclusion**: The data gathered through this questionnaire was intended to be provided to university healthcare providers to better understand how they can connect with international students with mental health concerns.

Keywords: international students, mental health, mental illness, depression, barriers

International Students at American Universities: Mental Health Needs and Assessing the Barriers to Accessing Mental Health Services

Mental health is important at every stage of life as it helps one handle stress, make healthy choices, and affects how one thinks, feels, and acts (CDC, 2018). Mental health consists of our emotional, psychological, and social well-being (CDC, 2018). Today, the mental health needs and concerns of university students (domestic and international) is a significant growing health concern that should be closely monitored, assessed, and carefully remedied. Depression, anxiety, mood disorder, and substance abuse are the most common mental health issues that are affecting university students (Ebert et al., 2018). Interventions need to be implemented to address the mental health challenges that students face including their ability to access appropriate treatment.

Background/Significance

Problem Statement and Epidemiological Data

In 2015, there were approximately 43.4 million adults, (one in five Americans age 18 or older) who were diagnosed with a mental illness (CDC, 2018). In 2015, 9.8 million adults (1 in 25 Americans aged 18 or older) were diagnosed with a serious mental illness (CDC, 2018). Within the same year, there were 65.9 million visits to the primary care physicians (PCPs), with mental health concern being the primary reason for those visits (CDC, 2018). Mental health concerns have significant consequences individually and systemically (CDC, 2018). Suicide has become the 2nd leading cause of death and mood disorders are now the 3rd most common cause of hospitalization (CDC, 2018). Patients with mental health issues are dying 25 years earlier as compared to others with no mental illnesses, and estimates suggest that mental health conditions cost the USA $193.2 billion in lost earnings (CDC, 2018).

Arizona's population is around 6.7 million people, out of which 4.6% of adults are living with serious mental health conditions such as depression, bipolar disorder, and schizophrenia (RTOR, 2020). Among these 4.6% adults, only an estimated 40.3% receive any form of treatment from either public or private sector, whereas the remaining 59.7% receive no treatment (RTOR, 2020). Based on the 2018 census, there are 4.4 million people that reside in Maricopa county (Maricopa County, 2020). In 2016, among the population aged 18-24 years, 11.1% reported mental illness (Holmes et al., 2018). Within the population aged between 25-34 years, 18.1% reported mental illness (Holmes et al., 2018). No data was provided for students' mental concerns on any government resources.

Research suggests that mental health concerns among university students are rising (Forbes-Mewett & Sawyer, 2016). This is evident from both the self-reported concerns from students and from the university-based counselors (Forbes-Mewett & Sawyer, 2016). Mental health concerns can lead to consequences that not only impact students, but also their friends, family, and the campus and community at large (Ishii et al., 2017). In the long run, this can affect their employment, earning potential, and above all, their physical health (Getting Started, 2020). Mental health also places a burden on campuses; research suggests that 64% of the students voluntarily dropped out of the university due to mental health issues, resulting in lost money in tuition, fees, and donations (Ishii et al., 2017; Getting Started, 2020).

Purpose and Rationale

Research has demonstrated that college students are increasingly vulnerable to mental health concerns, with as many as one in three first-year students reporting mental health concerns in the year 2018 (Stewart et al., 2019). When international students arrive in a foreign country like the USA, they face many challenges that include finding residence, orienting to the

university, learning the names of places in/around the university, adjusting to the new learning environment, language barriers, and financial issues (Kim et al., 2019). According to a recent study conducted among 900 international students, 41% reported experiencing a substantial level of stress due to homesickness, cultural shock, and discrimination (Wu et al., 2015). The goal of this paper is to discuss the background and significance of the rise in mental health issues especially among international students in the U.S., their mental health needs and concerns, and potential barriers to accessing mental health services including primary care mental health. The research was done of the existing literature regarding international students, their mental health needs and concerns, and in turn, identifying potential barriers to seeking/accessing services when referred by the primary care provider.

Internal Evidence

The current statistics of mental health issues among college students demonstrate that 40% fail to seek help, 80% feel overwhelmed by their responsibilities as students, 50% have struggled greatly from anxiety and which eventually resulted in struggles with academics, and 30% have reported that they had a problem with school /work due to mental health issues (CollegeStats, 2020). Also, 50% of these students rated their mental health as below average or poor, and only 7% of parents reported that their student suffers from a mental illness (CollegeStats, 2020).

An informal conversation with providers of the university revealed that international students are less likely to follow providers' recommendations for mental health therapy (G. Baca, personal communication, October 16, 2019). PCPs observe that referrals to mental health services are not being taken by international students to the mental health counselors as advised and they wonder why it might be (G. Baca, personal communication, October 16, 2019). Some

have hypothesized that it is because of multicultural factors including stigma related to mental health concerns, students' busy schedules, English-speaking therapists being the only option, and perception about mental illness (G. Baca, personal communication, October 16, 2019).

PICOT Question

The increased risk of mental health concerns, along with a reluctance to seek psychological help, makes the identification of factors that promote or inhibit help-seeking behavior among international students an important area of inquiry (Cheng, 2018). Currently, at a large university located in Southwestern United States, international students are receiving the same mental health screenings and referral processes as domestic students but are less likely to accept referrals to mental health services when indicated. Because of this, the barriers to students accessing mental health services and recommended need to be assessed and ultimately remedied. This query has led to the PICOT question, "How do international students (P) who experience a mental health issue (anxiety, depression, stress) (I) perceive barriers to access mental health support (O) when referred by a primary care provider (T)?"

Evidence Synthesis

A review of four different databases was performed to obtain the background information that was used to inform the PICOT question. The databases that were searched for literature review included PsycINFO, PsycArticles, PubMed, and Cumulative Index of Nursing and Allied Health Literature (CINAHL). Keywords included: *international students, foreign students, mental health, mental illness, depression, anxiety, stress, barriers, obstacles, challenges, perception, mental health,* and *counselor services.* Grey literature of government publications from the Centers for Disease Control and Prevention (CDC) and Maricopa county government policies were also searched and incorporated for the readers.

The initial search of Psychinfo using the key terms *international students OR foreign students AND mental health OR depression OR anxiety* yielded 30,873 studies. After applying the outcome words, *barriers OR perception OR behavioral health* and filters of human, young adults, last five years, scholarly journals, and English, the final yield for research resulted in 20 studies.

The initial search of PsycArticles using the key terms *international students OR foreign students AND mental health OR mental issues OR depression OR anxiety* yielded 31,592 studies. After applying the outcome words, *barriers OR perception OR behavioral health* and filters of human, young adults, last five years, scholarly journals, and English, the search yielded 89 studies.

The initial search of PubMed using the key terms *international students OR foreign students AND mental health OR mental issues OR depression OR anxiety OR stress* yielded 790 studies. Adding another term of *counselor service* yielded zero results. Mesh terms were used to broaden the search, but it also gave zero studies. Finally, adding the same outcome key words along with the filters mentioned above yielded 17 articles.

One of the initial CINAHL searches using the population key words *international students OR foreign students* yielded 2,332 studies. After applying the same filters/limits the final yield for research resulted in 17 studies.

The inclusion and exclusion criteria were the same for all four databases. The inclusion criteria included studies that were published in English, dates ranged from 2015 to present, studies performed on humans, studies that originated from multiple countries, and scholarly-written studies. Other inclusion criteria included international students, foreign students, mental health, depression, anxiety, barriers, mental, and counselor services. The exclusion criteria concentrated on studies that were published before 2015, in languages other than English, children less than 18

years old or more than 30 years old, and studies not performed on humans. Rapid critical appraisal, as well as inclusion and exclusion criteria, were used to narrow down the pool of articles to the 10 most relevant and quality studies. These included seven cross-sectional studies, one randomized control trial, and two qualitative studies.

Summary of Selection and Evaluation of Studies for the Literature Review

Ten studies, published between 2015 and 2021, were selected for the literature review that provides the foundation for the PICOT question and the variables related to the mental health needs and barriers to services of international students. Each study discussed the mental health needs of international students and the unique barriers that international and minority students may face in seeking or being open to receiving mental health services. The ten studies included nine quantitative studies that utilized a randomized control trial (RCT) or cross-sectional designs (Appendix A, Table A1), and one qualitative study (Appendix A, Table A2). Using the framework proposed by Melnyk & Fineout-Overholt (2019), the level of evidence of most of the studies was estimated at level-three, with the remaining studies estimated at levels two, four, or six (Appendix A, Table A3). Considering the relatively small amount of research available on the variables of interest related to mental health concerns and access to services among international students, these levels of evidence were acceptable. Each of the studies also utilized high quality of instruments, rigorous methodology, and robust statistical analysis which also contributes to the acceptableness of these studies regarding validity and reliability.

Summary of Sample Characteristics and Funding Biases of Selected Studies

Melnyk and Fineout-Overholt's (2019) rapid critical appraisal was used to evaluate these articles. All studies had an adequate sample size for their analysis method, ranging from 16 to 67,308 participants. Out of ten studies, seven gave the age range, two provided the average age,

and one did not provide either. Only two of the ten articles reported their funding source. Seven articles recognized potential biases in their research methodology and three did not. Seven of the studies were conducted in the USA, two in Australia, and one in Germany. All of the studies were conducted in a university setting and explored the barriers that international students face regarding mental health needs and services.

Heterogeneity

Heterogeneity was observed by measurement tools and demographics. Measurement tools self-report measures such as the Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), Self-Stigma of Seeking Help Scale, Help-Seeking Attitude and Intention, and Mental Health-Seeking Behavior. Occasionally, it was necessary for the researchers to modify an existing scale or measure to fit the purpose of their study and if so, they paired it with appropriated psychometric analysis.

Homogeneity

Most of the studies have more female than male participants, comprising of a diverse group of people from different educational, cultural, and geographical backgrounds. Homogeneity was found both in the independent variable (IV), dependent variables (DV), and outcomes. For the IVs, the studies generally discussed ethnicity, gender, age, sex, culture, acculturation, stigma, and English proficiency; for the DVs, the studies generally discussed mental health symptoms, attitude towards seeking mental health services, and mental health literacy. It was observed that most of the studies discussed international students' attitudes towards seeking psychological help.

About the Evidence

Understanding the challenges faced by international students has become an important priority for university administrators and mental health professionals. The evidence as presented in the selected studies suggests that international students face unique challenges including mental health concerns combined with various barriers to receiving help for those concerns. Evidence also suggests that universities may benefit from taking a proactive approach to identifying the specific barriers to accessing services within a university population. Also, universities can work to increase mental health awareness among international students, and counselors and instructors should work synergistically to promote mental health services on campus and in the community. Through the recognition of obstacles such as acculturation, language barriers, and negative stigma, healthcare providers would be better equipped to help international students who are suffering from mental illnesses. Consequently, this allows mental health professionals to guide them through their academic journey.

Theoretical Framework: Model for Mental Health Help-Seeking

The model for mental health help-seeking (Cauce et al., 2002) was chosen as the theoretical framework for this project. This model involves three steps: problem recognition, the decision to seek help and service selection (See Appendix B, Figure 1). Help-seeking cannot begin until one recognizes a mental health need, therefore, problem identification and recognition make up the first step in this model. The mental health needs can be defined as either epidemiologically defined need or perceived need (Cauce et al., 2002). While acknowledging a mental health issue makes it more likely for one to seek help, it is not for certain that it will take place. Once the problem is recognized, deciding to seek help is the next step in the model. This step could be a coercive process or a voluntary process.

After recognizing the problem and deciding to seek help, the final step is service selection which Cauce et al. (2002) describe as a process where there may be overlap between who help is sought from (e.g., treatment provider) and who the help is ultimately received by. The model explains that there are three different approaches to service selection: The first approach is informal support from family, friends, clergy, and folk healers. The second approach includes collateral services provided by school counselors and juvenile justice. Lastly, there are formal mental health services that include psychiatrists, psychologists, and social workers (Cauce et al., 2002). It is worth mentioning that these services are interconnected. This model is usually discussed chronologically but it rarely follows this linear pattern (Cauce et al., 2002). To elaborate on this, take a student who recognizes the problem, decides to seek help and selects a service, versus another student who is coerced by family or friends to seek help, and select a service (Cauce et al., 2002). The first student follows the linear path of Cauce et al.'s (2002) model whereas the second one does not. Regardless of the path they take, the application of this framework will help international students recognize what the barriers are that keep them from seeking help, and once recognized, they would know when to seek mental health services.

Implementation Framework: Johns Hopkins Nursing Evidence-Based Practice Model

The model that best fits this project and its site was the Johns Hopkins Evidence-Based Practice Nursing Model (JHNEBP; See Appendix B, Figure 2). This model was developed by the John Hopkins Hospital and the John Hopkins University School of Nursing (Gawlinski & Rutledge, 2008). The JHNEBP model is comprehensive as it addresses all the important components of EBP process including a clinical guiding question, search for the best evidence, critically appraise the evidence, integrate the evidence with one's clinical expertise, evaluate the outcomes of the EBP decision, and disseminating the outcome (Schaffer et al., 2012).

This model consists of 3 phases illustrated in Figure 2 which are referred to collectively as PET, namely practice question identified (P), evidence gathered (E), and translation (T). As applied to this model will be applied in 3 major steps. First, using a team approach, a practice questionnaire was identified. Secondly, evidence was gathered through the questionnaire. Finally, the evidence was translated for use in practice (Schaffer et al., 2012). This model fit this project as it collected qualitative data that was translated into identifiable barriers for mental health service providers.

Methods

There are several ethical issues that can arise during a project such as informed consent, the right to withdraw, deception, protection from harm, confidentiality, and privacy. Every effort was made to address all the ethical issues. Informed consent stated that participation in this project is voluntary, no compensation will be provided, one can withdraw from the project without being penalized, and one will be assigned a unique and random identification number for privacy and confidentiality. The consent form also stated that the results of this project will only be shared in the aggregate form, and no participants names will be used in the results. The consent form also fully disclosed that the result of this project will be shared with University health clinics, and the data may also be used in reports, presentations, or publications. International students were the focus of this project, and the site was a health office of a large university located in the Soutwestern United States. Currently, international students/patients visit the university's health services for their mental health concerns. PCPs identified the potential mental health concerns using their routine screening approaches and made a referral to mental health services. PCPs observed that referrals to mental health services were not being taken by international students and they were curious to learn why that may be. The recruitment

and data collection began after IRB approval and continued for 12 weeks between November 1, 2021 and January 31, 2021.

The key stakeholders involved in the implication of this project were the students, physicians, psychological counselors, the organization (i.e. the university), and the healthcare system in general. The theoretical framework, Model for Mental Health Help-Seeking, combined with the JHNEBP model, guided this project and allowed for the identification of the most salient barriers to seeking mental health services for international students by implementing a self-administered paper-and-pencil survey. This questionnaire collected qualitative data on what students identify as their barriers/obstacles that inhibit them from seeking psychological counseling.

A single page survey was created by compiling three different evidenced-based questionnaires. The first of the three inquired about participants' attitudes toward seeking psychological help, and this was assessed using the Attitudes Toward Seeking Professional Psychological Help Scale-Short Form (ATSPPH-SF) (Fisher & Farina, 1995). The second questionnaire gauged participants' stigma of seeking psychological help, which was assessed with the Self-Stigma of Seeking Help Scale (SSOSH) (Vogel et al., 2006). The final questionnaire assessed participants' acculturation stress using the Acculturative Stress Scale for International Students (ASSIS) (Sandhu & Asrabadi, 1994).

ATSPPH-Short Form consists of ten questions that assesses the recognition of the need for psychotherapeutic help and confidence in mental health practitioners (Elhai et al., 2007). Items are rated on a 4-point Likert-type scale ranging from 0 (disagree) to 3 (agree) with the total score ranges from 0 to 30. Higher scores indicate less treatment-related stigma and more positive attitudes seeking professional help. ATSPPH has consistently shown to have acceptable

psychometric properties in a range of samples and the scale has been used extensively in both Western and Eastern settings - internal consistency ($\alpha = .84$) and 1-month test-retest reliabilities ($r = .80$) (Elhai et al., 2007).

SSOSH consists of 10-item Likert-type scale that assess self-stigma as it relates to challenges in seeking help (Vogel et al., 2006). This item response anchors range from 1 (strongly disagree) to 5 (strongly agree). The SSOSH was originally validated using 5 different studies. The first study looked at the internal validity, which was good (.91) (Vogel et al., 2006). Study 2,3, and 4 looked at other aspects of validity and reliability using test-retest and comparison to similar construct measures (cross-validity), which also suggested high reliability (.86 to .90; .72 in the test-retest) (Vogel et al., 2006). Finally, study 5 examined predictive validity by doing a 2-month follow up to determine whether the measure accurately identified/predicted participants who did or did not engage mental health services.

ASSIS consists of 36 questions also in Likert-scale format from 1 (strongly disagree) to 5 (strongly agree), which will be used to assess acculturation stress among international students (Sandhu & Asrabadi, 1994). It is divided into six subscales including: perceived discrimination, homesickness, perceived hate, fear, stress due to change/cultural shock, guilt, and miscellaneous (Sandhu & Asrabadi, 1994). The total score ranges from 36 to 180 and higher scores indicate greater acculturative stress perceived by the individual (Sandhu & Asrabadi, 1994). The original study reported a Cronbach of 0.89, and subsequent studies have indicated that that is the only standardized instrument to access attitudes toward help-seeking that has been both psychometrically examined and used in a sizeable number of studies (Sandhu & Asrabadi, 1994). The ASSIS total score internal consistency reliability is .92 or above (Sandhu & Asrabadi, 1994).

If the international student/patient declined the referral, then the PCP at the University Health Services recruited that person by asking the question, “One of the doctorates of nursing practice students is working with us to disperse a questionnaire to identify the barriers that international students face in accessing mental health services. It takes less than ten minutes and is anonymous. Would you be interested in participating?” If the patient declined to participate, then no additional action was taken. If the patient agreed to participate, then the PCP’s medical assistant provided the participant with the written informed consent and the questionnaire to review and complete in the waiting room. If the participant had any questions, they could ask to speak to the medical assistant. The participant filled the questionnaire, and the completion of this questionnaire indicated their consent to participate in this project. The participant placed the completed questionnaire and informed consent in the provided envelope and returned it to the front desk staff. If Gloria Baca, NP, (site champion) was in the office, then the front desk staff turned the envelope in to her. If Gloria Baca was out of the office, the front desk staff slid the envelope into her locked office. Only Gloria Baca and ASU Health Services security officers have access to these offices. The total cost of this project was $1300, and the primary investigator bore the expenses (Table A4).

Results

Due to the COVID-19 pandemic, only 1 questionnaire was completed, but was rejected due to being filled by a domestic student. As a result, the researcher was unable to report any results. If enough surveys had been collected, the descriptive statistics would have been used to describe the sample data, and qualitative statistical analysis for interpretation of the data. This project was a gap analysis. Once the barriers faced by international students in seeking mental health services are recognized and addressed, students would experience increased wellbeing and

academic success. This would lead to a higher quality of life, good physical health, and the development of positive relationships with friends and family members. Healthcare providers would be better equipped to help international students who are suffering from mental illnesses. The University could take a proactive approach to identifying the specific barriers and work to increase mental health awareness among international students. Mental health counselors and instructors could work synergistically to promote mental health services on campus and in the community. This project is sustainable because once the pandemic is over, the site would use the questionnaire to identify barriers in seeking mental health services by international students, then determine steps for intervention and measure outcomes.

Discussion

To summarize, there is an increase in international students' enrollment all over the USA (Li et al., 2016). Several evidence-based studies have revealed that there are many obstacles for international students when they come to the USA, and as a result, they suffer from one or more mental illnesses (Babajide et al., 2019). Multiple studies have also identified that there are other barriers unknown to the PCPs that limit the international students to seek access to mental health services offered at the campuses. Three measures (ATSPPH, SSOSH, and ASSIS) combined into one questionnaire were utilized to recognize obstacles such as acculturation, language barriers, and self-stigma. The purpose of data collection through this questionnaire was to deliver university healthcare providers an understanding of how to connect with international students. There were a few strengths in this project such as an appropriate site, a dedicated site champion, the providers', and mental health counselor's willingness to participate. The limitations/barriers were the COVID-19 pandemic and students' proficiency in the English language. As mentioned

earlier, this project was a gap analysis, therefore future research would involve utilizing the questionnaire to determine the barriers in accessing mental health services.

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Appendix A

Evaluation and Synthesis Tables

Table A1

Evaluation Table Quantitative Studies

Citation	Theory/ Conceptual Framework	Study Design/Method	Sample/Setting	Major Variables Studies	Measurement of Variables	Data Analysis	Study Findings/ Results	Decision for Use/Application to Practice
Chen et al. (2019) Psychiatric Symptoms and Diagnoses Among U.S. College Students: A Comparison by Race and Ethnicity. **Country:** USA **Funding:** Not mentioned. **Bias:** Self-report data.	Model for Mental Health Help Seeking (inferred).	**Design:** Retrospective analysis of cross-sectional data **Purpose:** Describe the mental health experiences of college students from racial-ethnic minority backgrounds and explore differences in the presence/ absence of psychiatric diagnosis or treatment.	N = 67,308 **Demographics:** m = 21,159 f = 45,848 Transgender = 301 18–24 years = 61,422 >25years = 5,886 International = 3,384 White m = 13,841 f = 29,308 Hispanic m = 1,678 f = 4,291	**IV:** Demographic characteristic including ethnicity, gender, year in school, sexual orientation, age, etc. **DV:** Self-reported symptoms of mental illness and/or psychiatric diagnosis or treatment within the past year.	The American College Health Association–National College Health Assessment (ACHA-NCHA) selected survey was sued to collect the data. Symptoms of mental illness as measured by single-item questions about 11 different mental health concerns or behaviors such	Logistic regression analysis.	A conservative level of significance was set at $p<0.01$, and 99% confidence intervals are reported. Black, Hispanic, and Asian/Pacific Islander students had lower rates of self-reported past-year psychiatric diagnoses and lower rates of symptoms of mental illness	**LOE:** IV **Strengths:** Level of evidence, large sample size, large number of institutions surveyed, geographic diversity of participants, confounding variables were appropriately controlled, recency of the data. **Weakness:** Institutional self-selection limits generalizability

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			Black m = 783 f = 2.207 Asian/pacific islander m = 2,350 f = 4,790 American Indian/Native Alaskan/Native Hawaiian m = 113 f = 243 Multiracial m = 2,394 f = 5,009 **Setting:** Data was collected from108 colleges or universities in the United States. **IC:** 18 years or old, racial-ethnic minority group.		as depression and anxiety. Psychiatric diagnoses were assessed by obtaining participants' self-report of having been diagnosed or treated within the past 12 months for one or more of 15 different psychiatric diagnoses.		as compared to white students. Asian/Pacific Islander students reported mixed pattern of mental health risk factors including fewer anxiety symptoms but higher depression and suicidality. When conservative p level was used p<0.01 when less conservative was used p=<0.05. Compared to white students, minority students were more likely to endorse mental health symptoms and	of the data, missing income and socioeconomic status, first year students' reported symptoms may have existed before entering college. **Conclusion:** Mental health concerns may be undiagnosed among minority students. University may benefit from implementing proactive approached targeting minority students to help increase mental health awareness and engagement among students from racial-ethnic minority groups.

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			EC: Any question about the 11 symptoms presented was unanswered, any responses to the diagnosis questions were missing. **Attrition:** 0%.				were less likely to have received a psychiatric diagnosis or treatment within the past year.	**Feasibility:** Recommended for use in practice due to LOE, discusses the barriers faced by minority students, supports implementing proactive and targeted approaches.
Cheng et al. (2017) Self-Stigma, Mental Health Literacy, and Attitudes Toward Seeking Psychological Help. **Country:** USA **Funding:** Not discussed.	Model for Mental Health Help Seeking.	**Design:** CSS **Purpose:** To examine the roles of mental health literacy (i.e. recognition and attribution of depression and GAD) and self-stigma of seeking psychological help, as well as their interactions, in predicting attitudes toward seeking	N = 1,535 n=1,190 NHW. n= 132 AsA n= 108 LA n= 105 AA **Demographics:** Age range: 18-56 years. M age- 23.71 f-63.3% hs-88.4% **Setting:** Internet based survey carried out at a large public university in the	**IV:** MHL and self-stigma of seeking psychological help. **DV:** Attitudes toward seeking psychological help as measured by total scores on the ATSPPH.	Depression symptoms were measured using - PHQ-9 (α = .86). Anxiety symptoms were measured using - GAD-7 (α = .89) is a 4-point Likert-type scale. Stigma of seeking psychological help was	Hierarchical regression analysis.	Analysis done in 2 steps. **Step 1:** (with Covariates) Male B = –.26 β = –.22 p < .001 AsA B = –.13 β = –.08 p < .05 current levels of depression symptoms B = –.16	**LOE:** III **Strengths:** Level of evidence, large sample size allowed for adequate statistical power to examine the hypothesized relationships, minority students included. **Weakness:** Self-report data, sample recruited from one large public university,

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Bias: None discussed.		psychological help among a diverse sample of college students.	midwestern United States. **IC:** English, students >18 years. **EC:** Students who identified themselves as International students, other, or more than one race. **Attrition:** 18%.		assessed- SSOSH (α = .89) is a 5-point Likert scale. Attitudes toward seeking psychological help were assessed using - ATSPPH-SF (α = .83) is a 4-point Likert-type scale.		β = –.16 p < .01 Help seeking in the past 12 months B = .35 β = .28 p < .001 Help seeking prior to the past 12 months B = .31 β = .27 p < .001) **Step 2:** MH: GAD B = –.30 β = –.53 p < .001 Depression B = –.09 β = –.07 p < .001 Self -Stigma B = –.30 β = –.53 p < .001	certain questions were asked with the words 'wrong with', non-random sample. **Conclusion:** Highlighting the importance of decreasing self-stigma and gaining mental health literacy to facilitate positive attitude toward seeking psychological help particularly among minority college students. **Feasibility:** Recommended for use in practice due to LOE, accurate interpretation of the survey and recommendations.

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Clough et al. (2018) A comparison of mental health literacy, attitudes, and help-seeking intentions among domestic and international tertiary students. **Country:** Australia **Funding:** Not discussed. **Bias:** Incentives offered. All participants were entered in a draw to win one of the four $50 gift cards and first year psychology	Social Identification Theory.	**Design:** CSS **Purpose: T**o examine potential differences in psychological distress and related constructs, such as MHL and help-seeking attitudes, between domestic and international students.	N= 357 n=148 DS n= 209 IS **Demographics:** DS M 25.5 Age range- 17 and 59 years m-26 f- 122 IS M 23.0 Age range- 17 and 52 years m- 79 f- 130 **Setting:** An Australian university and associated tertiary college. **IC:** Age, gender, student status (i.e. IS or not), ethnicity, length of time lived in	**IV:** Domestic and International Students (DS and IS). **DV1:** General psychological distress. **DV2:** MHL **DV3:** Help-seeking attitudes and intentions. **DV4:** Intentions (Emotional problems). **DV5:** Intentions (Suicidal thoughts).	K – 10 is a 10-item questionnaire that provides a global measure of psychological distress (α = .91). Attitudes towards help-seeking were assessed using IAMHS (α = .86). Intentions to seek help for mental health problems were measured by GHSQ. 2 subscales: Suicidal problems (α = .77) Personal-emotional problems	Chi-square and t-tests. Hierarchical multiple regression.	**DV1:** International students were more likely to be male (χ2 (1, N = 357) = 13.46, p < .001, V = .20), younger (t (236) = 2.77, p = .01, d = .03), have been studying at university for less time (χ2 (7, N = 357) = 41.60, p < .001, V = .34), and have no previous use of MHSs (χ2 (1, N = 357) = 51.37, p < .001, V = .39). B = -.51 β = -.03 sr2 = <.01 p = .562 No significant difference was	**LOE:** III **Strengths:** Power analysis was conducted to determine the minimum sample size, level of evidence, measurements consistent with findings, one of a few studies conducted. **Weakness:** Non-random allocation of participants to groups, self-report data, sample recruited from one university, K-10 is not validated for IS. **Conclusion:** Both groups experience similar levels of psychological

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student participants received 1-hour course credit for participation.			Australia, educational qualifications or current degree, years of university completed, and MHSs **EC:** Aged <17 years, studies published before 1967, non-English. **Attrition:** 0%.		(α = .72) MHL was assessed using MHLS (α = .92)		found in both DS and IS. **DV2:** B = -14.85 β = -.43 sr2 = .15 p = <.001 Significant difference was found (IS>DS). **DV3:** Attitudes B = -6.29 β = -.21 sr2 = .04 p = <.001 Significant difference was found (IS>DS). **DV4:** Intentions (Emotional problems)	stress, but IS has less MHL levels, help-seeking attitudes, and help-seeking intentions for suicidal ideation. **Feasibility:** Recommended for use in practice due to LOE, measurements consistent with findings, helpful in tailored intervention that focus in overcoming the barriers.

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							B = -0.26 β = -.009 sr2 = <.01 p = .158 No significant difference was found in both DS and IS. **DV5:** Intentions (Suicidal thoughts) B = -0.44 β = -0.14 sr2 = .02 p = .037 Lower help seeking intentions in IS than DS.	
Ebert et al. (2018). Increasing intentions to use mental health services among	The Change Model	**Design:** RCT **Purpose:** To investigate the effects and moderators of a brief acceptance-	N= 1374 IG = 664 CG = 710 **Demographics:** 18 years: IG 17.4%	**IV:** Acceptance-facilitating intervention. **DV:** Intention to seek mental health	Major depressive episode, GAD, panic disorders, broad mania, and drug abuse	t-test Multiple regression SPSS macro PROCESS 3.0	**DV:** DV was assessed using different moderators.	**LOE:** II **Strengths:** Level of evidence, limited research exists on acceptance-facilitating

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university students. Results of a pilot randomized controlled trial within the World Health Organization's World Mental Health International College Student Initiative. **Country:** Germany **Funding:** National Institute of Mental Health, Belgian Fund for Scientific Research, King Baudouin Foundation, Eli Lilly, Netherlands Organization for Health		facilitating intervention on intention to use mental health services among university students.	CG 15.9% 19 years: IG 23.8 CG 26.2 Female IG 48.8% CG 52.1% **Setting:** Internet-based survey carried out at two German universities **IC:** Age >18 years, consented to participate. **EC:** Aged <18 years, studies published before 1992, non-English. **Attrition:** 52.54%.	services in the next semester.	were assessed using CIDISS (AUC 0.70 to 0.78). Alcohol abuse or dependence were assessed using AUDIT. Lifetime and 12-month suicidal thoughts and behaviors were assessed using CSSRS. Nonsuicidal self-injury (NSSI) was assessed using SITBI. The readiness to change potential emotional or substance-related problems were assessed using five items		Lifetime PD d = 0.34 95% CI: −0.08 to 0.7). 12-month PD d = 0.32 95% CI: −0.10 to 0.74 Lower self-reported physical health d = 0.37 95% CI: −0.77 to 1.51 Non-heterosexual students d = 0.38 95% CI: 0.08 to 0.67	intervention, low cost method of having a meaningful impact. **Weakness:** Intensive questionnaire (150 questions), high dropout rate, focused on intention to use mental services instead of actual use. **Conclusion:** A simple acceptance-facilitating intervention can increase intention to use mental health services, although effects, are on average, small. **Feasibility:** Recommended for use in practice due

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Research and Development (ZonMw), Protestants Fonds voor de Geestelijke Volksgezondheid (PFGV); South African Medical Research Council; Ithemba Foundation; Instituto de Salud Carlos III- FEDER, Northern Ireland Public Health Agency and Ulster University; Consejo Nacional de Ciencia y Tecnología (CONACyT), John D. and Catherine T. MacArthur Foundation; Pfizer Foundation;					related to the stages of change model.			to LOE, significant effect in IG than CG in certain categories indicated by explorative moderator analyses.

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United States Public Health Service, Fogarty International Center (FIRCA), Pan American Health Organization; Ortho-McNeil Pharmaceutical; GlaxoSmithKline; Bristol-Myers Squibb. **Bias:** Selection bias and pharmaceutical backed research.								
Han and Pong (2015) Mental Health Help-Seeking Behaviors Among Asian American Community	The Minority Model.	**Design:** CSS **Purpose:** To explore the relationship between cultural contextual variables,	N= 66 f=33 m=33 **Demographics:** Vietnamese=19 Filipino=14 Chinese=13	**IV1:** Culture and stigma of mental health. **IV2:** Acculturation and preference for counselors.	Mental health-help-seeking behavior was measured by a single item. A six-item measure for perceived	Basic descriptive analysis. Bivariate analysis using independent *t* test.	**DV:** Basic descriptive analysis e.g. frequency and percentage were conducted.	**LOE:** III **Strengths:** Level of evidence, models used for analysis fits the data well, detailed

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College Students: The Effect of Stigma, Cultural Barriers, and Acculturation. **Country:** USA **Funding:** Not mentioned. **Bias:** Only students enrolled in Asian American Studies, Asian American Literature, and English as Second Language classes.		demographic characteristics, and willingness to seek mental health services and to examine factors contributing to mental health seeking behaviors in Asian American community college students.	Other=20 **Setting:** A self-administered, paper and pencil survey questionnaire carried out at one of the largest public community colleges in California's San Francisco Bay Area. **IC:** Asian students. **EC:** Recent IS who had been in USA for 3 to 5 months and non-Asian descent. **Attrition:** 13.16%.	**IV3:** Demographic characteristics **DV:** Mental health-seeking-behavior.	stigma using 5-point Likert-type scale for stigma (α =.69). Acculturation was measured using GEQ-Asian (α =.70) and responses were coded on a 5-point Likert-type scale. Acculturation was measured using GEQ-American (α =.75) and responses were coded on a 5-point Likert-type scale. An 11-item questionnaire was used to measure preferences for a counselor based on	Chi-square test. Logistic regression analysis. Significance test of Cox and Snell's R^2 and Niekerk's R^2. The Hosmer and Lemeshow Test.	Out of 66 participants, 43 (65.2%) responded that they are willing to seek mental health services, where as 23 (34.8%) reported they were not willing to do so.	discussion of intervention. **Weakness:** Small sample size, representativeness is limited as only one community college was involved, self-selected group, lack information about support system. **Conclusion:** There is a lack of awareness of mental health services among community college students. College counselors, instructors, and student affairs staff need to collaborate to promote psychological services on

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					ethnicity and culture and each item was coded on a 5-point Likert-type scale for preference for counselor (α =.69).			campus as well as community. **Feasibility:** Recommended for use in practice due to LOE, majority participants responded that they are willing to seek mental health services, models used for analysis fits the data well.
Kim et al. (2019) Behavioral Health Risk and Resilience Among International Students in the United States: A Study of Sociodemographic Differences. **Country:** USA	Resilience Framework.	**Design:** CSS **Purpose:** To measure and describe acculturative stress, health-risk, and resilience factors in order to develop recommendations for increasing resilience to mitigate behavioral	N = 322 **Demographics:** m = 179 f = 143 18–25 years = 223 26–30 years = 73 31–35 years = 18 36–40 years = 8 Bachelor's = 92 Master's = 179 Doctoral = 51	**IV:** Demographic characteristic including age, country of origin, religion, education etc. **DV:** Acculturative stress as measured by the Index of Life Stress scale, resilience as	Index of Life Stress scale was used to assess acculturative stress among participants (α = .82). 31-item Resilience Scale for Adults (RSA) was used to measure respondents' protective and resilience	Four-phased analysis using SPSS 20 for the following analysis: Normality test using Fisher's skewness and kurtosis coefficients. Missing value analysis.	International students with the following demographic characteristics reported higher levels of acculturative stress age 36 to 40 years; females; married; living with family; South Korean; and/or in USA for more than 2 years reported higher levels of	**LOE:** III **Strengths:** Level of evidence, large sample size, diverse sample size, in depth discussion about barriers to seek help. **Weakness:** Self-report data, sample recruited largely from four specific region of the U.S. therefore not

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Funding: Not discussed. **Bias:** Sampling bias, self-report data.		health risks and outcomes.	India = 121 China = 76 South Korea = 50 Taiwan = 20 Other = 55 **Setting:** Paper-based survey - four large universities in one southern state; online survey was open to student across the U.S. **IC:** Foreign born, foreign citizen, enrolled as undergraduate or graduate student, on F-1 or J-1 visa. **Attrition:** 5.57%.	measured by Resilience Scale for Adults, mental health as measured by PHQ-9 & GAD-7, and binge drinking behaviors. IV and DV were used interchangeably depending on type of analysis.	factors on a 5-point Likert scale (α = .80). 9-item PHQ-9 was used to measure depression symptomology (α = .87) on a 4-point Likert scale. 7-item GAD-7 scale was used to measure symptoms of anxiety on a 4-point Likert scale. Monitoring the Future Survey (MTF) was used to assess the frequency of binge-drinking behaviors on a 6-point Likert scale.	Univariate descriptive statistics. Bivariate analyses of differences. Pearson correlation analysis Chi-square tests. Independent -samples t tests. Analyses of variance (ANOVA). Tukey's honestly significant difference (HSD) as post-hoc assessment.	acculturative stress. Demographics associated with higher resilience included: religious affiliation, "other" country of origin, and graduate level student's status. Higher anxiety was found among: females, religious affiliation, GPA less than 3.0, "other" country of origin and undergraduate student status. Higher depression was found among: females, "other" country of origin, and	widely generalizable; certain questions were misunderstood due to lack of English proficiency. **Conclusion:** The study highlights the diversity that characterizes U.S. international students, as well as underscores the potential relevance of a behavioral health risk and resiliency framework for understanding their experiences. **Feasibility:** Recommended for use in practice due to LOE, discusses the barriers faced

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							undergraduate students. Students with no religious affiliation were more likely to engage in binge drinking than those with religious affiliation. Students with no prior educational experiences in the U.S. were less likely to engage in binge drinking than those with prior U.S. education experience.	by international students, supports the use of targeted outreach and education, as well as psychosocial counseling.
Li et al. (2016) Attitudes Toward Seeking Professional Counseling Services Among	The Acculturation Theory.	**Design:** CSS **Purpose:** To examine the relationship between Chinese international students'	N= 135 n=109 m=57 f=78 **Demographics:** Average age = 27.55 years	**IV1:** Acculturation **IV2:** Ethnic identity **IV3:** English Proficiency.	Acculturation was measured using SL-ASIA (reliability of .88). The 21-item version is scored on 5-	G*Power 3.1.2 Chi-square Hierarchical multiple regression analysis	**DV:** Acculturation, ethnic identity, and English proficiency are statistically significant	**LOE:** III **Strengths:** Level of evidence, no incentive was provided to participants, conducted a power analysis to

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Chinese International Students: Acculturation, Ethnic Identity, and English Proficiency. **Country:** USA **Funding:** Not mentioned. **Bias:** Social desirability, social desirability and sampling bias.		acculturation, ethnic identity, English proficiency, and their attitudes toward seeking professional counseling services (ATSPCS).	Bachelor's students = 15 (11.1%) Master's = 42 (31.1%) Doctorate = 68 (50.4%) No response = 10 (7.4%) Average time is USA = 20.15 months Average of Test of English as a Foreign Language (TOEFL) = 89.77 **Setting:** An online survey carried out at a large southwestern research institution in the United States. **IC:** Chines students, possession of a valid student visa, current	**DV:** Attitudes toward seeking professional counseling services (ATSPCS).	point Likert scale. Behavioral and attitudinal aspects of ethnic identity was measured using a 15-item instrument MEIM (rated on a 4-point Likert scale; Cronbach's alpha .89 and .80 for Asian American and Asian International students respectively). Attitudes toward seeking professional counseling services was measured using a 10-item unidimensiona l scale	For Hypothesis 1 "enter" method in SPSS 20 was used for regression analysis = F (3, 105) = 3.02, p = .03 For Hypothesis 2 the "forward" method in SPSS 20 was used for regression analysis = p = .02	predictors for ATSPCS among Chinese international students and Chinese international students with a strong ethnic identity are less likely to seek professional counseling than those with a weak ethnic identity.	determine the number of participants, screening tools used were reliable. **Weakness:** Findings may not generalize, participants limited to one institution only, self-reported instrument was used. **Conclusion:** The results help to sort out relationship between acculturation, ethnic identity, English proficiency and help-seeking attitudes in Chinese international students. Ethnic identity was the only significant

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			enrollment in the target university, and place of origin reported as Mainland China. **EC:** Non-Chinese students and place of origin not reported as Mainland China. **Attrition:** 19.26%.		ATSPPHS-SF (rated on a 4-point Likert scale; reliability .84). English proficiency was measured using TOEFL.			predictor with an inverse relationship to ATSPCS. **Feasibility:** Recommended for use in practice due to LOE, mental health counselors should understand how race, culture, and ethnicity may affect personality formation and help-seeking behavior. Counselors also need to offer opportunities to students to discuss their beliefs about mental stigma.
Shadowen et al. (2019) Prevalence and Correlates of Depressive Symptoms Among International	Transitions Theory (inferred).	**Design:** CSS **Purpose:** To further our understanding of negative mental health outcomes in international	N=490 m=254 f=236 **Demographics:** Average age = 24.9 years old	**IV 1:** Difficulties with English **IV2:** Acculturative stress.	The depressive symptoms were screened using the 20-item CES-D (α = .90). The severity of anxiety	Hierarchical multiple regression analysis. Chi-square	**DV:** Positive relationship between anxiety scores and depression	**LOE:** III **Strengths:** Level of evidence, established validated screening tools, participants were recruited from

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Students: Implications for University Support Offices. **Country:** USA **Funding:** None mentioned. **Bias:** None mentioned.		students by examining the prevalence and correlates of depressive symptoms on a U.S. campus, in order to inform relevant college student services.	Africa = 2% Central America and the Caribbean = 2.4% Central Asia = 0.8% East and Southeast Asia = 69.8% Europe = 4.5% North America (including Mexico) = 0.6% The Middle East = 4.1% South America = 4.7% South Asia = 11.0% **Setting:** An online survey carried out at a mid-size university in USA. **IC:** International students, undergraduate	**IV3:** Perceived discrimination **IV4:** Support of a social network. **DV:** Prevalence rates of depression among international students.	symptoms was screened using a 21-item scale BAI ($\alpha = .97$) and items are rated on a 4-point scale. English fluency was examined using two items developed for the present study that were rated on a 5-point scale. The stress associated with acculturation among IS was assessed using a 36-item 5-point scale ASSIS ($\alpha = .96$). Perceived discrimination		scores ($B = 0.54$, $p < .01$). Lower levels of English fluency were associated with higher levels of depressive symptoms ($B = -0.57$, $p < .01$), ($\Delta R\ 2 = .01$), $\Delta F\ (1, 484) = 8.20$, $p < .01$, $R\ 2 = .51$ Higher levels of both acculturative stress ($B = 0.11$ $p < .001$) and perceived discrimination ($B = 0.21$, $p < .05$) were significantly related to higher levels of depressive	nine different regions, reminder emails sent over the course of 3 weeks. **Weakness:** Self-report methods, regional sub-sample groups were uneven. **Conclusion:** Results of the current study demonstrate that international students indicate that they are suffering from high rates of depressive and anxiety symptoms and could potentially benefit from the help of counseling centers. **Feasibility:** Recommended for

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			and graduate students. **EC:** Domestic students. **Attrition:** 0%.		was assessed using a 9-item scale (α = .95). Social support was measured with the one item on a 5-point scale.		symptoms (ΔR^2 = .06), $\Delta F(2, 482) = 30.38$, $p < .001$, R^2 = .56 Higher levels of social support were associated with lower levels of depressive symptoms (ΔR^2 = .02), $\Delta F(1, 481) = 26.19$, $p < .001$, R^2 = .59	use in practice due to LOE, screening tools well established, results showing all the IV are statistically significant.
Stewart et al. (2019) Predicting mental health help seeking orientations among diverse Undergraduates: An ordinal logistic	The Model of Help-Seeking Orientation.	**Design:** CSS **Purpose:** To employ the term help-seeking orientation for a variable that captures one's willingness to act that may precede actual	N= 1272 m=486 f=780 others = 6 **Demographics:** Age range = 17 – 61 years Average age=22.3 years	**IV 1:** Perception to access to campus-provided mental health care. **IV2:** Stigma. **IV3:** Age.	4-item perception of access sub-scale (α =0.855) Stigma was measured using Mental Health Knowledge	The ordinal logistic regression (OLR). Principal component analysis (PCA).	**DV:** When IV was examine separately in OLR (Model 0), all 5 IV displayed positively and statistically and significant.	**LOE:** III **Strengths:** Level of evidence, established validated screening tools, participants were recruited from wide cross-section of majors.

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regression analysis. **Country:** USA **Funding:** Grant from the John Cleaver Kelly (JCK) Foundation. **Bias:** Participants were offered $5 or a class credit.		help-seeking behavior.	AA- 27.3% Caucasian- 25.9% AsA- 19.6% Hispanic- 18.8% Multiracial – 5.9% Other – 2.3% Native American – 0.3% **Setting:** Paper survey carried out at a large, urban, public university system in the United States. **IC:** Undergraduate students, psychology courses taken, humans. **EC:** Graduate or doctorate students, students who have not taken	**IV4:** Gender. **IV5:** Number of psychology courses taken. **DV:** Help-seeking orientation.	Schedule (MAKS) (rated on a two-dimensional 5-item Likert subscale. The ability to help a friend was measured using Mental Health Knowledge Schedule (MAKS). Help-seeking orientation was measured using a 6-item dichotomous sub-scale (α =0.855).		When these 5 IV were analyzed in OLR model simultaneously (Model 1), psychological courses became statistically non-significant. Next, female x number of psychological courses interaction was added to Model 1 (Model 2), interaction was found statistically significant. After running 2 more models, it was determined that Model 2 would be the	**Weakness:** Self-report survey, not generalizable, some question not clear, no international students. **Conclusion:** This study has strengthened confidence that facilitators of a positive HSO include being of female gender, taking two or more psychology courses, and having a positive perception of access to campus-provided mental health care. Students who perceive these services as free, timely, confidential and adequate are more likely to

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			psychological courses. **Attrition:** 0%.				best model to describe the relationship between the HSO variable and the five independent variables.	want to seek help than those with more negative perceptions of access. **Feasibility:** Recommended for use in practice due to LOE, address the barriers in help-seeking attitudes of university students.

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Table A2

Evaluation Table Qualitative Study

Citation	Conceptual Framework	Study Design/Method	Sample/Setting	Major Variables Studied	Measurement of Variables	Data Analysis	Study Findings/ Results	Decision for Use/Application to Practice
Forbes-Mewett and Sawyer (2016) International Students and Mental Health. **Country:** Australia **Funding:** Not discussed. **Bias:** None discussed.	Explanatory framework.	**Design:** Audiotaped interviews. **Purpose:** To explore the views, concerns and experiences of these participants in relation to the mental health of international students.	N = 16 f = 12 m = 4 **Demographics:** Age range = 28 – 60 years Support services staff = 10 Academic staff = 2 Counsellor = 2 Medical services = 2 **Setting:** A large University in Australia **IC:** University staff. **EC:** Not discussed. **Attrition:** 0%.	**IV:** Tape interviews of university staff. **DV1:** Perceived increase in the number and severity of mental ill-health presentations by international students. **DV2:** Factors believed to contribute to an increase in mental health problems including the academic environment, everyday	Audio-taped, transcribed, and analyzed interviews.	A qualitative purpose driven analysis.	**DV1:** Participants reported a significant increase in the numbers of both international and local students presenting with perceived or diagnosed mental health problems, often exacerbated by the stress associated with living away from home and an increase in suicidal presentations. **DV2:** Most participants described the transition process in terms	**LOE:** VI **Strengths:** Strong qualitative design, only study that included student support staff, counsellors, medical practitioner, and academic staff point of view. **Weakness:** Asian students only, students voice not included, this study derived from another larger study. **Conclusion:** There is a mismatch between factors

Abbreviation Key: AA- African American AsA- Asian American ASSIS- Acculturative Stress Scale for International Students ATSPPH-SF Attitudes Toward Seeking Professional Psychological Help Scale–Short Form AUDIT- Alcohol use disorders identification test BAI- Beck Anxiety Inventory CES-D- Center for Epidemiological Studies–Depression Scale CG- Control Group CIDISS- Composite International Diagnostic Interview Screening Scales CS- Cohort Study CSS- Cross-Sectional Study CSSRS- Columbia Suicidal Severity Rating Scale DS- Domestic Students DV- Dependent Variable EC- Exclusion criteria f- female GAD- Generalized Anxiety Disorder GAD-7- Generalized Anxiety Disorder–7 GEQ- General Ethnicity Questionnaire GHSQ- General Help-Seeking Questionnaire hs- heterosexual IAMHS- Inventory of Attitudes toward Mental Health Services IC- Inclusion Criteria IG- Intervention Group IS- International Students IV- Independent Variable K-10- Kessler - 10 LA- Latino American m- male LOE- Level of Evidence MA- M- Mean Mixed-Methods Analysis MEIM- Multigroup Ethnic Identity Measure MH- Mental Health MHL- Mental Health Literacy MHLS- Mental Health Literacy Scale MHSs- Mental Health Services NHW- Non Hispanic White NR- Not reported PCP- Primary Care Provider PD- Panic disorder PHQ-9- Patient Health Questionnaire–9 RCT- Randomized Controlled Trial RN- Registered Nurse SITBI- Self Injurious Thoughts and Behaviors Interview SL-ASIA-Suinn–Lew Asian Self-Identity Acculturation Scale SR- Systematic Review SSOSH- Self-Stigma of Seeking Help Scale USA-United States of America

Citation	Conceptual Framework	Study Design/Method	Sample/Setting	Major Variables Studied	Measurement of Variables	Data Analysis	Study Findings/ Results	Decision for Use/Application to Practice
				living, and help-seeking. **DV3:** Outcome/ potential solutions e.g. structure of support services and university life.			of a "culture shock". English language difficulties and unfamiliar methods of teaching and learning were cited as major challenges. Difficulty to manage everyday tasks and interactions. Several participants reported IS delay seeking professional help for mental health problems. **DV3:** Most participants suggested common lunch hour, frequent exposure to availability of support/service, and students	that are contributing in an increase in mental ill-health and the services being provided. Support services are important to all who experience mental ill-health. Individualism and individualization are intensifying the difficulties faced by IS. **Feasibility:** Recommended for use in practice due to strong qualitative design, LOE, and accurate interpretation of the barriers faced by IS.

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Citation	Conceptual Framework	Study Design/Method	Sample/Setting	Major Variables Studied	Measurement of Variables	Data Analysis	Study Findings/ Results	Decision for Use/Application to Practice
							should bring medical report from their home country.	

Abbreviation Key: AA- African American AsA- Asian American ASSIS- Acculturative Stress Scale for International Students ATSPPH-SF Attitudes Toward Seeking Professional Psychological Help Scale–Short Form AUDIT- Alcohol use disorders identification test BAI- Beck Anxiety Inventory CES-D- Center for Epidemiological Studies–Depression Scale CG- Control Group CIDISS- Composite International Diagnostic Interview Screening Scales CS- Cohort Study CSS- Cross-Sectional Study CSSRS- Columbia Suicidal Severity Rating Scale DS- Domestic Students DV- Dependent Variable EC- Exclusion criteria f- female GAD- Generalized Anxiety Disorder GAD-7- Generalized Anxiety Disorder–7 GEQ- General Ethnicity Questionnaire GHSQ- General Help-Seeking Questionnaire hs- heterosexual IAMHS- Inventory of Attitudes toward Mental Health Services IC- Inclusion Criteria IG- Intervention Group IS- International Students IV- Independent Variable K-10- Kessler - 10 LA- Latino American m- male LOE- Level of Evidence MA- M- Mean Mixed-Methods Analysis MEIM- Multigroup Ethnic Identity Measure MH- Mental Health MHL- Mental Health Literacy MHLS- Mental Health Literacy Scale MHSs- Mental Health Services NHW- Non Hispanic White NR- Not reported PCP- Primary Care Provider PD- Panic disorder PHQ-9- Patient Health Questionnaire–9 RCT- Randomized Controlled Trial RN- Registered Nurse SITBI- Self Injurious Thoughts and Behaviors Interview SL-ASIA-Suinn–Lew Asian Self-Identity Acculturation Scale SR- Systematic Review SSOSH- Self-Stigma of Seeking Help Scale USA-United States of America

Table A3

Synthesis Table

Authors	Chen, J.A., et al.	Cheng, H., et al.	Clough, B. A., et al.	Ebert, D. D., et al.	Han & Pong	Kim, Y. K., et al.	Li, J., et al.	Shadowen, N. L., et al.	Stewart, G., et al.	Forbes-Mewett & Sawyer
General Information										
Year	2019	2017	2018	2018	2015	2019	2016	2019	2019	2016
Design	RA-CSS	CSS	CSS	RCT	CSS	CSS	CSS	CSS	CSS	Qual-Audiotaped interviews
LOE	IV	III	III	II	III	III	III	III	III	VI
Country	USA	USA	Australia	Germany	USA	USA	USA	USA	USA	Australia
Funding	NM	NM	NM	X	NM	NM	NM	NM	X	NM
Bias	X	NM	X	X	X	X	X	NM	X	NM
Demographics										
Number of Subjects	67,308	1,535	357	1,374	66	322	135	490	1272	16
Mean age (years)	NM	23.71	25.5				27.55	24.9	22.3	
Male	21,159	563	105	680	33	179	57	254	486	4
Female	45,848	972	252	694	33	143	78	236	780	12
Int. Students	3,364	132	209	120	66	322	135	490	353	
Domestic Students	63,944	1403	148	1254	0	0	0	0	919	
IG				664						
CG				710						
Setting										
University/College	X	X	X	X	X	X	X	X	X	X
Independent Variables										
Demographic Characteristics	X				X	X			X	

↑- More/Increased/Greater; ↓- Less/Decreased/Lower; AFI-Acceptance-facilitating intervention; AI-American Indian; CG-Control Group; CSS- Cross Sectional Study; IG-Intervention group; Int.-International; LOE-Level of Evidence; MH-Mental Health; MHL- Mental Health Literacy; MI-Mental Illness; NA-Native Alaskan; NH-Native Hawaiian; NM-Not Mentioned; Qual-Qualitative; RA-CSS-Retrospective analysis of Cross-Sectional Study;

MHL and self-stigma of seeking psychological help		X							X	
Domestic and Int. Students			X							
AFI				X						
Acculturation							X	X		
Ethnic identity							X			
English Proficiency							X	X		
Perceived discrimination								X		
Social support								X		
Perception to campus-provided MH									X	
# of psychology courses taken									X	
Tape Interviews										X
Dependent Variables										
Self-reported symptoms of MI	X									
Attitudes/Intention towards seeking help		X	X	X	X		X	X	X	
Psychological Distress			X							
MHL			X							
Emotional problems			X							
Suicidal thoughts			X							
Acculturation, resilience, and MH						X				
Rates of depression							X			

↑- More/Increased/Greater; ↓- Less/Decreased/Lower; AFI-Acceptance-facilitating intervention; AI-American Indian; CG-Control Group; CSS- Cross Sectional Study; IG-Intervention group; Int.-International; LOE-Level of Evidence; MH-Mental Health; MHL- Mental Health Literacy; MI-Mental Illness; NA-Native Alaskan; NH-Native Hawaiian; NM-Not Mentioned; Qual-Qualitative; RA-CSS-Retrospective analysis of Cross-Sectional Study;

Perceived ↑ in # & severity of MH by int. students										X
Factors believed to ↑ MH problems										X
Potential solutions										X
Findings										
↓ self-report MH & treatment in minority and int. students as compared to white	X									
↑ self-stigma ↓ likely to seek help		X								
Int. students have ↓ MHL			X							
Poor attitudes toward accessing MH services by Int. Students			X							
↓ help seeking intentions by Int. Students			X	X	X				X	X
↑ acculturative stress, discrimination resilience, depression, and MH						**X**		X		
Strong ethnic identity seeks ↓ professional help							X			
↓ English proficiency high depression								X		
↑ social support ↓ depression								X		
↑ in suicidal presentation										X
Social support										X

↑- More/Increased/Greater; ↓- Less/Decreased/Lower; AFI-Acceptance-facilitating intervention; AI-American Indian; CG-Control Group; CSS- Cross Sectional Study; IG-Intervention group; Int.-International; LOE-Level of Evidence; MH-Mental Health; MHL- Mental Health Literacy; MI-Mental Illness; NA-Native Alaskan; NH-Native Hawaiian; NM-Not Mentioned; Qual-Qualitative; RA-CSS-Retrospective analysis of Cross-Sectional Study;

Table A4

Budget

EXPENSE ITEMS	Cost ($)	Subtotal ($)	Total ($)
Direct Cost (Preparation)			
Equipment	500		
Material and supplies	200		
Printing/duplication	50		
Refreshments	100		
Travelling expenses	100		
Indirect Cost (Delivery)		1300	
Time spent to educate the providers	200		
Time spent to educate the staff	100		
Internet	50		
Self-funding	1300		
Private funding	0		
Cost Savings (Evaluation)			
Tuition Cost	5000		
Participant Payments	0		1300

Budget Justification: The following is justification for the items budgeted for this project:
1. Direct cost:
A. Equipment: This includes my personal laptop and cellphone.
B. Materials and Supplies:
a. Intelluctus software is necessary to run the data analysis. The latest version of the software is made available at a reduced cost to graduate students.
b. Writing utensils to answer questionnaires in the office.
c. Shredder: Once the answers of the questionnaire are entered into the site computer, they will be shredded.
d. File folders: To organize the documents.
C. Printing/duplicating: Printing of questionnaires and consent forms.
D. Refreshments: Refreshments will be provided to all the participants who volunteer to answer the questionnaire.
E. Travelling expenses: I will be travelling to the project site at least once a week for 12 weeks provided there are no COVID-19 restrictions.

2. Indirect Cost:
A. Time spent to educate the providers**:** Initially, I will educate the providers about the questionnaire that will be offered to international students once they are diagnosed with mental illness and refuse to see a behavioral therapist. This cost will be covered by the employers as all the employees are salary-based.
B. Time spent to educate the staff: This includes time spent by me to educate the staff about the project and questionnaire. The office staff will provide help with implementing the project.

The staff will triage the patients that are mentally ill by taking a short history and offering the tools recommended by the providers. This cost will be covered by the employers.

C. Internet expense: All the data received will be entered online to intelluctus software to run the data analysis.

3. Self-funding: This project will be funded by myself.
4. Private funding: At this point there is no funding available from any government or private entity.
5. Cost saving:

A. Tuition cost: A semester at Arizona State University (ASU) costs $5000. ASU can earn this money if the student does not drop out of the program due to mental illness.

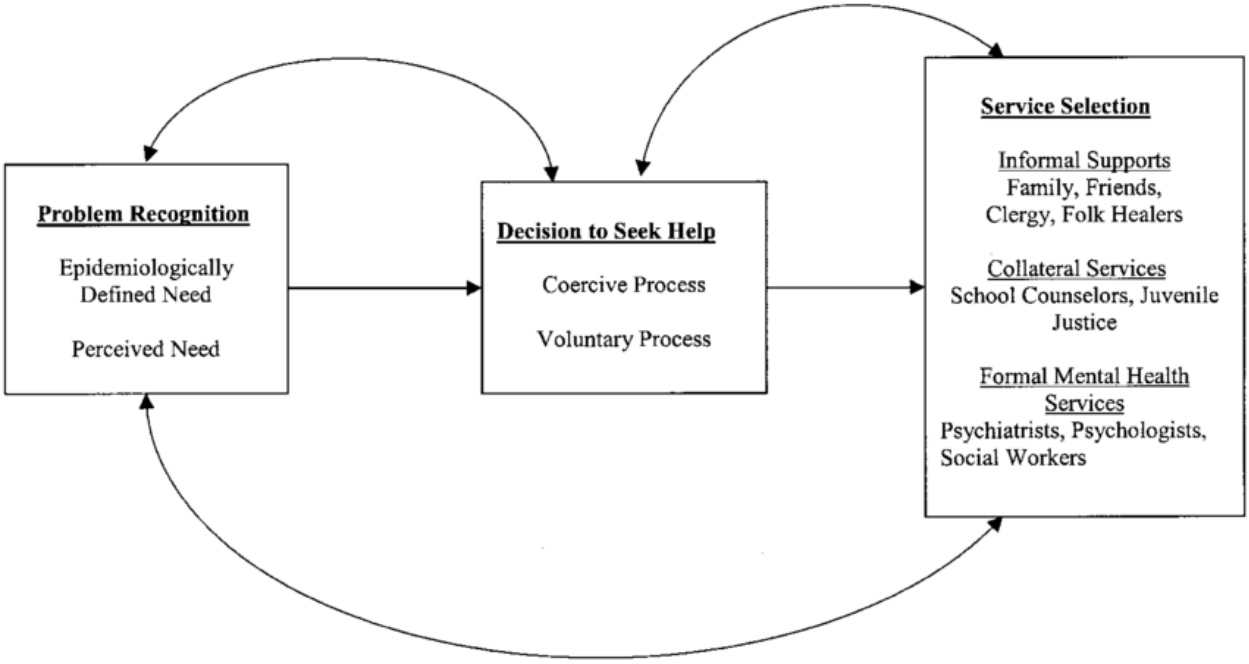
6. Participant payments: No payments will be provided to the participants of this project.

Appendix B

Frameworks and Models

Figure 1

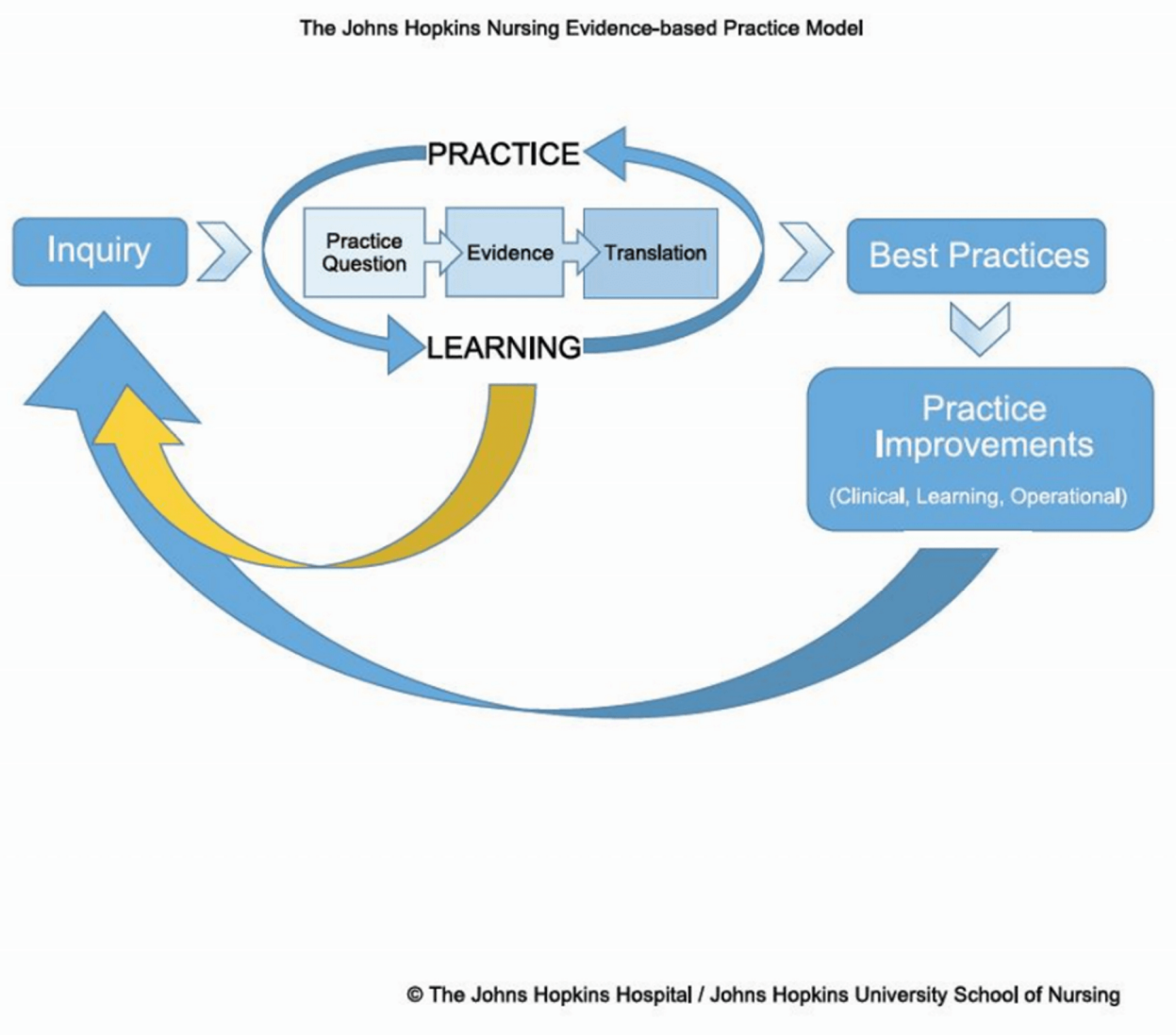
A Model for Mental Health Help-Seeking



Cauce et al. (2002)

Figure 2

The John Hopkins EBP Model



Schaffer et al. (2012)