MENTAL ILLNESS AND INDIAN IMMIGRANTS

BELIEFS ABOUT MENTAL ILLNESS AND ITS IMPACT ON ATTITUDES TOWARD TREATMENT: AN EXAMINATION OF THE ASIAN-INDIAN IMMIGRANT POPULATION IN THE UNITED STATES

A Dissertation

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DEDICATION

I would like to dedicate this dissertation to my dear late uncle, who suffered from depression and alcohol abuse. His journey and loss of community support inspired me to understand Indian immigrants’ beliefs about mental health issues. I thank him for his unconditional love and teaching me the importance of education.

With love and gratitude,

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CHAPTER I

A REVIEW OF BELIEFS ABOUT MENTAL ILLNESS AMONG ASIAN-INDIAN IMMIGRANTS

Abstract

This literature review evaluates the current research regarding beliefs related to mental illness among the Indian immigrant population in the United States. The literature is evaluated within the Ecological Model as a metatheory, using the construct of stigma and its influences on beliefs about mental illness as another guiding framework. In the present review, a history of the Indian immigrant population is provided alongside information about acculturation and current information regarding beliefs about mental illness both in India and among Indian immigrants in the United States. This review of the literature finds that the Indian immigrant population is growing in numbers, and is at risk for mental illness. For this reason, it is important to learn this population’s beliefs about how mental illness and how it informs attitudes toward seeking treatment.

Keywords: Indian immigrants, stigma, acculturation, mental illness
Introduction

Indian immigrants from the subcontinent of Asia have been a significant and growing population in the United States since the 1950s. According to the literature, this population underutilizes clinical services, despite experiencing a multitude of stressors related to acculturation (Das & Kemp, 1997; Rahman & Rollock, 2000; Leung, Cheung, & Tsui, 2011). At this time, information regarding the beliefs that Indian immigrants hold about mental illness and its impact on seeking treatment is growing in the literature. To further explore this issue, an in-depth review of the was conducted literature to clarify what is already known about beliefs related to mental illness and about the attitudes held about seeking treatment.

For this study, the following definition will be used to understand the meaning of mental illness. The National Alliance on Mental Illness (NAMI) defines mental illness as a medical condition impacting one’s mood, functioning, thinking, feeling, and ability to relate to others. Additionally, some disorders such as schizophrenia, are considered more challenging to experience and treat. According to the NAMI website, mental illness can impact anyone, regardless of race, class, gender, and ethnicity (NAMI, 2014).

The Ecological Model

When reviewing beliefs related to mental illness, it is helpful to conceptualize the beliefs of the Indian immigrant population through a metatheory that allows an examination of the multiple layers that impact this population’s understanding of mental illness (see figure 1). Bronfenbrenner’s ecological model (1994) evolved over decades from his initial work in the 1970s until the later part of his life (2000s). Many of his publications reviewed the ecological model and the particular components involved in the human developmental process, which he outlines as:
The ecology of human development involves the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings, and by the larger contexts in which the settings are embedded. (Bronfenbrenner, 1979, p. 21)

Bronfenbrenner (1994) discussed two propositions that help to illustrate the ecological model. The first proposition emphasizes the importance of an individual’s constant interaction with their direct environment, including other people, objects, and symbols. Interactions with the immediate environment are considered as proximal processes. Examples of this include parent-child interactions, child-child interactions, and play (both group and individual). The second proposition illustrates that the form, power, content, and direction of the proximal processes guide the interaction of the person with the environment. In this way, one of Bronfenbrenner’s earliest theories is the way in which the individual and the environment both evolve through their interaction. The ecological model will provide an overarching framework within which to consider beliefs around mental illness.

The ecological model itself consists of multiple layers and circles of influence within which an individual evolves (see Figure 1). Starting from the innermost circle, the components of the model include: the microsystem, mesosystem, exosystem, macrosystem, and choronosystem. The innermost circle, the microsystem, is defined as the immediate relationships, roles, and activities that are closest to the individual. The mesosystem is the connection between different settings and is considered to be a “system of microsystems” (Bronfenbrenner, 1994, p. 40), such as the connection between home and school. The exosystem is the environment that indirectly impacts an individual, such as the relationship between a parent’s employer and a child. For example, the parent’s employer may provide family insurance coverage for this employee’s
family, which then allows the child to receive health insurance. The macrosystem is known to be the outermost layer that provides an all-embracing context to the subsequent layers and is a reflection of the culture or characteristics of other cultures. The chronosystem involves “change or consistency over time not only in the characteristics of the person but also of the environment in which the person lives” (Bronfenbrenner, 1994, p. 40). The ecological model is a useful lens for the context of this study given its inclusion of multiple layers of influence on the individual.

**The Construct of Stigma**

In order to better understand some of the barriers toward treatment, it is helpful to examine mental health concerns through the lens of cultural stigma. The concept of stigma can be traced back to Goffman (1963), who defined stigma to be “an attribute that is deeply discrediting” and lessens someone from “a whole and usual person to a tainted, discounted one” (Goffman, 1963, p. 3). Goffman (1963) identified three types of stigma, the first being physical irregularities. The second type of stigma refers to deviances of character, which includes mental illness. The third type refers to negative attributes related to ideas such as race and religion. All three types of stigma have a negative impact on the recipient of such attributions.

Given that this literature review is addressing psychological issues, it is relevant to review stigma from a social psychology perspective, particularly the mechanisms through which individuals or groups stigmatize others or how individuals themselves become objects of stigmatization. There are four different mechanisms of stigma and the process by which stigmatism occurs (Major & O’Brien, 2005). The first mechanism refers to the negative treatment and discrimination experienced by the individual who is stigmatized. The second mechanism is called the Expectancy Confirmation Process, which refers to how an individual acts toward the stigmatized individual given his or her own stereotype of that person. The third
mechanism is known as the Automatic Stereotype Activation-Behavior, which refers to having a stereotype influence one’s behavior. The final mechanism of stigmatization is Stigma as Identity Threat, which refers to when an individual who has been stigmatized is at risk for a personal threatened identity based on that individual’s motivation, interpretation of others view of themselves and the understanding of one’s social environment. Each of these mechanisms of stigma are relevant for individuals with mental illness.

A different way to define stigma, offered by Bryne (2000) is as a disdain or disgrace associated with an object, person, or situation. The term is most often associated with feeling shame and other negative attributes. When reviewing the impact of stigma of mental illness for a minority group, such as Indian Immigrants, the concept of a double stigma is important to consider. Double stigma refers to the intensified negative feelings that one may experience – a disdain that one experiences not only for being an individual who suffers mental illness but also for being a member of a minority group (Gary, 2005). When working with Indian immigrants with mental illness, the impact of this double stigma should be explored by clinicians.

Self-Stigma

When considering stigma within the ecological model, the self is the first layer impacted by stigma. Self-stigma is one part of how a person views themselves, and an individual experiencing mental health symptoms is likely to experience a negative attitude toward the self. This could include a more stereotypical view that all individuals with mental illness are “doomed for life” and will never amount to anything. Due to internalizing stigma, a person with mental illness may feel that it is useless to pursue an education or get a job, because their condition will never improve and will constitute a barrier to their success in these endeavors. This individual may then avoid psychiatric treatment itself in order to avoid the label and feelings of shame that
accompany a psychiatric diagnosis (Corrigan, 2004; Corrigan, 2014). People who suffer from mental illness are likely to experience self-judgment that makes them uncomfortable with their own diagnosis and that could, in turn, impact their treatment. Self-stigma may have negative impact on the recovery of individuals with mental illness.

**Stigma and Relationships**

It is common for individuals suffering from mental illness to experience stigma, as it is believed that mental illness is a sign and result of weakness, in contradiction of experts’ definitions of mental illness (Yang et al., 2007). Stigma, given its negative nature, can impact social relationships, particularly through exclusion, isolation, and discrimination. Individuals suffering from mental illness have been shown to experience high levels of stigmatization, which then exert a negative influence on their social relationships (Bryne, 2000). As a result, the impact that stigma from mental illness has on relationships can be framed from an ecological perspective as the negative impact of mental illness on the microsystem.

Due to cultural and societal beliefs, many suffering from mental illness may internalize that they are “bad” or “less than,” given that society (larger macrosystem) has been known to look at individuals with mental illness differently. Additionally, when individuals have family members or close friends with mental illness, they may engage in what Bryne (2000) cites as “courtesy stigma” by being secretive and not sharing this information with people who could be supportive if they knew about it. This idea of “courtesy stigma” refers to the family member or close friend who is not sharing information about the person with mental illness. This fear of discrimination can be problematic to the sufferer and family member, as it can interfere with treatment and relationships (Bryne, 2000). Relatedly, Corrigan (2014) found that at times the individual suffering from mental illness may have a different understanding or opinion than the
community around them, in terms of what intervention may available. The relationship between the individual and the community can be taxed with such a discrepancy.

One important study by Owen, Thomas, and Rodolfa (2013) looked at individuals in treatment and evaluated therapeutic alliance and stigma, both social and self-stigma. The study was conducted at a large university and included 91 students and 26 therapists at various points in their training and career. Participants completed three scales assessing self-stigma, social stigma, and therapeutic rapport. The findings revealed that clients with higher levels of self-stigma had a lower working alliance, while in contrast clients with higher levels of social-stigma had a higher working alliance with their therapist. In addition, no direct relationship between self-stigma and treatment outcomes emerged. An understanding of the relationship between stigma and treatment outcomes is particularly helpful when looking at populations who are known to underutilize treatment. Furthermore, self-stigma can be considered a barrier to developing a strong therapeutic alliance for the client. This implies that self-stigma should be given greater attention when working with clients who have fears around the stigma associated with therapy.

**Public Stigma**

Public stigma consists of negative attitudes and beliefs that an outsider holds about the individual suffering from mental illness (Corrigan, 2004; Parcesepe & Cabassa, 2013). Individuals may keep distance from others with mental illness due to fears around dangerousness, typically related to violence. This illustrates that assumptions are made about individuals with mental illness by the public. The following is one example of public stigma in the workplace:
Someone from the public (or outside the primary family or other social network) may hold the stereotype that all individuals with mental illness are unreliable, leading to prejudice toward them. Should this public person find themselves in a position of power, such as an employer, this prejudice might cloud their hiring decisions, leading them to discriminate against a candidate with mental illness. Due to the public stigma related to mental illness, individuals who suffer from a mental disorder may then be at a disadvantage in the labor market. Similar discriminatory or negative processes may operate in the realms of social engagements, education, and healthcare (Corrigan, 2004).

Public stigma, as part of the exosystem layer within the ecological model is several layers removed from the individual. Despite this distance, public stigma exerts a strong impact on the individual and all the layers in between. The stigma that comes from the public may influence the other layers, which then in turn impact the individual.

Consequences of Stigma

As discussed by Link and colleagues (2001), an individual with mental illness may suffer many consequences due to stigma. First and foremost, one may feel a loss of self-esteem due to stigma and to public misconceptions about mental illness. This loss of self-esteem may result in self-blame – thinking that one is responsible for the mental illness – or that one is too weak to handle the stressors that come along with life that may result in psychiatric issues. Due to the negative attributes associated with mental illness, individuals who are struggling with a psychiatric illness may hesitate to share their difficulties with others. The disclosure of mental illness can have many implications, on both interpersonal and professional levels. For example, individuals may hesitate to disclose their illness to an employer out of fear that they may experience judgment or rejection by their colleagues. Furthermore, individuals with psychiatric
illness may fear that the security of their job could be impacted. These consequences can negatively impact many aspects of an individual’s life.

A more recent article (Illic et al., 2013), explored the consequences of stigma by creating a multifaceted scale which focused on four constructs: hostile discrimination, benevolent discrimination, taboo, and denial. The measures used to survey 367 participants included questions related to self-esteem, symptoms, quality of life, and stigma. Results from this study found that stigma (of varying levels) impacted one’s recovery. Similarly, to the findings from Link and Collegues (2001), this study also found that stigma impacts social relationships as someone suffering from mental illness were less likely to share their struggles with peers.

**Asian-Indian Immigrants in the United States**

Although stigma and mental illness are present in many different populations, the population of interest in this study is the Indian immigrant population, which is included within the broader Asian category in much of the present-day literature (Yang et al., 2007). Per the 2015 U.S. Census, approximately 17 million people living in the United States identify as Asian, representing 5.4% of the entire U.S. population. From 2000 to 2010 alone, the number of Asian immigrants increased by 43%, from 10.2 million to 14.7, making them the fastest growing population in recent U.S. history (Hoeffel, Rastogi, Ouk Kim, & Shahid, 2012). The 2015 Census estimates the size of this population will grow to about 29 million by 2060. Although there has been a failure to disaggregate other sub-ethnic groups of Asians in the U.S. Census, there is specific statistical information available about specific Asian subgroups provided by Migration Policy Institute (2015). Per the Migration Policy Institute’s most recent data, in 2015, Indian immigrants represented one of the largest immigrant groups with more than 2 million individuals born in India residing in the United States. Thus, this group represents 5.5% of the
foreign-born population currently living in this country (Zong & Batalova, 2017). The following countries made up the top ten immigrant groups in the United States in 2015: Mexico, India, China, Philippense, El Salvador, Vietnam, Cuba, Dominican Republic, Korea, and Guatemala (Zong & Batalova, 2017; see Table 1 for details) with India ranking as number two after Mexico.

**History of Indian Immigration**

A historical overview of Indian immigration to the United States can help clinicians and researchers better understand the population, the origins of their beliefs related to mental health, and their acculturation. To facilitate this, the Immigration Policy Center (2002) created a history, in the form of a timeline, of Indian immigration and patterns of their migration. Prior to the early 20th century, fewer than 600 Indian immigrants lived in the United States. By 1900, a little over 2,000 of them had arrived, with most finding work on the West Coast in sawmills, farms, and railroad companies. From 1899 to 1913, some 7,000 Indian immigrants arrived and engaged in unskilled labor. Between 1900 and 2000, the growth rate (detailed in table 2) of the Indian American population more than doubled, making them the largest group in the Asian Immigrant community (Immigration Policy Institute, 2002).

The year 1946 was a watershed year for Indian immigrants, who were permitted by the federal government to own their own land in the United States. A second wave of Indian immigration followed: from 1948 through 1965, more than 6,000 Indians immigrated. The Immigration and Nationality Act of 1952 further promoted Indian immigration by permitting entire families to move to the United States. In the 1950s, the immigration of professionals from India began (Immigration Policy Institute, 2002).

Indian immigrants who came to the United States during the 1950s were generally well educated and might be considered what would later be coined as a “model” minority group (Yu,
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2007). This term originated in 1966 when sociologist William Petersen, in an article in *The New York Times*, used the term “model minority” to describe the success of another immigrant group: the Japanese (Kasinitz, Mollenkopf, Waters, & Holdaway, 2008). Since then, this term has been subjected to a great deal of critical analysis, and the purpose and function of the label model minority has been much debated.

The theory that Asians succeed by merit (strong family, hard work, and high regard for education) is used by (U.S.) power elites to silence the protesting voices of racial minorities and even disadvantaged whites and to maintain the status quo in race and power relations. (Yu, 2007, p. 325)

Yu highlights the strong values within the Asian population related to family, work, and education. However, this quote speaks to the fact that this “model minority” is not necessarily a helpful or productive description of the group, given the impact that it may have on group members (who face various disadvantages, such as class); and such similarities are often lost or minimized when Asian groups are set apart from each other for political benefits. Lee (2015) discusses that this idea brings about conflict in stress in young Asian Americans.

While most categorizations of different generations of immigrants are imperfect and fail to fully capture the complexities of the immigration process, Rumbaut (2004), created a categorization system that has been successfully used in research to explore the impact of immigration history. The first category describes immigrants who arrive in the United States during adulthood (after age 18) and are considered first-generation immigrants. Individuals who moved to the United States during adolescents (between ages 13-17) are referred to, in the research literature, as 1.25-generation immigrants. Immigrants who come to the United States prior to the age of 12 and after the age of 5 are considered to be 1.5-generation immigrants.
Individuals who immigrated between the ages of 0-5 are referred to as 1.75-generation immigrants. Second-generation immigrants are defined as individuals who are born and socialized in the United States and have at least one parent who immigrated to the U.S. (Rumbaut, 2004; see Table 3). Rumbart (2004) admits that a critique of the model is that the categorization may be viewed as socially constructed and embedded in historical power relationships (particularly related to Anglo colonialism in India). However, the author notes that the strength of this categorization is that it allows for the researcher to look at individuals at different levels of acculturation (given their particular immigration status). This particular classification will be used for the purpose of this study.

Beliefs about Mental Illness

Based on this population’s trajectory of growth, there is a strong need to explore the prevalence of mental illness, current attitudes toward mental illness, and barriers to mental health treatment. The prevalence of mental illness in Asian-Indian immigrants is one reason to further explore mental health issues in this population. A recent literature review reported that the rates of depression, somatization, post-traumatic stress disorder, and anxiety were equally high and at times greater, among Asian-Americans compared to White Americans (Lee, Lei, & Sue, 2001). One study analyzed the relationship between discrimination and mental health diagnoses, using data from the US National Latino and Asian American Study (NLAAS) that was collected between 2002 and 2003 (Gee, Spencer, Chen, Yip, & Takeuchi, 2007). The findings suggested that racial discrimination was a strong predictor for depression and an even stronger indicator for anxiety. A second qualitative study explored South Asian immigrant women immigration issues and found health concerns related to stress, lack of social support, economic challenges, and difficulty in accessing treatment (Ahmad et al., 2005). Both of these studies show that various
factors influence mental health issues in Indian immigrants. A second important reason to learn more about beliefs around mental illness and attitudes toward seeking treatment is the underutilization of services in the Asian-American population (Abe-Kim et al., 2007). This growing population is both at risk for mental illness and underutilization of mental health services (Leong, Cheng, & 2011). The present literature indicates that Indian immigrants prefer to seek resources for mental illness within their community (friends and family). More information about Asian-Americans, and particular subgroups such as Indian immigrants, is important in order to contextualize their beliefs around mental illness and immigrants’ attitudes toward seeking treatment. There are significant cultural differences among various ethnic groups and there is a strong need for the literature to reflect that in order for clinicians to be well informed.

The Role of Gender in Mental Health

Recent literature includes information about the role of gender and its impact on seeking treatment for mental health (Mann, Roberts, & Montgomery, 2017; Gill & Nesbit, 2017). The role of the women within the family is such that she is required to care for the family, and adhere to gender role expectations. Mann and colleagues (2017) found that women with more traditional views about their role in the family experienced more depression, and women who understood themselves to be more modern, were found to have increased anxiety. This illustrates that regardless of level of acculturation, women are susceptible to mental health concerns likely due to the nuances related to gender role expectations (i.e. anxiety about not upholding gender norms and depression related to feeling isolated and unhappy in the domestic role).

Furthermore, the literature indicates that women fear seeking treatment due to the stigma of mental illness and the taboo nature of topic. A study was conducted where 10 Indian
daughters of first generation immigrants were interviewed (Gill & Nesbit, 2017). Participants reported challenges related to balancing two cultures and the tension between collectivism, a value of Indians and individualism, seen as a value to Americans.

A recent study conducted by Yoshima and colleagues (2012), in the metropolis of Detroit, Michigan found that men, in comparison to women, underwent more regular experiences of discrimination. The researchers interpreted this finding to be related to the idea that men are more educated and therefore are in working environments, which therefore creates more opportunities for discrimination.

**Acculturation**

Given a society stereotype of Asians as a model minority and the subsequent belief that Asian immigrants experience fewer acculturative stressors compared to other immigrant populations (Barringer & Kassebaum, 1989), it is important to examine the concept of acculturation within this population. According to Berry (2005), “Acculturation is the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members” (p. 698). This process of change can be viewed as a bilateral process that involves simultaneous acculturation and enculturation (Berry, 2005). Enculturation is defined as a process through which individuals learn about and identify with their ethnic minority culture (Wolksko et al., 2007). Miller et al. (2007) investigated acculturation among Asian American college students by reviewing the students’ responses to Western behavior, espousal of traditional Asian values, and espousal of Western values. Results showed that the model of acculturation was best defined as bilateral (vs. unilateral) and characterized by complex dimensions, such as values, behavior, and community environment.
This finding is significant because it shows that acculturation needs to be evaluated on different dimensions, not as a simplistic causal relationship.

Asian-Indian Cultural Values

Ramisetty-Mikler (1993) discussed fundamental differences between Indians immigrants and “Americans,” the majority population in the United States. In her work, she states that the Indian immigrant population differs from the majority culture in a variety of ways including time orientation (in terms of past, present, and future), the roles of religion, family structure, values, and social behaviors. Indians tend to stress the past and the future and see the present as a transitory period. Although individuals are perceived as in control of their "destiny," lineage and familial background are extremely important in establishing an Indian individual's sense of honor and character (Ramisetty-Mikler, 1993, p. 39). Religious rituals serve to maintain harmony in relationships and to prevent difficulties (medical, psychological, etc.) in the family. Rituals include daily prayer, fasting (often multiple times per week), and engaging in duties that are believed will result in positive karma. Indians strongly believe that prayer and dedication to religion will have a direct impact on their personal well-being and successes, including, though not limited to, health, wealth, and happiness (Ramisetty-Mikler, 1993).

Cultural expectations exist regarding the way a family “ought” to maintain traditions and values. Ramisetty-Mikler (1993) explains how each person in the family is assigned a role that contributes to ensuring family harmony in accordance with cultural norms. For example, fathers and husbands are the patriarchs of the family, while mothers and daughters provide the support in all non-financial matters. Sons are raised to take on responsibilities that will prepare them to become both the heads of their households and breadwinners and to assume patriarchal status.
In terms of values, Ramisetty-Mikler (1993) highlights that Indians have a strong desire for community and harmony, as group needs are considered to be more important than the needs of an individual family member. Additionally, the family unit is very involved in many life decisions for the next of kin, including (but not limited to) marriage and choice of profession. Social behaviors are expected to fit within the cultural mold and expectation of family and community members with the purpose of upholding traditions and values. These distinct cultural values can pose challenges related to assimilation and acculturation within the United States, and this can vary based on where in the United States one resides.

The understanding of values within the Indian culture is imperative for clinicians to understand when working with this population. Often times one’s values related to religion and culture, such as karma and reincarnation, can impact one’s understanding of their own mental illness. Mental health practitioners may want to use the first visit to explore how the patient understands their system in the context of cultural and religious values, in order to facilitate greater progress and recovery (Gupta, 2010). Additionally, the cultural influences on the understanding of mental illness may help understand how to appropriately adapt treatments for this population (Chandra, Arora, Mehta, Asaani, & Radhakrishan, 2016).

**Acculturation and Mental Illness**

Given that the acculturation process can be challenging and overwhelming, it is important to review the implications of acculturation for mental health within the Indian immigrant population. The acculturation process can be considered taxing on one’s physical and mental health (Schwartz, Unger, Zamboanga, & Szapcznik, 2010).

Kumar and Nevid (2010) conducted a study in which they observed the issues raised by acculturation, enculturation, and perceptions of illness (both medical and psychological) among
Indian immigrants in the United States. Participants were given case vignettes in which they were required to evaluate fictional characters with symptoms of mental illness. Results showed that acculturation influenced the evaluation of the male and female characters differently in the vignettes. Diagnoses attributed to men were less severe with respect to mental illness than diagnoses attributed to women, even though their symptoms were equivalent. Among participants presenting lower levels of acculturation, greater variation in the diagnoses attributed to the fictional characters was found, implying that Indian cultural attitudes regarding mental illness impacted the participants’ evaluations. Furthermore, a multitude of factors (such as gender conformity norms, values, roles, and expectations) impacted how participants evaluated symptoms of mental illness.

**Acculturation and the Ecological Model**

In analyzing the construct of acculturation, it is important to be mindful of the ecological model because various systems have implications for the acculturation process for immigrants. Although acculturation is a personal transformation that would be placed the individual level of the ecological model, mutually influencing systems exist in the environment. For example, if a child in the United States is born to Indian immigrant parents and is continuously exposed to and socialized with solely Indian immigrant children, their level of acculturation will be less than if they were exposed to a diverse group of children within the dominant social constructs of the United States. Additionally, the Indian immigrant population’s historical exposure to colonial powers (the British invasion and colonization of India) may influence their attitude toward acculturation; this is an example of the influence that historical macro relationships may have on the acculturative process (Bronfenbrenner, 1979).

**Mental Health Issues**
Overall, empirical investigation supports a relationship between acculturative stress and increased risk for mental illness among Asian-Americans (Lee, Lei, & Sue, 2001). However, as described above, little information exists regarding the prevalence of the mental health concerns specifically of Indians. Tummala-Narra and colleagues (2013) examined the experiences of Indian immigrant older adults related to mental illness through conventional content analysis (a type of qualitative analysis). The goal of their research was to better understand the experience of being an older Indian immigrant, and how these individuals coped with cultural changes and with aging. The participants in this study included 18 older, first-generation Indian adults (ages 61 to 82). The analysis led to the identification of four main themes. The first theme related to the challenges of living in the United States. These challenges included the separation from social and cultural networks, navigating across cultural contexts (e.g., learning English), and ambivalence about living in the United States. A second theme to emerge focused on care and family, particularly issues around a dependence on younger family members, as well as caring for others. The third theme involved an acceptance of past situations and concerns for the future. The final theme gleaned from this study related to the ways the older Indian immigrants coped with stress of acculturation. It was found that this group coped by helping others, developing positive relationships, and finding identification with the new culture. This study illustrates the numerous acculturative stressors facing immigrants to the United States and how this age group faces unique difficulties and challenges upon immigration. In the context of the ecological model, this particular study highlights aspects of the chronosystem, since many of these themes have are influenced by age and time. Particularly, some of these older adults need to be taken care of since time has gone forward and these individuals are aging, as reflected in the second
theme. The final theme speaks to the microsystem, as participants had to build new relationships in order to maintain social interactions with others in their community within the United States.

Tummala-Narra and colleagues (2012) conducted a similar study that evaluated acculturative stress and depression among Indian college students. The researchers used an existing database, the National Latino and Asian American Study (NLAAS) to explore the relationship between discrimination and depression, acculturative stress and depression, and the role of social support (both family and peer) and its impact on perceived discrimination and depression. Participant who identified as Indians (reportedly the minority with highest income in the database) were found to have a positive correlation between perceived discrimination and depression. Additionally, family support was an effective moderator between perceived discrimination and depression.

Leong and colleagues (2011) assessed 96 Indians in the United States for depressive symptoms and factors which were related to depression. In this study, it was found that depression had a significant relationship with status of employment, symptoms of anxiety, and other hardships. Additionally depression served as a predictor for other health concerns, given that individuals with depression were significantly more likely to develop other health issues. Through a depression measure, it was found that 17.7% of participants presented with depressive symptoms which is similar to other minority groups. Wittayanukorn and colleagues (2014) found the prevalence of depression to be 17.6% in Mexican Americans and 19.8 in African Americans. This illustrates that Asian Indians experience similar rates of depression to other minority groups.

Another study evaluated the challenges Asian immigrants face related to their quality of life (Gee, 2010). In this study, it was found that both difficulty speaking English and racial
discrimination served as barriers to having a positive quality of life for Asian immigrants. Participants from various subgroups participated in this study, including South Asians ($n = 822$). Results indicated that for south Asians, increased discrimination was related to a decrease in overall quality of life.

Additional research has been conducted in the area of discrimination and it has been found that discrimination has a negative impact on mental health (Spencer, Chen, Gee, Fabian, Takeuchi, 2010). Inman and colleagues (2015) evaluated the factors which were associated with race-based discrimination by conducting 9 focus groups ($n = 50$; 20 males; 30 females). It was found that the physical appearance of Indian immigrants and limited levels of acculturation created an increased risk of discrimination; however, a higher professional status was a protective factor. Participants discussed ways in which they coped with race based discrimination and this included: avoidance, disengagement, overcompensating with achievement, addressing the discrimination, and evaluating the discrimination.

When reviewing the present literature, estimates of the prevalence of mental illness among Indian immigrants are scarce. This may be in part due to the fact that Indian immigrants are known to under-report mental illness and often will seek religious treatment for illness (Rahman & Rollock, 2004). Additionally, mental health prevalence of Indian immigrants has been found to be grouped together with Asian mental, which is problematic given the diversity among the group (Kalibatseva & Leong, 2011). They experience acculturative stress, along with greater instances of discrimination, which may then lead to increased stigma (Tummala-Narra, Algeria, & Chen, 2012). A study conducted by Rahman and Rollock (2004) indicated that individuals who are actively engaged in the acculturation process may fear negative reactions from others (especially within their cultural/ethnic group) when disclosing experiences of mental
illness. When working with such individuals, it is important to monitor their experiences and perceptions of prejudice in conjunction with an assessment of symptoms of mental illness (Rahman & Rollock, 2004).

Rastogi and Wadhwa (2006) looked at the factors related to cultural and substance abuse issues. The authors indicated that the tension between managing both cultures, American and Indian, one may receive mixed messages about alcohol use. Additionally, stressors experienced by young immigrants, may lead individuals to exploring different peer groups which may involve alcohol and drug exposure. It was also found that shame related to seek help outside of the family, may prevent individuals who are suffering from substance abuse, to seek out psychological treatment.

**Mental Health Treatment**

Given the connection between the stressful process of acculturation and mental health issues, it is important to review how the Indian immigrant population seeks mental health treatment (Kumar & Nevid, 2010). Previous research by Das and Kemp (1997) suggested that Indian immigrants were less likely to hold positive attitudes toward treatment for three main reasons: 1) a cultural taboo against sharing personal and intimate information with others; 2) a rejection of mental illness for the group given the title of model minority; and 3) a disparity in cultural values between Indian and Western groups. Furthermore, Indian immigrants have been described as less likely to utilize mental health services in comparison to other individuals living in the United States given these culturally held beliefs (Das & Kemp, 1997).

Another study looked at resource utilization among both East Asian and Indian international college students. In this study, it was found that as Indian immigrants become more acculturated to the United States, the use of available resources increases. In contrast, East Asian international
college students did not demonstrate a relationship between acculturation and utilization of resources (Frey & Roysicar, 2006).

A study conducted by Leong, Park, and Kalibatseva (2013) looked at protective and risk factors related to psychological health in Latino and Asian immigrants. The researcher used available data to obtain information about 2554 Latinos, and 2095 Asian Americans. The study evaluated a history of DSM-IV diagnosis, social networking, ethnic identity, family cohesion, language proficiency, discrimination, acculturative stress, family conflict, and socioeconomic status. Findings revealed that both Asian Americans and Latinos demonstrated higher levels of ethnic identity, family cohesion, native language proficiency, and limited language proficiency. Additionally, it was found that social network, discrimination, acculturative stress, and family conflict were related to mental illness for both the Latino and Asian American group. This study allows researchers and clinicians to understand about psychological health of Asian Americans in comparison to another minority group, as well as the majority group of native born Americans.

**Barriers to Treatment**

Several types of barriers may impact whether an Indian immigrant seeks help for mental illness. First, the idea of mental illness may have different meanings in various cultures (Hirai & Clum, 2000). Second, affective barriers involving the fear of shame or “losing face” in the eyes of their cultural group may exist. Third, value-based barriers may emerge due to the fact that traditional psychotherapy in the United States is not in line with the collectivist value commonly held by Asian-Americans. There is a strong hesitation to discussing mental health issues among Indian immigrants (Roberts, Mann, & Montgomery, 2016). The collectivist or interdependent groups value collaboration and connection in a way that is different than the majority group,
which is much more focused on individualism as a feature of healthy identity development (Leong & Lou, 2001; Markus & Kitamaya, 2001). Logistical barriers such as being in a rural area, or lacking the time to access treatment due to stressors related to immigration may also prevent access to treatment (Leong & Lau, 2001). A non-Indian therapist may try to bridge this gap by reviewing the literature, attending multicultural trainings, and allowing their Indian immigrant clients to educate them.

It appears that access to mental health services for the South-Asian immigrant population may be partly impeded by a lack of appropriate services due to the failure to distinguish Indian Americans from the larger Asian-American population. Research has indicated that the idea of the “model minority” may be responsible for a lack of funding and research about South Asian immigrants’ health issues. Additionally, it requires a great deal of resources to make materials available in the numerous languages and to create culturally adapted resources, as this takes away from the actual services that can be provided to these individuals (Chaudhary et al., 2012).

A number of practical barriers may also exist. In a study conducted among South Asian women who immigrated to Canada, it was found that the women felt lonely and experienced a great deal of stress in their new country (Ahmad et al., 2004). A number of stressors were identified including a loss of social support, barriers to accessing health services, and a lack of health insurance. Specifically, the women indicated that they felt frustrated with long wait periods and issues with the referral process (Ahmad et al., 2004). Instead of seeking psychiatric professional help when necessary, these women described coping techniques including increased socialization, and self-awareness related to health care needs (Ahmad et al., 2004). This study illustrates that women experience a number of stressors upon immigration and seek resources to cope with this stress within their self and community.
Mental Health Service Utilization and the Ecological Model

When considering both the utilization of mental health services and the barriers to access, it is important to understand these issues within an ecological context. These services fall into the microsystem category, as individuals interact directly with the components of the microsystem. However, it is also important to note the influence that the mesosystem has on the microsystem, which, in turn, affects the individual. Given that public stigma is part of the mesosystem, stigma likely has a direct impact on one’s connection with mental health services (Bronfenbrenner, 1994).

Mental Illness in India

Given that this study focuses on further evaluating the beliefs related to mental illness in the Indian immigrant population, it is imperative to gain an understanding about the beliefs held in India. A review of mental illness in India will provide researchers and clinicians an understanding of the origination of the cultural belief that Indian immigrants may hold. Additionally, it may be helpful to understand the colonial history of India and its impact on mental health issues; however, this is not the focus of this current study.¹ One study (Kulhara, Avasthi, & Sharma, 2000) conducted in an urban area in northern India looked at the “magico-religious” beliefs of the relatives of patients suffering from schizophrenia. The term magico-religious refers to a cultural belief in supernatural ideas, such as sorcery, spirits, divine intervention, astrology, and reincarnation. The authors assessed the magico-religious beliefs of the relatives of 40 psychiatric patients using a questionnaire they devised called The Supernatural Attitude Questionnaire, which assesses the link between these attitudes and mental illness. The relatives included siblings, parents, and other family members; the majority (about 70%) of relatives had approximately 10 years of formal schooling. The findings revealed that
25% of relatives believed in a causal link between sorcery and mental illness, and 28% endorsed a belief that spirit intrusions caused mental illness. Additionally, the study showed that 28% of relatives believed that divine wrath could cause mental illness, and 34% believed that astrological influences are causally related to mental health issues. Thirty percent of relatives assumed that karma (past bad deeds) could result in mental illness, and over 50% of relatives indicated that they had religious or magico-religious rituals performed in hopes of improving the illness suffered by their loved one. This study illustrated the degree to which magico-religious beliefs were held by the relatives of individuals suffering from schizophrenia in an urban section of northern India.

As illustrated above, in India, religious beliefs seem to strongly influence interpretations of beliefs about mental illness. Another study conducted in southern India provided more information about how religious practices relate to mental illness (Padmavati, Thara, & Corin, 2005). In this study, much like the one described above (Kulhara, Avasthi, & Sharma, 2000), participants included both individuals with a psychotic disorder as well as their families. A total of 26 participants (12 males and 14 females; age range 22-71) were interviewed at various religious institutions where the patients lived. Of the 26 participants, 8 were patients, and 18 were caregivers to the patients. The interviews focused on the onset of the illness, its course, significant events in the patient’s life, possible explanations for the patient’s behavior, treatment history, and why religion was used to address mental health issues. Through these qualitative interviews, it was gleaned that individuals believed that mental illness was related to evil spirits, planetary positions, and the sins of a past birth. The strong religious themes that emerged in the interviews might have been influenced by the setting from which participants were recruited. Although this information provides an understanding of the relationship between religion and
mental health, it cannot be used as representative to all individuals living in India. Another study (Joel et al., 2003) conducted among 90 community health workers in southern Indian, these workers serve as frontline professionals who interact most with the patients. In this study it was found that 87.5% of the participants attributed the origins of mental illness to non-biomedical causes, such as black magic and evil spirits.

This literature illustrates that there is a significant impact of religious and spiritual beliefs related to the perceived causes of mental illness within Indian culture. These culturally linked ideas, held by individuals living in India, may travel with them as they immigrate to the United States. In addition to these religious beliefs, India, as a country, holds several values which include collectivism, family unity, respect being earned through power and status, importance of relationships, desire to be included in a group, the need for behaviors to fit a particular situation, and negative views of others (Panda & Gupta, 2004). These values appear to have a relationship with mental illness.

The literature is growing in this area, as it is a promising area of study. It is important that readers do not generalize these ideas to all regions of India. The country is filled with great diversity and each region holds beliefs and ideas that may be specific to them. Therefore, although we are beginning to build a body of literature about mental illness in India, it is important not to generalize these beliefs to all regions and persons in India.

**Rationale for the Study**

The above review of the existent literature leads to several important conclusions. The first is that there is limited information related to the prevalence of mental health issues among Indian immigrants; however, the literature has drastically expanded in the last few years. Furthermore, information on the experience of mental health symptoms, that are not depression and anxiety, is
lacking for this population. Another topic with only a limited examination in the literature is the relationship between high levels of education in the Indian immigrant population and beliefs surrounding mental illness. Finally, there is significant amount of literature on Asians; however, literature on Asian-Indians specifically is still growing. The lack of disaggregation of data is highly problematic. It is clear that there are differences among different Asian groups as demonstrated by the study conducted by Frey and Roysicar (2006). Overall, this population is considered to be risk for mental illness given the multitude of acculturative stresses as well as the prevalence of other mental health symptoms. There is a strong likelihood that mental health challenges are going undetected, underreported, and undertreated in the Indian immigrant and Indian-American population living in the United States. Stigma is certainly a strong deterrent to seeking mental health treatment (Corrigan, 2014). It is imperative to further evaluate the Indian immigrant population in relationship to mental health issues.
CHAPTER II

CLINICAL IMPLICATIONS OF BELIEFS AND BEHAVIORS RELATED TO MENTAL ILLNESS AMONG ASIAN-INDIAN IMMIGRANTS

Abstract

Limited literature is available for Asian-Indian Immigrants and mental health issues in the United States, specifically there is a lack of information related to beliefs about mental illness, attitudes toward treatment and the influence of various factors including acculturation. The current study used a mixed methods approach to examine Indian immigrants’ beliefs related to mental illness and their relationship with attitudes toward treatment. Survey results indicated that individuals with more culturally-based beliefs had more negative attitudes around seeking mental health treatment. Through a focus group, it was found that individuals preferred to seek help for mental health issues from a trusted member in their community and individuals experience stigma within that same community. Education related to mental health treatment might facilitate help-seeking behaviors among Indian immigrants.

Keywords: Indian immigrants, mental illness, treatment implications
Introduction

The Indian immigrant population is growing, but there is a lack of information available around their mental health issues, including rates of mental health and treatment seeking behaviors (Hoeffel et al., 2012; Zong & Batalova, 2015). Moreover, this population is considered at risk given that there are a number of acculturative stressors, as well as symptoms of mental health issues (Barringer & Kassebaum, 1989; Kumar & Nevid, 2010). The literature indicates that Indian immigrants under-report symptoms of mental health concerns, which means that individuals needing services are not receiving them (Abe-Kim et al., 2007; Leung, Cheung, & Tsui, 2011). Indian immigrants less often disclose mental health concerns due to fear of stigma and the contradiction with culturally based beliefs (more specifically defined below). At this time, limited research exists in the specific area of beliefs related to mental health held by first- and second- generation immigrants from India. An examination of the impact that stigma has on accessing mental health treatment has had limited attention in prior literature for Indian immigrants (Corrigan, 2004; Corrigan 2014; Owen, Thomas & Rodolfa, 2013; Illic et al., 2013). Although in the last few years there has been a significant increase in research related to Indian immigrants and mental health, it is important to continue to learn more information about this population.

At this time, although the literature contains some information about perceptions and beliefs about mental illness, acculturative stressors, and underutilization of mental health services related to the Indian population, there is limited research related to beliefs of mental illness with a focus on the Indian immigrant population (Kumar & Nevid, 2010; Gupta, 2010; Abe-Kim et al., 2007). Furthermore, a gap exists in the literature regarding the association between beliefs regarding mental illness and attitudes toward seeking treatment. The present
study aims to address this limitation by examining the relationship between culturally-based beliefs and attitudes toward seeking treatment held by first and second generation Asian-Indian immigrants in the United States.

In order to address the gap in the literature, a model was created to evaluate numerous variables concurrently. The model involved the exploration of numerous relationships including observed variables: age, immigration status, Indian identity, American identity, gender, proximity to mental illness, and unobserved variables: acculturation and beliefs. The beliefs variable is made up of two scales, to be later described as Asian cultural beliefs, and Indian cultural beliefs. The unobserved variable, acculturation is made up of American identity, and Indian identity. Additionally, age and immigration status are considered part of the acculturation variable which is present in the model (Tummala-Narra, Sathasivam-Rueckert, & Sundaram, 2013; Inman, et al., 2015) The model goes on to assess the relationships of acculturation, gender, and proximity to mental illness with beliefs. The unobserved variable beliefs, is made up of two culturally based belief scales. Finally, the model assesses the relationship between beliefs and attitudes toward seeking treatment.

The idea of cultural beliefs in this model refers to more traditional understandings of mental illness. These culturally based beliefs likely stem from socialization in India and messages that were received about mental illness. Indians then immigrate to the United States with beliefs that one should not seek help outside of the home (Rahman & Rollock, 2004; Rastogi & Wadhwa, 2006), stigma and fear of losing face (Hirai & Clum, 2000; Corrigan, 2014), and that religion provides an explanation for mental illness (Pamavati, Thara, & Corin, 2005; Kulhara, Avasthi, & Sharma, 2010). The relationship between these beliefs, and other more
traditional and cultural beliefs will be explored in relationship to attitudes toward seeking treatment in this study.

**Research Questions**

1. How do beliefs related to mental illness impact attitudes toward seeking treatment while accounting for acculturation, proximity to mental illness, gender, age, immigration, identity, and education?
2. How do Indian immigrants understand mental illness? Are there gender differences?
3. What resources are utilized by Indian immigrants for mental health issues? Furthermore, how does stigma impact help-seeking behavior?

**Hypotheses**

1. It is hypothesized that the that the model, described above (see Figure 1), is a good fit to the data. This hypothesis will address the first research question.
2. It is proposed that the following themes will emerge from the focus group: Understanding of Mental Illness, Gender, Resources, and Stigma. This hypothesis will address the second and third research question.

**Method**

Before recruitment began for this study, approval was sought and received from the Internal Review Board at Northeastern University (Approval number: 16-05-13) for the use of human subjects. A mixed-methods study was conducted.

**Participants**

A sample of 144 participants completed the quantitative component of the study. Of the 144 participants, 31 (21.5%) stated their age fell in the 18 to 25 years range. A little more than half of the participants (54.9%; n = 79) marked their age range as 26 to 45 years. Another 20.8%
(n =30) of the sample included individuals between the ages of 46 to 65. Only 4 participants (2.8%) identified as 66 and older. More than half of the participants identified as female (64.6%; n = 93), and the remaining participants identified as male (35.4%; n = 51) (table 4).

A small percentage of the sample indicated that their highest level of education was a high school diploma (6.3%; n =9), as most participants had at least a college degree. There were 54 (37.5%) participants, who had attained a Bachelor’s degree, and approximately thirty five percent (35.4%; n = 51) of individuals had earned a Master’s degree. The remainder of the participants (20.8%; n = 30) had a doctoral degree. The majority of participants had received their highest degree in the United States (77.1%; n = 111), whereas almost 19% of the participants had received their highest degree in India (18.8%; n =27). The remaining participants indicated that they had received an equivalent degree from the United States and India (2.1%; n = 3), or from a country other than the United States and India (2.1%; n = 3).

Of the 144 participants, 47 (32.6%) participants identified as first-generation immigrants. A small number (n = 7, 4.9%) of participants identified as 1.25 generational status immigrants. Approximately 7% (n = 10) of individuals identified as 1.5 generational status. Another 12 (10.5%) participants indicated that they were in the 1.75 generational status category. Almost half of the participants identified as second-generation immigrants (45.1%; n = 65).

In terms of proximity to mental illness, half of the participants indicated that either they or someone they knew was impacted by mental illness (n =72; 50%) and the other half of the participants reported they had not been impacted by mental illness (n =72; 50%).

For the focus group (qualitative portion), seven participants were recruited; however, demographics were not collected in order to preserve anonymity of the participants.

Survey Measures
Demographics. First, individuals were asked to provide their age. In order to participate, individuals needed to identify as a first- or second-generation immigrants (or anywhere between these two categories) from India. The subcategories of immigrant groups were further disaggregated to understand more about the individuals in the group and to prevent overgeneralizations. In particular, first-generation immigrants were defined as individuals born and socialized in another country who then immigrated to the United States at any age. Individuals who moved during adolescence (ages 13-17) were referred to as 1.25 generation immigrants. Immigrants who came to the United States after 5 and prior to age 12 are considered to be 1.5 generation immigrants. Individuals who immigrated before age 5 were referred to as 1.75 generation immigrants. Second-generation immigrants were defined as individuals who were born and socialized in the U.S., but had at least one parent who immigrated to the United States (Rumbaut, 2004). Individuals were then asked to share their highest level of education and the country where they obtained this highest degree. If individuals obtained equivalent degrees in their home country and in the United States, there was also an option for that. Finally, participants were asked about if they or anyone they knew were impacted by mental illness; this particular variable will be referred to as “proximity to mental illness” going forward.

Asian American Multidimensional Acculturation Scale (AAMAS). The AMMAS was developed to learn about participants’ identification with their culture of origin as well as their acculturation to the United States (Chung, Kim, & Abreau, 2004). This scale was developed through conducting three different studies which assessed the reliability and validity of the scale. The first study looked at 342 undergraduate students (118 males, 223 females, 1 did not state their gender) recruited through undergraduate courses at a West Coast university which they were attending. The participants included the following breakdown of identities: 28% Chinese,
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27% Korean, 14% Japanese, 12% Filipino, 11% Vietnamese, and 8% Other. The second study included 138 undergraduate students (41 males, 97 females) who were also recruited through their university to participate in the study (30% Chinese, 23% Korean, 12% mixed Asian, 9% Filipino, 9% Asian Indian, 9% Japanese, 4% Taiwanese, and 3% Vietnamese. The final study contained 44 participants (25 males, 19 females), who all identified as Korean immigrants and were residents of California. The participants in this final study ranged in age from 21 to 32 years old and were recruited through religious organizations.

The scale included 15 questions, and each question contained three parts to assess identification with three groups simultaneously: (1) Culture of Origin, (2) Other Asian Americans, and (3) American Culture. The ability to assess for multiple identities simultaneously made this scale unique. For the purpose of this study, the “other Asian-American” identity questions were removed so information regarding identity related to culture of origin and American culture could be evaluated. The scale explored four factors: (1) cultural identity, (2) language, (3) cultural knowledge, and (4) food consumption. A sample question was: “How well do you speak the language of?”: (a) your own Asian culture of origin, (b) English.”

The scale included 15 statements that participants were asked to rate on a 6-point Likert scale ranging from (1) “not very well” to (6) “very well”, according to how much each represented their view. The three identity subcategories were also scored from 1 to 6, with a higher score showing a high identity with the specific group. The final question on the AAMAS asked about negative feelings toward each identity; this question was coded inversely in the data analysis. Across the three studies the scores on the AAMAS demonstrated adequate internal reliability with Cronbach alpha ranging from 0.78 to 0.87 (Gim Chung, Kim, & Abreu, 2004).
For the current study, which removed the subcategory of “other Asians”, there was an internal reliability rating of .85 using Cronbach’s alpha. This rating fell within the range of the researchers who created this particular scale.

**Beliefs about Mental Illness Scale (BTMI).** This scale, created by Hirai and Clum, (2000), assessed cross-cultural differences in beliefs related to mental illness by comparing American students ($n = 102$) to Asian students ($n = 114$). The American student participants included 45 males and 57 females, additionally American students represented the following country of origin: Columbia ($n = 1$), England ($n = 1$), Puerto Rico ($n = 1$), Spain ($n = 2$), and the United States ($n = 97$). The Asian student participants included 85 males and 29 females. The following countries of origin were represented in the Asian sample: Bangladesh ($n = 1$), China ($n = 31$), Hong Kong ($n = 3$), India ($n = 22$), Indonesia ($n = 8$), Japan ($n = 5$), Macao ($n = 1$), Malaysia ($n = 5$), Nepal ($n = 5$), Pakistan ($n = 2$), Philippines ($n = 1$), South Korea ($n = 16$), Taiwan ($n = 6$), Thailand ($n = 7$), and Vietnam ($n = 1$). The BTMI aimed to assess stigmatizing views of mental illness including the beliefs that (1) mental illness is not curable, (2) it is shameful to suffer from mental illness, (3) people who suffer from mental illness are dangerous, and (4) individuals who suffer from mental illness are not trustworthy. Of the four areas related to beliefs studied, the following categories were considered most valid and ultimately used in the scale: dangerousness, poor social skills, and incurability.

The BTMI questionnaire consisted of 24 statements, and individuals were asked to indicate how much they agree with the statements based on a 6-point Likert scale ranging from (0) “completely disagree” to (5) “completely agree.” Total scores were indicative of beliefs about mental illness, with higher scores indicating more negative beliefs. An example of the statements for evaluation was “The term ‘psychological disorder’ makes me feel embarrassed.” Results
found that Asian students more often thought that individuals with a mental illness were
dangerous, and had poor social skills, in comparison to American students.

Among the Asian sample, Cronbach’s alpha was equal to .91, revealing high internal
reliability (Hirai & Clum, 2000). In the current study, using Cronbach’s alpha, an internal
reliability rating of .91 was found. A higher score on this scale was indicative of stronger Asian
cultural beliefs about mental illness.

**Attitudes Toward Seeking Professional Psychological Help Scale - Short Form**

(ATSPPH). This scale assessed attitudes toward seeking treatment for mental health issues
(Elhai, Schweinle, &Anderson, 2008; Fischer & Fraina, 1995). This was a shorter version of the
original 29 item-scale found to have poor factor structure validity. This shorter form assessed the
same constructs as the original scale with a focus on measuring one main construct: attitudes
toward seeking help for mental health issues. This modified scale assessed two subscales: (1)
openness to seeking treatment for emotional problems; and (2) value and need in seeking
treatment. The sample that was used to test the reliability and validity of this scale included
college students (n = 296) and patients from a primary care clinic (n = 389). The scale
demonstrated strong construct validity, as a higher score was indicative of less stigmatizing
beliefs about mental illness.

In the short form, participants were asked to indicate how much they agreed with or
disagreed with 10 statements, based on a Likert-scale from (0) “disagree” to (3) “agree.” An
example was: “If I believed I was having a mental breakdown, my first inclination would be to
get professional attention.” The internal consistency of this measure ranged from 0.82 to 0.84.
The one-month test-retest reliability was 0.80. The correlation with the original scale was 0.87
(Elhai, Schweinle, &Anderson, 2008). In the current study, the Cronbach’s alpha was .76.
Indian Cultural Beliefs Questionnaire (ICBQ). This questionnaire assessed beliefs about mental illness within the context of the Indian culture. This new scale was adapted from the Supernatural Attitude Questionnaire (Kulhara, Avasthi, & Sharma, 2000) by this researcher. Of the 19 questions on the Supernatural Attitude measure, four were selected and adapted for the ICBQ. Additionally, a fifth statement was created specifically for the ICBQ by this researcher. The four questions from the Supernatural Attitude Questionnaire were originally in binary format, but were modified to be scored on a 5-point Likert-like scale from (0) “completely disagree” to (4) “completely agree” in the ICBQ to allow for greater range in responses and increased flexibility. A sample question from this scale is: “If one suffers from mental illness, it is likely that they completed a bad deed in their past life.” Information regarding reliability and validity about the Supernatural Questionnaire is unavailable; however, it appears that the new adapted scale, ICBQ, has a strong internal reliability given that using Cronbach’s alpha an internal reliability rating of .72 was found in this current study. A higher score on this scale was indicative of stronger Indian cultural beliefs related to mental illness.

Focus Group Vignettes

Criteria for various disorders in each of the case vignettes were identified using the Diagnostic and Statistical Manual for Mental Disorders (5th ed., American Psychiatric Association, 2013). The following three cases were presented to participants in the focus group which are detailed in Appendix A: (1) An older female with depression; (2) A husband and father with alcohol abuse; and (3) A young female with a psychotic disorder. These case vignettes were designed by this researcher.
Procedure

Adult participants (age 18 and over) were recruited via online postings on Facebook (a social media website) and through personal acquaintances via email. Participants were encouraged to share the link for the study with other individuals who met the inclusion criteria. Additionally, the Indian Society of Worcester (ISW) hosted a focus group for the researcher to collect data from the community for the qualitative component of this study.

Participants were required to review an informed consent document prior to their involvement in the study. For the quantitative part of this study, which was completed online, the goal was to obtain data from approximately 200 participants in order to ensure enough power to satisfy statistical assumptions. For the qualitative component of the study, which was completed in person, the goal was to recruit 10 participants.

In order to more fully evaluate the research questions and to test the hypothesis, both a qualitative and quantitative component were included in the study.

Quantitative Study. A survey was created using Qualtrics\textsuperscript{1}. Individuals who were interested in participating in the study had access to the questionnaire link via email or could write directly to an email address created specifically for this study. Once individuals accessed the survey link they were instructed to review an informed consent document and received information about confidentiality. Additionally, they were given the contact information of the researcher, dissertation chair, as well as information about the Institutional Review Board.

Participants were provided with phone numbers with resources they could contact if they wanted to receive more information about mental health. Then, individuals were asked to provide demographic information, including age, gender, level of education, immigrant status, and proximity to mental health experiences. Participants were given the opportunity to discontinue

\textsuperscript{1} Qualtrics was the software used to create and administer the survey.
the study if they felt uncomfortable. Next, the participants ($n = 144$) were asked to complete an acculturation scale (AAMAS), two scales about culturally based beliefs (BTMI, ICBQ), and an attitude toward seeking treatment scale (ATSPPHS).

Upon completion, individuals had the opportunity to provide their email address (in a separate link) to enter a raffle for one of six 50-dollar Amazon.com gift cards, a strategy designed to increase motivation to participate in the survey. All of the email addresses were assigned a number in Microsoft Excel and six participant numbers were chosen at random to receive gift card using a website called “andrew.hedges.name/experiments/random/”.

**Qualitative Study.** The quantitative component used fictional scenarios to learn about Indian immigrants’ understanding of mental illness and the resource preference for mental health issues. In order to conduct this part of the study, a focus group was hosted by a Northeastern Indian Society. Participants were recruited through a flyer advertising the event and asked to sign up for the focus group via email in order to plan for the number of participants.

At the time of the focus group, several digital recorders were dispersed throughout the room to record the content of the focus group. As soon as participants began to arrive, they started an unprompted discussion related to their own experiences with mental health without prompting from the researcher. The individuals who disclosed information talked about close family members and the difficulties experienced by each of them. The researcher carefully interrupted the participants and asked them to spend some time reviewing the consent form before beginning the recording of the discussion. Prior to beginning to review the prepared cases, participants continued their discussion about their personal experiences. Given that this discussion was vital to the researchers’ understanding of beliefs held by Indian immigrants, it was both recorded and coded in the analysis.
During the focus group, individuals were given the opportunity to engage in conversation with each other while reviewing the questions associated with each case vignette. The event was expected to last up to 2 hours, with 15 minutes for introduction, 20 minutes for each question (60 minutes), and 15 minutes to summarize and to thank the participants. In spite of this planning, the group started later than anticipated given that participants were running late, and several participants needed to leave early; therefore, the total time for the focus group was approximately 1 hour and 35 minutes (15 minutes for introductions and review of consent forms, 1 hour and 14 minutes of recorded dialogue, and 6 minutes of closing remarks, as well as distribution of 25-dollar movie theatre gift cards). Three cases were presented to the participants, one case at a time. Participants received a printed copy of each case. Prior to the start of the session, my role as a researcher was explained to the group. Additionally, it was planned that if individuals began to self-disclose about mental health issues, an appropriate referral would be promptly made; however, this was not necessary. It is unknown if focus group participants also completed the quantitative component given the anonymity of the online survey. Furthermore, four of the seven participants were previously known to this researcher through mutual acquaintances in the community.

Data Analysis

Quantitative. For the quantitative analysis, 205 participants initially consented to the survey and completed some part of the survey; however, only 180 participants completed the demographics and began completing the construct measures. The 180 participants had some variance in the level of participation in the study. It was found that 180 participants completed the AAMAS, 157 participants completed the BTMI and ICBQ; and 151 participants completed
the ATSPPH. After cleaning the data, there were 144 participants that could be included in the analyses.

The data cleaning began by reviewing each measure for each participant and retaining data from participants if 20% or less was missing for each variable. There were 61 participants who had more than 20% missing data for one or more of the variables. For participants with 20% or less missing data, the mean was used to replace the missing data. Each of the constructs were individually reviewed to see what percentage of the questionnaire was completed for each participant. For the first variable, AAMAS, there were 15 questions, therefore if more than 3 of the questions were unanswered by a participant, that individual’s data could not be used in the analysis; however, if 1-3 questions were missing for a participant, the average number for the questions answered were inputted for those missing questions.

When each of the variables were tested for normality, one of the assumptions of Path Analysis, the Indian Cultural Beliefs Questionnaire did not meet the criteria for normality, as it was positively skewed; given this, the variable was transformed using the square root technique which resulted in the ICBQ variable meeting the normality assumption. Upon the completion of data collection, the data were downloaded into SPSS. Once the data were obtained, they were sorted and cleaned. Missing data were accounted for by using an average when 20% or less was missing for an individual participant. Next, each of the measures was scored, and a correlation matrix (see table 5) was computed in order to identify associations between the variables. The quantitative data were evaluated using path analysis (see Figure 2). Path analysis examined relationships among all the variables simultaneously, as well as evaluating direct and indirect relationships between variables (Olobatuyi, 2006). Prior to running the path analysis, all assumptions were tested in SPSS; the assumptions included normality, independence of
observations, model specification, linearity, multicollinearity, non-reverse causation, linearity between variables, residuals not correlated with variables that precede them or residuals independent of the predictor, and all endogenous variables follow a multivariate normal distribution. Following the specified assumptions, the path analysis was run. An evaluation of the model fit began with a chi-square test. Additionally, an assessment of fit was conducted, that calculated how similar the predicted data were to matrices containing the relationships in the actual data. After examining model fit, the researcher looked at individual parameter estimates and examined them for statistical significance. The model included a latent acculturation variable comprised of age, immigration status, and Indian and American identity. The model proposed that acculturation, level of education, gender, and proximity to mental illness lead to beliefs related to mental illness, which, in turn, lead to attitudes towards treatment seeking. A software used for structural equation model, called Analysis of a Moment Structures (AMOS) was used to test the model. AMOS then provided modification indices, based on these indices and the available theory and evidence, changes were made.

Through the use of the software, it was suggested the removal of education because of the limited variance (ultimately the variable was dichotomized to graduate degree vs. no graduate degree), and lack of significance to the model. Additionally, AMOS suggested acknowledging the association o the following variables using a double headed arrow: acculturation and gender; acculturation and proximity to mental illness; and gender and proximity to mental illness.

Acculturation, one of the latent variables, was composed of the indicators: age, immigration, Indian identity, and American identity. In the survey, participants were given four options to select from of which best described their age: 18 to 25, 26 to 44, 45 to 65, and 66 and older. Given that path analysis is less suited to categorical variables, age was dichotomized into two
categories of 18 to 44, and 45 and older. Similarly, in the survey, participants were given five options to select from which best described their immigration; however, given the assumptions of path analysis, it was deemed that dichotomizing the immigration status variable into first and second generation was best for the model (Rosseel, 2014). The hypothetical model included a direct pathway from acculturation to culturally based beliefs. Culturally based beliefs was a latent variable made up of two scales, one scale that was normed on an Asian sample but had limited Indian representation, and an adapted scale that specifically looked at individuals of Indian descent.

The relationship between these various constructs were evaluated using structural equation modeling. As noted above, a figure was created and a path analysis was run based on the hypothesized model (see Figure 2). The fit of the model will be evaluated using the following fit indices: (1) Bentler’s Good-of-Fit index (GFI) should be greater than .90; (2) Comparative Fit Index (CFI) should also be greater than .90; and (3) Root Mean Square Error of Approximation (RMSEA) should be less than .08 (Olobatuyi, 2006).

**Qualitative.** In order to evaluate the qualitative component of the study, the researcher used Directed Content Analysis (Hsieh & Shannon, 2011) to identity the themes that emerged in the focus group discussion about mental illness. The researcher hired a professional company, Transcribe Me, to transcribe the dialogue from one of the digital recorders that was present during the focus group. Certain participants stated some content in Hindi, which was transcribed as “foreign” by the transcription company; given the researcher’s familiarity with Hindi, the transcription was reviewed and content in Hindi was translated.

Direct Content Analysis allowed for an exploration of an idea that has not been fully explored or for which there is no data. Per Hsieh and Shannon (2005), two different strategies
can be used within directed content analysis. The first strategy involves using the predetermined codes which are selected by the researcher based on a review of the literature, to highlight content that appears to reflect one of the codes. Then the researcher is to review and categorize the highlighted content and determine the correct theme. The second strategy allows the researcher to immediately code content that falls into one of the predetermined categories.

For this particular study, the researcher used the second strategy and through a review of literature related to Indian immigrants and mental health, four key concepts that appeared salient to the focus group content. The predetermined themes included: understanding of mental illness, gender differences, resources, and stigma. For directed content analysis, the questions in the interview or focus group are purposefully designed to answer questions related to the predetermined codes, which were determined upon completing a thorough literature review.

Four predetermined categories were selected based on the literature review, which included:

**Understanding of Mental Illness.** The literature indicates that Asian Indian immigrants do experience mental illness (Leung, Cheung, Tsui, 2011). Furthermore, the literature indicates that various stressors are experienced by the Indian immigrant population, related to both acculturation and discrimination (Rahman & Rollock, 2004; Tummala-Narra, Alegria, & Chen, 2012; Inman et al., 2015). The present literature indicates that there are differences in how Indian immigrants understand mental health across various areas, including but not limited to age, gender, immigration status, and level of acculturation (Yoshihama, Bybee, & Blazevski, 2012; Meghani & Harvey, 2016). This researcher hopes to learn how Indian immigrants understand mental illness.

**Gender.** The literature indicates that mental health issues are perceived differently based on the gender of the person who is experiencing a mental illness. This was prevalent in the research
that has been completed about Asian Indian immigrants (Kumar & Nevid, 2010; Gill & Nesbit, 2017). The researcher hoped to further delineate the role of gender in the understanding of mental illness.

**Resources.** It is known Indian immigrants are at risk for experiencing mental illness. The current literature illustrates that Indian immigrants likely under-report mental illness and seek treatment from the other options, such as religious interventions (Rahman & Rollock, 2004; Gee, 2010; Leung, Cheng, & Tsui, 2011). This researcher aimed to understand what resources Indian immigrants are using to cope with stressors and instances of mental illness.

**Stigma.** An extensive amount of literature indicates that stigma has a negative impact on mental illness. Literature focusing on Asians, specifically Asian-Indians, has noted that stigma is likely a deterrent to seeking treatment for mental health issues (Das & Kemp, 1997; Gill & Nesbit, 2017; Owen, Thomas, & Rodolfa, 2013). The researcher hoped to learn more about the relationship between stigma and treatment seeking behaviors.

This researcher followed the first strategy, and initially highlighted content that could be categorized into codes. Following the initial step, the researcher reviewed the highlighted content and coded the focus group data into one of the four predetermined themes. The open-ended questions for each of the case vignettes were purposely designed to answer the second and third researcher question, as is recommended for Directed Content Analysis (Hsieh & Shannon, 2005).

**Results**

**Descriptive**

The variables included in path analysis model include: attitudes toward treatment ($\mu = 28.4$), American identity ($\mu = 72.7$), Indian identity ($\mu = 68.6$), Indian cultural beliefs ($\mu = 2.0$), and Asian cultural beliefs ($\mu = 64.3$).
Bivariate Correlations

In order to learn about the bivariate relationships between each of the variables in the model, a correlational analysis was completed. Table 5 provides a review of the bivariate relationships among all the variables which ranged from $r = -0.03$ to $r = 0.43$.

**Attitudes toward treatment.** Positive attitudes had a positive moderate relationship with females ($r = 0.34, p < 0.01$), which was significant. Positive attitudes had a negative, weak correlation with higher levels of Indian cultural beliefs ($r = -0.27, p < 0.01$). Positive attitudes had a negative, moderate relationship to higher levels of Asian cultural beliefs ($r = -0.34, p < 0.01$), and proximity to mental illness ($r = -0.32, p < 0.01$), both correlations were significant. Older individuals had a positive weak correlation with Indian identity ($r = 0.21, p = 0.01$), Indian cultural beliefs ($r = 0.26, p < 0.01$), Asian cultural beliefs ($r = 0.29, p < 0.01$).

**Indian and American Identity.** Indian identity had a moderate negative correlation with second generation immigrants ($r = -0.40, p < 0.01$), that was significant. American identity also had a moderate positive relationship with second generation immigrants ($r = 0.33, p < 0.01$), that was significant. American identity had a weak negative correlation with Indian cultural beliefs ($r = -0.27, p = <0.01$), which was significant.

**Cultural Beliefs.** Indian cultural beliefs had a moderate positive relationship with Asian cultural beliefs ($r = 0.43, p < 0.01$), that was significant. The relationship of Asian cultural beliefs with gender ($r = -0.29, p < 0.01$) was negative, moderate, and significant. Asian cultural beliefs had a weak, positive relationship to proximity to mental illness ($r = 0.25, p < 0.01$), that was significant.

**Gender.** Gender had a weak, significant positive relationship with proximity to mental illness ($r = -0.25, p < 0.01$).
Evaluation of Model

Upon examination of the model, the hypothesized model did not fit the data well and was therefore rejected, ($\chi^2 = 90.9$, $p < .001$, CFI = .76, GFI = .89, RMSEA = .113). After exploration of the modification indices and path significance, with consideration of the theoretical background, a second and final model was developed. Given that the pathway from education to belief was not significant, education was removed. The second model met the recursive assumption, which means that all relationships were unidirectional. After incorporating the aforementioned changes suggested from AMOS, the final model improved the fit to the data ($\chi^2 (1) = 42.1$, $p < .005$, CFI = .90, GFI = .94, RMSEA = .08). When looking at the overall model fit, the assumption of significance (i.e., the model was significant) was not met; however, the GFI, RMSEA, and CFI cut-off requirements were met.

Overall, this model explains 26% of the variability of Indian immigrant’s attitudes toward treatment. When evaluating each of the relationships of the model using regression standardized estimates, it was noted that age had a moderate negative relationship with acculturation ($\beta = -.58$, $p < .001$), immigration had a strong positive relationship with acculturation ($\beta = .78$, $p < .001$), Indian identity had a moderate negative relationship with acculturation ($\beta = -.49$, $p < .001$), and American identity had a moderate positive relationship with acculturation ($\beta = .45$, $p < .05$). Acculturation had a moderate negative relationship with cultural beliefs ($\beta = -.30$, $p < .01$). Finally, cultural beliefs had a strong positive relationship with Asian cultural beliefs ($\beta = .75$, $p < .05$) and a moderate positive relationship with Indian cultural beliefs ($\beta = .56$, $p < .001$). Gender had a moderate negative relationship with culturally based beliefs ($\beta = -.38$, $p < .001$). Proximity to mental illness has a weak positive relationship with culturally based beliefs ($\beta = .13$, $p < .01$).
and a negative weak relationship with attitudes \((\beta = -.20, p < .05)\) Finally, culturally based beliefs had a moderate negative relationship with attitudes toward treatment \((\beta = -.41, p < .001)\).

**Qualitative results**

The researcher aimed to learn about how Indian immigrants understand mental illness, their use of resources, and the impact of stigma on help seeking behaviors. The focus group vignettes had open-ended questions that were related to these areas to provide the researcher with data to answer the research questions. Content was found to support each of the four predetermined themes: understanding of mental illness, gender dynamics, resources, and stigma (Hsieh & Shannon, 2005).

**Understanding of Mental Illness.** Content related to this area of interest was better understood after the review of the transcription. In this instance, participants were asked to share what, if anything, they thought should be done for Hansaben, the first responses were:

Absolutely. She needs to be brought to a doctor. Maybe do some blood work to see if there’s something medically wrong with her. Let some family member who has a good relationship with her interact with her and understand what is going on…Yes, maybe I feel that probably we should encourage her to go meet, go out of the house, or get socially involved. Volunteer working, or something like that—so that one person is in the group, then they feel that useful, that useful is being important.

In the second case, with Jay, participants were quick to label what they believed to be happening: “He has taken to alcoholic addiction.” Similarly, in the second case about Lalita, participants were quick to attempt to diagnosis Lalita by saying, “it’s schizophrenia.”
**Gender.** Upon reviewing the focus group transcription, the researcher gained more information about the gender differences related to mental illness. This was seen in the following quote:

But women, if they ask for help it’s considered like they can’t handle it. And that’s what’s upsetting sometimes with people in India, because we do so much, you know? But if they do ask for help then it’s considered they aren’t strong enough. That’s what I’m seeing here she won’t [get help] unless she asks.

Another participant discussed the stressors that females face and how they are expected to handle these difficulties:

But I can totally see this—if she didn’t have those conversations about beliefs. I know a number of older women in my family, like grandmothers and taijis (aunts), and people they have put on this era [need] of doing everything. They’re always the ones—they never have problems—it feels like they never have problems. They wake up in the morning, they’re the first ones up, they make chai (tea), for the entire family. They never seem to be frowning, and if they are then it’s like, “Oh, I’m fine, let’s doing something else.”

This quote was corroborated by a few participants and further highlights how women handle stressors:

I feel like women in India, which is something I admire about women in India too, is just they’re very strong and they’re very…resilient…yea but it also leads to them not being able to say when they’re struggling and it’s kind of…they don’t want to ask for help, they don’t ask for help.
Resources. This third theme sought to understand where participants were seeking support for mental health issues. It was found that participants first reached out to their community for help, which was helpful in some ways, yet challenging in other ways. Participants often discussed the role of the community in terms of dealing with stress and mental health issues. These quotes illustrate the ways the community can be utilized to improve the mental health concerns for individuals:

“Let some family member who has a relationship with her interact with her and understand what’s going on” and “yes, maybe I feel that probably we should encourage her and understand what’s going on.” Additionally, members suggested that a young woman with psychotic symptoms may benefit from “volunteer work, or something like—so that once a person is in the group, then they feel that useful, that being useful is very important.”

Participants also commented about the challenges individuals with mental illness face within the community. One participant talked about negative impacts of the community on one’s mental health issues: “That’s exactly what I was talking—severely depressed, or now my kid is suffering from bipolar disorder. If we’re not comfortable sharing what colleges [our children are going to], how about mental illness?” Another participant discussed the challenge in the community resource:

Well, also what [inaudible] was saying about how kids are already putting pressure on themselves. So, yeah, if I’m out there every day saying, I need to get into this college. I need to get into this college, and then I come home and—some auntie or somebody tells me like, “Beta (darling), you should get into that college.” It’s like yes, I know that. Thank you.

A similar quote about difficulties in using the community as a resource is as follows:
No, not that, but I’m thinking like, what am I going to major in? Because when I go home for Christmas, and then somebody asks me what I’m going to major in, and I say well I’m majoring in psychology, they’re not going to talk to me anymore, because I’m not going into medicine.

It was notable that one participant discussed the societal pressures middle-aged women face when it comes to responding to the community, “That’s okay, even 50, 60-year-old women ask it. What are we going to do when we grow up? We’re grown up, I mean (inaudible), [the] baby boomers then climbing mountains. The stress is everything.”

**Stigma.** Stigma, as found in the literature, was described as a strong deterrent in discussing mental health issues in the community as well as seeking treatment. Participants shared their fear around revealing mental health issues in their family due to stigma within the community. Furthermore, there was a comparison to the increased acceptance of mental illness in mainstream western culture versus more traditional Indians (both in India and in the United States). One participant stated:

I think it’s very easy in this country for people to press the stress button. I feel weird because we are in a different environment, there is some positive there too that we don’t quickly press the stress button. You make it work, whatever it is you just make it work. You roll with the punches.

Another participant discussed the stigma associated with mental illness: “Like it has become a taboo being sick is something like attention seeking.”

The following quote further explains the experience of one participant related to stigma:
The question that we were talking is like, you have some issues with your child. How open you are ready to go and talk to another person that this is the problem I have. But we don’t talk.

Participants talked about the stigma within the community that makes one fear judgment of others:

Well I think she’s bringing up a good point saying we’ve gone from mental illness to judgment, but I think it’s a theme that is woven across, right? I think there’s judgment in mental illness. There’s judgment in choices, and I think at the end it comes down to we kind of have hesitation reaching out to our own community at times because of the fear of being judged.

Participants reported difficulty in asking others for help. A participant discussed the challenges she faced with her mother’s mental illness:

In India, it was so common for friends to come home for lunch and dinner, right? So my Mother would ask very odd questions and we were so scared. We would not want too many of my friends; I had not openly told them, and even to talk about it now, and now, I’ve told—all my friends know it. But at that time, I was so embarrassed to have anybody over.

Another participant highlighted the lack of discussion around mental health issues in the community:

And then also, once you go past accepting, I think a lot of our community is afraid of asking for help, right? So once there’s a step of like, okay there’s a problem, I have to accept it and then you go past denial. But then it’s like, who do I ask for help? Where do I go for help?
The lack of acceptance around mental health issues was discussed:

And then also, once you go past accepting. I think a lot of our community is afraid of asking for help, right? So once there a step of like okay there’s a problem I have to accept it, and then you go past denial. But then it’s like who do I ask for help? Where do I go for help?

The second hypothesis and second and third research question aimed to learn about how individuals understand mental illness, how gender plays a role, how does stigma impact treatment seeking, and what resources are useful. The four predetermine codes of understanding of mental illness, resources, gender, and stigma were all salient themes throughout the transcript of the focus group, as supported by the second hypothesis.

**Discussion**

The current study looked at how beliefs about mental illness impact attitudes toward seeking treatment for Indian immigrants. Furthermore, this study aimed to understand more about how Indian immigrants understand mental illness and what resources are utilized by this population. Through a mixed method approach, these areas of interest were explored. The following results will be discussed in the context of the ecological model (see figure 1; Bronfenbrenner, 1994).

**Research Question 1: Impact of Beliefs of Mental Illness on Attitudes toward Treatment**

The hypothesis for this study (which aims to address the first research question) stated that the proposed model would fit the data well. The model assess acculturation, beliefs about mental illness, attitudes toward seeking treatment, proximity to mental illness, and gender. After analyzing the available data, it was clear that the proposed model was not a good fit for the data.
After evaluating a number of the recommendations, it was deemed that education did not have a significant impact on the model due to a lack of variance in the variable. This is likely because the participants in this study were highly educated, given that over 93% had at least an undergraduate degree or higher. This finding is consistent with current literature which indicates that Indian immigrants are a highly-educated population (Zong & Batalova, 2017; Panda, 2012).

After testing the hypothesized model and making changes, the second model was a better fit and illustrated many important ideas related to beliefs about mental illness and attitudes toward seeking treatment. Individuals who were less acculturated (e.g. more traditional) had more culturally based beliefs about mental illness, suggesting that individuals who are less acculturated have more negative and fear-based beliefs about mental illness. Individuals who endorsed lower levels of acculturation and higher levels of culturally based beliefs may have a more religious conceptualization of mental illness (Kulhara, Avasthi, & Sharma, 2000). This is consistent with previous literature, as cultural beliefs around mental illness have a more stigmatized and non-medical perspective (Chung, Kim, & Abreu, 2004; Chandra et al., 2016). In terms of the ecological model, acculturation is a personal transformation that also falls into the chronosystem level as individuals often change their level of acculturation with time. Each stage of the assimilation process may not be obvious to the individual; however, after some time it will likely be noted. The increased assimilation would likely impact the beliefs around mental illness.

Males were found to have more culturally based beliefs, and females had less culturally based beliefs. This finding was consistent with past research evaluating culturally based beliefs (Hirai & Clum, 2000). The reasoning for this can be understood in the context of the current literature which indicates that females experience more mental illness. Given that women have
less culturally based beliefs and are therefore more open to seeking treatment (Kumar & Nevid, 2010; Mann, Roberts, & Montgomery, 2017). When evaluating this relationship using the ecological model, gender itself falls within the personal level; however, the mesosystem is salient here given different relationships in the mesosystem are influenced by culturally-embedded messages which then influence gendered beliefs (i.e., only weak men get depressed).

A third finding from the path analysis, proximity to mental illness had a negative relationship with culturally based beliefs, illustrates that when one was impacted by mental illness (directly or indirectly), that the individual had less culturally based beliefs. It is assumed individuals impacted by mental illness, may have sought psychological treatment and had an exposure to mental health treatment; this in turn may be responsible for the finding (Subudhi, 2014). Additionally, the proximity to mental illness variable also had a direct positive relationship with attitudes toward treatment indicating that those who have had exposure to mental illness had a more positive attitude about seeking treatment. This likely means that individuals who had been exposed to mental illness (directly or indirectly), sought treatment (or someone close to them sought treatment) and had a positive interaction with mental health providers and that treatment was effective in some way. The variable of proximity to mental illness and its relationship to beliefs can be understood within the microsystem. Attitudes can also be contextualized within the micro-level, as exposure to mental health issues (within family, school, workplace, etc.) can impact both beliefs and attitudes.

The last finding from the path analysis model, cultural beliefs had a negative relationship with attitudes toward treatment, demonstrated that individuals who held more culturally based beliefs, had a more negative attitude toward seeking treatment. Given that the questionnaire was tailored toward assessing attitudes toward seeking a “medical intervention,” this likely illustrates
a preference to seek non-medical types of interventions, such as religion or other community resources (Rahman & Rollack, 2004). Culturally based beliefs and attitudes fall in the macrosystem level, as life experiences can impact and influence beliefs and attitudes. As hypothesized, the model required minor adjustments, but overall represented the data well.

**Research Question 2: Understanding Mental Illness**

The second research question, explored through qualitative analysis, sought to understand how Indian immigrants understand mental illness, while considering gender differences. The focus group provided a significant amount of information in this area. One of the themes explored in the qualitative analysis was *understanding of mental illness* which addressed the second research question. The first case vignette described an older woman suffering from depression. Participants first described that they would like to see this woman receive a medical rule out (through bloodwork). Additionally, participants described her presentation to include loneliness, isolation, and likely depression. This medical bias demonstrated by participants may be related to an increased level of comfort with traditional medical ailments versus mental illness.

The second case vignette described a husband and father who was suffering from alcoholism. Participants quickly labeled the clinical presentation to demonstrate an “alcohol addiction.” Their understanding was that he was using alcohol to cope with stress and that it did not matter why he was drinking because he needed help. The third case vignette described a young female with a psychotic disorder. Participants immediately recognized that this woman was experiencing serious mental health symptoms and wanted her to receive both medical and psychiatric attention. These findings illustrated that Indian immigrants are able to identify mental
illness in the context of western medicine and endorse help-seeking behaviors, which may lead to increased help-seeking behavior.

When exploring the second research question, through the qualitative analysis it was found that the pressures females face impact their ability to ask for help. This was most evident when the participants discussed the first case. Particularly, participants made statements about the weight of responsibilities in the home for women and how that leads to an inability to express emotions and difficulty in asking for help. Based on the literature, females experience more mental health issues in comparison to males (Kumar & Nevid, 2010). Furthermore, there are more research studies available on females and mental illness which shows that women are spending more time thinking about mental health and are likely having contact with the mental health system (Ahmad et al., 2004).

In the context of the ecological model, the microsystem and mesosystem both are salient when looking at the understanding of mental illness. Within microsystem there are influences from important relationships that impact one’s understanding of mental illness. Additionally, the mesosystem is important to examine as the linkage between settings can also influential as one learns about mental health issues.

**Research Question 3: Resource Utilization**

The third question aimed to understand what resources were used in the context of mental illness and how stigma impacts help seeking behaviors. Based on the literature, the two themes of *resources* and *stigma* were predetermined to answer this researcher question. A significant amount of data related to these themes was found.

It was clear that the community was the first *resource* participants identified when asked what should be done for the individual in the cases. For the first case, participants felt that
mentally ill woman may benefit from talking with her daughter. As the discussion continued, participants felt that a visit to a psychologist and psychiatrist may be beneficial if the older woman was comfortable. Although psychiatric help was considered, it was not the first idea presented in terms of intervention for this case.

In the second case, participants felt that an influential person (preferably an older male) would be best suited to approach the male about his alcohol addiction and the importance of seeking help. Gender roles was salient in this case, as demonstrated by previous literature (Ramisetty-Mikler, 1993; Mann, Roberts, & Montgomery, 2017; Rastogi & Wadha, 2006). Alcoholics Anonymous (AA) was a recommendation as a community resource for this case. For the third case, participants felt that involving friends, and the counseling department may be useful. Additionally, participants felt that it was justified to seek psychiatric treatment for the third case due to the more severe clinical presentation.

During the initial, unprompted discussion about personal experiences with mental illness, stigma was brought up in a prominent manner and was noted to be a salient problem in the Indian community. As the discussion became focused on the clinical cases there were limited comments related to stigma. It can be assumed that individuals were more consumed in the content of the cases, and that stigma was not overtly asked about in the open-ended questions.

When considering these themes within the ecological model, the interaction between the individual and the microsystem is most salient. The third research question found that individuals utilize their community when experiencing mental illness and also experience stigma from that same community.

Focus Group Observations
In the focus group, it was most surprising to see the enthusiasm and strong interest in discussing mental health issues given the literature around stigma (Corrigan, 2004). Participants discussed that they did not have places in the community to discuss such issues and found the focus group to be a safe place. The researcher was struck by participants’ level of interest in talking about their own issues, as the researcher felt that talking about personal issues would be uncomfortable (Link et al., 2001). The level of transparency and comfort (or perhaps discomfort) seen in the focus group was encouraging and that perhaps more similar forums would be helpful; this may slowly help increase dialogue among the Indian immigrant community.

Positionality

It is important to note that my conceptualization of this research, and perhaps my interpretation of the results, was influenced by my experience as a second-generation Indian immigrant. The continuously changing role of insider vs. outsider allowed me to gain a unique perspective of the results of the study (Bourke, 2014). My parents immigrated to the United States in 1983. I have had the privilege of being exposed to two rich cultures: American and Indian. During my journey as a second-generation immigrant, I have wondered about the taboo that exists around mental health issues in the Indian immigrant population and have seen firsthand the stigma and negative beliefs toward people with mental illness. Given my personal identity as the daughter of immigrants and my future as a counseling psychologist, I felt it was critical that I gain more information about the beliefs Indian immigrants hold regarding mental illness and how that, in turn, impacts attitudes toward treatment.

A discussion of the research results and implications would not be complete without an analysis of myself, as the researcher, and my positionality in both the survey and focus group (Berger, 2013). When looking at the survey, it is important to note that I emailed a number of
personal acquaintances to the complete questionnaire. The influence of the relationship between myself and the participants was made clear after the receiving of approximately 50 emails with various comments about the study. Some participants thanked me for exploring this topic, others wanted to let the researcher know that they had completed the study, and some had critiques or comments about the study. In terms of the focus group, 4 of the 7 participants were known to me through the community prior to the focus group; this may have resulted in more authentic answers due to comfort or participants may have withheld information they would have otherwise shared in such a setting. It is unclear how the positionality of the researcher impacted the qualitative study; however, it did not appear to be damaging in any way.

As the leader of the focus group, I felt honor and privilege, that individuals within my community, one where it is taboo to discuss mental health issues, attended. Not only did these participants attend, but they also engaged in a meaningful and vulnerable conversation which was most unexpected for me. At times, it felt difficult to manage the dual relationship, as many of the participants were older than me. The cultural responsibility to respect elders, who were also known to me, did interfere a few times with my ability to be an effective leader, particularly when it came to stopping one conversation and asking participants to move to another topic.

**Clinical implications**

1. The quantitative results suggested that men had more culturally based beliefs and therefore had less positive attitudes about seeking treatment. Given this, it is imperative to find ways to reach out to males and educate them about mental illness. Many men believe that individuals with mental illness are dangerous, have social difficulties, mental illness is not curable, and non-medical treatments are warranted, as they are socialized in this way by their parents and other elders. Education around mental health issues,
prevalence, and efficacy of different treatments may influence men’s beliefs and further increase their attitudes toward seeking treatment. This may be done through community events, and educating primary care physicians.

2. It was found that first generation immigrations held less favorable attitudes toward seeking treatment. Education and exposure to mental illness and overall psychological health, specifically tailored to this population, may allow this group to seek treatment if necessary.

3. Findings also suggested that individuals who have had more exposure to mental illness have more positive attitudes about treatment. This, in fact, may suggest that the individuals who have indicated proximity to mental illness have had success with treatment. It is important to educate those without exposure to mental illness that treatment works, and is helpful. This message could be delivered through support groups, media (e.g., Bollywood movies, Indian T.V. shows), as well as different community events. At this time, it is not clear who the behavioral health providers for Indian immigrants are; however, during the focus group participants vocalized fear around confidentiality when meeting with an Indian provider.

4. It is important to educate our clinicians to be more competent with cross-cultural issues and provide them with trainings specific to Asian Indians and the need for treatment. Perhaps embedding this important information in multicultural courses at the graduate course level, could assist in informing clinicians. Particularly, it would be helpful for clinicians to understand the diverse needs of this group based on their age, immigration status, gender, and level of acculturation.
5. At the end of the focus group, the researcher was asked to return to hold a similar group where individuals in the community can come together and talk about issues that were more difficult to broach without the safe space. Interestingly, the researcher was asked to call it “Chai Time,” as opposed to a more mental health or clinical name for the group. This shows that people wish to have a space to talk about difficult topics. Perhaps there can be support groups in the community for individuals experiencing various mental health concerns. Furthermore, support groups for family members who are supporting the individual would be important.

6. The participants were highly educated and numerous individuals endorsed strong cultural beliefs; this indicates that many educated individuals do hold negative beliefs about individuals with mental health issues. Providing education to providers and community leaders about mental health beliefs among the Indian immigration population will allow for an increased likelihood for success in interventions. It is important that the education be targeted at particular subgroups, as the needs for individuals may be different based on age, education level, immigration status, and acculturation level.

Limitations

A limitation in this study was the failure to assess participant income. The researcher had concerns around asking this personal question because of the level of shame and stigma related to mental health issues. Moreover, given the researcher’s involvement and understanding of the Indian immigrant community, the researcher felt that participants may not feel comfortable in sharing such private information. The concern was that asking about both income and then mental health issues may deter participants from completing the survey. In future studies, providing individuals with a multiple-choice question to include income ranges may be useful.
An additional limitation of this study is that questions about mental illness, in the quantitative analysis, were general in the belief and attitude questionnaire. There is a strong likelihood that if questions were specific to different diagnoses that the responses may have been more variable. The researcher attempted to address this limitation by using diverse clinical presentations in the focus group.

Although the measures used in this study provided a great deal of information, the survey lacked an assessment of attitudes toward seeking treatment outside of the medical model. Future research would benefit from an exploration of other types of treatment including, but not limited to: cultural, religious, spiritual, artistic, and literary. Beliefs related to some of these non-medical areas were assessed; however, further extensive exploration of attitudes toward these types of interventions would add a greater depth to current literature.

The sample size for the focus group was quite small. Although the focus group provided a wealth of information, it may have been helpful to have multiple focus groups and to compare themes across groups. Additionally, the positionality of the researcher may have impacted responses of the participants in the focus group. Additionally, in relation to the focus group, there was a failure to evaluate triangulation in relationship to the determined codes.

In addition, this research was unable to collect adequate data from individuals who were less educated (and likely were of a lower social class). In future studies, it is imperative to gain access to a lower-income population to assess their attitudes and beliefs. In future studies, data from a more diverse Indian immigrant population, would allow for greater generalization related to attitudes and beliefs.

Conclusion
Mental health issues are salient in the Indian immigrant community; however culturally based beliefs appear to influence attitudes toward seeking treatment. This study found that less acculturated individuals had more culturally based beliefs; men had more culturally based beliefs, in comparison to females; and individuals who have been exposed to mental health issues have less culturally based beliefs and more positive attitudes toward seeking treatment. The ecological model allows for the researcher to understand the findings from the research in the context of various important factors including time, culture, life course, relationships, and community (Bronfenbrenner, 1994).

In future studies, additional qualitative information regarding beliefs about mental health illness would provide more information and would allow for generalizability of results. The experiences and stories allow for clinicians and researchers to develop a greater understanding of what the beliefs are around mental illness, and how mental health providers can more easily reach this community. Additionally, future research should consider surveying individuals about their beliefs in a way that is specific to different diagnoses (i.e. schizophrenia vs. anxiety). Finally, future studies may consider interviewing individuals (and their families) who suffer from mental illness as they would be able to share first account information related to stigma. Difficulties may arise in recruiting such individuals; however, the use of the community may allow for greater dialogue and participation in such a study.
References


Berger, R. (2015). Now I see it, now I don’t: Researcher’s position and reflexivity in qualitative research. *Qualitative research, 15*(2), 219-234.


Shiyko, M. (2014). *Path Analysis and Confirmatory Factor Analysis: An AMOS Tutorial* [PDF document]. Retrieved from Lecture Notes Online Website: https://blackboard.neu.edu/webapps/blackboard/content/listContent.jsp?course_id=_2072857_1&content_id=_8159560_1


FOOTNOTE

1A review of mental health and Asian Indian immigrants would be incomplete without a brief review of this population in England. Given the colonization of India by Britain in the mid to late 1800s, a strong western influence was brought to India (Go, 2011). This influenced the large migration from India to Britain. Given the similar western values in both Britain and the United States, a brief review of mental health and Indian immigrants in England may allow for comparison as well as additional data for Indian immigrants in the United States (Go, 2011).

From the years 1955-1975, Indians immigrated to England for a number of reasons, not limited to, challenges in India, independence from England in 1947, economic motivation, and other cultural reasons (Ram, 1987). As of 2011, individuals of Indian ethnicity (not mixed) totaled approximately 1.4 million, which made up 2.5% of the population, the largest ethnic group, in the United Kingdom (White, 2012).
APPENDIX A

FOCUS GROUP VIGNETTES

1. An elder in the family, named Hansa Bhen, has recently been spending a great deal of time in her bedroom, and is found to be sleeping for multiple hours during the day, and then also throughout the night. Additionally she has lost a noticeable amount of weight in the last several weeks and seems sad most of the time. The last few weeks, during the minimal interactions she has with others, many of her conversations with others are about her belief that her time on this earth is done. This presentation of Hansa Bhen is concerning as typically she enjoys cooking for her grandchildren, watching Zee TV, having chai and snacks with her friends, and going to religious retreats.

   a. Please discuss what you believe to be happening in this situation
   
   b. Does something need to be done?
   
   c. What will things look like for this individual in the future?

      Would you seek out assistance? If so from whom?
2. One of your cousin/brothers, Jay, has been drinking a lot more than usual in the past several weeks. Jay has always enjoyed drinking at family parties, and is known to have a little more than everyone else. It is also fairly usual for Jay to either fall asleep at the party or to end up getting sick. However, lately you have noticed that Jay appears to be under the influence of alcohol every time you see him, which is typically one to two times per week. Recently you heard from another family member, that Jay recently lost his job and it was likely due to his alcohol use. You are particularly worried as Jay has one young son and his wife is currently not working as she is pregnant with their second child who is due in just a few weeks.

   a. Please discuss what you believe to be happening in this situation
   b. Does something need to be done?
   c. What will things look like for this individual in the future?
   d. Would you seek out assistance? If so from whom?
   e. Please share any similarities or differences between this case and the prior case about Hansa Bhen.
3. Your nineteen year old niece, Lalita, has always been the gem of your eye, as she is so kind and sweet natured. In the past several months you have noticed some peculiar changes in her behavior. Particularly, you have noticed that when she speaks to you, what she is saying does not quite making sense. Sometimes Lalita even looks off into the distance and laughs while you are speaking with her about something serious. Also you have observed her talking to herself even when she is around others. Lalita has tried to take a college course, however she has had little success.

   a. Please discuss what you believe to be happening in this situation
   
   b. Does something need to be done?
   
   c. What will things look like for this individual in the future?
   
   d. Would you seek out assistance? If so from whom?
   
   e. Please share any similarities or differences between this case and the prior case two cases about Hansa Bhen and Jay.
APPENDIX B

DEMOGRAPHICS QUESTIONNAIRE

1. How old are you?
   a. 18 to 25
   b. 26 to 45
   c. 46 to 65
   d. 66 and older

2. Which of the following best describes your immigration to the United States?
   a. Arrived to the United States after the age of 18
   b. Arrived to the United States between age 13 to 17
   c. Arrived to the United States between age 5 to 12
   d. Arrived to the United States prior to age 5
   e. Born within the United States and at least one parent was born outside of the United States

3. How do you identify?
   a. Male
   b. Female
   c. Other

4. Which of the following best describes your highest level of education?
   a. Less than high school diploma
   b. High School Diploma
   c. Bachelor’s degree
   d. Master’s Degree
   e. Doctorate Degree

5. Which country did you receive your highest degree?
   a. India
   b. United States
   c. Have equivalent degrees from both countries
   d. Other

6. Have you or someone close to you been impacted by mental illness?
   a. Yes
   b. No
APPENDIX C

ASIAN AMERICAN MULTIDIMENSIONAL ACCULTURATION SCALE (AAMAS)

Instructions: Use the scale below to answer the following questions. Please circle the number that best represents your view on each item.

Not very well 1 2 3 4 5 6
Somewhat  4 5 6
Very well

1. How well do speak the language of –
  a. your own Asian culture of origin? 1 2 3 4 5 6
  b. English? 1 2 3 4 5 6

2. How well do you understand the language of –
  a. your own Asian culture of origin? 1 2 3 4 5 6
  b. English? 1 2 3 4 5 6

3. How well do you read and write in the language of –
  a. your own Asian culture of origin? 1 2 3 4 5 6
  b. English? 1 2 3 4 5 6

4. How often do you listen to music or look at movies and magazines from -
  a. your own Asian culture of origin? 1 2 3 4 5 6
  b. the White mainstream groups? 1 2 3 4 5 6

5. How much do you like the food of –
  a. your own Asian culture of origin? 1 2 3 4 5 6
  b. the White mainstream groups? 1 2 3 4 5 6

6. How often do you eat the food of –
  a. your own Asian culture of origin? 1 2 3 4 5 6
  b. the White mainstream groups? 1 2 3 4 5 6

7. How knowledgeable are you about the history of –
  a. your own Asian culture of origin? 1 2 3 4 5 6
  b. the White mainstream groups? 1 2 3 4 5 6

8. How knowledgeable are you about the culture and traditions of –
  a. your own Asian culture of origin? 1 2 3 4 5 6
  b. the White mainstream culture? 1 2 3 4 5 6

9. How much do you practice the traditions and keep the holidays of –
  a. your own Asian culture of origin? 1 2 3 4 5 6
  b. the White mainstream culture? 1 2 3 4 5 6
10. How much do you identify with –
   a. your own Asian culture of origin? 1 2 3 4 5 6
   b. the White mainstream groups? 1 2 3 4 5 6

11. How much do you feel you have in common with people from –
   a. your own Asian culture of origin? 1 2 3 4 5 6
   b. the White mainstream groups? 1 2 3 4 5 6

12. How much do you interact and associate with people from –
   a. your own Asian culture of origin? 1 2 3 4 5 6
   b. the White mainstream groups? 1 2 3 4 5 6

13. How much would you like to interact and associate with people from –
   a. your own Asian culture of origin? 1 2 3 4 5 6
   b. the White mainstream groups? 1 2 3 4 5 6

14. How proud are you to be part of –
   a. your own Asian culture of origin? 1 2 3 4 5 6
   b. the White mainstream groups? 1 2 3 4 5 6

15. How negative do you feel about people from –
   a. your own Asian culture of origin? 1 2 3 4 5 6
   b. the White mainstream groups? 1 2 3 4 5 6
APPENDIX D

INDIAN CULTURAL BELIEFS QUESTIONNAIRE
(ICBQ)

Please use the following scale to indicate how much you agree or disagree with the statements listed below.

0 - completely disagree
1 - somewhat disagree
2 - neutral
3 - somewhat agree
4 - completely agree

1. If one suffers from mental illness, it is likely that they completed a bad deed in their past life.

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<th>Completely disagree</th>
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2. Karma can be responsible for one suffering from a mental illness.

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3. A religious person or Pooja may help in relieving one from mental illness.

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4. One may suffer from a mental illness because of evil spirit (or black magic).

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5. Mental illness is not biological in nature.

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APPENDIX E

BELIEFS TOWARD MENTAL ILLNESS SCALE (BTMI)

Using the scale below, please indicate the level of your agreement with the following items by choosing the number that most closely corresponds with your beliefs.

- 0 = completely disagree
- 1 = mostly disagree
- 2 = slightly disagree
- 3 = slightly agree
- 4 = mostly agree
- 5 = completely agree.

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<td>1. A mentally ill person is more likely to harm others than a normal person.</td>
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<td>2. Mental disorders would require a much longer period of time to be cured than would other general diseases.</td>
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<td>3. It may be a good idea to stay away from people who have psychological disorders because their behavior is dangerous.</td>
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<td>4. The term “psychological disorder” makes me feel embarrassed.</td>
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<td>5. A person with a psychological disorder should have a job with minor responsibilities.</td>
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6. Mentally ill people are more likely to be criminals than non-mentally ill people.

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7. Psychological disorders are recurrent.

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8. I am afraid of what my boss, friends and others would think if I were diagnosed as having a psychological disorder.

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9. Individuals diagnosed as mentally ill will suffer from its symptoms throughout their life.

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10. People who have once received psychological treatment are likely to need further treatment in the future.

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11. It might be difficult for mentally ill people to follow social rules such as being punctual or keeping promises.

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12. I would be embarrassed if people knew that I dated a person who once received psychological treatment.

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13. I am afraid of people who are suffering from psychological disorders because they may harm me.

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14. A person with a psychological disorder is less likely to function well as a parent.

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15. I would be embarrassed if a person in my family became mentally ill.

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16. People who have received treatment for a mental illness should not marry and have children.

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17. Mentally ill people are likely to be dangerous regardless of their diagnoses.

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18. I do not believe that psychological disorders are ever completely cured.

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19. Mentally ill people are unlikely to be able to live by themselves because they are unable to assume responsibilities.

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20. Most people would not knowingly be friends with a mentally ill person.

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<tr>
<th></th>
<th>completely disagree</th>
<th>mostly disagree</th>
<th>slightly disagree</th>
<th>slightly agree</th>
<th>mostly agree</th>
<th>completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

21. The behavior of people who have psychological disorders is unpredictable.

<table>
<thead>
<tr>
<th></th>
<th>completely disagree</th>
<th>mostly disagree</th>
<th>slightly disagree</th>
<th>slightly agree</th>
<th>mostly agree</th>
<th>completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

22. Psychological disorders are unlikely to be cured regardless of treatment.

<table>
<thead>
<tr>
<th></th>
<th>completely disagree</th>
<th>mostly disagree</th>
<th>slightly disagree</th>
<th>slightly agree</th>
<th>mostly agree</th>
<th>completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

23. Even if I had a psychological disorder, I would avoid having treatment because I am ashamed of it.

<table>
<thead>
<tr>
<th></th>
<th>completely disagree</th>
<th>mostly disagree</th>
<th>slightly disagree</th>
<th>slightly agree</th>
<th>mostly agree</th>
<th>completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

24. I would not trust the work of a mentally ill person assigned to my work team.

<table>
<thead>
<tr>
<th></th>
<th>completely disagree</th>
<th>mostly disagree</th>
<th>slightly disagree</th>
<th>slightly agree</th>
<th>mostly agree</th>
<th>completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX F

ATTITUDES TOWARD SEEKING PROFESSIONAL PSYCHOLOGICAL HELP: A SHORTENED FORM
(ATSPPH)

1. If I believed I was having a mental breakdown, my first inclination would be to get professional attention.

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Partly Disagree</th>
<th>Partly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

2. The idea of talking about problems with a psychologist strikes me as poor way to get rid of emotional conflicts.

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Partly Disagree</th>
<th>Partly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

3. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy.

<table>
<thead>
<tr>
<th>Agree</th>
<th>Partly agree</th>
<th>Partly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

4. There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears without resorting to professional help.

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Partly Disagree</th>
<th>Partly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

5. I would want to get psychological help if I were worried or upset for a period of time.

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Partly Disagree</th>
<th>Partly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
6. I might want to have psychological counseling in the future.

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Partly Disagree</th>
<th>Partly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

7. A person with an emotional problem is not likely to solve it alone; he or she is likely to solve it with professional help.

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Partly Disagree</th>
<th>Partly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

8. Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Partly Disagree</th>
<th>Partly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

9. A person should work out his or her own problems; getting psychological counseling would be a last resort.

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Partly Disagree</th>
<th>Partly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

10. Personal and emotional troubles, like many things, tend to work out by themselves.

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Partly Disagree</th>
<th>Partly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Table 1

*Table of Immigrant Prevalence in the United States as of 2015*

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Percentage of Immigrant Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>26.9</td>
</tr>
<tr>
<td>India</td>
<td>5.5</td>
</tr>
<tr>
<td>China</td>
<td>4.8</td>
</tr>
<tr>
<td>Philippines</td>
<td>4.6</td>
</tr>
<tr>
<td>El Salvador</td>
<td>3.1</td>
</tr>
<tr>
<td>Vietnam</td>
<td>3.0</td>
</tr>
<tr>
<td>Cuba</td>
<td>2.8</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>2.5</td>
</tr>
<tr>
<td>Korea</td>
<td>2.4</td>
</tr>
<tr>
<td>Guatemala</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Note. From Zong and Batalova (2017).
Table 2

**Indian Immigration Timeline**

<table>
<thead>
<tr>
<th>Time</th>
<th>Approximate Population in the United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to 1900s</td>
<td>600</td>
</tr>
<tr>
<td>1900</td>
<td>2000</td>
</tr>
<tr>
<td>1913</td>
<td>7000</td>
</tr>
<tr>
<td>1960</td>
<td>12,000</td>
</tr>
<tr>
<td>2015</td>
<td>2,000,000</td>
</tr>
</tbody>
</table>

Note. From Zong and Batalova (2017); Immigration Policy Institute (2002).
Table 3

*Table of Immigrant Status*

<table>
<thead>
<tr>
<th>Immigration Status</th>
<th>Year Moved to U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 generation</td>
<td>Moved to U.S. after age 18</td>
</tr>
<tr>
<td>1.25 generation</td>
<td>Moved to U.S. between ages 13-17</td>
</tr>
<tr>
<td>1.5 generation</td>
<td>Moved to U.S. between ages 5-12</td>
</tr>
<tr>
<td>1.75 generation</td>
<td>Moved to the U.S. prior to age 5</td>
</tr>
<tr>
<td>2.0 generation</td>
<td>Born and socialized in U.S. with at least one immigrant parent</td>
</tr>
</tbody>
</table>

Note. From Rumbaut (2004).
Table 4

*Table of Descriptive Statistics*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>% of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 25</td>
<td>31</td>
<td>21.5</td>
</tr>
<tr>
<td>26 to 45</td>
<td>79</td>
<td>54.9</td>
</tr>
<tr>
<td>46 to 65</td>
<td>30</td>
<td>20.8</td>
</tr>
<tr>
<td>66 and older</td>
<td>4</td>
<td>2.8</td>
</tr>
<tr>
<td>Generational Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0 Generation</td>
<td>47</td>
<td>32.6</td>
</tr>
<tr>
<td>1.25 Generation</td>
<td>7</td>
<td>4.9</td>
</tr>
<tr>
<td>1.50 Generation</td>
<td>10</td>
<td>6.9</td>
</tr>
<tr>
<td>1.75 Generation</td>
<td>12</td>
<td>10.5</td>
</tr>
<tr>
<td>2.0 Generation</td>
<td>65</td>
<td>45.1</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>51</td>
<td>35.4</td>
</tr>
<tr>
<td>Female</td>
<td>93</td>
<td>64.6</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Diploma</td>
<td>9</td>
<td>6.3</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>54</td>
<td>37.5</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>51</td>
<td>35.4</td>
</tr>
<tr>
<td>Doctorate Degree</td>
<td>30</td>
<td>20.8</td>
</tr>
<tr>
<td>Country of Highest Degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>27</td>
<td>18.8</td>
</tr>
<tr>
<td>United States</td>
<td>111</td>
<td>27</td>
</tr>
<tr>
<td>Equivalent Degree from both Countries</td>
<td>3</td>
<td>2.1</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2.1</td>
</tr>
<tr>
<td>Proximity to Mental Illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impacted by Mental Illness</td>
<td>72</td>
<td>50</td>
</tr>
<tr>
<td>Not Impacted by Mental Illness</td>
<td>72</td>
<td>50</td>
</tr>
</tbody>
</table>

Note. Sample Total N = 144.
## Table 5

*Table of Bivariate Correlations of PATH Analysis Factors*

<table>
<thead>
<tr>
<th></th>
<th>ATSPPH</th>
<th>Age</th>
<th>Indian</th>
<th>American</th>
<th>ICBQ</th>
<th>BTMI</th>
<th>Gender</th>
<th>Immigration</th>
<th>Prox_MI</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATSPPH</td>
<td>1</td>
<td>.06</td>
<td>.06</td>
<td>.13</td>
<td>- .27</td>
<td>-.34*</td>
<td>.34**</td>
<td>-.01</td>
<td>-.32**</td>
<td>29.4</td>
<td>5.48</td>
</tr>
<tr>
<td>Age</td>
<td>-</td>
<td>1</td>
<td>.21*</td>
<td>-.29**</td>
<td>.26*</td>
<td>.29**</td>
<td>-.03</td>
<td>-.47**</td>
<td>.10</td>
<td>.24</td>
<td>.43</td>
</tr>
<tr>
<td>Indian</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>.09</td>
<td>.02</td>
<td>.11</td>
<td>.16</td>
<td>-.40**</td>
<td>.12</td>
<td>68.6</td>
<td>12.3</td>
</tr>
<tr>
<td>American</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-.27**</td>
<td>-.16</td>
<td>.10</td>
<td>.33**</td>
<td>-.13</td>
<td>72.7</td>
<td>9.1</td>
</tr>
<tr>
<td>ICBQ</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>.43**</td>
<td>-.14</td>
<td>-.16</td>
<td>.09</td>
<td>2.0</td>
<td>2.1</td>
</tr>
<tr>
<td>BTMI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-.29**</td>
<td>-.07</td>
<td>.25**</td>
<td>64.3</td>
<td>17.6</td>
</tr>
<tr>
<td>Gender</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-.12</td>
<td>-.25**</td>
<td>1.65</td>
<td>.48</td>
</tr>
<tr>
<td>Immigration</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-.15</td>
<td>1.45</td>
<td>.50</td>
</tr>
</tbody>
</table>

Note: *Correlation is significant at the 0.05 (2-tailed).
**Correlation is significant at the 0.01 (2-tailed).
Figure 1

Ecological Model

Figure 1. Ecological Model (Bronfenbrenner, 1994)
Figure 2

**Proposed Path Analysis Factor Model**

![Proposed Path Analysis Model](image)

Figure 2. Proposed Path Analysis Model which evaluates factors related to Attitudes toward Seeking Treatment
Figure 3

**Final Path Analysis Factor Model**

Figure 3. Final Path Analysis Model evaluating factors related to Attitudes toward Seeking Treatment

Note. * $p < .05$, ** $p < .01$, *** $p < .001$