EXAMINING MENTAL ILLNESS STIGMA AND THE IMPACT ON HELP SEEKING ACROSS RACE AND ETHNICITY: A FOCUS ON SOUTH ASIAN COMMUNITIES

A Dissertation
Submitted to
The Temple University Graduate Board

In Partial Fulfillment
of the Requirements for the Degree
DOCTOR OF PHILOSOPHY

By
Devlina Roy
December 2018

Examining Committee Members:

Laura P. Pendergast, PhD, Advisory Chair, College of Education, Temple University
Catherine A. Fiorello, PhD, College of Education, Temple University
Janice H. Laurence, PhD, College of Education, Temple University
Frank H. Farley, PhD, College of Education, Temple University
Annemarie H. Hindman, PhD, College of Education, Temple University

ABSTRACT

From medieval to modern times, mental illness is a construct that has been deeply misunderstood and stigmatized by humankind (Dubin & Fink, 1992). Individuals living in the United States experience a fear of being judged or ridiculed for their psychopathological symptomology as a result of mental illness stigma (Bharadwaj et al. 2015). Mental illness stigma impacts how individuals choose to seek help and whether they choose to seek help at all (Rusch et al., 2005). Individuals from diverse cultural and ethnic backgrounds face unique barriers to access to mental healthcare (Cauce et. al, 2002). Specifically, individuals from diverse backgrounds are affected by the social and cultural environment they are a part of where cultural factors can impact whether or not these individuals choose to seek help from mental health service providers (Cauce et. al, 2002). The theory of "Double Stigma" (Gary, 2005) proposed that individuals from diverse ethnic and cultural backgrounds face impactful barriers to mental healthcare as a result of of mental illness stigma combined with racial discrimination.

Different ethnic minority groups face unique barriers to mental healthcare. African Americans are a group of individuals who have been found to associate seeking mental health treatment with feelings of embarrassment when compared to European Americans (Snowden, 2001). Additionally, Asian Americans are a group of individuals who have often referred to as the "model minority," a problematic notion which suggests that in terms of mental illness, this ethnic group has had little to no social or psychological problems and have assimilated well to life in the United States (Sue & Morishima, 1982). This theory has contributed to Asian American communities internalizing the idea that they must uphold the standard that has been set for them,

ultimately impacting their decision to seek help for mental illnesses (Sue & Morishima, 1982).

Within the Asian American community, South Asians are the third largest and fastest growing ethnic group in the United States (U.S. Census Bureau, 2000). Within the South Asian community, stigma is highly prevalent and perpetuated by discrimination (Neelam, Mak, & Wessely, 1997). This discrimination and judgement from one's own community impacts if and how individuals from South Asian communities choose to seek help. Loya, Reddy and Hinshaw (2010) found that relative to European American college students, South Asian college students presented with higher level of reluctance to seek help through University-based counseling services. Loya and colleagues (2010) also found over all poorer attitudes toward individuals with mental illness from South Asian college students.

This study investigated perceptions of mental illness and help seeking across racial groups, with a specific focus on South Asian communities. Specifically, a model examining informal and formal help seeking was utilized to explore differences in perceptions of help seeking practices across racial groups. Through multigroup structural equation modeling (SEM), changes in model fit were explored to assess whether negative perceptions of mental illness predicted informal and formal help seeking behaviors across racial groups. Participants included 355 individuals, 18 and older, across the United States who identified as South Asian, White/European American or Black/African American. Based on previous research which has found that ethnic minority groups face unique barriers to accessing appropriate mental healthcare (Cauce et. al, 2002; Gary, 2005; Snowden, 2001; Sue & Morishima, 1982; Neelam, Mak & Wessely, 1997; Loya,

Reddy & Hinshaw, 2010), it was hypothesized that South Asian individuals would have more negative perceptions of individuals with mental illness as well as more negative attitudes towards all modes of help seeking compared to their non-South Asian counterparts. Additionally, it was hypothesized that South Asian females will have more positive attitudes towards mental illness than South Asian males.

Results indicated that a more positive perception of mental illness is associated with more likelihood of seeking help for mental illness for all racial groups examined through SEM. Results also indicated similar fit indices and invariance across all racial groups examined through SEM. Through univariate analyses, South Asian females were found to have a more positive view of individuals with mental illness than South Asian males. Univariate analyses also revealed that compared to White/European Americans, individuals who identified as Black/African American perceived mental illness more negatively when assessing individuals their own racial group. Implications, strengths, limitations, and directions for future research are discussed.

ACKNOWLEDGMENTS

To my advisor and dissertation committee chair, Dr. Laura Pendergast, for allowing me the intellectual agency to select a topic that I have wanted to explore since my childhood, I offer my sincerest thanks. With her continued support, expertise and feedback, I have completed the most challenging undertaking of my academic career.

The upmost gratitude is due to my dissertation committee members, Dr. Catherine Fiorello, Dr. Janice Laurence, Dr. Frank Farley and Dr. Annemarie Hindman. Their expertise, commitment and flexibility during this process has been invaluable.

Lastly, to my family and friends who have been unfalteringly patient, understanding and encouraging throughout all of my academic endeavors, I am deeply appreciative of all of your support.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Mental illness stigma, or negative stereotypes and perceptions of mental illness

and individuals who suffer from mental illness, is a prominent and relevant problem

within the United States (Hinshaw, 2007). Historically, individuals with mental illness

have been characterized as dangerous, unable to care for themselves and inherently weak

(Dubin & Fink, 1991). These negative perceptions date back to medieval times and have

played a role in the emergence of stereotypical and often invalid views of mental illnesses

and disorders (Dubin & Fink, 1991). Many physical ailments such tuberculosis and

epilepsy were also stigmatized in the past; however, stigma regarding these physical

illnesses have diminished with the help of education and awareness (Dubin & Fink,

1991). Mental illness, on the other hand, remains among the most misunderstood and

stigmatized topics in human health (Dubin & Fink,1991). Many scientists attribute this to

(a) a lack of understanding of mental illness and (b) negative connotations regarding

mental illness that children learn as early as the playschool years (e.g., Weiss, 1994).

The stigma associated with mental illness not only perpetuates discrimination and

a feeling of isolation in individuals who suffer from mental illness, but this stigma can

also have a strong negative impact on whether an individual chooses to seek professional

help for emotional distress they may face (Rusch, Angermeyer & Corrigan, 2005).

Individuals may choose to engage in formal or informal help seeking; they may also

choose to not seek help at all (Cauce et al., 2002). Informal help seeking involves

utilizing resources such as social, community or family support to work through mental

problems. Formal help seeking may involve obtaining services through mental health

professionals. Informal help seeking may be an adequate form of coping for some individuals; for others, informal help seeking may not be substantial in addressing their needs. Individuals who are not able to obtain adequate help from informal help seeking practices may also choose to refrain from formal help seeking options due to mental illness and mental health stigma, leaving them to feel isolated and ostracized. Individuals who fall victim to the negative effects of stigma may choose to rely on themselves or others for support, but they may also choose to ignore the distress that they are experiencing completely (Rusch, Angermeyer & Corrigan, 2005), which can ultimately result in serious, life-threatening consequences (Link & Phelan, 2001).

Though stigma is prevalent for most racial and ethnic groups, minority communities face specific challenges which further perpetuate mental illness stigma and impact one's desire to formally seek help (Corrigan, 2004; Narrow et al., 2000). According to Gary (2005), a variety of ethnic minority groups, including African Americans, Hispanic Americans and Asian Americans, have historically negative perceptions of mental illness. Related factors that may impact help seeking for individuals from these minority communities include low socioeconomic status, limited resources, distrust of the mental health system and discrimination from one's community (Gary, 2005). Research has found that when compared to their White/ European American counterparts, ethnic minorities choose to seek help from mental health professionals far less often (Corrigan, 2004; Narrow et al., 2000). Specifically, Cooper-Patrick and colleagues (1995) found that African Americans utilize important coping mechanisms such as community support and self-reliance for dealing with distress; however, African Americans are more likely to view seeking help from mental health

professionals as an embarrassment compared to other racial groups, which is a significant barrier to treatment (Cooper-Patrick, Brown, Palenchar, Gonzales, & Ford, 1995).

Ethnic minority populations with mental illness have been thought to face "double stigma" as they experience specific racial discrimination and prejudice along with mental illness stigma from the public and their cultural communities (Gary, 2005). Asian Americans are a population that face a certain level of stereotype threat due to the "model minority" classification which refers to Asian Americans as a group of individuals who have adjusted well to assimilation in the United States and face little to no social or psychological problems (Sue & Morishima, 1998). This idea is extremely problematic as it perpetuates the notion that individuals from Asian backgrounds must avoid dealing with their distress in order to maintain an image that society and their communities have created for them (Sue & Morishima, 1998). Additionally, Asians have been found to typically avoid seeking treatment from mental health professionals; those who do choose to seek help may be more likely to end their treatment prematurely (Leong & Lau, 2001).

Within the Asian American population, South Asians are the third largest and fastest growing subpopulaton (U.S. Census Bureau, 2000). South Asians have been found to not only seek help less than other ethnic groups, but many also distance themselves from individuals with mental health problems or mental illness due to stigma and negative perceptions of both mental illness and help seeking in their community (Loya, Reddy & Hinshaw, 2010). These negative perceptions are often impacted by discrimination and can contribute to feelings of isolation and consequences as serious as suicide (Neelman, Mak, & Wessely, 1997). Furthermore, when South Asians attempt to deviate from typical practices and ideals regarding mental illness and health, this often

results in more internalized fear of being ostracized from other members of their community (Loya, Reddy & Hinshaw, 2010). Because of this, South Asians develop poorer attitudes toward mental illness and help seeking (Loya, Reddy & Hinshaw, 2010).

As is true of many cultures, those in South Asian countries historically turned to superstition and religion to understand mental illness (Saravanan, Jacob, Deepak, Prince, David, & Burga, 2007). Though there has been more of an understanding of mental illnesses from a scientific perspective, many South Asians living on the Indian subcontinent as well as the United States still hold negative views and stereotypes about mental illness, which further perpetuates negative views on help seeking (Loya, Reddy & Hinshaw, 2010). Because of this, individuals within this community who are facing psychological or emotional distress feel isolated knowing that their community frowns upon the symptoms they are experiencing (Loya, Reddy & Hinshaw, 2010). Additionally, peers and community members from South Asian groups tend to distance themselves from individuals who are suffering from mental illness in order to avoid being associated with those individuals (Loya, Reddy & Hinshaw, 2010).

Beyond race and ethnicity, demographic factors such as gender and age also play a part in whether an individual chooses to seek help for psychological distress they may experience. Historically, males have been found to devalue and avoid emotion based coping such as seeking support from their social groups (Copeland & Hess, 1995), while females have been found to have more positive attitudes towards help seeking (Leong & Zachar, 1999). Additionally, it has been found that regardless of the amount of education obtained, women's attitudes toward mental health remained consistently more positive. On the other hand, it has been found that men who have been educated on mental illness

and mental health tend to have more positive attitudes towards seeking help for psychological problems (Mackenzie, Gekoski & Knox, 2006). This finding further suggests that awareness, initiatives and education opportunities regarding mental illness can continue to aid in increasing help seeking amongst men.

Additionally, age and generation also have an impact on how an individual perceives mental illness and whether they choose to seek help. Older generations may have more negative perceptions of mental illness and help seeking, though this is not to say that these ideals may not be passed on to younger generations. The prevalence of mental disorders is most prominent in individuals within the 16-24 year age range in comparison to all other time points in the life span (Griffiths, & Christensen, 2010). Though adolescents and young adults have been found to have a high susceptibility to develop mental disorders and illnesses, there remains a large disparity in their willingness to seek help (Rickwood & Wilson, 2007). Colleges around the country provide mental health services through counseling centers, but research has found that college-aged students often do not utilize the services available to them (Chambless & Ollendick, 2001). Though adults face many stressors and challenges that can negatively impact their mental health and stability, adolescents and young adults are a particularly vulnerable population in terms of mental illness and disorders.

The present study serves multiple purposes. Firstly, the study will utilize models of help-seeking and perceptions of mental illness that have been tested in the past to create a new model which combines the findings of past studies. This model will examine informal and formal help seeking across racial and ethnic groups to better understand patterns of help seeking. Currently, there is limited research focusing primarily on the

South Asian population living in the United States. Though there has been research conducted on opinions on mental illness in South Asia, first and second generation South Asian Americans are a population that have not been as thoroughly examined in past research studies. The current research will add to the existing literature base in that examining help seeking in South Asian Americans across gender has not been extensively studied. Additionally, the current study will examine patterns of informal and formal help-seeking, and the factors that influence how an individual from this community chooses to address their psychological distress. The study will examine how the proposed model operates among South Asian individuals relative to other racial and ethnic groups.

The present study will also compare perceptions of mental illness across multiple ethnic groups to further understand the patterns of how mental illness is perceived across multiple communities. With the South Asian group being one of the most rapidly growing communities in the United States, this research will examine important and necessary questions to aid in understanding stigma associated with mental illness and help seeking in this community and ethnic minority communities as a whole. If the current hypotheses (i.e. negative perceptions of mental illness will predict informal and formal help seeking behaviors across racial and ethnic groups; when compared to non-South Asian communities [i.e., White/ European American, African American, East Asian], South Asians who have more negative perceptions of mental illness will have more negative attitudes towards informal and formal help seeking; perceptions of mental illness and attitudes toward informal and formal help seeking will differ across racial and ethnic groups; South Asian females will have more positive attitudes towards mental

illness than South Asian males) hold true, this research may present important

implications regarding mental illness and help seeking behaviors across multiple minority

groups in the United States.

CHAPTER 2

LITERATURE REVIEW

Defining Stigma

As humans, our behaviors and choices are often influenced by the opinions of those around us. The decisions we make can be strongly impacted by our community and society. The Merriam-Webster dictionary (2017) defines the term "stigma" as "a mark of shame or discredit." Researchers have examined stigma in many different social and societal contexts; some of these topics include physical ailments, socioeconomic status, sexual orientation and gender identity. One of the most prominent areas of research on stigma is mental illness and mental health. Corrigan (2004) describes the disconnect between individuals who would benefit from mental health services but opt not to pursue them as stigma. In this context, stigma can be specifically defined as "avoiding the label of mental illness and the harm it brings by deciding not to seek or fully participate in care" (Corrigan, 2004, p. 614). Corrigan also argues that this mental illness stigma can lead to two significant types of harm: lowered self-esteem and societal repercussions. These types of harm are influenced by over-generalizations or stereotypes from one's community and society.

To understand stigma, one must first understand stereotypes, or "knowledge structures that are learned by most members of a social group" (Corrigan, 2004, p. 615; Augoustinos & Ahrens, 1994; Esses, Haddock, & Zanna, 1994; Hilton & von Hippel, 1996; Judd & Park, 1993; Krueger, 1996; Mullen, Rozell, & Johnson, 1996). Corrigan (2000) describes stereotypes as being a combination of "social" and "efficient." Stereotypes are considered to be "social" because they are a representation of collectively

agreed-upon notions of groups of persons (Corrigan, 2000). Stereotypes are "efficient" because individuals who belong to a stereotyped group are often judged based on quick impressions and expectations of those who do not belong to that stereotyped group (Corrigan, 2000). Stigma is a specific term for prejudice or negative stereotyping. In the context of mental illness, stigmas represent knowledge that is often unjustified and invalid, which can ultimately lead to discrimination (Corrigan, 2000).

The discrimination which results from stigma can lead to a lack of help seeking for individuals with mental illness (Corrigan, 2004). To fully grasp why individuals with mental health concerns often fail to engage in treatment, we must understand the social-cognitive processes that play a role in this stigma. Corrigan (2000) presents four social-cognitive processes which involved: cues, stereotypes, prejudice, and discrimination.

In this context, "cues" can be thought of as traits that the general public uses to create judgements about people with mental illness. Within the area of "cues," it has been found that the general public makes assumptions about individuals with mental illnesses based on four specific cues: "psychiatric symptoms, social-skills deficits, physical appearance, and labels" (Corrigan, 2004, p. 615). These specific symptoms, which are often associated with severe mental illness, typically involve bizarre behavior and inappropriate affect (Corrigan, 2004). This type of symptomology can lead to stigmatizing reactions in the form of negative perceptions and mistreatment of individuals with mental illness (Link, Cullen, Frank & Wozniak, 1987, Penn et al., 1994; Socall & Holtgraves, 1992). Other factors that can result in stigmatizing reactions from others include: poor social skills which result from some psychiatric illnesses; physical appearance associated

with severe mental illness such as being "unkempt" (Bellack, Mueser, Morrison, Tierney, & Podell, 1990; Mueser, Bellack, Douglas, & Morrision, 1991).

It is evident that stigma is often perpetuated by assumptions made by the general public. Rusch, Angermeyer and Corrigan (2005) explain the intricacies of stigma by examining the core assumptions of stigma. One of the major assumptions of stigma which has been identified by media analyses of film and print include these common misconceptions: "individuals with mental illness are homicidal maniacs who must be feared; individuals with mental illness are rebellious; individuals with mental illness have childlike perceptions" (Rusch, Angermeyer and Corrigan, 2005, p. 530). Beyond the United States, researchers in countries such as Canada and England have conducted research that supported these misconceptions through independent factor analyses. Specifically, two independent factor analyses conducted by Brockington and colleagues (1993) and Taylor and Dean (1981) examined more than 2,000 American and English participant's survey responses identified the following factors regarding mental illness stigma: "fear and exclusion: individuals with mental illness are to be feared and kept out of communities; authoritarianism: individuals with mental illness are irresponsible, and life decisions must be made by others; and lastly, benevolence: individuals with mental illness are childlike and must be cared for" (Rusch, Angermeyer and Corrigan, 2005, p. 530).

Though Corrigan (2000) focuses on certain cognitive and behavioral features of mental illness stigma including: stereotypes (cognitive knowledge structures), prejudice (cognitive and emotional consequences of stereotypes) and discrimination (behavioral consequence of prejudice), Link and Phelan (2001) examine stigma through a slightly

different lens. Link and Phelan (2001) define stigma in the following way, "stigma exists when elements of labeling, stereotyping, separation, status loss, and discrimination co-occur in a power situation that allows these processes to unfold" (p. 363). In this explanation of stigma, stereotypes, separation, discrimination and status loss parallel Corrigan's theory of stereotypes, prejudice and discrimination. In comparison to Corrigan and colleagues (2000), Link and colleagues (2001) stress two societal aspects of stigma. The first is the labeling process, the core of Links modified labeling theory (Link, Cullen, Struening & Shrout, 1989), which emphasizes that human differences between persons have to be noticed to be regarded as relevant (Link & Phelan, 2001). The second societal aspect of stigma, accordingly to Link and colleagues, is in order for the negative consequences of stigma to unfold, the stigmatizing group must be in a more powerful position than the stigmatized group (Link & Phelan, 2001).

Public Stigma

The general public has been widely found to hold negative perceptions of individuals who suffer from mental illness (Rusch et al., 2005). In the last several decades, researchers have found that public attitudes toward people with mental illness have become more stigmatized (Rusch et al., 2005). Specifically, survey research has found that in the United States, a representative population from a sample gathered in the year 1996 was 2.5 times more likely to have stigmatic views on mental illness than a comparable group from the year 1950 (Rusch et al., 2005; Phelan, Link, Stueve & Pescosolido, 2000).

Corrigan (2004) chronicles the negative impact of public stigma on individuals with mental illness through multiple facets. Public stigma, or "the reactions of the general

public towards a group based on stigma about that group" (Rusch et al., 2005, p. 530),

can harm individual's access to social opportunities (Corrigan, 2004). Historically,

several studies have shown that prejudice and stereotypes about mental illness have

negative impact on employment (e.g. Bordieri & Drehmer, 1986; Segal, Baumohl, &

Moyles, 1980; Wahl, 1999). Moreover, public stigma also has an influence within the

criminal justice system. It has been found that individuals who display signs of serious

mental illness are more likely than those who do not to be arrested by the law

enforcement officers (Teplin, 1984, Corrigan, 2004). Additionally, individuals with

mental illness tend to spend more time incarcerated than those who do not present

symptoms of mental illness (Steadman, McCarthy, & Morrissey, 1989, Corrigan, 2004).

Teplin (1994) argued that the reason for the incarceration of individuals with mental

illness is due to bureaucratic and legal systems level issues, which include many

psychiatric facilities choosing not to accept patients who present "dangerous" behaviors

as a result of severe mental illness. This type of discrimination results in police arresting

individuals presenting with "dangerous" behaviors in order to remove them from the

community (Teplin, 1994).

Research suggests that there is also a negative perception of individuals with

mental illness within the general healthcare system, specifically in terms of receiving care

and benefits (Corrigan, 2004). Individuals with mental illness have been found to be less

likely to receive care through insurance benefits or readily available physical healthcare

services that individuals without mental illness have access to (Desai, Rosenheck, Druss,

& Perlin, 2002; Druss & Rosenheck, 1997; Druss, Allen, & Bruce, 1998; Druss &

Rosenheck, 1998). Specifically, Druss and colleagues (2000) examined individuals with

myocardial infractions and found that when an individual presents with comorbid mental disorders, they are significantly less likely to undergo necessary procedures to treat their physical illness (Druss, Bradford, Rosenheck, Radford & Krumholz, 2000). In a study conducted prior to the passage of the Affordable Care Act, Druss and Rosenheck (1998) found that individuals who present with mental illness were more likely to remain at their job solely due to fear of losing their insurance and were more likely to be denied insurance (Druss & Rosenheck, 1998).

Rusch, Angermeyer and Corrigan (2005) also examine the impact of negative representations of mental illness through the media by conducting a systematic review of past studies which explored this topic. The conceptual overview conducted by Rusch and colleagues (2005) suggests that negative media representations of mental illness (i.e. individuals with mental illness must be feared, rebellious or childlike) can result in ongoing discrimination. These negative representations can also restrict opportunities for individuals with mental illness through structural discrimination within private and public institutions (Rush, Angermeyer & Corrigan, 2005).

Self-Stigma

Within the context of self-stigma, defined as "what members of a stigmatized group may do to themselves if they internalize the public stigma" (Corrigan, 2004, p. 616), individuals may also avoid mental health care because of "the stigma's potential effects on the sense of self" (Corrigan, 2004, p. 618). One's self-esteem and confidence can be negatively impacted if harmful notions associated with stigma are accepted and internalized (Corrigan, 1998; Holmes & River, 1998), which may lead individuals with

mental illness to believe that they are less valued because of their disorders (Link, 1987, Link & Phelan, 2001).

It has also been found that individuals who perceive that they are being discriminated against from the general public may not always experience self-stigma. Some research indicates that individuals with mental illness who have a general awareness of public prejudices against them have lowered self-esteem (Link, Cullen, Mirotznik & Struening, 1992; Wahl, 1999). However, there have also been studies that have found that awareness of stereotypes did not lead to diminished self-esteem in individuals with mental illness (Hayward & Bright, 1997). These mixed results have caused researchers to believe that prejudice, described by the Merriam-Webster dictionary (2017) as "an adverse opinion or leaning formed without just grounds or before sufficient knowledge," causes some individuals to react with righteous anger to stigma, while others may be indifferent, and others may self-stigmatize themselves (Rusch, Angermeyer & Corrigan, 2005; Corrigan, 2002).

To better understand why individuals react differently to public stigma, Corrigan and colleagues (2002) developed a model of personal response to mental illness stigma (Fig. 2, Corrigan & Watson, 2002). It was proposed that individuals with a condition such as mental illness, which is highly stigmatized, can perceive their illness based on the negative responses of other individuals. However, individuals with mental illness that do not identify themselves as being a part of a stigmatized group are more likely to remain indifferent to stigma because they do not feel as though specific prejudices and discrimination refer to them. For individuals who do identify with the stigmatized group, they apply the stigma to themselves and this reaction is moderated by "perceived

legitimacy" (Corrigan, 2002). This means, if these individuals consider the stigmatizing attitudes and perceptions to be legitimate, then their self-esteem and self-efficacy are more likely to be low (Rusch, Lieb, Bohus & Corrigan, 2006; Schmader, Major, Eccleston & McCoy, 2001). However, if these individuals regard public stigma to be unfair or illegitimate, then they are likely to react in "righteous anger" (Corrigan, 2002; Frable, Worthman & Joseph, 1997).

Additionally, within the context of self-stigma, reluctance related to disclosure is also prevalent. Whether individuals choose to disclose their mental illness may depend on their "sense of identity" (Corrigan & Matthews, 2003). If someone does not feel that their mental illness is a relevant part of their identity, they are unlikely to disclose information about their mental illness to relatives or other individuals, especially if these relatives or individuals have expressed negative remarks about mental illness. However, an individual who regards their mental illness as an important part of their life and is surrounded by individuals who have not shown discriminating behavior against individuals with mental illness, is more likely to disclose their mental illness (Rusch, Angermeyer & Corrigan, 2005).

Overall, research indicates mental illness stigma can have a detrimental influence on willingness to seek treatment (Rusch, Angermeyer & Corrigan, 2005). Stigma can lead to label avoiding and decreased treatment participation due to the outcomes of public and self-stigma which include a potential decrease of self-esteem, self-efficacy and confidence in one's future (Rusch, Angermeyer & Corrigan, 2005; Corrigan, 2004; Corrigan, 2002). These negative outcomes are thought to be related to the historical perceptions of mental illness (Bharadwaj et al. 2015).

Mental Illness Stigma through a Historical Lens

Historically, the topic of mental illness has been stigmatized in the United States. The fear associated with being judged and ridiculed by society for mental illnesses has impacted human behavior for decades (Bharadwaj et al. 2015). Being socially disgraced has led individuals to hide feelings of emotional discomfort, perpetuating already existing stigma. In turn, individuals who experience ridicule or judgement from society or their community are less likely to seek treatment for mental illness. Although public knowledge about mental health has increased over time, stigmatization of individuals with mental illness and associated help-seeking persists (Bharadwaj et al., 2015). In fact, compared to other illnesses, mental illness remains one of the least publicly accepted illnesses (Hinshaw, 2007).

To better understand the origins of this deep rooted stigma, one must delve into the historical perceptions of mental illness. Dubin and Fink (1992) review the history behind mental illness and indicate that through writings from medieval to modern times, mental illness was not always understood thoroughly and was once thought to be related to demonic possession. Over time, though these understandings have changed and evolved, individuals with mental illness continue to be viewed as "constitutionally weak, responsible for their own plight, and dangerous" (Dubin & Fink, 1992, p. 2). What is arguably most interesting about mental illness stigma is that it persists as an ongoing phenomenon in society, while many physical illnesses which were once also stigmatized, no longer face the same discrimination (Dubin & Fink, 1992).

Byrne (2000) claims that mental illness has existed long before the introduction of the psychiatric treatment for mental illness. However, Byrne (2000) argues that though

psychiatry is the field which treats mental illness, it's existence has not been enough to eradicate stereotypes associated with mental illness (Byrne, 2000). It is suggested that the stigma associated with mental illness could be a result of not having the proper language to describe this phenomenon. Over the course of time, stigma associated with several social injustices and prejudiced beliefs have been described with words such as racism, homophobia, ableism, sexism and ageism. However, there has been no documented word for prejudice against mental illness. Because of this, "psychophobic" became the term that some use to describe individuals who continue to harbor prejudicial attitudes about mental illness (Byrne, 2000). Throughout history, it has been found time and time again that the increase of politically correct language has played a major role in the reduction of discrimination on "gender, age, religion, color, size and physical disability" (Byrne, 2000, p. 67; Thompson & Thompson, 1997), which indicates that the lack of appropriate language for mental illness stigma may be associated with its continued prevalence.

Along with this, the treatment of individuals with mental illness throughout history has also played a major role in how these individuals are perceived by society. Specifically, individuals with mental illness have been thought of as having to be institutionalized as they have been perceived as being a threat to others. Dubin and Fink (1992) claim that even as time has progressed, psychiatric hospitals are typically structured in a way which deviates from what most people would consider normal. Specifically, before patients are provided with the rights that they would have outside of the hospital, they must first prove themselves to be "normal" (Dubin & Fink, 1992). Examples of this include: having to be in bed by 9 or 10 o'clock in the hospital, though most individuals do not go to sleep by this time. When patients do not comply, they are

seen as difficult, noncompliant and resistant to treatment (Dubin & Fink, 1991). This cycle of treatment in psychiatric hospitals can continue to perpetuate stigma associated with individuals who suffer from mental illness.

Weiss (1994) suggests that negative attitudes toward individuals with mental illness began as early as playschool and continues to progress into adulthood. McGuffin and Martin (1999) made the claim that an improved understanding of the causes of mental illness will be essential in reducing stigma and changing public perception of psychiatric disorders, which suggests that increased awareness and understanding of mental illness can aid in alleviating negative perceptions of individuals with mental illness. Researchers have found that negative public attitudes of mental illness have not completely changed because of the deep rooted misconceptions of mental illness (Green, McCormick & Walkley, 1987; Huxley, 1993).

The Impact of Stigma on Help-Seeking

Rusch and colleagues (2005) found that although individuals who experience mental distress can benefit from psychiatric treatments, most will not initiate treatment or will terminate treatment prematurely. Choosing to not seek treatment or end treatment early was found to be consistent across severity of mental illness, meaning individuals experience minor disorders or serious mental illness were found to have similar practices in terms of help seeking (Rusch et al., 2005). Additionally, individuals who do seek treatment were found to often become inconsistent with taking prescribed medications and engaging in treatment after being discharged (Rusch et al. 2005).

When examining youth specifically, research has found that approximately 18 to 34% of adolescents with high levels of internalizing disorders such as depression or

anxiety seek help (Gulliver, Griffiths, & Christensen, 2010; Sawyer et. al, 2001). Beyond childhood and adolescence, adults experiencing psychological distress have also been found to avoid seeking help for mental illnesses and disorders. Studies have found that in a given year, only approximately 35% of individuals with mental disorders seek treatment for their symptomology. (Bland, Newman, & Om, 1997).

There are several speculations about why individuals do not seek professional help for common mental disorders. Gulliver and colleagues (2010) found that along with stigma and negative attitudes towards seeking help, reasons why individuals avoid seeking help from mental health professionals include cost, transportation and self-reliance. Younger individuals have been found to rely on family and friends for support rather than seeking professional help (Rickwood, Deane, & Wilson, 2007). It should be noted that informal help seeking through self-reliance as well as social support from family members and friends are healthy coping mechanisms. However, when these coping mechanisms are no longer sufficient in the treatment of mental disorders, younger individuals have been found to choose not to seek professional help. Specifically, researchers have found that individuals may have doubts about whether treatment will help, whether treatment truly stays confidential or whether others may find out they are seeking treatment (Mojtabai, 2001).

A study conducted by Rickwood and colleagues (2007) found that high reliance on the self to solve problems, along with a lack of emotional competence and negative attitudes about seeking professional help were barriers to help-seeking. Though self-reliance is a healthy and important coping mechanism, negative attitudes toward professional help seeking was problematic due to further perpetuating stigma in regard to

mental health. These findings were based on a model of help seeking in which seeking help was conceptualized as a multi-step process that included the following steps: "individual's development of an awareness of the problem, the expression of the problem and a need for help to others, the identification of appropriate sources of help for the individual to access, and the willingness of the individual to actually seek out and disclose to potential sources of help" (Gulliver, Griffiths, & Christensen, 2010, p. 114).

Specific to ethnic minority youth, Cauce and colleagues (2002) developed a model of help-seeking as a framework to understand the cultural and contextual factors that affect ethnic minority adolescents' pathways to mental health services (Cauce, Domenech-Rodriguez, Paradise, Cochran, Shea, Srebnik, & Baydar, 2002; Fig. 4). They determined that two factors, epidemiologically assessed need and perceived need, lead to problem recognition. They also suggested that culture and context affect coercive and voluntary processes (i.e. by force or at their own will), which ultimately leads to the decision to seek help. Specifically, they established that an individual's cultural community and background can impact whether they choose to seek help by coercion, voluntarily or not at all. It was concluded by these authors that culture and context were largely the determining factors in who ethnic minorities choose to seek help from, whether that is "formal mental health services, collateral services or informal network members" (Cauce et. al, 2002, p.46).

The model developed by Cauce and colleagues (2002) does not have a specific space for culture and context, because the authors determined that culture and context surround all constructs within the model. Through this model, Cauce and colleagues (2002) determined that individuals from ethnic minority backgrounds, specifically

adolescents and ethnic minority families, may choose various types of mental health services based on how they are affected by the larger social and cultural environment they are a part of. Social and cultural factors ultimately "guide and push them toward or away from" mental health service providers (Cauce et. al, 2002, p. 46). It should be noted that using coping mechanisms outside of professional mental health services is an important and necessary coping skill. However, being guided away from professional help when it is necessary is problematic. Taken together, it is evident that mental health help seeking can be a difficult task for individuals dealing with a variety of mental health concerns, but ethnic minorities face additional barriers to seeking help. Specifically, negative perceptions of mental illness from community members, such as relatives and individuals from the same cultural background, can impact whether an individual from an ethnic minority background chooses to seek help.

<div align="center">Gender Differences in Help-Seeking</div>

Beyond culture and ethnic background, gender has also been found to play an important role in whether an individual chooses to seek help. Studies have found that in general, females are more likely to seek help from mental health professionals. Specifically, it has been found that adolescent girls have more positive attitudes towards help seeking than their male counterparts (Cauce et. al, 2002; Cook, 1984; Gardland & Zigler, 1994; Kuhl, Jarkon-Horlick & Morrisey, 1997).

Copeland and Hess (1995) found that male adolescents were more likely to devalue expression of affect, while female adolescents more often used emotion focused coping techniques such as relying on social support and seeking out help from others to work through their problems. Leong and Zachar (1999) also found that females had more

positive attitudes toward seeking help than their male counterparts. Interestingly, they found that individuals who had less authoritarian and socially restrictive perspectives of mental health and seeking treatment for emotional problems were more likely to have positive attitudes towards help-seeking, regardless of gender.

Mackenzie, Gekoski and Knox (2006) conducted a study exploring age and gender differences in attitudes toward seeking psychological help. Examining gender specifically, women exhibited particularly positive help-seeking attitudes, regardless of how much education they had received. On the other hand, men's attitudes were positively influenced by education, which indicates that men who have certain resources, such as the opportunity for education, are more likely to seek help. The authors found this to be an encouraging finding because it indicates that educational interventions designed to improve attitudes toward seeking psychological help may in fact be most effect when targeting males.

Mackenzie, Gekoksi and Knox (2006) also specifically found gender differences for "psychological openness," which indicates that women in the sample were more willing to acknowledge psychological problems and the need for help than their male counterparts. This is consistent with research which has suggested that women are more likely than men to recognize and label emotional distress (Kessler, Brown, & Bowman, 1981).

These findings are consistent with research that has been done in the past regarding gender differences in seeking mental health services. Mechanic (1964) argued that gender differences in help-seeking start as early as childhood, with boys and girls being taught to interpret and react to any physical symptoms and feelings of illness

differently from one another. When examining gender differences in adulthood, Verbugge (1979) argued that adult men and women also differ in perceptions of symptoms and in their willingness to define themselves as ill, which can be attributed to the stereotypical gender roles that men and women have held for centuries. Kessler, Brown and Broman (1981) conducted a study examining sex differences in psychiatric help seeking. It was found that gender differences were evident in terms of translating nonspecific feelings of psychiatric symptoms into conscious problem recognition, with women being more likely to do this compared to men.

Findings from multiple studies spanning across decades have examined gender differences in help-seeking practices. This is a clear indication that due to the deep rooted nature of gender roles, the perception of mental illness and choosing how to react to one's own emotional distress is often dictated by cultural and societal norms regarding gender (Cauce et. al, 2002; Cook, 1984; Gardland & Zigler, 1994; Kuhl, Jarkon-Horlick & Morrisey, 1997). Through the findings of the aforementioned studies, it is evident that gender differences in help seeking and the willingness to acknowledge symptoms, specifically lower rates of men who choose to seek help, is still an ongoing and prevalent problem in society.

<center>Stigma in Ethnic Minorities</center>

Stigma and the utilization of mental health care services greatly impact individuals from diverse backgrounds. Past research suggests that European Americans with mental illness are more like to use psychiatric services than African Americans and Hispanic Americans (Corrigan, 2004; Narrow et al., 2000). This is not to say that European Americans are also not impacted by stigma; however, it should be noted that

some individuals from minority backgrounds face stigma that is perpetuated not only by

the general public, but also by their cultural communities (Corrigan, 2004). Factors such

as low socioeconomic status can negatively impact an individual's ability to purchase

necessities (Gary, 2005). Additionally, the distrust of the mental health system impacts

ethnic minorities access to mental health care (Gary, 2005). These factors can result in

higher morbidity and mortality rates in ethnic minorities; however, the implementation of

novel approaches to aid in providing ethnic minorities with adequate mental health care

can help to address these issues (Gary, 2005; Marmot & Wilkinson, 1999; Mayberry,

Mili, & Ofili, 2002).

Gary (2005) proposed the concept of "double stigma," or the theory that

individuals from ethnically diverse backgrounds are faced with discrimination within the

context of race as well as mental health care. This concept focuses on the fact that when

examining the discrimination paradigm, America's history is one filled with prejudice

and discrimination against multiple racially diverse groups, including but not limited to

African Americans, American Indians and Alaska Natives, Asian Americans and

Hispanic Americans. Discrimination continues to exist and has tremendous influence in

the lives of individuals from diverse backgrounds (Abreu, 1999; Balsa & McGuire, 2003;

Byrd & Clayton, 2001; Hamilton & Sherman, 1994). Double stigma is created when

individuals from ethnic minority backgrounds are confronted with significant barriers

related to discrimination (Gary, 2005, Fig. 3). Specifically, racial and ethnic

discrimination can overlap with a lack of adequate health care as a result of double

stigma. Research examining this phenomenon has found that ethnic minorities who have

histories or present symptoms of mental disorders experience distinctly different access

and outcome histories than their more socially accepted White/ European American counterparts (Rogler, Cortes & Malgady, 1991). Additionally, there is a significant lack of mental health professionals who are members of these ethnic minority groups who have entered the mental health field. Because of a relatively low amount of ethnic minority mental health professionals along with a lack of cultural competence and sensitivity, mental health disparities in the form of inadequate treatment continue to be perpetuated in mental health care delivery systems (Gary, 2005; Smedley, Stith & Nelson, 2003).

The deep rooted effects of being discriminated against and mistreated throughout the course of United States history has negatively impacted ethnic minorities in regard to mental health care. Research suggests that socioeconomic status and environmental factors can impact an individual's access to resources for the treatment of mental illnesses and disorders (Gary, 2005). Specifically, individuals with less education or individuals that are of the working class have been found to receive substantially compromised mental health care. Additionally, a lack of education and awareness of mental health has inhibited ethnic minorities in utilizing necessary resources to obtain adequate treatment and care for mental disorders (Gary, 2005). Research has found that psychiatric services are more likely to be sought out by White/ European American Americans in comparison to African American, American Indian and Alaska Native, Asian American and Hispanic American groups (Byrd & Clayton, 2001; Jones, 2003.)

Minority groups are often thought of as experiencing prominent amounts of stigma surrounding mental health from their cultural communities (Cauce et. al, 2002). Cauce and colleagues (2002) examined how several ethnic minority communities deal

with distressful situations. Research suggests that individuals from some cultural backgrounds, including many African American and Asian American groups, often deal with psychological problems by often avoiding thinking about them altogether (Cauce et. al 2002). Specifically, it is suggested that Asian American groups avoid expressing any thoughts related to emotional distress, as this is frowned upon in their community. Additionally, seeking help for emotional problems is perceived negatively and is thought to be shameful or as a "loss of face" (Cheung & Snowden, 1990; Takeuchi et al., 1993; Cauce et. al, 2002). Similarly, African American communities have been found to encourage willpower to overcome adversity rather than seeking help from professionals (Broman, 1996).

It has been found that when compared to White/ European Americans, minority groups face the negative effects of stigma, such as being perceived as shameful or weak, from their community more often (Cauce et. al, 2002). One study found that White/ European American youth sought professional help 53% of the time, compared to African Americans and Latino youth who sought help 32% and 30% of the time respectively (McMiller & Weisz, 1996). This has been thought to be the case because of a history of "self-reliance and mistrust of mental health providers", which leads to denial of mental health problems in African Americans (Snowden, 2001, p.185). Similarly, it has been found that Japanese American students are more likely than White American students to attribute mental illness to social causes, to seek help from family members or friends, and to try and resolve problems on their own (Narikiyo & Kameoka 1992).

Stigma and Help-Seeking in African Americans

Snowden (2001) examined perceptions of mental illness and help seeking in African American communities. Snowden's findings suggest African Americans often turn to religious and spiritual explanations of mental disorders, relying on prayer as a viable remedy for emotional distress. The avoidance of seeking help from mental health professionals was found to be related to generations of African American communities mistrusting mental health providers and opting to rely on one's self and one's community members for guidance and aid (Snowden, 2001). Though self-reliance and social support are important and healthy for coping, findings from this study do bring to light issues such as historic mistreatment of people of color that impact community member's willingness to seek professional help. A study conducted by Cooper-Patrick and colleagues (1995) found that compared to White/ European American Americans, African Americans more often rated spirituality as a means of treatment and help seeking for symptoms associated with mental illness (Snowden, 2001).

Cooper-Patrick and colleagues (1995) also found that when compared to White/ European American Americans, African Americans are more likely to associate seeking mental health treatment with a feeling of embarrassment, which acts as a significant barrier in seeking help for symptoms of mental illness and disorders. Additionally, other barriers that African Americans face include economic deprivation, mistrust of the healthcare system due to continual maltreatment of people of color, and the experience of racism (Johnson, 1993). Copper-Patrick and colleagues (1995) found that in terms of support, African Americans were more likely to rely on community members and personal relationships for reassurance and companionship rather than seeking treatment

through mental health service providers (Snowden, 2001; Cooper-Patrick et. al, 1995).

These are practices that promote healthy forms of coping for many individuals, but for

more severe mental disorders, they may not be sufficient.

Snowden (2001) posits that to fully understand African American perceptions of

mental illness and mental health, factors that should be considered include socioeconomic

status, age and gender of individuals from African American communities. Specifically,

education and outreach initiatives which emphasize the services available should be

conducted in order to promote awareness. Research has found that individuals who are

receptive to these initiatives often benefit from mental health services more than

individuals who do not accept information regarding these educational initiatives

(Snowden, 2001).

African Americans are more likely to experience adverse conditions including

extreme poverty and living in stress-enhancing communities with high rates of

incarceration and homelessness (Snowden, 2001). These factors can impact African

American's access to mental health services (Snowden, 2001). Compared to White/

European American Americans, African Americans with severe mental illness who do

receive treatment from mental health professionals have been found to more likely

experience "recidivism," or repeated use of psychiatric hospitals to receive treatment for

mental illnesses which exposes the disparities across race in psychiatric hospitals

(Snowden, 2001).

Additionally, financial constraints can also play an important role in how African

Americans access mental health services. African Americans have been found to be more

likely to be insured through Medicaid. Freiman and colleagues (1994) found that

Medicaid recipients were three times more likely to be hospitalized than individuals covered by private insurance. Taken together, perception of the healthcare system as well as significant barriers can impact how African Americans utilize mental health services, and how individuals in this community ultimately view mental illness as a whole (Snowden, 2001).

<div style="text-align:center">Mental Illness in Individuals from the Eastern World</div>

Asian Americans are a group of individuals who have often been referred to as the "model minority," specifically referring to the notion that they have had little to no social or psychological problems while adjusting to assimilating to life in the United States (Sue & Morishima, 1982). This idea has been found to be highly problematic because research has found that many Asian Americans in fact present with a wide range of mental health problems that should be further investigated (Leong & Lau, 2001; Sue and Morishima, 1982; Uba, 1994). The "model minority" idea is attributed to Asian American communities not engaging in treatment for psychological distress, due to feeling as though they must uphold the standard that has been set for them (Sue & Morishima, 1982).

Compared to nonminority individuals and similar to other ethnic minority groups, Asian Americans have been found to typically refrain from utilizing mental health services, and when they do seek help from mental health professionals, they have been found to often prematurely terminate their treatment (Leong & Lau, 2001). Asian Americans often are categorized as a single culture and group of people. This is a grave misunderstanding because Asian Americans are one of the most heterogeneous ethnic minority groups, as they have over 20 subgroups (e.g. Chinese, Japanese, Korean,

Filipino, Vietnamese, Cambodian, Laotian, Indian, etc.) all with unique cultural and linguistic backgrounds, as well as differing immigration histories in the United States (Sue & Morishima, 1982). The diversity between Asian subgroups has found to be associated with differences in specific stigma experienced by these groups, mental health service needed, utilization and outcome (Leong & Lau, 2001).

When examining Asian groups, research has found that subgroups within Asian communities each have unique and important functioning related to mental health service usage. For example, individuals from Southeast Asian backgrounds have been associated with having a higher rate of war trauma, socioeconomic disadvantage and refugee status than other Asian groups (Leong & Lau, 2001). Because of this, Southeast Asian communities have been found to typically be diagnosed with more severe mental disorders compared to Chinese Americans (Uehara, Takeuchi, & Smukler, 1994). Additionally, Southeast Asians have also been found to make less improvement after seeking treatment than other Asian subgroups (Ying & Hu, 1994; Zane, Lau, & Gock, 2000).

Many Asian cultures are considered to be relatively collectivist, defined as favoring the whole group over the individual (Leong & Lau, 2001). With multiple collectivist cultures within the different regions of Asia, Asians are very closely tied with their community and many of the decisions they make regarding mental health are consistent with how they feel this will affect their family and community (Leong & Lau, 2001). Another reason why Asian Americans may avoid seeking treatment from mental health service providers can be attributed to the cultural norm in which it is typical to avoid open and intimate communication, which can inhibit an individual from an Asian

background to feel open and willing to communicate sensitive and private details in a psychotherapeutic relationship (Lin & Lin, 1978). Additionally, research indicates that some Asian Americans only consider behaviors as signs of mental illness if those signs are upsetting to their social group (Moon & Tashima, 1982). Because of this, they may only seek professional help for behaviors that are considered dangerous or disruptive (Moon & Tashima, 1982), but typically not for emotional distress (Leong and Lau, 2001; Tracey, Leong, & Glidden, 1985.)

Another common barrier in seeking help for Asian Americans is the widely accepted concept of "mind-body holism." Within this theory, it is thought that physical and mental ailments are connected and should be treated similarly (Leong & Lau, 2001). Sue and colleagues (1976) found that when compared to European Americans, Asian Americans were more likely to believe that mental disorders are associated with organic causes. Mind-body holism is thought to be the reason why many Asian Americans seek psychological help from either herbalists or medical doctors who typically treat them for physical conditions. Comparatively, European Americans have been found to consult physicians for physical conditions and mental health service providers for emotional distress (Sue & Morishima, 1982).

When examining culturally informed perceptions of mental illness and health, Asian Americans have been found to typically believe that ruminating on distressing and disturbing thoughts is problematic (Sue et al., 1976). Many studies have found that Chinese Americans view mental illness as a problem that can be solved through willpower and avoiding morbid thoughts (Arkoff, Thaver, & Elkin, 1966; Lum, 1982; Root, 1985; Sue et. al, 1976). This can also be related to collectivistic cultural values

within Asian communities which focus on avoiding stigmatizing practices such as seeking help from mental health professionals, as this practice would negatively reflect on one's community and cultural group. Taken together, these barriers can affect Asian American's perceptions of mental health and help seeking.

<div align="center">Stigma in South Asian Communities</div>

The South Asian subgroup is one that is often forgotten when individuals think of "Asians." This subgroup is made up of individuals who originate from the Indian subcontinent (India, Pakistan, Sri Lanka, Bangladesh, Nepal, Bhutan, Afghanistan and the Maldives). Asian Americans represent the third largest ethnic group in the United States, and South Asians comprise the third largest and fastest growing subpopulation within this group (U.S. Census Bureau, 2000). Stigma is highly prevalent in South Asian culture specifically in respect to mental illness (Saravanan, Jacob, Deepak, Prince, David & Burga, 2007). This stigma is perpetuated by discrimination within the community, and a lack of appropriate treatment has led to consequences as serious as suicide (Neelman, Mak, & Wessely, 1997). Creating awareness in South Asian communities is essential in diminishing this stigma (Saravanan, Jacob, Deepak, Prince, David & Burga, 2007).

South Asians have been found to often rely on religious or superstitious beliefs to help explain medical constructs (Saravanan, Jacob, Deepak, Prince, David & Burga, 2007). Additionally, individuals from South Asian communities can experience feelings of isolation from their community in regard to mental illness. Specifically, friends, family and community members may distance themselves from an individual with mental illness and may not reach out to offer help, which further perpetuates feelings of isolation and the inability to openly discuss emotional distress (Durvasula, & Mylvaganam, 1994).

Support from the community has been found to be a strong protective and resilience factor for South Asians dealing with mental health issues (Durvasula, & Mylvaganam, 1994), and this support is an important factor in breaking the barrier of mental illness stigma and aiding in the recovery for individuals within this community.

To understand the South Asian perspective on mental illness and help seeking, it is important to first delve into how individuals from South Asian perceive mental health, and how these perceptions follow a trend for individuals who immigrate to the United States. Because many perceptions are deep rooted, having an understanding of individuals who reside in South Asia and their understanding of mental illness will provide valuable insight on how individuals who live in the United States are impacted by cultural and historic values from their community (Durvasula, & Mylvaganam, 1994).

Research examining the cultural understanding of mental illness in South Asian countries has yielded interesting and mixed results. Saravanan, Jacob, Deepak, Prince, David, and Burga (2007) explored perceptions of psychosis and severe mental illness in Velore, South India. Results suggest that community members typically held negative views towards mental illness, while relatives of individuals with mental illness wanted more support from mental health professionals specifically in regard to alleviating mental illness stigma. It was also found that individuals from this part of India often hold religious beliefs to understand mental illness, though many individuals have been turning to medicine and science to better understand mental illness as well. These results suggest that there is progress in regard to creating awareness for South Asian communities, but mental illness and mental health stigma still exists.

An ongoing problem in regard to mental health in South Asia is limited community-based support systems for individuals with serious mental illness. Thara (1992) chronicled the development of a community support system for people with serious mental illness in the urban slums of Madras, India due to a lack of such mental health supports and services in South India. The author described the attempts to alleviate this problem by building more community support systems for individuals with mental illness of which awareness and education were some of the main components of this program, suggesting that perceptions of mental illness in South Asia are based on negative perceptions of mental illness.

Mental illness stigma has become so prevalent that it can lead to consequences as severe as suicide (Neelman, Mak, & Wessely, 1997). Parker and colleagues (2009) examined the explanations and perceptions of suicide by surviving family members and friends of victims in the Malavani slum of Mumbai, India. It was found that the sociocultural context of suicide involved several factors, including victimization of women, physical health problems and mental tension. Additionally, it was found that when compared to their male counterparts, women were more likely to engage in suicidal behavior due to being more vulnerable to the impact of problem drinking by their spouse or father. Ultimately, the findings of this study indicated the strong need for both culturally sensitive social intervention, more mental health supports and services for not only individuals suffering from mental health problems but also their support systems.

Understanding how individuals in South Asia perceive mental illness provides important insight into how individuals who have immigrated outside of the South Asia are impacted by historical and cultural perspectives of mental illness. Loya, Reddy and

Hinshaw (2010) examined differential attitudes toward psychological counseling in South Asian and White/ European American college students. These results indicate how certain ideals in regard to mental illness and health evident in South Asians living in the Indian Subcontinent are similar to individuals living in the United States. Loya and colleagues (2010) found that relative to White/ European American college students, South Asian colleges students presented with more reluctance to seek help through counseling services within their college or university for mental health related problems. Additionally, South Asians were also found to have overall poorer attitudes towards help seeking and heightened levels of personal stigma toward individuals with mental illness when compared to their White/ European American peers.

These results are important as they suggest that across a variety of common social interactions, South Asian students are more likely to exclude, reject and distance themselves from individuals with mental illness due to the stigma within their community. Loya and colleagues (2010) utilized both the modified label theory (Link et al., 1989) and conceptualization of the role of stigma on help-seeking process (Corrigan, 2004), and concluded that internalized personal stigma in regard to mental illness can threaten the well-being of an individual who experiences mental health related problems. Because of this, individuals may not seek help from available mental health supports such as counseling services in order to avoid the potential consequences, which include discrimination from their community, due to negative perceptions of mental illness and help seeking, as well as lowered self-esteem (Loya, Reddy, & Hinshaw, 2010).

Specifically, within the context of members of the South Asian group, deviating from the social norms within this community can create internalized fears of rejection

and ostracism from other members in the community, and this appears to contribute to poorer attitudes toward mental health help seeking. Loya and colleagues (2010) argue that in order to encourage greater use of counseling services for South Asian students, it is important to assess and then address specific stereotypical views of mental illness within this community, such as the perception that individuals with mental illness are more violent (Rao, Feinglass, & Corrigan, 2007), through targeted educational campaigns which will specifically focus on the deep rooted perceptions that affect this group and how they choose to seek help. In order to create necessary awareness, we must first understand how South Asians choose to seek help, and how this differs from other racial and ethnic groups. Previous research has not fully examined the extern to which South Asians perceive mental illness and help-seeking gender, and how this may deviate from other ethnic minorities. The proposed study aims to examine these questions.

<center>Purpose of the Current Study</center>

The purpose of the current study is to examine perceptions of mental health and illness across different cultural, and racial backgrounds, with a specific focus on South Asian communities. The impact of mental illness perceptions on help seeking behaviors in these communities will also be explored. South Asian Americans from young adulthood to late adulthood was examined through a national sample. A model examining informal and formal help seeking was utilized to explore differences in perceptions of mental illness and help seeking practices across racial groups. The model will draw from theories from the following researchers: Corrigan (2000); Rusch, Angermeyer and Corrigan (2005); Link and Phelan (2001); Gulliver, Griffiths and Christensen (2010); Hunt and Eisenberg (2010); Bland, Newman and Om (1997); Cauce, Domenech-

Rodríguez, Paradise, Cochran, Shea, Srebnik and Baydar (2002); Loya, Reddy, & Hinshaw (2010).

This model was derived from the theory of Corrigan (2000) who proposed that the general public makes assumptions about individuals with mental illnesses based on four specific "cues": psychiatric symptoms, social-skills deficits, physical appearance and labels. In terms of mental illness stigma, cues can be defined as traits that the general public uses to create judgements about people with mental illness. Corrigan (2000) proposed that these specific cues can impact the way the public views individuals with mental illness and can lead to stigmatizing, negative perceptions of mental illness. This model also draws upon the theory of Rusch, Angermeyer and Corrigan (2005) who presented the idea that the public views individuals with mental illness as childlike and people who should be feared. Lastly, in terms of negative perceptions, the model employs the theory of Link and Phelan (2001) who theorized that stigma exists when discrimination, stereotyping and labeling is involved. In terms of help-seeking, the model examines levels of formal (seeking help from mental health professionals) and informal (self-reliance, social support and spirituality) help-seeking across racial and ethnic groups based on the theories of Rusch, Angermeyer and Corrigan (2005) and Gulliver, Griffiths and Christensen (2010) who proposed that individuals may or may not choose to seek specific types of help based on negative attitudes toward mental illness and help seeking. Hunt and Eisenberg (2010) and Bland, Newman and Om (1997) theorized that age plays a role in whether an individual chooses to seek help, with college students having a particularly low interest in mental health services. Cauce and colleagues (2002) proposed that based on consistent past findings, females maintain more positive attitudes toward

help seeking than their male counterparts. Based on these theories on gender and age differences, the model will also examine these two variables. Additionally, the model, depicted in Figure 1, also employs previous research indicating that unlike many other ethnic minority groups, South Asians have difficulty engaging in informal help seeking due to discrimination within their community (Loya, Reddy, & Hinshaw, 2010).

To date, there is little research which has focused specifically on the South Asian community, particularly in relation to the help-seeking process (Loya, Reddy, & Hinshaw, 2010). This gap in research is important because of the rapid growth of the South Asian community in the United States, and findings which indicate that mental health service usage differs considerably across ethnic subgroups within the broader Asian American Community (Barreto & Segal, 2005). It has also been found that South Asians are at an increased risk for severe consequences such as suicide (Neelman, Mak, & Wessely, 1997). Taken together, it is evident that this is an area of research that should be examined to understand the impact of perceptions of mental illness on help seeking for this group of ethnic minorities.

This study aims to understand help seeking behaviors in South Asians, and how this differs from other racial groups. Though many racial groups have been found to engage in coping mechanisms such as relying on their community members for support, ethnic minorities have been found to avoid formal help seeking options more often (Snowden, 2001). However, South Asian groups have been found to not only avoid formal help seeking, but informal as well (Durvasula & Mylvaganam, 1994). The present study aims to explore (a) perceptions of mental illness and how this may predict patterns

of help seeking across racial groups as well as (b) perceptions of mental illness across gender.

<div align="center">Research Questions</div>

1. Does the proposed model fit the data? In other words, do negative perceptions of mental illness as defined here (i.e. authoritarianism, benevolence, social restrictiveness, discrimination-devaluation) predict informal and formal help seeking behaviors overall?

2. Do the overall constructs of perceptions of mental illness and help-seeking (as defined above) and inter-relationships between these constructs differ as a function of race/ethnicity, as evidenced by changes in model fit?

3. Do South Asians who have more negative perceptions of individuals with mental illness (i.e. authoritarianism, benevolence, social restrictiveness, discrimination-devaluation) have more negative attitudes towards informal and formal modes of help less than their non-South Asian counterparts (i.e., White/ European American, African American, East Asian)?

4. Do South Asian males perceive mental illness as more negative and stigmatic compared to South Asian females?

<div align="center">Hypotheses</div>

1. Negative perceptions of mental illness as defined here (i.e. authoritarianism, benevolence, social restrictiveness, discrimination-devaluation) will predict informal and formal help seeking behaviors for the overall sample.

2. The overall constructs of perceptions of mental illness and help-seeking (as defined above) and inter-relationships between these constructs will differ as a function of race/ethnicity for South Asian communities, as evidenced by changes in model fit.

3. Perceptions of mental illness and attitudes toward informal and formal help seeking will differ across racial and ethnic groups; South Asians will have more negative perceptions of individuals with mental illness (i.e. authoritarianism, benevolence, social restrictiveness, discrimination-devaluation) and will have more negative attitudes towards informal and formal modes of help seeking less than their non-South Asian counterparts (i.e White/ European American, African American, East Asian).

4. South Asian females will have more positive attitudes towards mental illness than South Asian males.

CHAPTER 3

METHODOLOGY

Project Mental Health Awareness and Perceptions (MAPS)

The following is an overview of Project MAPS; data for the present study were extracted from this larger study. Project MAPS is a study that aims to examine whether individual characteristics (race, ethnicity, culture, and gender) influence perceptions of mental illness stigma, experiences of mental illness stigma, and help seeking behaviors. The present study was part of Project MAPS, and the data collected and analyzed were extracted from the total sample of Project MAPS participants.

Participants

Project MAPS

The participants for the larger Project MAPS study included 668 participants from multiple ethnic groups. This included but was not limited to those who self-identified as Asian American, Black/African American, White/ European American, and Latino/ Hispanic American. Immigrant and native participants were welcomed to participate. English forms were available for all participants. Demographic information, including level of education, socioeconomic status, age, gender/sex, ethnicity, country of origin, and sexual orientation was collected.

Present Study

For the purposes of the present study, participants included 355 adults (ages 18+). Of these participants, 114 identified as South Asian (Indian, Bangladeshi, Pakistani, Sri Lankan, Nepalese) ethnic groups, 176 participants identified as White/European American and 65 participants identified as Black/African American.

Recruitment

Informational flyers were distributed to venues frequented by ethnic minorities (i.e. cultural events, organizational meetings). Databases for South Asian and Non-South Asian organizations and listservs were located through Google organizations. Organizations included social service groups, professional groups and recreational groups. Along with this, student centers, ethnic minority clubs and student organizations also received informational flyers. In addition to physical flyers, virtual fliers were dispersed through listservs, social media (with the use of tweets, Instagram and Facebook posts, hashtags). Snowball sampling was also employed by using social media outlets to pass the survey along to participants through connections (Atkinson & Flint, 2001; Sadler, Lee, Lim & Fullerton, 2010). At the end of the questionnaire, participants had the opportunity to share a link to the survey with friends or acquaintances who were willing to complete the measures of the study.

Procedure

Data were collected online due to the sensitive nature of the topic and the desired target population. An online self-report approach was selected as the ideal platform for the current research because it has been found to increase anonymity, and reduce social desirability specifically in regard to sensitive topics (Kreuter, Presser, & Tourangeau, 2008). Data were collected during one time point, and this time point included the questionnaires which are explained below. However, two distributions of the survey were implemented due to several participants terminating the survey prematurely during the first distribution, likely due to length. The survey was shortened and a second distribution was implemented.

Email address were collected for follow up regarding a second data collection point unrelated to the current study and incentives. No other identifying information was retained in order to maintain confidentiality. The data file containing survey responses from participants was stored separately from the email addresses that participants provide. Survey piping was employed to guide participants to appropriate questionnaires based on answers they provide. Specifically, participants were asked to provide demographic information on their race and ethnicity. This information then randomly assigned them to a vignette condition which either matched the participant's own racial group or a different racial group.

<div align="center">Project MAPS Measures</div>

All the participants in the first distribution of the general study completed the Demographic Information section, Opinions of Mental Illness Questionnaire (OMI; Struening & Cohen, 1963), The Perceived Stigma Questionnaire (PSQ) and the General Help-Seeking Questionnaire (GHSQ; Wilson, Deane, Ciarrochi, & Rickwood, 2005), The Survey Coping Profile Endorsement (SCOPE) (Matheson, Anisman, 2003), The Center for Epidemiologic Studies Depression Scale-Revised (CESD-R; Van Dam & Earleywine, 2010), State-Trait Inventory for Cognitive and Somatic Anxiety (STICSA; Ree, MacLeod, French, & Locke, 2000), Teate Depression Inventory (TDI; Balsamo, Saggino, & Giampaglia, 2014), Stephenson Multigroup Acculturation Scale (SMAS; Stephenson, 2000, and a select sample received the Social Phobia and Anxiety Inventory-23 (SPAI-23; Roberson-Nay, Strong, Nay, Beigdel, & Turner, 2007), Social Phobia Inventory (SPIN; Conner & Davidson, 2000), Social Interactive Anxiety Scale (SIAS-6) and Social

Phobia Scale (SPS-6), and Brief Fear of Negative Evaluation-Straightforward (BFNE-S; Rodebaugh et al., 2004), as well as original vignettes.

Present Study Measures

The present study was conducted through two separate survey distributions. The initial survey included all Project MAPS measures listed in the previous section. The initial distribution resulted in several participants terminating the survey prematurely, likely due to the length and time to complete the survey. Due to premature termination of the initial survey, a second survey distribution included only the measures necessary for the present study. Only the following measures were used for analyses for the present study: The Demographic Information Questionnaire, Opinions of Mental Illness Questionnaire (OMI; Struening & Cohen, 1963), The Perceived Stigma Questionnaire (PSQ), the General Help-Seeking Questionnaire (GHSQ; Wilson, Deane, Ciarrochi, & Rickwood, 2005), as well as original vignettes examining mental health stigma.

Demographic Information

The demographic information section consists of several questions related to the demographics of the participants including date of birth, gender, age, biological sex, race, ethnicity, annual income, parental annual income, education level, parental education level, geographical location, and immigration generation (e.g., first-generation, second-generation American).

Help-Seeking Behavior

The General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005) consists of 20 items using a 7-point scale with 1 indicating extremely unlikely and 7 indicating extremely likely with a higher score indicating a higher tendency to seek help (Wilson et.

al, 2005). Wilson and colleagues (2005) suggested two factors within the help seeking questionnaire: informal and formal help seeking. Reliability and validity analyses were conducted on this scale using a sample size of 218 high school students (n = 112 males, n = 106 females) from an Australian public high school; the age of these students ranged from 12-19 years (M = 16.29, SD = 1.49). Internal consistency and test-restest reliability was conducted on the scale which resulted in a Cronbach's alpha of .85 and a test-retest reliability of .92. Predictive validity analyses indicated that perceived quality of previous mental health care was positively related to seeking help from a mental health professional for emotional problems (r = .51, p < .001) and for suicidal thoughts, (r = .57, p < .001; Wilson et al., 2005).

Mental Illness Stigma

The Opinions of Mental Illness Questionnaire (OMI; Struening & Cohen, 1963) was used to assess prejudicial attitudes about mental illness. The OMI uses 70 statements about the presentation and treatment of mental illness that the respondents rate on a 6-point scale (6 = strongly agree to 1= strongly disagree). Struening and Cohen (1963) suggested five subscales or factors for the OMI. The first factor is authoritarianism, which represents opinions of the mentally ill as a class of people inferior to normal individuals. High scores on this factor indicate a belief that the mentally ill are inferior to normal individuals. The second factor is benevolence which represents attitudes that are encouraging to mentally ill patients but still acknowledge some fear toward them. The next factor is mental hygiene ideology. This factor indicates the opinion that mental illness is similar to other illnesses and should be adequately treated by mental health professionals. High scores on this factor indicate a positive regard for individuals with

serious mental illness (Struening & Cohen, 1963). The fourth factor, social

restrictiveness, measures the participant's regard of the mentally ill as a danger to society,

and suggests they should be restricted both during and after hospitalization. Low scores

on this factor indicate that the participants are in favor of less restrictive environments for

mental patients. The final factor is interpersonal etiology, which measures the belief that

mental illness results from bad interpersonal experiences such as the lack of parental love

and attention). Reliability and validity analyses were conducted on a sample of 1,200

patients from 3 different Veterans Affairs inpatient hospitals across the United States

(400 patients per hospital). This was done to maximize the regional and subcultural

differences in the sample. The average age for all three hospitals combined ranged from

38.8-42.9 years. The ratio of men to women across all three hospitals was approximately

three to one. This measure has been determined to be reliable by Struening and Cohen

(1963) who found that the measures of internal consistency (K-R 20 reliability

coefficients) for four of the five OMI factors (Struening & Cohen, 1963) were adequate.

Specifically, mental hygiene ideology was the only factor which resulted in lower

internal consistency coefficients ranging from 0.29-0.39. However, authoritarianism

(0.77-0.80), benevolence (0.70-0.73), restrictiveness (0.71-0.77), and interpersonal

etiology (0.65-0.66) all resulted in adequate internal consistency.

The original Perceived Stigma Questionnaire (PSQ) by Link (1989) is a 29-item

questionnaire created to measure perceived stigma of participants on four scales. Link

(1989) suggested the following subscales or factors: devaluation-discrimination, secrecy,

withdrawal, and education. In this study, only the section of the instrument that measures

devaluation-discrimination was used. The devaluation-discrimination subscale was

designed to measure the extent to which respondents discriminate against individuals with mental illness. The secrecy, withdrawal, and education scales, designed to measure the coping styles of individuals with mental illness, was not used since this study is primarily focused on attitudes toward mental illness. This study utilized a modified version of the devaluation-discrimination subscale which was developed and modified by Angermeyer, Link and Majcher-Angermeyer (1987) to assess attitudes of professionals who work with people who receive mental health services. In the modified version, items were rewritten to reflect the opinion of the respondent with regard to what they would do as opposed to what most people would do. For instance, the original item "Most people would willingly accept a mental health consumer as a close friend" was changed to "I would willingly accept a person who receives mental health services as a close friend". Participants are asked the extent to which they agree with statements about individuals with mental illness, rated on a six-point Likert scale where 1 is strongly disagree, and 6 is strongly agree. The devaluation and discrimination subject was found to have adequate internal consistency (alpha = .84) by researchers who examined the properties of this measure (Angermeyer, Link and Majcher-Angermeyer (1987), Ritsher, Otilingam, & Grajales, 2003). Angermeyer, Link and Majcher-Angermeyer (1987) conducted analyses using 184 subjects from inpatient and outpatient hospitals; the participants ranged in age from 35.6-37.6 years. In the outpatient setting, 35% were men while in the inpatient setting, 49% were men. Ritsher, Otilingam and Grajales (2003) conducted analyses using 127 participants from an outpatient mental health facility; the average age of participants was 49.5 years and 93.6% of the participants were men.

Original Vignettes

Vignettes were developed to assess how individuals from multiple racial and ethnic groups perceive mental illness and help seeking for an individual from their own racial and ethnic background versus individuals from other racial and ethnic backgrounds. Vignette topics include mental health disorders such as depression, anxiety and panic disorder. The vignette included questions exploring whether the character perceives their mental illness as shameful as well as whether they are able to treat their symptoms through self-reliance rather than obtaining formal help. The vignette included questions assessing whether the participants feels as though the vignette character should pursue help seeking through informal and formal options. Questions were rated on a 1-5 Likert scale where 1=Strongly Disagree and 5=Strongly Agree. For the questions assessing perceptions of mental illness, a higher score was associated with more negative perceptions. For the questions assessing help seeking, a higher score was associated with more positive attitudes. Items were reversed scored as necessary for analysis purposes. To assess validity and reliability of this measure, exploratory factor analysis and internal consistency analysis were conducted.

Data Analysis

Preliminary Analyses

Descriptive statistics and demographic information were analyzed using SPSS (Version 23) and are reported. Percentages of missing data were calculated and are reported. It is important to determine whether the values in the dataset are missing completely at random or if the missing data shows systematic patterns as a result of bias

(Johnson & Young, 2011). Listwise deletion was conducted to handle missing data, as the missing data in this study occurred completely at random.

Measurement Model

Analysis was conducted using Mplus statistical modeling software (Version 7.3; Muthén & Muthén, 2012). The four-step model outlined by Muliak and Millsap (2000) was employed to address potential misspecifications. Firstly, confirmatory factor analyses were conducted to assess the acceptability of the scales being used and of the measurement model itself. Exploratory factor analyses were conducted only if the model suggested by the CFA revealed poor fit. This was done to determine the number of factors within each individual scale (Muliak & Millsap, 2000). Figure 1 presents the proposed structural equation model of analysis. Structural equation modeling (SEM) was used to determine the structure of the relationship between variables.

Figure 1. Proposed structural equation model examining relationship between perceptions of mental illness and help seeking (item level data not shown but was used for analyses).

Note:

Explanation of factors within "Negative Perceptions of Mental Illness":

Authoritarianism – The perception that individuals with mental illness are inferior to those without.

Benevolence – The perception that individuals with mental illness are individuals who should be acknowledged, but are still individuals who should be feared.

Social Restrictiveness – The perception that individuals with mental illness are a danger to society and should be restricted both before and after hospitalization.

Devaluation-Discrimination – The perception that individuals with mental illness should be discriminated against.

Baseline Structural Equation Modeling

After the measurement model was confirmed, a full structural model was tested. Hypothesis testing was conducted to compare models and fit indexes. Because all the variables in the measurement model consisted of factor scores obtained from the CFAs, the variables were considered to be continuous standardized variables (Muthén & Muthén, 2012). For this reason, Maximum Likelihood with Robust Standard Error (MLR) was implemented to perform the analysis (Muthén & Muthén, 2012). This was conducted to assess fit for the initial baseline model. The following fit statistics were utilized for each model: chi square test of model fit (X^2) non-significant, root mean square error of approximation (RMSEA; Steiger, 1990) less than .08 (Browne & Cudeck, 1993), comparative fit index (CFI) greater than .90 (Hu & Bentler, 1990), and Tucker Lewis Index (TLI) greater than .90 (Bentler, 1990). Multiple tests of model fit were conducted due to chi-square model-fit's sensitivity to sample size (Kline, 2010; Bentler & Bonnet, 1980). For RMSEA, researchers have indicated that a stringent cut-off value indicating a good model fit should less than 0.06 (Hu & Bentler 1999); however, other researchers have proposed that this value may be overly stringent (Markland, 2007). Researchers have also indicated that CFI > 0.90 and TLI ≥ 0.90 reflects a good model fit (Hu & Bentler, 1995).

Multi-Group Structural Equation Modeling

Lastly, multi-group analysis based on the baseline model was conducted. This was done to test invariance across groups. Specifically, separate models across race and ethnicity was tested to examine differences across these groups. Hypothesis testing was conducted for the models to compare fit indexes. Chi-square model fit, comparative fit

index (CFI; Bentler, 1990) and the root-mean-square error of approximation (RMSEA; Steiger, 1990) was utilized to asses fit across groups. In order to assess differences in model fit across groups, one model (Model A) was compared to another (Model B; i.e. South Asian model compared to White/ European American model); non-significant chi-square ($p < 0.05$), $\Delta CFI < 0.01$ and $\Delta RMSEA > 0.015$ indicated that Model B has a comparable fit to Model A. The configural, metric and scalar invariance was assessed to test the equivalence of the measurement model.

Subsequent Univariate Analyses

Analysis of Variance (ANOVA) and regression analyses were conducted to assess relationships between perceptions of mental illness and race as well as help seeking behaviors and race through original vignettes. Specifically, one-way ANOVA was conducted to assess mean differences across race and ethnicity (independent variable) and perceptions of mental illness and help seeking (dependent variable). This was assessed for an individual from the same racial/ethinc background as the participant, as well as an individual from a different racial/ethnic background through the use of original vignettes. To assess whether individuals were more likely to have negative perceptions of mental illness of members of their own race versus another race, items from each vignette condition (i.e. South Asian character, White/European American character, East Asian character; Black/African American character) were computed to create two new variables: a) perceptions of mental illness and b) coping. Specifically, participants that identified their race in the demographic section were randomly assigned to a vignette condition which either matched their self-identified race or a condition from another racial group. Each participant responded to identical questions regarding perceptions of

mental illness and coping, with the only difference being the race of the individual in the vignette assigned to the participant. Differences were examined to determine if individuals from racial groups perceived mental illness differently depending on the race of the character they were assigned. Furthermore, one-way ANOVA as well as linear regression analyses was conducted to assess whether one's gender predicts more negative perceptions of mental illness, specifically in the South Asian group.

CHAPTER 4

RESULTS

Descriptive Statistics

The present study is part of a larger study titled "Project MAPS." The scales utilized specifically for this study were administered concurrently with additional scales and measures. Two distributions of the survey were implemented due to several participants terminating the survey prematurely during the first distribution, likely due to length. Participants completed the survey in its entirety more frequently after the second distribution, suggesting that the length of the initial survey likely deterred many participants from fully completing the survey. Specifically, 59% of participants completed the survey in its entirety during the first distribution, while 72% of participants completed the survey in its entirety during the second distribution.

Multiple one-way ANOVA tests were conducted to assess differences across demographic variables of the participants who terminated the survey early between the two distributions. Specifically, differences in race, gender and annual income were examined through multiple univariate analyses. Of the participants who terminated the survey prematurely, 67 completed the demographic section. These participants were utilized for further analyses. Results revealed a significant difference between distribution 1 and distribution 2 across race ($F(2, 64) = 4.148$, $p = .020$; see Table 1). A Tukey post hoc test revealed that Black/African American participants terminated the distribution 1 survey, or the lengthier survey, more frequently than South Asian and White/European American participants. Additionally, one-way ANOVA tests revealed no

significant difference between the two survey distributions across annual income (F(8,

58) = 2.751, p = 0.61) or gender (F(1, 65) = .698, p = .407; see Tables 2-3).

To further examine the impact of the two survey distributions on the sample,

several one-way ANOVA tests were conducted to assess differences across demographic

variables of individuals who did complete the survey in its entirety. Specifically,

differences across race, gender and annual income were examined dependent on whether

an individual completed the survey during the first or second survey distribution. Results

indicated that there was a statistically significant difference between distribution 1 and

distribution 2 respondents across race (F(2, 352) = 32.999, p = .000). A Tukey post hoc

test revealed that South Asian participants completed the survey through distribution 1

more often compared to White/European American and Black/African American

participants (see Table 4). Additionally, it was determined through one-way ANOVA that

a significant difference existed across annual income for respondents who completed the

survey through the two distributions (F(12, 342) = 3.293, p = .000). A Tukey post hoc

test revealed that individuals in the $30,000-39,999 bracket completed the survey in the

second distribution more often than individuals in the $90,000-$99,999 and $100,000 or

more brackets (see Table 5). Lastly, a one-way ANOVA revealed that no significant

difference existed across gender for participants who completed the survey through the

two distributions (F(4, 349) = 1.339, p = .255). Additional information on descriptive

statistics is described in detail below.

Six hundred and sixty-eight respondents participated in the Project MAPS Survey.

For the purposes of this study, individuals who self-identified as South Asian,

White/European American or Black/African American were utilized for analyses. Of the

total respondents (N=668), 313 (47%) were deleted listwise due to missing responses for most items (>75% of items; N = 215) or if they did not meet the necessary criteria for the present study (i.e. 18+ years and self-identified as South Asian, White/European American or Black/African American; N = 98); 355 (53%) participants were retained for data analysis, of which 114 identified as South Asian, 176 as White/European American and 65 as Black/African American. Several participants opted to prematurely terminate the survey during the first, lengthier distribution. This likely explains the large amount, nearly half, of respondents who were deleted listwise prior to beginning analyses. Participants included in the data analysis (N = 355) ranged in age from 18 years to 74 years (M = 30.28, SD = 10.963). Missing data analysis (Little's Missing Completely at Random Test; Little, 1998) was conducted to determine whether the values in the dataset were missing completely at random or if the missing data showed systematic patterns as a result of bias (Johnson and Young, 2011). Significance must amount to less than 0.05 in order to conclude that data is not missing completely at random (Little, 1988). There was no pattern of systematic missing data found among the participants of this study; missing data appeared to occur completely at random (Little MCAR Test, p = 0.21). Listwise deletion methods were conducted to handle missing data (Johnson and Young, 2011). This method was chosen because research suggests that when data are missing completely at random, listwise deletion methods will not introduce any bias into the parameter estimates (Allison, 2003).

Of those participants who self-selected their ethnicity, 10 identified as Hispanic/Latino(a), while 345 participants (97%) identified as Non-Hispanic/Latino(a). Of those participants who self-selected their race, 114 identified as South Asian, 176

identified as White/European American and 65 identified as Black/African American.

Sample Demographics, including race and ethnicity can be found in Table 1. Participants

who self-identified as Black/African American were removed for the structural

equational model analyses due to low sample size. Those participants were included for

subsequent univariate analyses to examine differences in perceptions of mental illness

and help seeking. The reason for this is because only 65 participants identified as

Black/African American, and literature suggests that each group must contain at least 100

participants (Hox & Mass, 2001) to conduct structural equation modeling.

Table 1
One-Way Analysis of Variance of Survey Distribution for Non-Completers Across Race

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	1.562	2	.781	4.148	.020	0.115
Within Groups	12.050	64	.188			
Total	13.612	66				

Table 2
One-Way Analysis of Variance of Survey Distribution for Non-Completers Across Annual Income

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	3.745	8	.468	2.751	.061	0.275
Within Groups	9.867	58	.170			
Total	13.612	66				

Table 3
One-Way Analysis of Variance of Survey Distribution for Non-Completers Across Gender

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	.145	1	.145	.698	.407	0.011
Within Groups	13.467	65	.207			
Total	13.612	66				

Table 4
One-Way Analysis of Variance of Survey Distribution Across Race

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	14.007	2	7.004	32.999	.000	0.158
Within Groups	74.708	352	.212			
Total	88.715	354				

Table 5
One-Way Analysis of Variance of Survey Distribution Across Annual Income

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	9.189	12	.766	3.293	.000	0.104
Within Groups	79.527	342	.233			
Total	88.715	354				

Table 6
One-Way Analysis of Variance of Survey Distribution Across Gender

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	1.338	4	.334	1.339	.255	0.015
Within Groups	87.137	349	.250			
Total	88.475	353				

Table 7
Demographics for the Study Sample (N = 355)

	Total Sample:	South Asian:	White/European American:	Black/ African American:
Total	355	114	176	65
Gender				
Female	265	90	131	44
Male	82	24	40	18
Transgender Male	2	-	2	-
Transgender Female	-	-	-	-
Gender Variant/Non-	2	-	1	1
Conforming	4	-	2	2
Not Listed	-	-	-	-
Ethnicity				
Hispanic/Latino(a)	10	-	6	4
Non-Hispanic/Latino(a)	345	114	170	61

Measurement Model

Confirmatory Factor Analysis

Because all the scales utilized for the present study were previously validated, confirmatory factor analyses were conducted to test the factor structure of each scale. However, if model fit was poor and modification indices were not theoretically justifiable, exploratory factor analysis was subsequently conducted to determine factor structure for each scale. For each scale, the variable which most closely represented the overall meaning of the intended factor was fixed to 1 to serve as a marker indicator (Brown & Moore, 2012). Detailed information on all scales used in the present study are described below.

Opinions of Mental Illness Questionnaire

The original Opinions of Mental Illness Questionnaire (OMI; Struening & Cohen, 1963) was proposed of a five factor model including: Authoritarianism, Benevolence, Social Restrictiveness, Mental Health Ideology and Interpersonal Etiology. However, only three factors were utilized for the purposes of the present study (Authoritarianism, Benevolence and Social Restrictiveness) and were included in the confirmatory factor analysis. For each factor, the item that was most semantically and theoretically aligned with the overall meaning of the factor was fixed to 1 to serve as a marker indicator (items 1, 10 and 24 respectively). The Authoritarianism factor was comprised of the following items: 1, 6, 7, 9, 11, 16, 19, 21, 31, 36, 39, 40, 43 and 48. The Benevolence factor was comprised of the following items: 10, 12, 17, 18, 22, 32, 38, 45 and 49. The Social Restrictiveness factor was comprised of the following items: 4, 14, 24, 26, 29, 37, 41, 42, 51. The model fit of the 3-factor model was sufficient ($\chi^2(461)= 883.02$; $p<0.0001$;

RMSEA=0.056; CFI=0.946; TLI=0.942. Thus, no post-hoc modifications were needed.

Further a reliability analysis was conducted to ensure that the factors within the OMI

were suitable for interpretation. Cronbach's alpha revealed strong reliability ($\alpha = 0.875$;

Gliem & Gliem, 2003).

Table 8

Means, Standard Deviations, Skewness, and Kurtosis for Items from the Opinions of Mental Illness Questionnaire (OMI; Struening & Cohen, 1963)

Items	Mean (SD)	Skewness	Kurtosis
OMI-1 - Nervous breakdowns usually result when people work too hard.	3.22 (1.290)	.380	-.767
OMI-4 - Although patients discharged from mental hospitals may seem all right, they should not be allowed to marry.	5.42 (.963)	-2.084	4.568
OMI-6 - It is easy to recognize someone who once had a serious mental illness.	5.15 (1.031)	-1.505	2.229
OMI-7 - People who are mentally ill let their emotions control them: normal people think things out.	4.83 (1.271)	-1.184	.747
OMI-9 - When a person has a problem or a worry, it is best not to think about it, but keep busy with more pleasant things.	4.49 (1.283)	-.902	.035
OMI-10 - Although they usually aren't aware of it, many people become mentally ill to avoid the difficult problems of everyday life.	4.69 (1.386)	-.840	-.322
OMI-11 - There is something about mental patients that makes it easy to tell them from normal people.	5.13 (1.058)	-1.629	2.828
OMI-12 - Even though patients in mental hospitals behave in funny ways, it is wrong to laugh about them.	1.63 (1.049)	2.245	5.261
OMI-14 - The small children of patients in mental hospitals should be allowed to visit them.	2.11 (1.058)	1.087	1.425
OMI-16 - People would not become mentally ill if they avoided bad thoughts.	5.32 (1.038)	-1.981	4.117
OMI-17 - Patients in mental hospitals are in many ways like children.	4.63 (1.231)	-.767	.051
OMI-18 - A heart patient has just one thing wrong with him, while a mentally ill person is completely different from other patients.	3.93 (1.491)	-.314	-.990
OMI-19 - Mental patients came from homes where the parents took little interest in their children.	4.88 (1.170)	-1.035	.500
OMI-21 - Anyone who tries hard to better himself deserves the respect of others.	1.62 (.868)	1.847	4.377
OMI-22 - If our hospitals had enough well trained doctors, nurses, and aides, many of the patients would get well enough to live outside the hospital	2.95 (1.293)	.336	-.499
OMI-24 - If the children of mentally ill parents were raised by normal parents, they would probably not become mentally ill.	4.97 (1.081)	-1.220	1.468

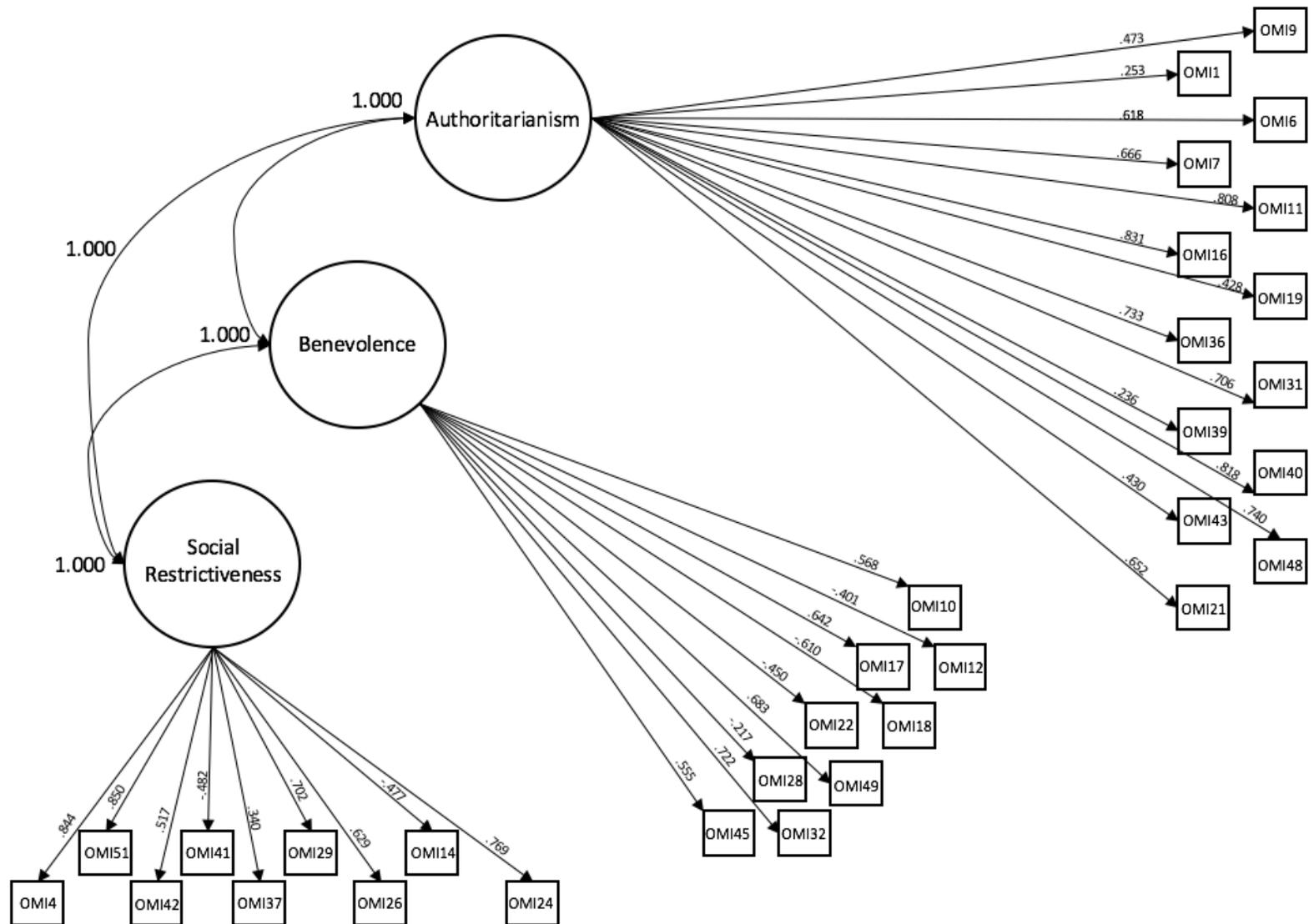|			
OMI-26 - Many mental patients are capable of skilled labor, even though in some ways they are very disturbed mentally.	2.38 (1.214)	1.171	1.169
OMI-29 - The mental illness of many people is caused by the separation or divorce of their parents during childhood.	4.69 (1.237)	-.740	-.196
OMI-31 - To become a patient in a mental hospital is to become a failure in life.	5.52 (.948)	-2.700	7.939
OMI-32 - The patients of mental hospitals should be allowed more privacy	2.59 (1.131)	.725	.421
OMI-36 - The law should allow a woman to divorce her husband as soon as he has been confined in a mental hospital with severe mental illness.	4.19 (1.441)	-.419	-.796
OMI-37 - People who are unable to work because of mental illness should receive money for living expenses.	2.22 (1.031)	.965	1.374
OMI-38 - Mental illness is usually caused by some disease of the nervous system.	3.83 (1.279)	-.193	-.408
OMI-39 - Regardless of how you look at it, patients with severe mental illness are no longer really human.	5.63 (.866)	-3.051	10.266
OMI-40 - Most women who were once patients in a mental hospital could be trusted as baby sitters.	3.17 (1.284)	.114	-.524
OMI-41 - Most patients in mental hospitals don't care how they look.	4.68 (1.051)	-1.159	2.105
OMI-42 - College Professors are more likely to become mentally ill than are businessmen.	4.80 (1.085)	-.822	.899
OMI-43 - Many people who have never been patients in a mental hospital are more mentally ill than many hospitalized mental patients.	3.61 (1.273)	.017	-.540
OMI-45 - Sometimes mental illness is punishment for bad deeds.	5.47 (1.055)	-2.396	5.223
OMI-48 - There is little that can be done for patients in a mental hospital except to see that they are comfortable and well fed.	5.16 (1.067)	-1.755	3.516
OMI-49 - Many mental patients would remain in the hospital until they were well, even if the doors were unlocked.	3.61 (1.259)	-.196	-.561
OMI-51 - All patients in mental hospitals should be prevented from having children by a painless operation.	5.40 (1.009)	-2.085	4.473

Figure 2. Confirmatory Factor Analysis: Proposed 3-factor structure for the Opinions of Mental Illness Questionnaire (OMI; Struening & Cohen, 1963). Standardized pattern coefficients are presented.

Perceived Stigma Questionnaire

The 12-item The Devaluation and Discrimination subscale within the Perceived Stigma Questionnaire (PSQ; Link, 1989) was utilized in this study. The following steps were conducted to obtain an adequate model to utilize for further analyses: 1) A confirmatory factor analysis was conducted based on the proposed factor structure from previous literature. 2) An exploratory factor analysis was conducted after the CFA revealed poor model fit. 3) A bifactor model with one general factor and two group factors was tested after the previous EFA extracted a two-factor structure, where both factors were highly correlated. 4) After examining the bifactor rotation, a model with one general factor and two group factors was retained. The general factor from this model was utilized for further analyses. Details on this process is explained below.

The Devaluation and Discrimination subscale was proposed of a one-factor model which was evaluated through a confirmatory factor analysis. Item 1 of the scale was fixed to one to serve as the marker indicator, as this item was most semantically and theoretically aligned with the overall meaning of the factor. The model fit of the one-factor model was poor (χ^2 (54)= 301.05; p<0.0001; RMSEA=0.126; CFI=0.934; TLI=0.919. Therefore, an exploratory factor analysis with oblique rotation (geomin) was conducted. Researchers have argued that though the "eigenvalue rule of 1" method can provide a general idea of what may be an appropriate number of factors to extract in an EFA, this should not be the preferred method as it may provide erroneous information (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Costello & Osborne, 2005). Because of this, scree plot and parallel analysis were used as the primary methods to determine how many factors to extract as well. Scree plot and parallel analysis both suggested the extraction of a two-factor model. Indices of the two-factor model was further evaluated. The two-factor model presented with acceptable fit (χ^2 (43)=114.21; p<0.0001; RMSEA=0.076,

CFI=0.981; TLI=0.971), where the two factors were highly correlated (0.71; p<0.001; Brown, 2015).

Because the two factors in the model were highly correlated, a bifactor model was tested to determine whether the 12 items of the PSQ loaded onto a general factor (Devaluation and Discrimination) in addition to two group factors (Zinbarg, Yovel, Revelle, & McDonald, 2006). Thus, an exploratory factor analysis extracting one general and two group factors through bifactor rotation criterion was examined. The goodness of fit indices suggested good model fit (χ^2(33)=54.345; p<0.0001; RMSEA=0.048, CFI=0.994; TLI=0.989). The general factor represents the original "devaluation and discrimination" factor, consistent with the literature which suggests that this construct should be treated as a unidimensional factor (Link, 1989). When examining the items that loaded onto each of the group factors, it was found that the first group factor was consistent with the "devaluation" items, where the items focused on whether an individual values the positive qualities someone with mental illness may possess. The second group factor was consistent with the "discrimination" aspect of the scale, where items focused on treating an individually differently based on whether they are diagnosed with mental illness or not.

Cronbach's alpha revealed acceptable reliability ($\alpha = 0.84$) (Gliem & Gliem, 2003). Further, omega hierarchical reliability estimates were calculated to determine the reliability of this scale (Zinbarg, Yovel, Revelle, & McDonald, 2006). The omega coefficients were calculated utilizing the Omega computer software program (Watkins, 2013). In regard to the bifactor model, the general factor for devaluation discrimination subscale was characterized by adequate reliability ($\omega h = 0.86$). However, the two group factors revealed weak reliability ($\omega h = 0.66$; $\omega h = 0.64$ respectively). Group factors are often the result of residual variance unexplained by the

general factor (Kim & Mueller, 1978). Therefore, the correlation between the general and group factors are fixed to be 0. Based on this, it was decided to utilize the general factor for the measurement model as a unidimensional "devaluation discrimination" factor remaining consistent with previous literature (Link, 1989).

Table 9

Means, Standard Deviations, Skewness, and Kurtosis for Items from the Perceived Stigma Questionnaire (PSQ; Link, 1989)

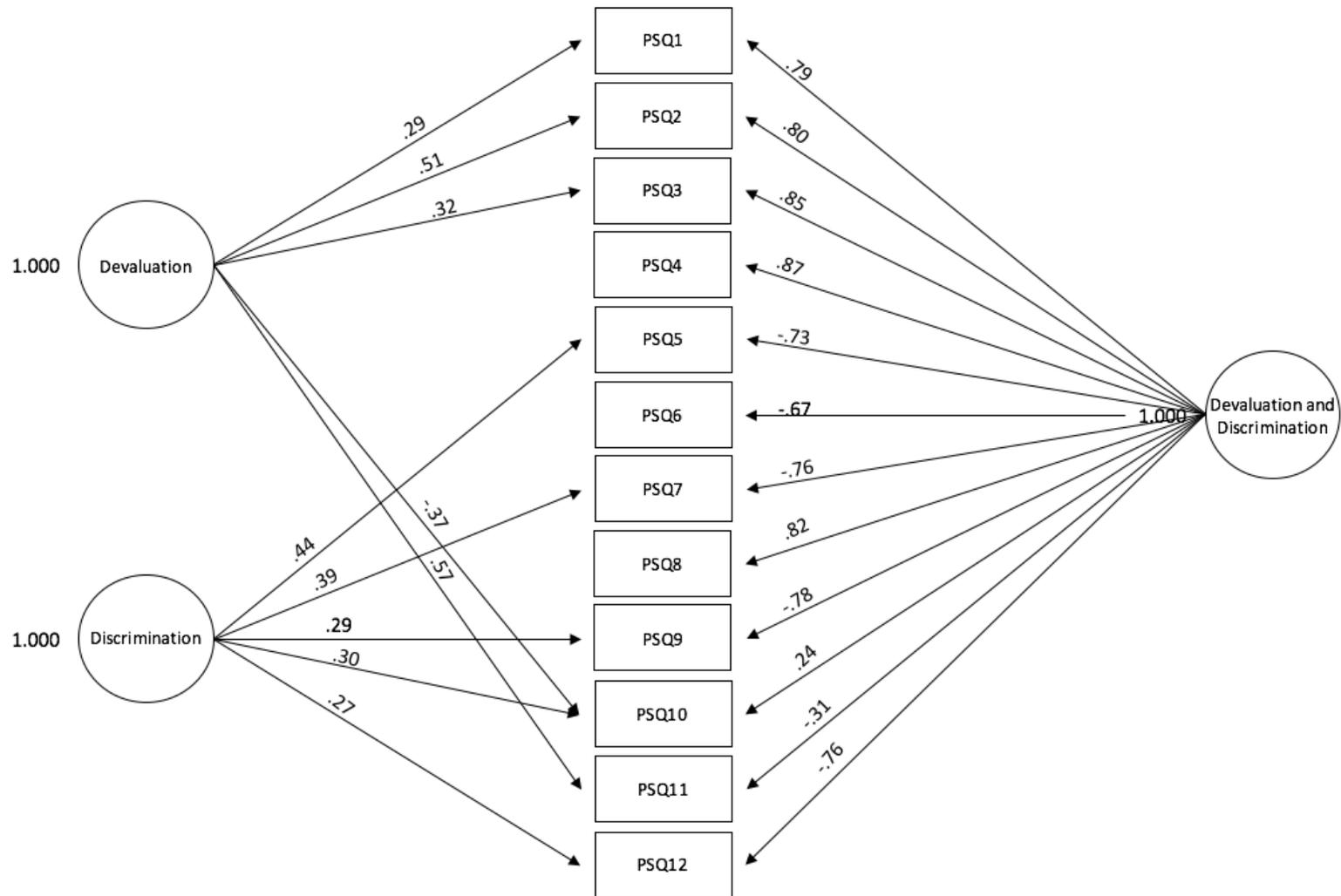| Items	Mean (SD)	Skewness	Kurtosis
PSQ-1 - I would willingly accept an individual who receives mental health services as a close friend.	5.36 (1.103)	-2.31	5.169
PSQ-2 - I would believe that a person who has been in a mental hospital is just as intelligent as the average person.	5.46 (1.001)	-2.470	6.908
PSQ-3 - I believe that an individual who receives mental health services is just as trustworthy as the average person.	5.21 (1.061)	-1.537	2.507
PSQ-4 - I would accept a fully recovered individual who receives mental health services as a teacher of young children in a public school.	4.94 (1.294)	-1.307	1.191
PSQ-5 - I believe that entering a mental hospital is a sign of personal failure.	1.55 (1.166)	2.568	6.164
PSQ-6 - I would not hire an individual who receives mental health services to take care of my children even if he/she has been well for some time.	2.48 (1.453)	.850	-.184
PSQ-7 - I think less of a person who has been in a mental hospital.	1.79 (1.312)	1.978	3.233
PSQ-8 - I would hire an individual who receives mental health services if he or she is qualified for the job.	5.21 (1.120)	-1.862	3.752
PSQ-9 - I would pass over the application of an individual who receives mental health services in favor of another applicant.	1.97 (1.268)	1.477	1.618
PSQ-10 - Most people in my community would treat a person who receives mental health services just as they would treat anyone else.	3.22 (1.487)	.249	-.934
PSQ-11 - Most young people would be reluctant to date someone who has been hospitalized for a serious mental disorder.	3.80 (1.300)	-.297	-.655
PSQ-12 - Once I know a person is in a mental hospital. I will take his or her opinion less seriously.	1.91 (1.277)	1.703	2.431

Figure 3. Exploratory Factory Analysis: Bifactor structure for the Perceived Stigma Questionnaire (PSQ; Link, 1989). Standardized pattern coefficients are presented.

Help Seeking Questionnaire – Mental Health Problems

The General Help Seeking Questionnaire (HSQ; Wilson et al., 2005) examines informal and formal help seeking within two specific areas: a) mental health problems and b) suicidal thoughts. Wilson, Deane and Ciarrochi (2005) proposed that the HSQ can be treated as two separate scales, to examine help seeking across different levels of psychological symptomology (i.e. mild to severe). Both of these scales (Mental Health Problems and Suicidal Thoughts) were proposed to have two factors, a) informal and b) formal help seeking. For the "mental health problems" scale (comprised of the first eight items of the HSQ), items 1 and 4 were fixed to one to serve as the marker indicators for each factor, as they represented the items that were most semantically and theoretically aligned with the overall meaning of the factors (informal and formal help seeking, respectively). The two-factor model was evaluated through a confirmatory factor analysis, revealing a poor model fit ($\chi^2(19)$=73.11; p<0.0001; RMSEA=0.099; CFI=0.879; TLI=0.821). One theoretically supported post-hoc modification was made. Specifically, item HS7 (religious leader) was moved from the informal factor to the formal factor (MI = 28.438; the remaining MIs were lower than 23.150). This item loaded onto to the informal factor with a low loading (0.193). Additionally, this item was highly correlated with two other items from within the formal factor (HS5: Phone Helpline; HS6: Doctor/General Practitioner). Furthermore, decades of literature suggest that religious leaders often do not provide the same level of comfort that one may obtain from their family or social circle (Bhugra, 1989; Nguyen, Yamada & Dinh, 2012). Additionally, research suggests that though there are benefits to spirituality and religion as a means of coping, individuals who are experiencing emotional distress may feel

judged after expressing their concerns to leaders within their respective religions

(Bhugra, 1989; Nguyen, Yamada & Dinh, 2012; Argyle & Beit-Hallahmi, 2013). With

these considerations, it was decided to move HS7 (Religious Leader) to the formal factor.

This item produced a higher loading when moved to the formal factor (0.319) and the

modified model revealed acceptable fit indices (χ^2(19)=44.58; p<0.001; RMSEA=0.068;

CFI=0.943; TLI=0.916). This finding suggests that when an individual is experiencing

mental health problems, they may in fact consider a religious leader (i.e. priest, rabbi,

chaplain, etc.) a formal source of support rather than an informal source of support. The

two factors within the "mental health problems" subscale of the HSQ were poorly

correlated (0.22; p=0.001). Additionally, a reliability analysis was conducted to ensure

that the factors within the HSQ were suitable for interpretation. Cronbach's alpha

revealed acceptable reliability for the informal factor (α = 0.727) as well as the formal

factor (α = 0.735).

Table 10

Means, Standard Deviations, Skewness, and Kurtosis for Items from the Mental Health Problems subscale of the General Help Seeking Questionnaire (HSQ; Wilson et al., 2005)

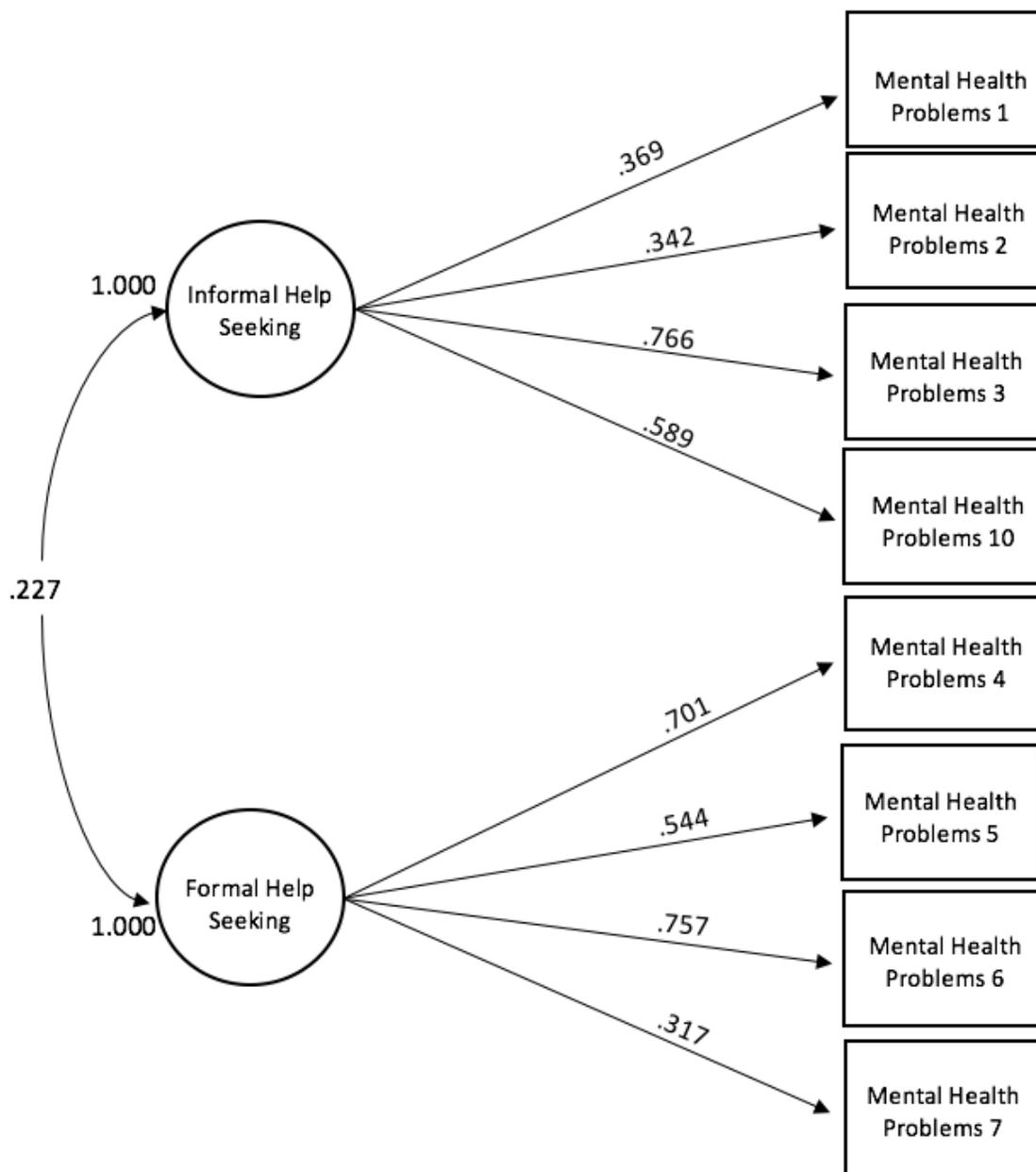| Items	Mean (SD)	Skewness	Kurtosis
HS-1 - Intimate partner (e.g., girlfriend, boyfriend, husband, wife, de facto)	5.69 (1.573)	-.798	1.439
HS-2 - Friend (not related to you)	5.33 (1.539)	-.121	.313
HS-10 - Parent	4.43 (1.956)	-006	-.529
HS-3 - Other family member/relative	3.84 (1.926)	.410	-.282
HS-4 - Mental Health Professional	4.62 (1.891)	.018	-.443
HS-5 - Phone Helpline	2.37 (1.526)	1.171	1.346
HS-6 - Doctor/General Practitioner	3.82 (1.849)	.352	-.154
HS-7 - Religious Leader	2.18 (1.610)	1.311	1.042

Figure 4. Proposed 2-factor structure for the Mental Health Problems subscale of the General Help Seeking Questionnaire (HSQ; Wilson et al., 2005). Standardized pattern coefficients are presented.

Help Seeking Questionnaire – Suicidal Thoughts

The second subscale with the General Help Seeking Questionnaire, Suicidal Thoughts, is comprised of the last eight items of the HSQ, as was also proposed to have two factors, informal and formal help seeking. For the "suicidal thoughts" scale (comprised of the last eight items of the HSQ), items 1 and 4 were fixed to one to serve as the marker indicators for each factor, as they represented the items that were most semantically and theoretically aligned with the overall meaning of the factors (informal and formal help seeking, respectively). The original two-factor model was evaluated through a confirmatory factor analysis, also revealing a poor model fit $(\chi^2(19) = 68.36;$ p<0.0001; RMSEA=0.095; CFI=0.947; TLI=0.922). Residual correlation of several items were suggested through modification indices. Most of these suggestions were not theoretically grounded. However, two suggestions were further explored. Specifically, two of the suggestions involved residual correlations with items within the same factor: a) items HS_S3 (other relative or family member) with HS_S1 (intimate partner) within the informal factor and b) HS_S7 (religious leader) with HS_S6 (doctor/general practitioner within the formal factor. Rickwood, Deane, Wilson and Ciarrochi (2005) explored patterns of help seeking for mental health from young individuals. These researchers suggested that adolescents and adults have similar patterns of help seeking with their relatives and intimate partners (i.e. are more likely to seek help from informal sources). Similarly, seeking help from religious leaders was comparable to professional sources of help, such as doctors or mental health professionals (Rickwood et. al, 2005). Lei and Wu (2007) explained that researchers should only make modifications of this nature if they are supported by strong substantive theories (Byrne, 1998). In this

particular case, these two modifications were retained due to strong theoretical support.

The remaining modification indices did not provide any theoretical justification.

The modified model showed acceptable fit indices ($\chi^2(19)=42.14$, p<0.001; RMSEA=0.072; CFI=0.973; TLI=0.955). The two factors within the "suicidal thoughts" subscale were highly correlated (0.616; p<0.001). Additionally, a reliability analysis was conducted to ensure that the factors within the HSQ were suitable for interpretation. Cronbach's alpha revealed acceptable reliability (Gliem & Gliem, 2003) for the informal factor ($\alpha = 0.733$) and the formal factor ($\alpha = 0.731$).

Table 11
Means, Standard Deviations, Skewness, and Kurtosis for Items from the Suicidal Thoughts subscale of the General Help Seeking Questionnaire (HSQ; Wilson et al., 2005)

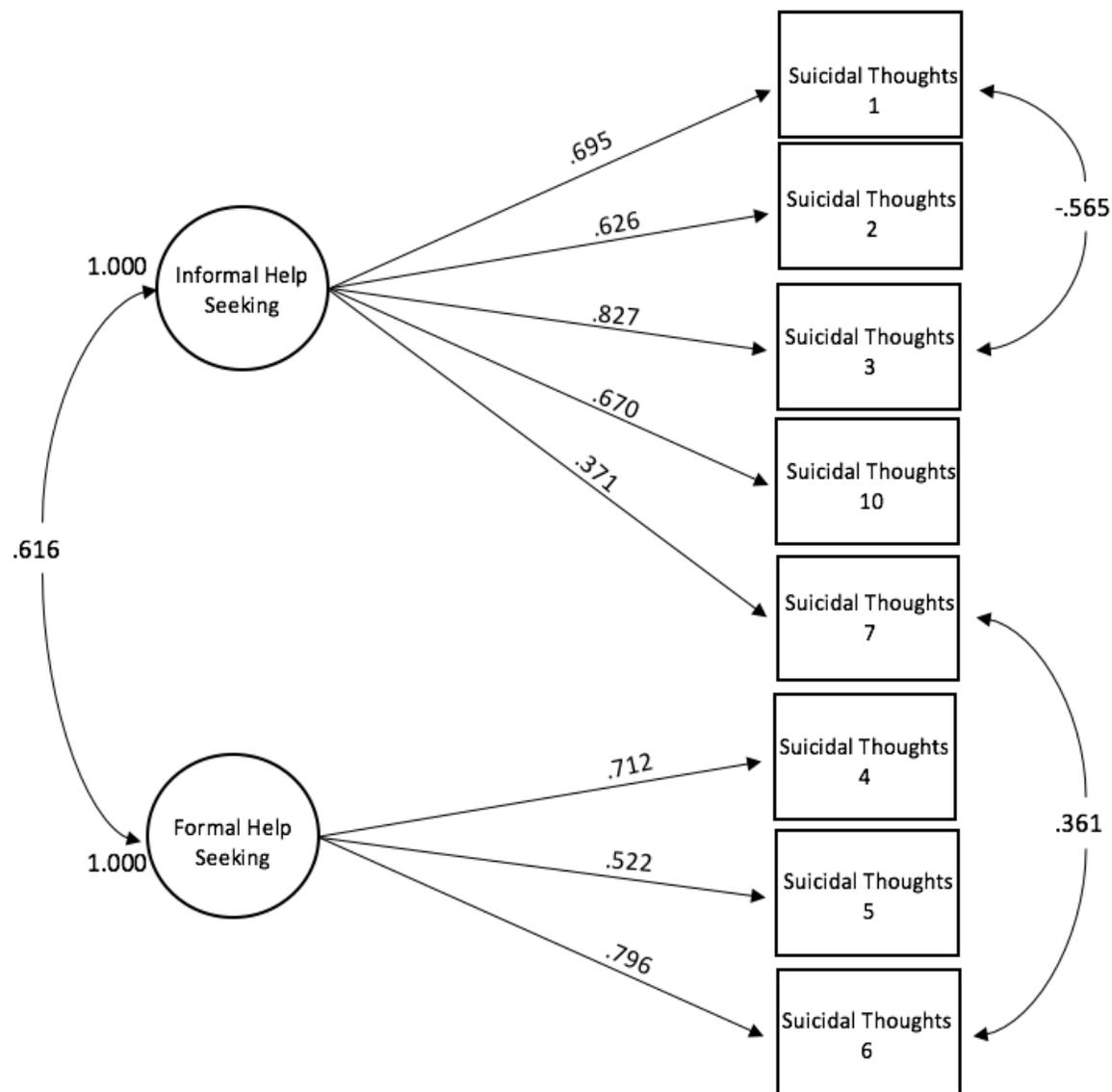| Items	Mean (SD)	Skewness	Kurtosis
HSS-1 - Intimate partner (e.g., girlfriend, boyfriend, husband, wife, de facto)	4.96 (1.737)	-.472	.028
HSS-2 - Friend (not related to you)	4.74 (1.887)	-.038	-.446
HSS-10 - Parent	4.18 (2.441)	.176	-1.182
HSS-3 - Other family member/relative	3.89 (2.567)	.403	-1.173
HSS-4 - Mental Health Professional	4.80 (1.666)	-.455	.110
HSS-5 - Phone Helpline	4.10 (2.522)	.258	-1.231
HSS-6 - Doctor/General Practitioner	4.43 (2.405)	.130	-1.163
HSS-7 - Religious Leader	2.73 (2.481)	1.202	-.034

Figure 5. Proposed 2-factor structure for the Suicidal Thoughts subscale of the General Help Seeking Questionnaire (HSQ; Wilson et al., 2005). Standardized pattern coefficients are presented.

Specification of the Measurement Model

Following individual CFAs for each of the aforementioned scales, and prior to running the structural equation model, a measurement model of two factors was tested. These two factors included a) negative perceptions of mental illness and b) help seeking behaviors. The first factor, negative perceptions of mental illness, was composed of four indicators (factor scores). These four indicators included authoritarianism, benevolence and social restrictiveness from the Opinions of Mental Illness Questionnaire as well as devaluation and discrimination from the Perceived Stigma Questionnaire. In combination, these four indicators created the negative perceptions of mental illness factor. The second factor, help seeking behaviors, was composed of four indicators. These indicators included informal and formal help seeking for mental health problems, and informal and formal help seeking for suicidal thoughts.

Because all the variables in the measurement model consisted of factor scores obtained from the CFAs (see above sections), the variables are considered to be continuous standardized variables (Muthén & Muthén, 2012). For this reason, Maximum Likelihood with Robust Standard Error (MLR) was implemented to perform the analysis (Muthén & Muthén, 2012). The model fit was poor (χ^2(19)=130.557; p<0.001; RMSEA=0.143; CFI=0.936; TLI=0.906) ((Hu & Bentler 1999). Once again, several residual correlations were suggested, most of which were not retained due to a lack of theoretical justification. However, one suggestion was further explored. Specifically, the Mental Health Problems 1 factor (informal help seeking for mental health problems) was suggested to be correlated with with the Suicidal Thoughts 1 factor (informal help seeking for suicidal thoughts). On the original factor analysis, these two factors were

combined to create an overall informal help seeking factor (Wilson, Deane, Ciarrochi, 2005). Additionally, these two factors are semantically very similar, as they are assessing the same mode of help seeking across severity of psychological symptomology (mild to severe). Therefore, they are naturally highly correlated and the relationship between these two factors may not be fully explained or accounted for by the overall factor. That is, other factors may explain the association between these two factors. Specifically, researchers have suggested that family, friends and relatives are typically the first people a large proportion of individuals will seek help from prior to seeking professional help (Rickwood, Wilson, Deane, Ciarrochi, 2005). With strong theoretical and empirical justification, this modification index was retained (Hox & Mass, 2001). The model improved significantly (χ^2(18)=39.021; p=0.002; RMSEA=0.064; CFI=0.988; TLI=0.981). However, the suicidal thoughts informal help seeking factor indicated a factor loading greater than 1.00, resulting in a negative residual variance (Heywood Case). Because the negative residual variance was not statistically significant, it was fixed at 0 (Dillon, Kumar & Mulani, 1987). This did not change the overall model fit. The remaining modification indices did not provide any theoretical justification, thus were not retained.
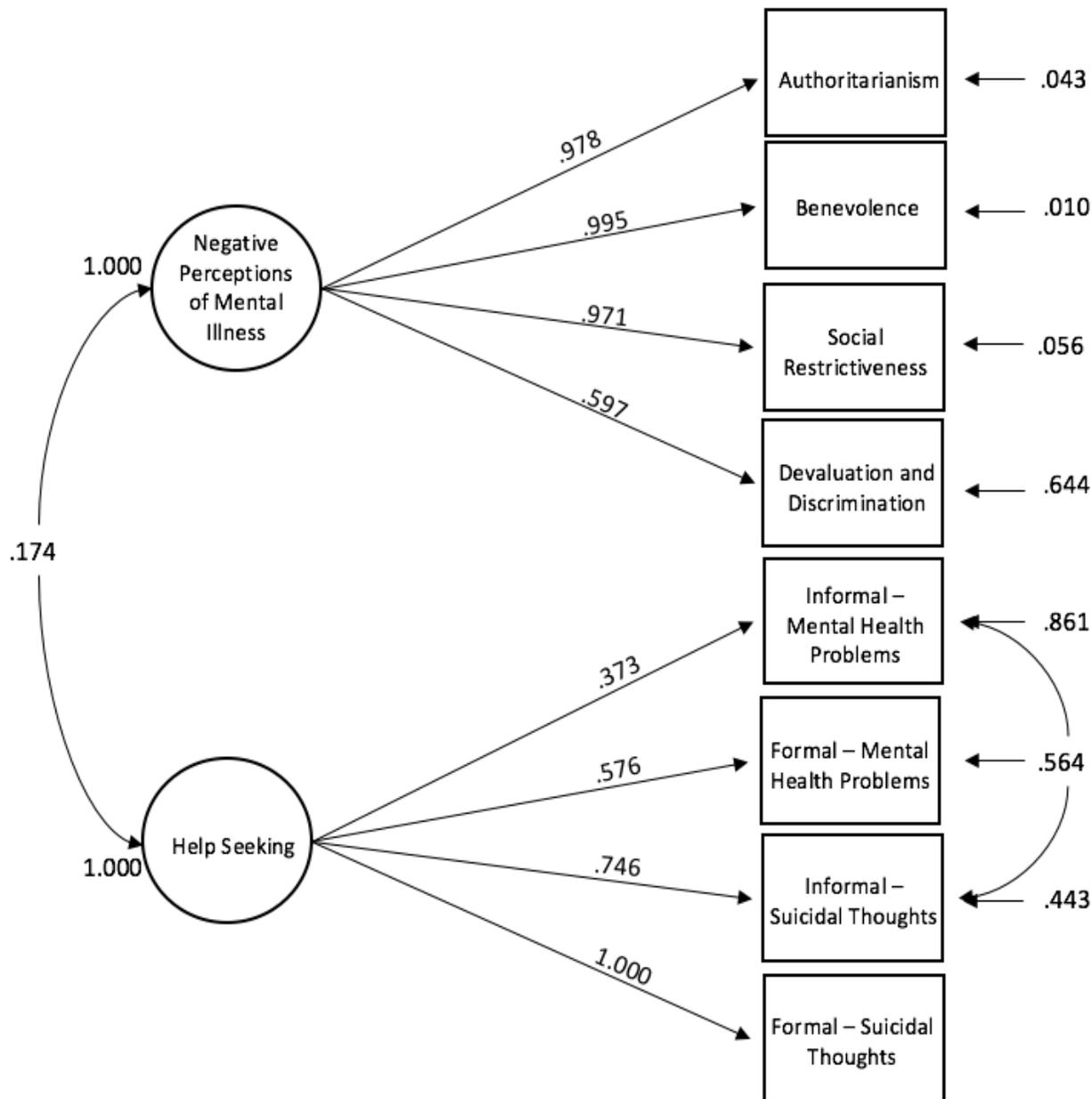
Figure 6. Proposed measurement model. Standardized pattern coefficients are presented.

Structural Equation Model

Model Fit for Overall Sample

Following analysis of the measurement model, the SEM was added utilizing the identified factors and Maximum Likelihood with Robust Standard Error (MLR) was implemented to perform the analysis in Mplus (Version 7.3; Muthén & Muthén, 2012). In summation, the "negative perceptions of mental illness" factor was comprised of four factors: authoritarianism, benevolence, social restrictiveness, and devaluation and discrimination. The help seeking factor was comprised of four factors: informal help seeking for mental health problems, formal help seeking for mental health problems, informal help seeking for suicidal thoughts and formal help seeking for suicidal thoughts. The two factors together illustrate a relationship where negative perceptions of mental illness impact help seeking across the sample being examined.

A visual summary of the full structural equation model with direct effects is presented in Figure 7. Results revealed an overall small, yet significant association between the two variables being examined (negative perceptions of mental illness and help seeking behaviors) (F^2 = .174). This indicates that across the entire sample, this association exists for both South Asian and White/European American participants (χ^2(19)=42.124, p<0.001, RMSEA=0.065, CFI=0.987; TLI=0.981).
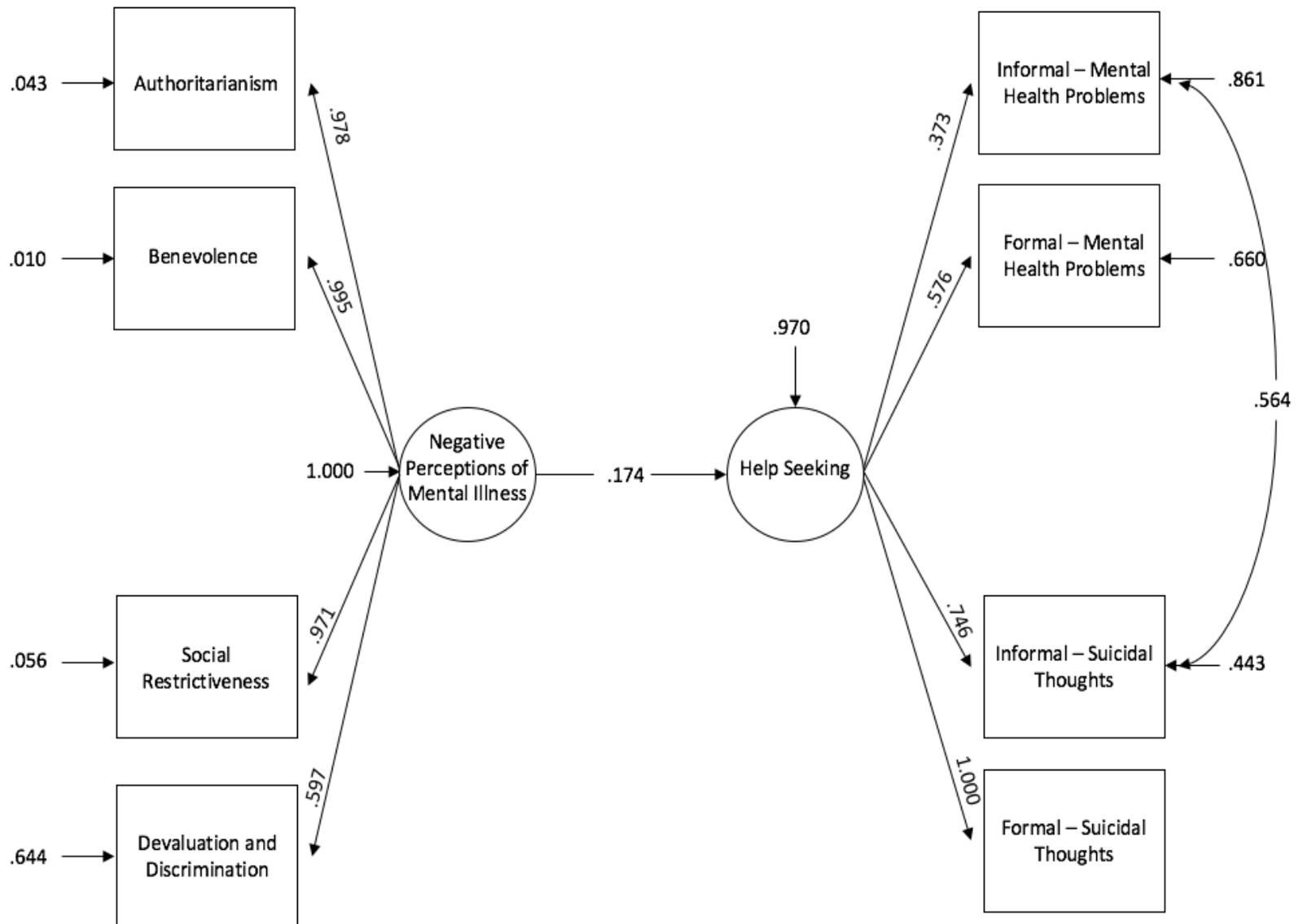
Figure 7. Structural equation model examining association for entire sample. Standardized pattern coefficients are presented.

Multigroup Structural Equation Model

To compare the relationship between negative perceptions of mental illness and help seeking behaviors across South Asians and White/European Americans, a multiple-group analysis was performed. Specifically, the following multistep process was conducted: 1) Two parallel SEMs were conducted to examine differences model fit across race (South Asians versus White/European Americans). 2) The measurement model was tested to assess equivalence across the two groups. 3) To test the equivalence of the measurement model, the configural, metric and scalar invariance was assessed. Details on this process is explained below.

Firstly, to compare model fit across racial groups being examined (South Asians and White/European Americans), Maximum Likelihood with Robust Standard Error (MLR) was implemented to perform multiple group structural equation modeling analysis in Mplus (Version 7.3; Muthén & Muthén, 2012). Two parallel SEMs were conducted to examine differences model fit across race (South Asians versus White/European Americans) according to the factors identified above: "negative perceptions of mental illness" and "help seeking" (see Figure 8 and 9 below).

A visual summary of both of the structural equation models for South Asians and White/European Americans with direct effects is presented in Figure 8 and 9. Results revealed similar fit indices, indicating that across the two groups examined, the model fit described above remained fairly consistent. The model fit for White/European Americans was as follows: ($\chi^2(24)=35.065$, p<0.001, RMSEA=0.052, CFI=0.991; TLI=0.987). The model fit for South Asians was as follows: ($\chi^2(24)=32.828$, p<0.001, RMSEA=0.057, CFI=0.991; TLI=0.986). Additionally, the association between the two

latent factors was assessed and compared across groups. The fit between the two groups

changed slightly. The estimates for White/European American were significant while

estimates for the South Asian group were not.

Furthermore, the measurement model was tested to assess equivalence across the

two groups, which revealed that the loadings were the same. To test the equivalence of

the measurement model, the configural, metric and scalar invariance was assessed. The

configural model assumes that the baseline model has no between-group invariance

constraints on estimated parameters (Marsh, 1994), therefore permitting different

parameter values across groups. This model is important as it provides the basis for

comparison with all subsequent models testing for invariance across groups (Bollen,

1989). The metric model is more restrictive than the baseline model, as factor pattern

coefficients are constrained to be equal across groups. These coefficients carry

information about the relationship between latent and observed scores (Steenkamp &

Baumgartner, 1998). The scalar model assumes that group differences in the means of the

observed items should be a result of differences in the means of the means of the

underlying constructs. To test for scalar invariance, intercepts of the items should be

constrained to remain the same across groups (Meredith, 1993). To establish invariance,

chi-square, CFI and RMSEA of the configural model versus the metric model was

compared to determine whether the loadings were the same across groups (Hong, Malik

& Lee, 2003). Due to the chi-square test's sensitivity to sample size, researchers

recommended reporting multiple fit indices in structural equation modeling studies (Hu

& Bentler, 1995; Thompson, 2000). Furthermore, the metric model versus the scalar

model was compared to establish equivalence of the intercepts across groups (Hong,

Malik & Lee, 2003). Non-statistically significant comparisons would indicate equivalence. In the case of significant comparisons (p<.0.05), partial equivalence was considered, where single parameters are freely estimated across the two groups. Scholars have argued that full metric/scalar invariance is not necessary for further tests of invariance and analysis to be meaningful, so long as one item is invariant (Bryne, Shavelson & Muthen, 1989; Steenkamp & Baumgartner, 1998). For this reason, analyses were continued on the basis of partial scalar invariance.

The comparison between the configural model and metric model (p=0.23) was not statistically significant, suggesting that the factor loadings are equal across the two groups. The comparison between metric and scalar, however, was statistically significant (p=0.03) according to the chi-square statistic. When examining the change in CFI and RMSEA, however, all comparisons were found to be less than 0.01, indicating that invariance exists across the groups (French & Finch, 2016). This finding suggests that regardless of whether pattern coefficients are constrained or not, South Asians and White European/Americans exhibit similar patterns of perceptions of mental illness and help seeking behaviors. Due to chi-square's sensitivity to sample size (Hu & Bentler, 1995; Thompson, 2000), partial invariance was not further examined as this finding was not further confirmed by the change in the CFI and RMSEA. Primary results support invariance across the two groups being examined. Parameter estimates and comparisons are available in Tables 12-15 below.
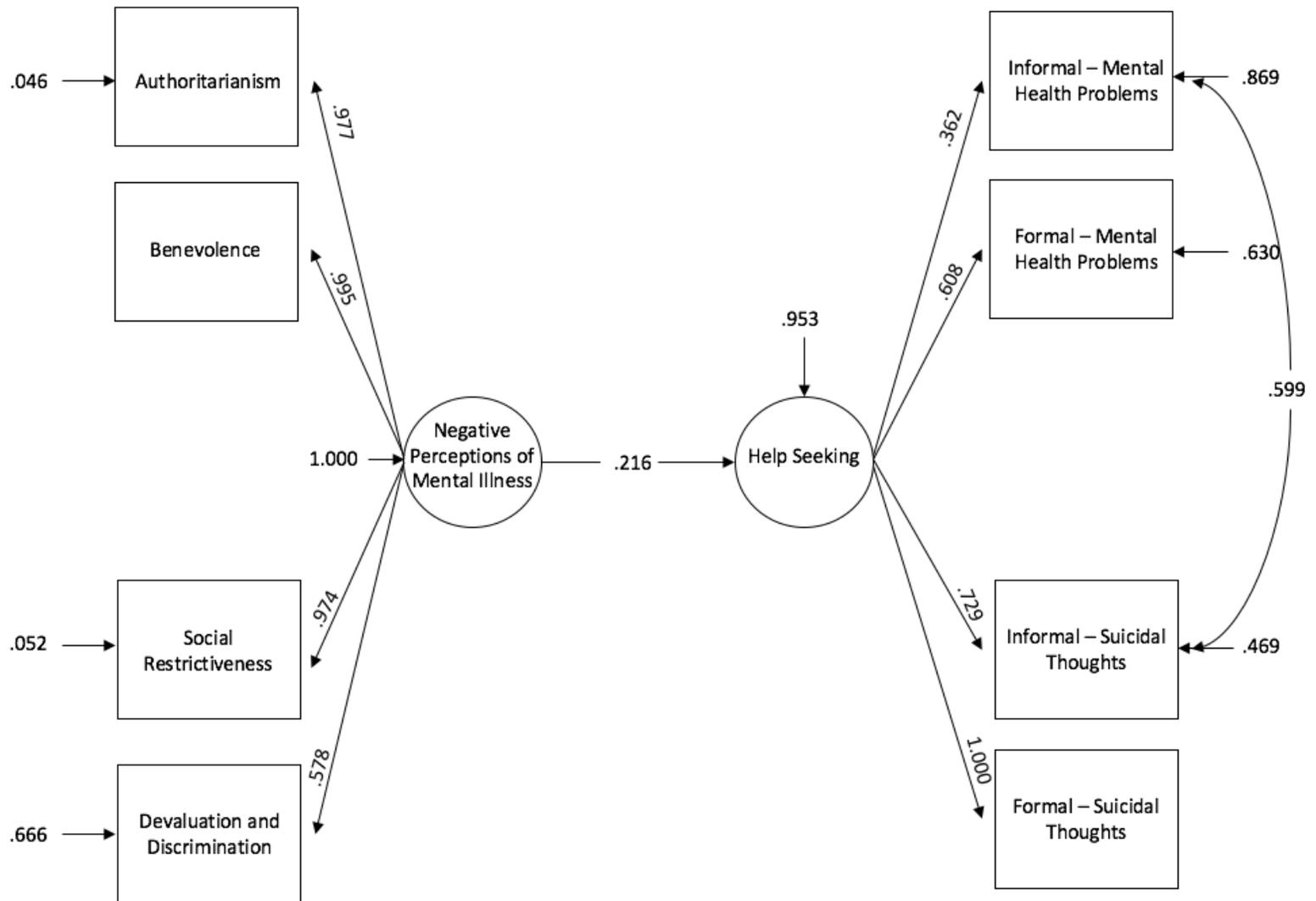
Figure 8. Structural equation model examining association for White/European American group. Standardized pattern coefficients are presented.
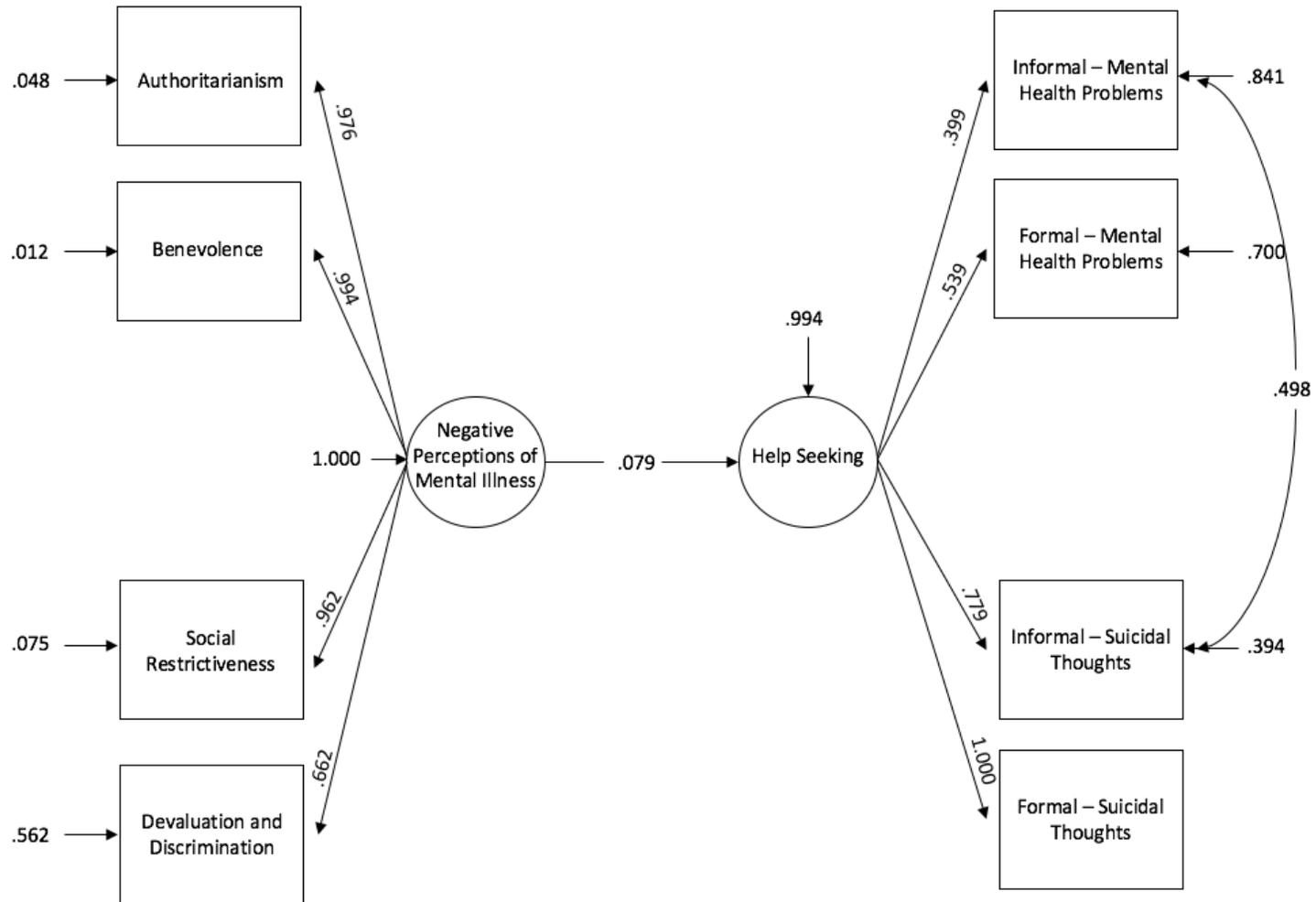
Figure 9. Structural equation model examining association for South Asian group. Note: Regression coefficient (.079) is non-significant. Standardized pattern coefficients are presented.

Table 12
Measurement Model Comparisons

	X^2 (df) (p)	ΔX^2 (df) (p)	CFI	ΔCFI	TLI	RMSEA	ΔRMSEA
Configural	82.175(50) (0.003)	-	0.986	-0.002	0.979	0.073	-0.003
Metric	91.768(57) (0.002)	9.32(7) (0.23)	0.984	-0.004	0.980	0.070	0.004
Scalar	107.426(64) (0.0006)	15.96(7) (0.03)	0.980	-	0.978	0.074	-

Note. RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker- Lewis index.

Table 13
Standardized Parameter Estimates for the Configural Model

Factor	Negative Perceptions Factor Loading		Help Seeking Factor Loading		Indicator Intercepts	
	White	South Asian	White	South Asian	White	South Asian
Authoritarianism	0.977	0.976			0.219	-0.397
Benevolence	0.996	0.993			0.209	-0.366
Social Restrictiveness	0.973	0.965			0.181	-0.315
Devaluation/Discrimination	0.529	0.703			0.031	-0.193
Mental Health Problems (Informal)			0.310	0.475	-0.015	0.059
Mental Health Problems (Formal)			0.613	0.526	0.097	-0.129
Suicidal Thoughts (Informal)			0.724	0.786	-0.013	0.020
Suicidal Thoughts (Formal)			1.000	1.000	0.034	-0.077

Table 14

Standardized Parameter Estimates for the Metric Model

Factor	Negative Perceptions Factor Loading		Help Seeking Factor Loading		Indicator Intercepts	
	White	South Asian	White	South Asian	White	South Asian
Authoritarianism	0.977	0.976			0.220	-0.394
Benevolence	0.995	0.993			0.209	-0.365
Social Restrictiveness	0.974	0.964			0.180	-0.319
Devaluation/Discrimination	0.591	0.677			0.030	-0.205
Mental Health Problems (Informal)			0.365	0.403	-0.014	0.061
Mental Health Problems (Formal)			0.606	0.540	0.098	-0.128
Suicidal Thoughts (Informal)			0.731	0.782	-0.012	0.020
Suicidal Thoughts (Formal)			1.000	1.000	0.035	-0.078

Table 15

Standardized Parameter Estimates for the Scalar Model

Factor	Negative Perceptions Factor Loading		Help Seeking Factor Loading		Indicator Intercepts	
	White	South Asian	White	South Asian	White	South Asian
Authoritarianism	0.977	0.976			-0.313	-0.366
Benevolence	0.996	0.994			-0.313	-0.365
Social Restrictiveness	0.973	0.962			-0.309	-0.357
Devaluation/Discrimination	0.579	0.662			-0.205	-0.274
Mental Health Problems (Informal)			0.362	0.339	-0.002	-0.003
Mental Health Problems (Formal)			0.608	0.539	-0.025	-0.021
Suicidal Thoughts (Informal)			0.729	0.779	-0.043	-0.045
Suicidal Thoughts (Formal)			1.000	1.000	-0.080	-0.078

Subsequent Regression and Univariate Analyses

Examining Gender Differences in South Asians

To determine differences in perceptions of mental illness across gender within the South Asian group, a simple linear regression was calculated. Specifically, items from the perceived stigma questionnaire were computed to create a "total stigma" variable, where higher scores indicate a more positive perception of individuals with mental illness; items were reverse scored as necessary. Linear regression analysis indicated that approximately 5.4% of the variation in perceptions of mental illness is explained by gender for South Asian participants; it should be noted that this small effect size may be due to the sample size disparity between male and female respondents (R^2=054, $F(1,111)$=6.323, p=.013; see Table 16). On average, there is a difference of (β = -4.53) between males and females, with females having a more positive view of individuals with mental illness.

Due to the discrepancy between male and female participants, additional univariate analyses also were conducted to further examine gender differences across the South Asian group. There was a statistically significant difference between groups (female and male) as determined by the one-way ANOVA ($F(4, 341) = 6.532$, p = .000). A Tukey post hoc test revealed that South Asian male respondents had a significantly more negative perception of individuals with mental illness than their South Asian female counterparts (p = .000; see Table 17). Once again, these results should be interpreted with caution due to limited sample size.

Table 16
Simple Linear Regression: Perceptions of Mental Illness Across Gender in South Asians

	β	F(df)	R^2	Sig.
Constant	57.878	F(1, 111) = 6.323	.054	.013
Gender	4.530			

Table 17
One-Way Analysis of Variance of Perceptions of Mental Illness Across Gender in South Asians

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	2092.554	4	523.138	6.53	.000	.077
Within Groups	27308.304	341	80.083			
Total	29400.858	345				

Perceptions of Mental Illness across Race

Univariate analyses were also conducted to see differences in perceptions of

mental illness across three racial groups (South Asians, N=114; White/European

Americans, N=176; and Black/African Americans, N=65). These analyses were

conducted to incorporate the data from the Black/African American participants, as there

was not a large enough sample size to include this group in the structural equation model.

Results revealed a statistically significant difference between groups, (F(2,344) = 3.783,

p = .024). A Tukey post hoc test revealed that White/European participants had more

positive perceptions of mental illness than Black/African American participants; this

difference approached but did not reach statistical significance (p = .050; see Table 18).

The Tukey post-hoc test was chosen for all univariate analyses in this study due to the

design of the Tukey HSD test, which was created specifically to account for multiple

comparison (Maxwell & Delaney, 2003).

Table 18
One-Way Analysis of Variance of Perceptions of Mental Illness Across Race

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	633.722	2	316.886	3.783	.024	0.022
Within Groups	28815.663	344	83.766			
Total	29449.435	346				

Additionally, multiple univariate analyses and post hoc tests were conducted to examine differences of perceptions of mental illness and coping based on one's self-identified race. Specifically, participants in the study were randomly assigned a vignette condition based on the race they self-identified in the demographic section. Participants were either assigned a vignette matched with their own race or a vignette condition of a different race. Differences were examined to determine if racial groups perceived mental illness and coping differently depending on the race of the character they were assigned. In order to do this, items from each vignette condition (i.e. South Asian character, N=98; White/European American character, N = 113; East Asian character, N = 69; Black/African American character, N=68) were computed to create two new variables: a) perceptions of mental illness and b) coping. Results revealed no statistically significant differences across racial groups in regard to mental illness with the exception of one group: it was found that Black/African American participants perceived mental illness more negatively when they were presented with their own race compared to White/European participants (p = .003; see Table 22). Specifically, when Black/African American participants and White/European American participants were assigned the Black/African American vignette character, Black/ African American participants had a more negative perception of the character than their White/ European American counterparts. The effect size for this finding revealed that 20% of the variance is

accounted for by race. This indicates that 80% of the variance is a result of other factors, which is an important consideration. Furthermore, results revealed no statistically significant differences across racial groups in regard to coping. This indicates that regardless of the race of the respondent and the race of the character presented in the vignette, participants did not respond differently in terms of their perceptions of coping and help seeking (see Tables 23-26 below).

Table 19
One-Way Analysis of Variance of Perceptions of Mental Illness Across Race (South Asian Vignette)

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	101.644	2	50.822	2.453	.091	.052
Within Groups	1968.407	95	20.720			
Total	2070.051	97				

Table 20
One-Way Analysis of Variance of Perceptions of Mental Illness Across Race (White/European American Vignette)

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	49.813	2	24.906	1.317	.272	.024
Within Groups	2080.718	110	18.916			
Total	2130.531	112				

Table 21
One-Way Analysis of Variance of Perceptions of Mental Illness Across Race (East Asian Vignette)

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	17.239	2	8.619	.570	.568	0.018
Within Groups	921.699	61	15.110			
Total	938.938	63				

Table 22

One-Way Analysis of Variance of Perceptions of Mental Illness Across Race (Black/African American Vignette)

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	232.154	2	116.077	6.357	.003	0.20
Within Groups	1168.562	64	18.259			
Total	1400.716	66				

Table 23

One-Way Analysis of Variance of Perceptions of Coping Across Race (South Asian Vignette)

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	8.543	2	4.267	.282	.755	.006
Within Groups	1453.648	96	15.142			
Total	1462.182	98				

Table 24

One-Way Analysis of Variance of Perceptions of Coping Across Race (White/European American Vignette)

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	48.716	2	24.358	1.933	.149	.035
Within Groups	1398.407	111	12.598			
Total	1447.123	113				

Table 25

One-Way Analysis of Variance of Perceptions of Coping Across Race (East Asian Vignette)

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	25.499	2	12.749	1.220	.302	.038
Within Groups	679.251	65	10.450			
Total	704.750	67				

Table 26

One-Way Analysis of Variance of Perceptions of Coping Across Race (Black/African American Vignette)

	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between Groups	15.840	2	7.920	.588	.558	.018
Within Groups	875.027	65	13.462			
Total	890.868	67				

Research Questions

Research Question 1: Does the proposed model fit the data? In other words, do negative

perceptions of mental illness as defined here (i.e. authoritarianism, benevolence, social

restrictiveness, discrimination-devaluation) predict informal and formal help seeking

behaviors overall (across all racial and ethnic groups)?

The first research question being evaluated as part of this project asked whether

negative perceptions of mental illness (authoritarianism, benevolence, social

restrictiveness, discrimination-devaluation) predict informal and formal help seeking.

Structural equation modeling revealed a small, yet significant association between the

two variables being examined (negative perceptions of mental illness and help seeking).

Specifically, there is a positive association between these two variables. As expected, it

was found that as the predictor increases, the outcome increases as well. In other words, a

better or more positive perception of mental illness is associated with more likelihood of

seeking help for mental illness, regardless of whether the participant identified as South

Asian or White/European American (β = -.174; p = .000). This finding suggests that

when those individuals completing the survey exhibited more positive perceptions of

mental illness, they also displayed more positive perceptions of help seeking.

Additionally, the model fit for the entire sample was adequate ($\chi^2(19)$=42.124, p<0.001,

RMSEA=0.065, CFI=0.987; TLI=0.981), indicating that the model does indeed fit the

data, and negative perceptions of mental illness predict informal and formal help seeking

for the overall sample.

Research Question 2: Do the overall constructs of perceptions of mental illness and help-seeking (as defined above) and inter-relationships between these constructs differ as a function of race/ethnicity, as evidenced by changes in model fit?

The second research question sought to answer whether the model fit in the original structural equation model would change as a function of race, specifically between South Asians and White/European Americans. Multigroup analysis was performed to compare the relationship between negative perceptions of mental illness and help seeking behaviors across South Asians and White/European Americans. Firstly, two parallel SEMs were conducted between South Asians and White/European Americans. Results indicated that the model fit did not change significantly between the two groups. This suggests that regardless of whether a respondent self-identified as South Asian or White/European American, the model fit remained consistent. The model fit for White/European Americans was as follows: ($\chi^2(24)$=35.065, p<0.001, RMSEA=0.052, CFI=0.991; TLI=0.987). The model fit for South Asians was as follows: ($\chi^2(24)$=32.828, p<0.001, RMSEA=0.057, CFI=0.991; TLI=0.986).

Furthermore, configural, metric and scalar invariance was assessed to test the equivalence of the measurement model. Examining the change in CFI and RMSEA indicated that all comparisons were found to be less than 0.01, suggesting that no variance exists across both groups examined (French & Finch, 2016). This suggests that regardless of whether pattern coefficients are constrained or not, South Asians and White European/Americans exhibit similar patterns of perceptions of mental illness and help seeking behaviors. All other comparisons resulted in non-significance, indicating that factors, loadings and intercepts were largely equivalent across both groups.

Research Question 3: Do South Asians who have more negative perceptions of individuals with mental illness (i.e. authoritarianism, benevolence, social restrictiveness, discrimination-devaluation) have more negative attitudes towards informal and formal modes of help less than their non-South Asian counterparts (i.e. White/European American, Black/African American, East Asian)?

The third research question aimed to examine differences in perceptions of mental illness and help seeking in South Asians compared to other racial groups. Results revealed that compared specifically to White/European Americans, South Asian participants revealed similar patterns of perceptions of mental illness and help seeking (as noted in the above research question). This question was further examined through the original vignettes implemented in the study. Results revealed no significant differences in perceptions of mental illness or help seeking in South Asians compared to White/European Americans or Black/African American participants, regardless of which vignette condition was received. However, an interesting finding revealed that compared to White/European participants, Black/African American participants perceived mental illness more negatively when they received the vignette associated with their own race (p = .003; see Table 22 above). These findings suggest that perceptions of mental illness and help seeking may be consistent across many racial groups, though Black/African American participants may be more critical of these constructs when examining them within their own community. It should also be noted that the effect size for this finding indicated that 20% of the variance is accounted for by race. This suggests that 80% of the variance is likely due to other factors beyond race, which is an important consideration.

Research Question 4: Do South Asian males perceive mental illness as more negative and stigmatic compared to South Asian females?

The final component being assessed as part of this project was to determine whether perceptions of mental illness differed across gender within the South Asian community. A simple linear regression was calculated to predict differences across gender in South Asians. Results indicated that approximately 5.4% of the variation in perceptions of mental illness is explained by gender for South Asian participants (R^2=.054, $F(1,111)$=6.323, p=.013; see Table 16 above). Overall, female participants were found to have a more positive view of individuals with mental illness.

Additionally, subsequent univariate analyses were conducted to further examine this question. Results revealed a statistically significant difference between groups (female and male) as determined by the one-way ANOVA ($F(4,341) = 6.532$, p = .000). A Tukey post hoc test revealed that South Asian male respondents had a significantly more negative perception of individuals with mental illness than their South Asian female counterparts (p = .000; see Table 17 above). This indicates that South Asian male participants have a more negative view of individuals with mental illness compared to their South Asian female counterparts. However, it should once again be noted that these results may also be impacted by the small sample of male participants.

CHAPTER 5

DISCUSSION

Present Study

Previous literature has determined that mental illness stigma is pervasive in the United States (Hinshaw, 2007) and ultimately impacts how individuals choose to seek help for emotional distress (Rusch, Angermeyer & Corrigan, 2005). Specifically, individuals may engage in formal or informal modes of help seeking, or they may choose to not seek help at all (Cauce et al., 2002), perpetuating feelings of isolation and ostracism. Barriers to help seeking for mental illness exist for all groups, though some communities face specific challenges in accessing appropriate mental health care.

Through the lens of intersectionality, ethnic minorities with mental illness are in a unique position as they experience what Gary (2005) coined as "double stigma," or the combination of racial discrimination and prejudice and mental illness stigma from the public and their cultural communities. Asian Americans are a particular racial group that experiences higher levels of stereotype threat due to the "model minority" myth which refers to the flawed idea that Asian Americans are a group of individuals who have adjusted well to assimilation to Western culture and face little to no psychological distress (Sue & Morishima, 1998). This idea further perpetuates stigmatic feelings towards mental illness and help seeking, creating unique barriers to mental health care for Asian Americans (Sue & Morishima, 1998). Specifically, Asian Americans are less likely to seek help from informal (family, relatives, social networks) and formal sources (mental health professionals) for emotional distress (Leong & Lau, 2001).

Within the Asian American population, South Asians are the third largest and fastest growing subpopulation (U.S. Census Bureau, 2000). Though research on this particular group is limited, previous literature has found that South Asians seek help for mental and emotional distress less often than other ethnic groups, and also distance themselves from members of their community who present with mental illness (Loya, Reddy & Hinshaw, 2010). The stigma associated with mental illness and help seeking perpetuates feelings of isolation for individuals facing emotional distress and has been found to lead to consequences as serious as suicide (Neelman, Mak, & Wessely, 1997).

Additionally, research has found that demographics, such as gender, play a role in whether an individual chooses to seek help for emotional distress. Specifically, males have historically been found to avoid emotion based coping (Copeland & Hess, 1995), while females have been found to hold more positive attitude towards help seeking and utilizing social supports to overcome difficult situations (Leong & Zachar, 1999). Based on previous findings, it is theorized that within the South Asian group, gender differences will also play a role in how individuals in this community perceive mental illness and different modes of help seeking.

The current research sought to investigate the association between perceptions of mental illness and help seeking behaviors across race and ethnicity, with a specific focus on South Asian communities. Additionally, this research examined how different racial groups perceive individuals with mental illness as well as informal and formal help seeking behaviors. Lastly, gender differences in perceptions of mental illness and help seeking within the South Asian community were assessed.

Review of Findings

Negative Perceptions of Mental Illness and the Impact on Help Seeking

Hypothesis one stated that negative perceptions of mental illness as defined by this study (i.e. authoritarianism, benevolence, social restrictiveness, discrimination-devaluation) will predict informal and formal help seeking behaviors across the entire sample, across racial and ethnic groups. This hypothesis was supported. The findings are consistent with previous research examining the impact of negative perceptions of mental illness on help seeking (Rusch, Angermeyer & Corrigan, 2005; Gulliver, Griffiths, & Christensen, 2010; Sawyer et. al, 2001). Specifically, it was found that in a sample of South Asian and White/European American participants, there was a small, yet statistically significant positive association ($F^2 = .174$) between perceptions of mental illness and help seeking, indicating that the more positively one views individuals with mental illness, the more likely they are to seek informal and formal modes of help. This is consistent with previous research which found that negative attitudes toward mental illness and help seeking impacts if and how an individual may choose to seek help for mental health problems (Rickwood, Deane, & Wilson, 2007).

Though this is an interesting finding, it would be beneficial to observe these patterns across other racial and ethnic groups to see if the same relationship exists, as previous research indicates that perceptions of mental illness impact help seeking across multiple racial and ethnic groups (Gulliver, Griffiths, & Christensen, 2010). Due to small sample size, only the South Asian and White/European American groups were suitable to be included in the analyses.

Perceptions of Mental Illness and the Impact on Help Seeking Across Race

Hypothesis two stated the overall constructs of perceptions of mental illness and help-seeking (as defined above) and inter-relationships between these constructs will differ as a function of race/ethnicity, as evidenced by changes in model fit. Specifically, when compared to non-South Asian communities (i.e White/European American, Black/ African American, East Asian), South Asians who have more negative perceptions of mental illness will have more negative attitudes towards informal and formal help seeking. Due to lower sample size, South Asian participants were compared only to White/ European American participants through structural equation modeling.

Results indicated that the association between negative perceptions of mental illness and negative attitudes toward help seeking was consistent for South Asian participants. When compared to White/European Americans, the model fit remained consistent and very similar. This indicates that both groups in the sample indicated a similar association between perceptions of mental illness and help seeking. Previous research indicates that South Asians are a group that have a particularly stigmatic view of mental illness and help seeking compared to other racial groups (Loya, Reddy & Hinshaw, 2010). Though this finding is not supported by previous literature, it remains an important one as it indicates that perhaps over time, South Asians have acquired a more comparable perception of mental illness and help seeking, similar to other racial groups. However, future research should explore this area further, particularly examining differences between South Asians and other minority groups. Additionally, a sample which consists of a more even distribution of male and female participants may provide alternate findings, which should be further explored. Both the South Asian and

White/European American groups in the sample had an uneven distribution of female to male participants (South Asian: Female N=90, Male N=24; White/ European American Female N=138, Male N=38).

Differences in perceptions of mental illness and help seeking behaviors were further explored through multiple univariate analyses. This was conducted to compare Black/African American participants who participated in the study (N=65) with South Asian and White/European American participants. Additionally, these analyses were also conducted to explore hypothesis three, which aimed to explore perceptions of mental illness and attitudes toward informal and formal help seeking across racial and ethnic groups. This hypothesis was supported, where results indicated a significant difference in perceptions of mental illness between the three groups examined. Specifically, it was found that both South Asians and Black/African American participants had a more negative perception of individuals with mental illness when compared to the White/European American sample. Though the mean differences between the South Asians and Black/African American group were very similar, only the Black/African American group had a statistically significant negative perception of mental illness compared to the White/European American group (p=0.024, η^2=0.022). However, the effect size of this finding indicates that approximately 2% of the change in perceptions of mental illness can be accounted for by race, which is quite small. Previous literature has indicated that Black/African American communities are more likely to have a negative perception of mental illness due to associating seeking mental health treatment with a feeling of embarrassment (Cooper-Patrick et. al, 1995). However, differences in perceptions of mental illness and help seeking should be further examined with a larger

sample size. There were only 65 Black/African American participants in the study, while there were 176 White/European Americans and 114 South Asians. These differences in sample size may have impacted the overall results of this particular analysis. Findings from the present study indicate that between the groups examined, there were no statistically significant differences between South Asians and the other groups examined (Black/African Americans and White/European Americans).

Perceptions of Mental Illness and Help Seeking: Examining One's Own Race versus Other Races

Differences across race was further examined through the analyses of the original vignettes in the study. Specifically, each vignette condition had one of four characters of different races (i.e. South Asian, White/European American, Black/African American, East Asian). When a participant began the study, they were asked demographic questions, one of which asked them to self-select their own racial identity. Dependent on their response, each respondent had a 50% chance of receiving a vignette character of their own race and a 50% chance of receiving one of the three other conditions. The aim of this survey piping structure was to examine differences across groups when an individual is assessing a character from their own race versus a different race. Interestingly, findings remained consistent across all vignette conditions for the South Asian group. That is, individuals who identified as South Asian had very similar responses in terms of how they perceived an individual with mental illness and their coping style, regardless of which condition they were given. Their responses also did not significantly differ from the other two racial groups examined (Black/African American, White/ European American). This once again indicates that contrary to previous literature (Durvasula, &

Mylvaganam, 1994; Loya, Reddy & Hinshaw, 2010), South Asian participants in this study are found to perceive mental illness and help seeking similarly to other racial groups. However, it would be beneficial to further investigate these differences across other minority groups such as East Asians. Due to low sample size, East Asian participants were not used in analyses, however previous research indicates that individuals within East Asian communities have been found to typically refrain from utilizing mental health services, or often prematurely terminate their treatment (Leong & Lau, 2001). Future research is necessary to understand perceptions of mental illness and help seeking between and within the East Asian group, as findings may suggest specific differences between South Asian and East Asian individuals.

Further analyses revealed that Black/African American participants perceived mental illness more negatively when they were presented with their own race compared to White/European participants ((p=0.003, η^2=0.20). The effect size of this finding indicates that approximately 20% of the change in perceptions of mental illness for the Black/African American vignette can be accounted for by race. This is an interesting finding as it supports the idea that individuals from minority groups are more likely to be critical of individuals from their own community (Snowden, 2001). Specifically, future research is necessary to understand negative perceptions of mental illness in Black/African American individuals as this will provide direction for reducing barriers and access to mental health care for this group.

Lastly, result revealed no statistically significant differences across racial groups in regard to coping. This indicates that regardless of the race of the respondent and the race of the character presented in the vignette, participants did not respond differently in

terms of their perceptions of coping and help seeking. However, future research should once again examine differences across other racial groups with a larger sample size as well as a more even distribution of male and female participants, as the current sample distribution may have impacted the results of this study.

Gender Differences in South Asians

Hypothesis four stated that South Asian females will have more positive attitudes towards mental illness than South Asian males. This hypothesis was supported. However, there was a large disparity between male and female South Asian participants (Female N=90, Male N=24). Therefore, these results should be interpreted with caution. Through comparing the association of the structural equation model across gender, findings revealed that there was no association between perceptions of mental illness and help seeking for South Asian males in the sample. This may have been impacted by the small sample size. When differences were further assessed through univariate analyses, findings revealed that South Asian male respondents had a significantly more negative perception of individuals with mental illness than their South Asian female counterparts. Results are consistent with previous research that indicated that females have more positive attitudes towards help seeking than their male counterparts (Cauce et. al, 2002; Cook, 1984; Gardland & Zigler, 1994; Kuhl, Jarkon-Horlick & Morrisey, 1997). Future research is necessary to further examine differences with a more evenly distributed sample size. Understanding perceptions of mental illness across gender is necessary for continued intervention to ultimately increase the likelihood of help seeking behaviors for individuals who are experiencing emotional or mental distress.

Strengths of the Present Study

A number of strengths can be identified in the current study. This study utilized multiple methods for sample recruitment. One such recruitment strategy involved the snowball method to build upon a community-based sampling approach. Sharing the survey through social media platforms was encouraged and allowed the recruitment of a diverse, national sample. Additionally, participants were recruited through a systematic distribution of the survey to several community organizations, universities and cultural groups all over the country. This method provided a sample of individuals from diverse settings and regions.

An additional strength of the present study is the implementation of structural equation modeling (SEM). Researchers have chronicled the strength of using SEM as opposed to multivariate approaches (Byrne, 2012; Kline, 2011). Specifically, analyses such as multiple regression provides information on predictive relationships between variables, but are not able to analyze all of the constructs of interest. Structural equation modeling is a more robust and thorough option which provides the ability to comprehensively investigate associations and relationships between multiple indicators included in a model.

Furthermore, another strength of the present study is the use of multiple scales to assess perceptions of mental illness. To create an integrative and comprehensive "perception of mental illness factor," two different widely used measures were combined: a) Opinions of Mental Illness Questionnaire (OMI; Struening & Cohen, 1963) and b) The Perceived Stigma Questionnaire (PSQ; Link, 1989). This allowed for a thorough examination of the desired factor across groups. Specifically, four different constructs of

negative perceptions of mental illness was examined: authoritarianism, benevolence, social restrictiveness and discrimination/devaluation. This provided a thorough examination of the negative perceptions of mental illness factor. Additionally, help seeking behaviors were separated into informal and formal categories, which allowed the examination of different modes of help seeking across groups (General Help-Seeking Questionnaire - GHSQ; Wilson, Deane, Ciarrochi, & Rickwood, 2005). Wilson and colleagues (2005) proposed that the HSQ can be treated as two separate scales, to examine help seeking across different levels of psychological symptomology (i.e. mild to severe). The present study was able to examine two different modes of help seeking across two different levels of need: a) mental health problems and b) suicidal thoughts. In combination, these constructs provided a comprehensive and through assessment of the impact of negative perceptions of mental illness on attitudes towards help seeking behaviors which is a strength of the study and an important addition to the literature base on this topic.

Lastly, implementing an online survey format for the present study was an advantage in obtaining data in an anonymous way. Using an online survey reduces the chance of discomfort that may arise from sensitive material, such as the present topic. Additionally, survey research reduced issues related to social desirability, as participants have the opportunity to participate in the study privately without the influence of other individuals (Paulhus, 2002). The online survey approach also allowed for easy distribution among participants through the snowball method. This allowed recruitment from a variety of settings, networks and organizations through a diverse, national sample.

Limitations

Though the present study does have notable strengths, there are several limitations that should also be considered. One such limitation was the sample size of each group in the study. Specifically, Black/African American participants were unable to be included in the structural equation model due to not meeting adequate sample size criteria. However, responses from those participants were assessed through subsequent univariate analyses. Additionally, there were simply not enough participants from the East Asian group for any analysis, despite several recruitment procedures to obtain participants from this group. Future research is necessary to examine differences in this group as well as other racially diverse communities.

Similarly, there was a significant disparity amongst the amount of female to male participants in the entire sample. Because of this, analyses of gender differences must be observed with caution. Research indicates that compared to their female counterparts, males typically have more negative attitudes toward mental illness and help seeking (Cauce et. al, 2002). This may have played a role in whether male participants chose to participate in the study given its sensitive nature. Future research should ensure that there is an even distribution across gender in order to obtain an accurate representation of results and findings amongst male and female participants.

A very evident limitation of this study was the length of the survey and the amount of participants who prematurely terminated the survey. Two survey distributions were implemented, with the second providing a shorter and more concise version of the study. Because the present study was extracted from a larger study (Project MAPS), several of the scales and questionnaires that were part of the original distribution added to

the length and time of the overall survey. The original survey was taking up to thirty minutes for many participants to complete, which caused several individuals to opt to stop the survey. Due to this, a new survey was distributed through social media and systematic recruitment procedures. The second survey was being completed in approximately eleven minutes by participants, which dramatically increased the amount of participants who completed the survey in it's entirely. However, a large amount of data was lost because of the length of the original survey. Another limitation of this study is that sensitive nature of the topic may have also caused participants to end prematurely. Moreover, the survey based nature of the study may have led to response bias due to social desirability, ultimately contributing to error in the sample (Paulhus, 2002).

Additionally, because the snowball method was implemented, many of the participants in the survey were part of the same larger networks. This increases the chances of individuals in the sample being like-minded (Atkinson & Flint, 2001; Sadler, Lee, Lim & Fullerton, 2010). This sampling bias is important to note, as it is likely that several of the participants were distributing the survey to individuals within their own network. Specifically, many of the South Asian participants who participated in the study were recruited through the snowball method and were largely part of an interwoven social network on the East Coast of the United States. Though there was some diversity in the sample, the overall makeup of this group included South Asian females from the New Jersey-New York-Pennsylvania area. Had the sample been more diverse in terms of area of residence and gender, results may have presented alternate findings. Additionally, the snowball method also provides the possibility of restricted range sampling bias. Specifically, individuals who participated in the study may have been from similar socio-

economic backgrounds due to the implementation of the snowball method. In the future, it would be beneficial to use multiple strategic recruitment techniques to avoid this type of sampling bias.

The present study aimed to observe differences in perceptions of mental illness and help seeking across racial groups. Race is a construct that is extremely complex, as it is socially constructed. For example, individuals who selected "Black/African American" as their identified racial group may not identify with the term "African American" at all, but rather may be part of groups such as "Afro Latin" or "Afro Caribbean." These individuals may still identify as "Black," but likely have unique cultural differences that impact their perceptions of mental health and help seeking, which may or may not have impacted the findings of this study. Similarly, individuals who identified as "South Asian" may also identify as "Indo Caribbean," again having a different cultural background to those individuals who identify their cultural heritage as being aligned with the Indian subcontinent. The complexity and sensitivity of the constructs of race and ethnicity create challenges when conducting survey based research, as many individuals may not identify with any one particular racial group. Subsequently, individuals who identified as mixed race, biracial or selected "other" were not able to be included in the analyses, though these participants still provide valuable data that should be further explored.

Lastly, many of the measures in the present study were created several decades ago. Because of this, the questions on these measures may not represent completely realistic situations pertaining to the lives of individuals living in the United States today. This may have impacted the way individuals perceived and responded to the questions on

the survey. Updated scales and measures assessing perceptions of mental illness and help seeking are necessary as time progresses to ensure that the questionnaires that are being distributed accurately and realistically relate to participant's lives in present times.

Lessons Learned

One of the main lessons learned after conducting the present research was the importance of creating a survey which is reasonable in length of time. Due to the present study being a part of a larger data collection effort (Project MAPS), the length of time to complete the original survey may have caused several participants to prematurely terminate their participation. This caused potentially valuable data to be forfeited. After the survey was adjusted to only include the measures necessary for the present study, participants were more likely to complete the survey in its entirety. Sensitivity to participant and time and effort is necessary when conducting a study of this nature, particularly of sensitive content.

Relatedly, recruitment efforts, though vast and inclusive of systematic and snowball methods to accrue participant data, did not result in an extremely diverse sample for specific groups. South Asian participants were largely from a sample of female individuals living on the East Coast of the United States. Though the snowball method was effective in recruiting these participants, a more diverse sample may have impacted findings. Additionally, participants within specific groups were difficult to recruit, thus resulting in extremely low sample sizes. Specifically, there were not enough East Asian participants to include in the analyses for this study (N=4). Though specific cultural groups and organizations were contacted for each specific minority group, more targeted efforts should have been made for groups which are difficult to recruit. Research

has indicated that Asian Americans Asians are a group that have been found to typically avoid seeking treatment from mental health professionals (Leong & Lau, 2001), which may have impacted individual's willingness to participate in a study of this nature.

Though efforts were made to ensure that the demographic section of the survey was inclusive of all individuals, constructs such as race, gender identity and sexual orientation are vast. Survey research does not always allow individuals of varying backgrounds to self-select a demographic choice that is most aligned with their identities. Because of this, some individuals self-selected their race or gender as the "other" or "prefer not to respond" option, and therefore could not be used in the overall analyses for the present study. Their responses, however, are valuable and should be used for additional studies on this topic.

Another important lesson learned throughout this process was the importance of incentives for survey research. Participants were given the option to enter into a raffle for a $50 gift card of their choice when completing the survey. However, the length of the original survey was not aligned with the potential incentive, which likely was not motivating for several participants, ultimately leading to terminating their participation prior to completing the survey.

As awareness and education around topics such as mental illness and help seeking increases, it is necessary to utilize measures that include items relatable to the present times. Because the measures used in the study, though well supported in previous research on similar topics, were from several decades ago, it is likely that participants found the items unrealistic or not related to how they view constructs such as mental

illness or help seeking. The validation of new measures is essential for topics that are ever changing, such as the present study.

Directions for Future Research

The present study had several strengths and limitations. Future research is necessary to continue to understand the complexities of perceptions of mental illness and how it impacts help seeking across groups. Several lines for future research have been suggest above. Researchers should continue to explore perceptions of mental illness in Black/African American participants, as there was evidence through this study that interventions are needed to dismantle barriers to mental health care.

This study was able to examine differences across three different racial groups. Future research should explore this topic across groups beyond the three that were presented in this study. Additionally, exploring differences across Asian subgroups (i.e. South Asian, East Asian, South East Asian) will be valuable in understanding specific disparities across these very diverse communities. Research has found that Asian Americans are often thought of as one large demographic group. However, this is problematic because Asian Americans are one of the most heterogeneous ethnic minority groups, as they have over 20 subgroups (e.g. Chinese, Japanese, Korean, Filipino, Vietnamese, Cambodian, Laotian, Indian, etc.) all with unique cultural and linguistic backgrounds, as well as differing immigration histories in the United States (Sue and Morishima, 1982). Because of this, continued research is necessary to examine differences among these subgroups to provide services that are geared toward the specific needs of individuals from these diverse backgrounds.

Future research is also necessary to examine the constructs assessed in the present study with a larger sample of participants, particularly across gender. The present study included a sample largely consisting of female participants. Male participation in a study of this nature would provide valuable information on perceptions of mental illness and help seeking, as previous literature has found that males have more negative attitudes toward both of these constructs when compared to their female counterparts (Copeland & Hess, 1995; Leong & Zachar, 1999). The present study examined gender differences, though the results must be taking with caution due to the disparity between female to male participation in the survey.

In the future, conducting a mixed methods study with an interview component would be highly valuable in obtaining information on individual perceptions of mental illness and help seeking. Survey based research often provides limited perspective and choice for individuals, where an interview may provide more insight and range in terms of how participants perceive the constructs explored in this study. Additionally, open ended responses provide the opportunity to delve into detail about individual perspectives that a Likert scale may potentially miss.

The current project demonstrated that negative perceptions of mental illness is associated with poorer attitudes towards help seeking. The results of the current project are meaningful. This project reiterates previous research which has found that mental illness stigma is a problem in the United States and continues to impact individual's access to mental health care (Rusch, Angermeyer & Corrigan, 2005; Cauce et al., 2002). Furthermore, results revealed that Black/African American participants perceive mental illness more negatively than White/European Americans. This is a strength of the present

study as it reveals important disparities in stigma surrounding mental illness and help seeking for individuals from Black/African American communities. These findings reiterate the importance of strong interventions to address barriers to mental health care for individuals from racially diverse communities.

Finally, the findings of the current research also highlight the need for continued intervention to address barriers to mental health care for individuals from racially diverse communities. Continued research on this topic across diverse groups will provide insight on how to mitigate the effects of negative perceptions of mental illness on help seeking, thereby combatting barriers to mental healthcare for individuals across racial and ethnic groups. This will also provide information to practitioners on how to work with individuals from diverse backgrounds, by providing service that is sensitive to specific cultural and community based norms related to mental illness and mental health.

Conclusions

There were several main findings of the current research. First, more positive perceptions of individuals with mental illness is associated with more positive attitudes toward help seeking behaviors, formal or informal. This finding supports previous research which indicates that mental illness stigma can have a strong negative impact on whether an individual chooses to seek professional help for emotional distress they may face (Rusch, Angermeyer & Corrigan, 2005). Further, South Asians were found to have similar perceptions of mental illness and help seeking to White/European Americans and Black/African Americans, which indicates that perhaps over the course of time and with appropriate interventions, views toward mental illness and mental health can be changed. Additionally, Black/African American participants were found to have more negative

views of individuals with mental illness when they were assessing an individual from their own racial background. This is an important finding as it highlights the need for targeted intervention to dismantle barriers to mental healthcare for this group. In sum, due to the limited research on the South Asian subpopulation, the present study provided necessary and current information on perceptions of mental illness for a group that has not been thoroughly examined in the past. Additionally, findings on Black/African American participants provided important insight into how mental illness stigma within one's community can impact views on mental health. Examining other minority groups is essential in continuing to understand differences for individuals of diverse background. This project has the potential to contribute significantly to the research and development of interventions to promote healthy help seeking behaviors for emotional and mental distress for individuals from varying backgrounds living in the United States.

REFERENCES

Abreu, J. M. (1999). Conscious and nonconscious African American stereotypes: impact on first impression and diagnostic ratings by therapists. *Journal of Consulting and Clinical Psychology, 67*(3), 387. doi: 10.1037/0022-006X.67.3.387

Allison, P. D. (2003). Missing data techniques for structural equation modeling. *Journal of abnormal psychology, 112*(4), 545. doi: 10.1037/0021-843X.112.4.545

Angermeyer, M. C., Link, B. G., & Majcher-Angermeyer, A. (1987). Stigma perceived by patients attending modern treatment settings: Some unanticipated effects of community psychiatry reforms. *The Journal of Nervous and Mental Disease, 175*(1), 4-11. doi: 10.1097/00005053-198701000-00002

Argyle, M., & Beit-Hallahmi, B. (2013). *The Social Psychology of Religion (Psychology Revivals)*. Routledge.

Arkoff, A., Thaver, F., & Elkind, L. (1966). Mental health and counseling ideas of Asian and American students. *Journal of Counseling Psychology, 13*, 219–223.

Atkinson, R., & Flint, J. (2001). Accessing hidden and hard-to-reach populations: Snowball research strategies. Social research update, 33(1), 1-4.

Augoustinos, M., Ahrens, C. and Innes, J. M. (1994). Stereotypes and prejudice: The Australian experience. *British Journal of Social Psychology, 33*(1), 125–141. doi:10.1111/j.2044-8309.1994.tb01014.x

Balsa, A. I., & McGuire, T. G. (2003). Prejudice, clinical uncertainty and stereotyping as sources of health disparities. *Journal of Health Economics, 22*(1), 89–116. doi: 10.1016/S0167-6296(02)00098-X

Bellack, A. S., Mueser, K. T., Morrison, R. L., Tierney, A., & Podell, K. (1990). Remediation of cognitive deficits in schizophrenia. *American Journal of Psychiatry, 147*, 650–655.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107*(2), 238–246. doi: 10.1037/0033-2909.107.2.238

Bentler, P. M., & Bonnet, D. C. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*, 588–606. doi: 10.1037/0033-2909.88.3.58

Bharadwaj, P., Pai, M. M., & Suziedelyte, A. (2015). *Mental health stigma* (No. w21240). National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w21240.pdf

Bhugra, D. (1989). Attitudes towards mental illness: A review of the literature. *Acta Psychiatrica Scandinavica, 80*(1), 1-12. doi: 10.1111/j.1600-0447.1989.tb01293.x

Bland, R. C., Newman, S. C., & Orn, H. (1997). Help-seeking for psychiatric disorders. *The Canadian Journal of Psychiatry, 42*(9), 935-942. doi: 10.1177/070674379704200904

Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley

Bordieri, J. E., & Drehmer, D. E. (1986). Hiring decisions for disabled workers: Looking at the cause. *Journal of Applied Social Psychology, 16*(3), 197–208. doi: 10.1111/j.1559-1816.1986.tb01135.x

Brockington, I. F., Hall, P., Levings, J., & Murphy, C. (1993). The community's tolerance of the mentally ill. *The British Journal of Psychiatry*, *162*(1), 93-99. doi: 10.1192/bjp.162.1.93

Brohan, E., Slade, M., Clement, S., Rose, D., Sartorius, N., & Thornicroft, G. (2011). Further development and psychometric validation of the discrimination and stigma scale (DISC-12). *Psychiatrische Praxis*, *38*(1), 1-7. doi: 10.1055/s-0031-1277768

Brohan, E., Clement, S., Rose, D., Sartorius, N., Slade, M., & Thornicroft, G. (2013). Development and psychometric evaluation of the Discrimination and Stigma Scale (DISC). *Psychiatry Research*, *208*(1), 33-40. doi: 10.1016/j.psychres.2013.03.007

Broman, C. L. (1996). Coping with personal problems. In H. W. Neighbors & J. S. Jackson (Eds.), *Mental health in Black America* (pp. 117–129). Thousand Oaks, CA: Sage.

Brown, T. A. (2015). Confirmatory Factor Analysis for Applied Research (2nd ed.). New York, NY: Guilford Press.

Brown, T. A., & Moore, M. T. (2012). Confirmatory factor analysis. *Handbook of structural equation modeling*, 361-379.

Byrd, W. M., & Clayton, L. A. (2001). Race, medicine, and health care in the United States: a historical survey. *Journal of the National Medical Association, 93*(3 Suppl), 11S-34S.

Byrne, B. M., Shavelson, R. J., & Muthén, B. (1989). Testing for the equivalence of factor covariance and mean structures: The issue of partial measurement invariance. *Psychological bulletin, 105*(3), 456.

Byrne, B. M. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming.* Mahwah, NJ: Lawrence Erlbaum Associates.

Byrne, P. (2000). Stigma of mental illness and ways of diminishing it. *Advances in Psychiatric treatment*, *6*(1), 65-72. doi: 10.1192/apt.6.1.65

Byrne, B. (2012). *Structural Equation Modeling with Mplus*. New York, NY: Routledge.

Cauce, A. M., Domenech-Rodríguez, M., Paradise, M., Cochran, B. N., Shea, J. M., Srebnik, D., & Baydar, N. (2002). Cultural and contextual influences in mental health help seeking: a focus on ethnic minority youth. *Journal of consulting and clinical psychology*, *70*(1), 44. doi: 10.1037/0022-006X.70.1.44

CDC. Attitudes Toward Mental Illness—35 States, District of Columbia, and Puerto Rico, 2007. MMWR2010;59(20);619–625. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5920a3.htm.

Cheung, F. K., & Snowden, L. R. (1990). Community mental health and ethnic minority populations. *Community Mental Health Journal, 26*(3), 277–291. doi: 10.1007/BF00752778

Cook, E. P. (1984). Students' perceptions of personal problems, appropri- ate help sources, and general attitudes about counseling. *Journal of College Student Personnel, 25,* 139–145.

Cooper-Patrick, L., Brown, C., Palenchar, D. R., Gonzales, J. J., & Ford, D. E. (1995). Factors associated with help-seeking behavior for mental health services. *AHSR and FHSR Annual Meeting Abstract Book, 12*, 105.

Copeland, E. P., & Hess, R. S. (1995). Differences in young adolescents' coping strategies based on gender and ethnicity. *The Journal of Early Adolescence, 15*(2), 203-219. doi: 10.1177/0272431695015002002

Corrigan, P.W. (2002). Testing social cognitive models of mental illness stigma: The prairie state stigma studies. *Psychiatric Rehabilitation Skills, 6*, 232–254.

Corrigan, P. W. (1998). The impact of stigma on severe mental illness. *Cognitive and Behavioral Practice, 5*(2), 201–222. https://doi.org/10.1016/S1077-7229(98)80006-0

Corrigan, P. W. (2000). Mental health stigma as social attribution: Implications for research methods and attitude change. *Clinical Psychology: Science and Practice*, *7*(1), 48-67. doi: 10.1093/clipsy.7.1.48

Corrigan, P. (2004). How stigma interferes with mental health care. *American psychologist*, *59*(7), 614. doi: 10.1037%2F0003-066X.59.7.614

Corrigan, P. W., Edwards, A. B., Green, A., Diwan, S. L., & Penn, D. L. (2001). Prejudice, social distance, and familiarity with mental illness. *Schizophrenia Bulletin, 27*(2), 219. doi: 10.1093/oxfordjournals.schbul.a006868

Corrigan, P., & Matthews, A. (2003). Stigma and disclosure: Implications for coming out of the closet. Journal of *Mental Health, 12*(3), 235-248. doi: 10.1080/0963823031000118221

Corrigan, P. W., Green, A., Lundin, R., Kubiak, M. A., & Penn, D. L. (2001). Familiarity with and social distance from people who have serious mental illness. *Psychiatric Services, 52*(7), 953-958. doi: 10.1176/appi.ps.52.7.953

Corrigan, P. W., & Watson, A. C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry, 1*(1), 16.

Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical assessment, research & evaluation, 10*(7), 1-9.

Dillon, W. R., Kumar, A., & Mulani, N. (1987). Offending estimates in covariance structure analysis: Comments on the causes of and solutions to Heywood cases. *Psychological Bulletin, (101*)126–135. doi: 10.1037/0033-2909.101.1.126

Desai, M. M., Rosenheck, R. A., Druss, B. G., & Perlin, J. B. (2002). Mental disorders and quality of care among postacute myocardial infarction outpatients. *Journal of Nervous and Mental Disease, 190*(1), 51–53.

Druss, B. G., Allen, H. M., & Bruce, M. L. (1998). Physical health, depressive symptoms, and managed care enrollment. *American Journal of Psychiatry, 155*(7)*,* 878–882. doi: doi.org/10.1176/ajp.155.7.878

Druss, B. G., Bradford, D. W., Rosenheck, R. A., Radford, M. J., & Krumholz, H. M. (2000). Mental disorders and use of cardiovascular procedures after myocardial infarction. *JAMA: Journal of the American Medical Association, 283(4),* 506–511. doi:10.1001/jama.283.4.506

Druss, B. G., & Rosenheck, R. (1997). Use of medical services by veterans with mental disorders. *Psychosomatics, 38*(5), 451–458. doi: 10.1016/S0033-3182(97)71422-1

Druss, B. G., & Rosenheck, R. (1998). Mental disorders and access to medical care in the United States. *American Journal of Psychiatry, 155*(12), 1775–1777. doi: 10.1176/ajp.155.12.1775

Dubin, W. R., & Fink, P. J. (1992). Effects of stigma on psychiatric treatment. In P. J. Fink & A. Tasman (Eds.), *Stigma and mental illness* (pp. 1-7). Arlington, VA: American Psychiatric Association. Retrieved from http://psycnet.apa.org/record/1992-97606-001

Durvasula, R. S., & Mylvaganam, G. A. (1994). Mental health of Asian Indians: Relevant issues and community implications. *Journal of Community Psychology*, *22*(2), 97-108. doi: 10.1002/1520-6629(199404)22:2<97::AID-JCOP2290220206>3.0.CO;2-#

Esses, V. M., Haddock, G., & Zanna, M. P. (1994). The role of mood in the expression of intergroup stereotypes. In M. P. Zanna & J. M. Olson (Eds.), *The psychology of prejudice: Ontario symposium on personality* (Vol. 7, pp. 77–101). Hillsdale, NJ: Erlbaum.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4, 272–299. doi: 1082-989X/99/S3.00

French, B. F., & Finch, H. (2016). Factorial invariance testing under different levels of partial loading invariance within a multiple group confirmatory factor analysis model. *Journal of Modern Applied Statistical Methods, 15*(1), 26. doi: 10.22237/jmasm/1462076700

Frable, D. E., Wortman, C., & Joseph, J. (1997). Predicting self-esteem, well-being, and distress in a cohort of gay men: The importance of cultural stigma, personal visibility, community networks, and positive identity. *Journal of personality, 65*(3), 599-624. doi: 10.1111/j.1467-6494.1997.tb00328.x

Gary, F. A. (2005). Stigma: Barrier to mental health care among ethnic minorities. *Issues in mental health nursing, 26*(10), 979-999. doi: 10.1080/01612840500280638

Gliem, J. A., & Gliem, R. R. (2003). *Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales.* Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education.

Green, D. E., McCormick, I. A., Walkey, F. H., & Taylor, A. J. (1987). Community attitudes to mental illness in New Zealand twenty-two years on. *Social Science & Medicine, 24(*5), 417-422. doi: 10.1016/0277-9536(87)90214-0

Gulliver, A., Griffiths, K. M., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review. *BMC psychiatry, 10*(1), 113. doi: 10.1186/1471-244X-10-113

Hamilton, D., & Sherman, J. (1994). Stereotypes. In R. S. Wyer, & T. K. Srull (Eds.), *Handbook of Social Cognition* (2nd ed., pp. 1–68). Hillsdale, NJ: Erlbaum.

Hayward, P., & Bright, J. A. (1997). Stigma and mental illness: A review and critique. *Journal of Mental Health, 6*(4), 345-354. doi: 10.1080/09638239718671

Hilton, J. L., & von Hippel, W. (1996). Stereotypes. *Annual Review of Psychology, 47*(1), 237–271. doi: 10.1146/annurev.psych.47.1.237

Hinshaw, S. P. (2009). *The mark of shame: Stigma of mental illness and an agenda for change*. Oxford University Press.

Holmes, E. P., & River, L. P. (1998). Individual strategies for coping with the stigma of severe mental illness. *Cognitive and Behavioral Practice, 5*(2), 231–239. doi: 10.1016/S1077-7229(98)80008-4

Lei, P. W., & Wu, Q. (2007). Introduction to structural equation modeling: Issues and practical considerations. *Educational Measurement: issues and practice, 26*(3), 33-43.

Hong, S., Malik, M. L., & Lee, M. K. (2003). Testing configural, metric, scalar, and latent mean invariance across genders in sociotropy and autonomy using a non-Western sample. *Educational and psychological measurement, 63*(4), 636-654. doi: 10.1177/0013164403251332

Hox, J. J., & Maas, C. J. (2001). The accuracy of multilevel structural equation modeling with pseudobalanced groups and small samples. *Structural equation modeling, 8*(2), 157-174.

Hu, L. T., & Bentler, P. M. (1995). Evaluating model fit. In R. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76–99). Newbury Park, CA: Sage Publishing.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*, 1–55. doi: 10.1080/10705519909540118

Hunt, J., & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health, 46*(1), 3-10. doi: 10.1016/j.jadohealth.2009.08.008

Huxley, P. (1993). Location and stigma: A survey of community attitudes to mental

   illness-Part 1. Enlightenment and stigma. Journal of Mental Health, 2(1), 73-80.

   doi: 10.3109/09638239309016956

Johnson, R. (1993). Clinical issues in the use of the DSM-III-R with African American

   children: A diagnostic paradigm. *Journal of Black Psychology*, *19*(4), 447-460.

   doi: 10.1177/00957984930194005

Johnson, D., R., & Young, R. (2011). Toward best practices in analyzing datasets with

   missing data: Comparisons and recommendations. *Journal of Marriage and

   Family*, *75*(5), 926–945.

Jones, R. N. (2003). Racial bias in the assessment of cognitive functioning of older

   adults. *Aging & Mental Health, 7*(2), 83–102.

Jöreskog, K. G. K., & Sörbom, D. (1982). Recent developments in structural equation

   modeling. *Journal of Marketing Research*, *19*(4), 404–417. doi: 10.2307/3151714

Judd, C. M., & Park, B. (1993). Definition and assessment of accuracy in social

   stereotypes. *Psychological Review, 100*(1), 109–128. doi: 10.1037/0033-

   295X.100.1.109

Kim, J. O., & Mueller, C. W. (1978). Factor analysis: Statistical methods and practical

   issues (Vol. 14). Sage.

Kessler, R. C., Brown, R. L., & Broman, C. L. (1981). Sex differences in psychiatric

   help-seeking: evidence from four large-scale surveys. *Journal of health and social

   behavior, 22*(1), 49-64.

Kline, R. B. (2010). Principles and practice of structural equation modeling (3rd ed.).

   New York, NY: Guilford Press.

Kline, R. B. (2011). Principles and Practice of Structural Equation Modeling (3rd ed.). New York, NY: Guilford Press.

Kreuter, F., Presser, S., & Tourangeau, R. (2008). Social desirability bias in CATI, IVR, and web surveys: The effects of mode and question sensitivity. *Public Opinion Quarterly, 72*(5), 847–865. http://doi.org/10.1093/poq/nfn063

Krueger, J. (1996). Personal beliefs and cultural stereotypes about racial characteristics. *Journal of Personality and Social Psychology, 71*(3), 536 –548. doi: 10.1037/0022-3514.71.3.536

Kuhl, J., Jarkon-Horlick, L., & Morrissey, R. F. (1997). Measuring barriers to help-seeking behavior in adolescence. *Journal of Youth and Adolesccence, 26(6),* 637–650. doi: 10.1023/A:1022367807715

Leong, F. T., & Lau, A. S. (2001). Barriers to providing effective mental health services to Asian Americans. Mental health services research, 3(4), 201-214. doi: 10.1023/A:101317701

Leong, F. T., & Zachar, P. (1999). Gender and opinions about mental illness as predictors of attitudes toward seeking professional psychological help. *British Journal of Guidance & Counselling, 27*(1), 123-132. doi: 10.1080/03069889908259720

Lin, T., & Lin, M. (1978). Service delivery issues in Asian North American communities. *American Journal of Psychiatry, 135*, 454–457.

Link, B. G. (1982). Mental patient status, work and income: An examination of the effects of a psychiatric label. *American Sociological Review, 47*(2), 202–215.

Link, B. G. (1987). Understanding labeling effects in the area of mental disorders: An assessment of the effects of expectations of rejection. *American Sociological Review, 52*(1), 96–112.

Link BG, Cullen FT, Struening E, Shrout P, Dohrenwend BP. 1989. A modified labeling theory approach in the area of mental dis- orders: an empirical assessment. *American. Sociological Review, 54*(3), 100–23.

Link, B. G., Cullen, F. T., Frank, J., & Wozniak, J. F. (1987). The social rejection of former mental patients: Understanding why labels matter. *American Journal of Sociology, 92*(6), 1461–1500. doi: 10.1086/228672

Link, B. G., Cullen, F. T., Mirotznik, J., & Struening, E. (1992). The consequences of stigma for persons with mental illness: Evidence from the social sciences. In P. J. Fink & A. Tasman (Eds.), *Stigma and mental illness* (pp. 87-96). Arlington, VA: American Psychiatric Association.

Link, B. G., & Phelan, J. C. (2001). *Conceptualizing stigma. Annual Review of Sociology, 27*(1), 363–385. doi: 10.1146/annurev.soc.27.1.363

Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*(404), 1198-1202.

MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological methods, 4*(1), 84. doi: 1082-989X/99/S3.00

Mackenzie, C. S., Gekoski, W. L., & Knox, V. J. (2006). Age, gender, and the underutilization of mental health services: the influence of help-seeking attitudes. *Aging and Mental Health, 10*(6), 574-582. doi: 10.1080/13607860600641200

Marmot, M., & Wilkinson, R. G. (Eds.). (1999). *Social determinants of health.* New York: Oxford University Press.

Markland, D. (2007). The golden rule is that there are no golden rules: A commentary on Paul Barrett's recommendations for reporting model fit in structural equation modelling. *Personality and Individual Differences, 42*, 851–858. doi: 10.1016/j.paid.2006.09.023

Marsh, H. W. (1994). Confirmatory factor analysis models of factorial invariance: *A multifaceted approach. Structural Equation Modeling,* 1, 5-34. doi: 10.1080/10705519409539960

Mayberry, R. M., Mili, F., & Ofili, E. (2000). Racial and ethnic differences in access to medical care. *Medical Care Research and Review, 57*(1), 108-145. doi: 10.1177/1077558700057001S06

Maxwell, S. E., & Delaney, H. D. (2003). Designing experiments and analyzing data: A model comparison perspective. Routledge.

Meredith, W. (1993). Measurement invariance, factor analysis, and factorial invariance. *Psychometrika,* 58, 525-543. doi: 10.1007/BF02294825

McGuffin, P., & Martin, N. (1999). Science, medicine, and the future: Behaviour and genes. *BMJ: British Medical Journal, 319*(7201), 37.

McMiller, W. P., & Weisz, J. R. (1996). Help-seeking preceding mental health clinic intake among African-American, Latino, and White/ European American youths. *Journal of the American Academy of Child & Adolescent Psychiatry*, *35*(8), 1086-1094. doi: 10.1097/00004583-199608000-00020

Mojtabai, R. (2009). Unmet need for treatment of major depression in the United States. Psychiatric services, 60(3), 297-305. doi: 10.1176/ps.2009.60.3.297

Moon, A., & Tashima, N. (1982). *Help-seeking behavior and attitudes of Southeast Asian refugees*. San Francisco: Pacific Asian Mental Health Research Project.

Mueser, K. T., Bellack, A. S., Douglas, M. S., & Morrison, R. L. (1991). *Prevalence and stability of social skill deficits in schizophrenia. Schizophrenia Research, 5*(2), 167–176. doi: 10.1016/0920-9964(91)90044-R

Mullen, B., Rozell, D., & Johnson, C. (1996). The phenomenology of being in a group: Complexity approaches to operationalizing cognitive representation. In J. L. Nye & A. M. Brower (Eds.), *What' s social about social cognition? Research on socially shared cognition in small groups* (pp. 205–229). Thousand Oaks, CA: Sage. doi: 10.4135/9781483327648.n9

Mulaik, S. A., & Millsap, R. E. (2000). Doing the Four-Step Right. *Structural Equation Modeling: A Multidisciplinary Journal*. doi: 10.1207/S15328007SEM0701_02

Muthén, L. K., & Muthén, B. O. (2012). *Mplus User's Guide* (Seventh). Los Angeles, CA: Muthén & Muthén.

Narikiyo, T. A., & Kameoka, V. A. (1992). Attributions of mental illness and judgments about help seeking among Japanese-American and White American students. *Journal of Counseling Psychology*, *39*(3), 363.

Narrow, W., Regier, D., Norquist, G., Rae, D., Kennedy, C., & Arons, B. (2000). Mental health service use by Americans with severe mental illnesses. *Social Psychiatry and Psychiatric Epidemiology, 35*(4), 147–155. doi: 10.1007/s001270050197

Nguyen, H. T., Yamada, A. M., & Dinh, T. Q. (2012). Religious leaders' assessment and attribution of the causes of mental illness: An in-depth exploration of Vietnamese American Buddhist leaders. *Mental Health, Religion & Culture, 15*(5), 511-527. doi: 10.1080/13674676.2011.594037

Parker, R.S., Balkrishna, N., Weiss, M.G., (2009). *Explaining suicide in an urban slum of Mumbai, India. Crisis, Hogrefe Publishing. 30*(4), 192-201. doi: 10.1027/0227-5910.30.4.192

Paulhus, D. L. (2002). Socially desirable responding: The evolution of a construct. In H. I. Braun, D. N. Jackson, & D. E. Wiley (Eds.), *The Role of Constructs in Psychological and Educational Measurement* (pp. 49–69). Mawah, NJ: Erlbaum.

Phelan, J. C., Link, B. G., Stueve, A., & Pescosolido, B. A. (2000). Public conceptions of mental illness in 1950 and 1996: What is mental illness and is it to be feared? *Journal of Health and Social behavior*, *41*(2), 188-207.

Penn, D. L., Guynan, K., Daily, T., Spaulding, W. D., Garbin, C., & Sullivan, M. (1994). Dispelling the stigma of schizophrenia: What sort of information is best? *Schizophrenia Bulletin, 20*(3), 567–578. doi: 10.1093/schbul/20.3.567

Prejudice [Def. 2a]. (n.d.). *Merriam-Webster Online*. In Merriam-Webster. Retrieved May 10th, 2017, from http://www.merriam-webster.com/dictionary/prejudice.

Rao, D., Feinglass, J., & Corrigan, P. (2007). Racial and ethnic disparities in mental illness stigma. *The Journal of Nervous and Mental Disease, 195*(12), 1020-1023. doi: 10.1097/NMD.0b013e31815c046e

Rickwood, D., Deane, F. P., Wilson, C. J., & Ciarrochi, J. (2005). Young people's help-seeking for mental health problems. *Australian e-journal for the Advancement of Mental health, 4*(3), 218-251.

Rickwood, D. J., Deane, F. P., & Wilson, C. J. (2007). When and how do young people seek professional help for mental health problems?. *Medical Journal of Australia, 187*(7), S35.

Ritsher, J. B., Otilingam, P. G., & Grajales, M. (2003). Internalized stigma of mental illness: psychometric properties of a new measure. *Psychiatry research, 121*(1), 31-49. doi: 10.1016/j.psychres.2003.08.008

Rogler, L. H., Cortes, D. E., & Malgady, R. G. (1991). Acculturation and mental health status among Hispanics. Convergence and new directions for research. *American Psychologist, 46*, 585–597.

Root, M. (1985). Guidelines for facilitating therapy with Asian American clients. *Psychotherapy, 22*, 349–356.

Rüsch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: concepts, consequences, and initiatives to reduce stigma. *European psychiatry, 20*(8), 529-539. doi: 10.1016/j.eurpsy.2005.04.004

Rüsch, N., Lieb, K., Bohus, M., & Corrigan, P. W. (2006). Self-stigma, empowerment, and perceived legitimacy of discrimination among women with mental illness. *Psychiatric Services, 57*(3), 399-402. doi: 10.1176/appi.ps.57.3.399

Sadler, G. R., Lee, H. C., Lim, R. S. H., & Fullerton, J. (2010). Recruitment of hard-to-reach population subgroups via adaptations of the snowball sampling strategy. Nursing & health sciences, 12(3), 369-374.

Saravan, B., Jacob, K.S., Deepak, M.G., Prince, M., David, A.S., Bhugra, D. (2008). Perceptions about psychosis and psychiatric services: a qualitative study from Vellore, India. *Soc Psychiatr Epidemiol, 43*(3), 231-238. doi: <u>10.1007/s00127-007-0292-y</u>

Sawyer, M. G., Arney, F. M., Baghurst, P. A., Clark, J. J., Graetz, B. W., Kosky, R. J., ... & Rey, J. M. (2001). The mental health of young people in Australia: key findings from the child and adolescent component of the national survey of mental health and well-being. Australian & New Zealand Journal of Psychiatry, 35(6), 806-814. doi: 10.1046/j.1440-1614.2001.00964.x

Schmader, T., Major, B., Eccleston, C. P., & McCoy, S. K. (2001). Devaluing domains in response to threatening intergroup comparisons: Perceived legitimacy and the status value asymmetry. *Journal of Personality and Social Psychology, 80*(5), 782. doi: 10.1037/0022-3514.80.5.782

Segal, S. P., Baumohl, J., & Moyles, E. W. (1980). Neighborhood types and community reaction to the mentally ill: A paradox of intensity. *Journal of Health and Social Behavior, 21*(4), 345–359. Retrieved from http://www.jstor.org/stable/2136411

Smedley, B. D., Stith, A. Y., & Nelson, A. R. (Eds.). (2003). Unequal treatment: Confronting racial and ethnic disparities in health care. *Washington, DC: The National Academies*.

Snowden, L. R. (2001). Barriers to effective mental health services for African Americans. *Mental health services research*, *3*(4), 181-187. doi: 10.1023/A:1013172913880

Socall, D. W., & Holtgraves, T. (1992). Attitudes toward the mentally ill: The effects of label and beliefs. *Sociological Quarterly, 33*(3), 435–445

Steadman, H. J., McCarthy, D. W., & Morrissey, J. P. (1989). *The mentally ill in jail: Planning for essential services*. New York: Guilford Press.

Steiger, J. H. (1990). Structural Model Evaluation and Modification: An Interval Estimation Approach. *Multivariate Behavioral Research*, *25*(2), 173–180. doi: 10.1207/s15327906mbr2502_4

Stigma [Def. 1b]. (n.d.). *Merriam-Webster Online*. In Merriam-Webster. Retrieved April 20th, 2017, from http://www.merriam-webster.com/dictionary/stigma.

Struening, E., & Cohen, J. (1963). Factorial invariance and other psychometric characteristics of five opinions about mental illness factors. Educational arid Psychological Measurement, 23(2), 209-290. doi: 10.1177/001316446302300206

Steenkamp, J.-B. E. M., & Baumgartner, H. (1998). Assessing measurement invariance in crossnational consumer research. *Journal of Consumer Research*, 25, 78-90.

Sue, S., & Morishima, J. K. (1982). *The mental health of Asian Americans*. San Francisco: Jossey-Bass.

Sue, S., Wagner, N., Davis, J. A., Margullis, C., & Lew, L. (1976). Conceptions of mental illness among Asian and White/ European American-American students. *Psychological Reports, 38*, 703– 708.

Takeuchi, D. T., Bui, K. V. T., & Kim, L. (1993). The referral of minority adolescents to community mental health centers. *Journal of Health and Social Behavior, 34*(2), 153–164.

Taylor, S. M., & Dear, M. J. (1981). Scaling community attitudes toward the mentally ill. Schizophrenia bulletin, 7(2), 225. doi: 10.1093/schbul/7.2.225

Teplin, L. A. (1984). Criminalizing mental disorder: The comparative arrest rate of the mentally ill. American Psychologist, 39(7), 794–803. doi: 10.1037/0003-066X.39.7.794

Thara, R., (1992). An attempt at the development of community-based support systems in the urban slums of Madras, India. *Psychosocial Rehabilitation Journal, 16*(1), 155-159. doi: 10.1037/h0095723

Thompson, B. (2000). Ten commandments of structural equation modeling. In L. G. Grimm & P. R. Yarnold (Eds.) *Reading and understanding more multivariate statistics* (pp. 261 – 284). Washington, DC: American Psychological Association.

Thompson, M., & Thompson, T. (1997). *Discrimination against people with experiences of mental illness: discussion paper.* The Commission.

Tracey, T. J., Leong, F. T. L., & Glidden, C. (1985). Help seeking and problem perception among Asian Americans. *Journal of Counseling Psychology, 33*(3), 331–336. doi: 10.1037/0022-0167.41.3.280

Uba, L. (1994). *Asian Americans: Personality patterns, identity, and mental health*. New York: Guildford.

Uehara, E. S., Takeuchi, D. T., & Smukler, M. (1994). Effects of combining disparate groups in the analysis of ethnic differences: Variations among Asian American mental health service consumers in level of community functioning. *American Journal of Community Psychology, 22*(1), 83-99. doi: 10.1007/BF02506818

Verbrugge, L. M. (1979). Female illness rates and illness behavior: Testing hypotheses about sex differences in health. *Women & health, 4*(1), 61-79. http://dx.doi.org/10.1300/J013v04n01_04

Wahl, O. F. (1999). Mental health consumers' experience of stigma. *Schizophrenia Bulletin, 25*(3), 467–478. doi: 10.1093/oxfordjournals.schbul.a033394

Watkins, M. W. (2013). Omega. Phoenix, AZ: Ed & Psych Associates.

Weiss, M. F. (1994). Children's attitudes toward the mentally ill: an eight-year longitudinal follow-up. Psychological Reports, 74(1), 51-56. doi: 10.2466/pr0.1994.74.1.51

Wilson, C. J., Deane, F. P., Ciarrochi, J., & Rickwood, D. (2005). Measuring help-seeking intentions: Properties of the general help-seeking questionnaire. *Canadian Journal of Counselling, 39*(1), 15-28. Retrieved from http://search.proquest.com.libproxy.temple.edu/docview/195809895?accountid=14270

Ying, Y. W., & Hu, L. T. (1994). Public outpatient mental health services: Use and outcome among Asian Americans. *American Journal of Orthopsychiatry, 64*(3), 448–455.

Zane, N., Lau, A., & Gock, T. (2000). The impact of ethnic specific mental health services for Asian Americans: Predictors of treatment outcome. *Manuscript in preparation.*

Zinbarg, R. E., Yovel, I., Revelle, W., & McDonald, R. P. (2006). Estimating generalizability to a latent variable common to all of a scale's indicators: A

comparison of estimators for ωh. *Applied Psychological Measurement, 30*, 121–

144. doi: 10.1177/0146621605278814