Breaking The Silence: Extending Theory To Address The Underutilization Of Mental Health Services Among Chinese Immigrants In The United States

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BREAKING THE SILENCE:
EXTENDING THEORY TO ADDRESS THE UNDERUTILIZATION OF MENTAL
HEALTH SERVICES AMONG CHINESE IMMIGRANTS IN THE UNITED STATES

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For the Degree of Doctor of Philosophy in

Mass Communications

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2018

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DEDICATION

To the best woman in my life, my grandmother, who passed away suddenly in 2011. You are always in my heart.
ACKNOWLEDGEMENTS

Words cannot express my feelings, nor my thanks to everyone who has helped me, guided, and supported me along the way. I would like to express the deepest appreciation to my advisor, Dr. Sei-Hill Kim for his patience, encouragement, and advice he has provided throughout my time as his student. I have been extremely lucky to have such a great advisor who cared so much about my work, my performance, and my career development and spent countless hours training and advising me. Choosing him as my advisor was the best decision I have ever made throughout my graduate school years. I would also like to thank Dr. Brooke W. McKeever. She has been so much more than a committee member for me. She has been my mentor, my support, and my inspiration and I owe her so much. I would also like to thank the members of my committee, Dr. Robert McKeever, Dr. Carol J. Pardun, and Dr. Daniela B. Friedman, for their extreme patience, support, and guidance. I would also like to thank the faculty and staff in the School of Journalism and Mass Communications, including Dr. Andrea H. Tanner, Dr. Ran Wei, Dr. Shannon Bowen, Ms. Lisa Sisk, and Ms. Sandra Hughes, as well as my USC cohorts and friends. I could not have come this far without the encouragement of the school. Finally, I want to thank my family and my friends, especially Liz Lee and Taylor Wen, for their love and support. A special thanks to Elliott Peng, who has been there for me since the day we met. You are my inspiration.
ABSTRACT

Mental health services underutilization has been a prevalent issue in Chinese immigrant community in the United States. Using a nation wide survey of 445 Chinese immigrants in November 2017, this study investigates the effects of cognitive barriers (i.e., acculturation levels) and affective obstacles (i.e., mental illness stigma) on Chinese immigrants’ perceptual, attitudinal, and behavioral responses toward mental health services, by combining situational theory of problem solving and the theory of planned behavior. This study also examines the effects of mainstream and ethnic media use on acculturation and perceived stigma. Findings provide empirical support for the combined model, showing that all the cognitive and affective factors can predict Chinese immigrants’ communicative action and behaviors regarding mental health services utilization. In addition, this study found that acculturation (cognitive barriers) is an effective predictor of individuals’ ability to recognize the problem, connection to the problem, subjective norms regarding the problem, and their perceived behavioral control over the problem. On the other hand, mental illness stigma (affective barriers) can predict individuals’ constraint recognition, attitudes, and perceived behavioral control over the issue. Practical implications are discussed for health public relations practitioners and communicators to better identify publics, propose strategic messages, and implement communication campaigns to improve Chinese immigrants’ mental health services utilization rates.
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CHAPTER 1
INTRODUCTION

In 2013, Mingdong Chen, a Chinese immigrant, butchered his sister-in-law and four nephews and nieces with a meat cleaver in New York City. Chen had exhibited symptoms of severe mental illness but had been reluctant to seek professional help before he committed his murder, according to the family. The killing stunned the Chinese community in the United States and raised question about mental health services underutilization among Asian Americans. Sadly, the case of Mingdong Chen is not a single incident.

Although Asian Americans in the United States have relatively lower rates of mental illness, decades of research have shown that they have been the least likely to seek professional mental health care among all ethnic/racial groups (e.g., Atkinson & Gim, 1989; Spencer, Chen, Gee, Fabian, & Takeuchi, 2010). In 2008, among Asian Americans who were diagnosed with mental illness, 69% of them never sought professional care, compared to Caucasians (40%), African Americans (59%), and Latinos (64%) (Alegria et al., 2008). In 2014, the national survey on drug use and health reported that only 6.8% of Asian adults age 18 and over received a mental health treatment or counseling, compared to 18% of non-Hispanic whites (SAMHSA, 2015). The latest statistics (SAMHSA, 2015) reported that more than 13% of Asian Americans and Pacific Islanders had a diagnosable mental illness in the United States. Suicide death rates for both Asian Americans at
certain age are higher than they are for whites (Office of Minority Mental Health, 2016). Nevertheless, this ethnic group is three times less likely to seek psychological help for mental health issues, relative to other ethnic/racial populations in the country (Nishi, 2016).

Barriers to using mental health services among Asian Americans have been well demonstrated in research in the past two decades. Health-related organizations and scholars have also devoted time and effort to understanding why Asian Americans are reluctant to communicate about mental health problems (Sue, Cheng, Saad, & Chu, 2009). However, Asian Americans’ struggle with using mental health services has yet to be improved. One of possible explanations is that the majority of studies considers Asian Americans as a whole, rather than segmenting them into relevant publics based on their culture backgrounds, relevance, and psychosocial responses to an issue or a situation. In order to better understand the reasons behind Asian Americans’ unwillingness to utilize mental health care, this study examines the subgroup of Chinese Americans, by focusing on first-generations immigrants only, in order to delineate them from the combined Asian American group and to provide practical implications to the specific population.

The term Asian Americans refers to a panethnic group that comprises more than twenty different nationalities and ethnic populations who have ancestral origins in East Asia, South Asia, and Southeast Asia (U.S. Census Bureau, 2010). Because Asian Americans comprise a huge number of people with ancestry from a wide range of culturally diverse traditions, this study rather focuses on Chinese Americans, the largest ethnic group in the category of Asian Americans, comprising 26% of the population as of 2010 (U.S. Census Bureau, 2010). This study further breaks down Chinese Americans
into smaller groups, by only focusing on first generation immigrants, not only because Chinese immigrants are now the third largest foreign-born group in the United States, but because immigrants are the most vulnerable generation to mental disorders (Hall & Olff, 2016; Lee, Friedmann, Kverno, Newhouse, Zhang, & Thomas, 2015). Research has reported a higher incidence rate of psychological distress among immigrants than native populations, possibly due to significant disruptions of social networks and increased sense of alienation, resulting from migration and resettlement in a new country (e.g., Bas-Sarmiento, Saucedo-Moreno, Fernández-Gutiérrez, & Poza-Méndez, 2017). As the fastest-growing immigration population in the United States, significant challenges to reducing mental health associated stigma and promoting professional services have been posed, especially with the limited current literature and research targeting this population (Augsberger et al., 2015).

The purpose of this study, therefore, is to address the problem of mental health services underutilization in the Chinese immigrant community, based on their media use, acculturation degree, awareness, attitudes, and involvement related to mental health care. This study employs acculturation theory (Berry, 1974, 1980, 2003), mental illness stigma, the situational theory of problem solving (Kim & Grunig, 2011), and the theory of planned behavior (Ajzen, 1985) to explore Chinese immigrants’ communication and services utilization behaviors related to mental health problems. Building upon acculturation and psychosocial literature, this research investigates how acculturation degree shapes the manner in which Chinese immigrants feel and behave toward mental illness in the community, including their ability to recognize the problem, perceived barriers, connections, attitudes, subjective norms, and behavioral control. As public
health literature reveals, those with a higher degree of acculturation are more likely to recognize mental health problems, to be more positive with regard to seeking professional care, to be more willing to discuss the issues, and to be more tolerant of mental health discrimination in the community (Miller, Yang, Hui, Choi, & Lim, 2011). In addition to mental illness associated stigma, acculturation, therefore, also represents an important predictor of affective, cognitive, and behavioral reactions toward mental disorders among ethnic minorities.

While several studies have explored the relationship between immigrants’ acculturation and their acceptance of mental health services, the existing research rarely addresses the influence of the media on individuals’ psychosocial responses in these phenomena. The mass media are important information sources regarding mental health and play critical roles in cultivating individuals’ attitudinal responses toward mental illness (Wahl, 2004). Klin and Lemish (2008) observed that mental disorders is always presented as abnormal and dangerous in the media, which may disseminate misperceptions and stigma associated with it. Further research on the relationships between media use, in particular mainstream and ethnic media use, and public perceptions were suggested by the authors (Klin & Lemish, 2008).

In this respect, the objectives of this research are threefold. First, this study seeks to demonstrate how both mainstream media and ethnic media use impact the immigrants’ acculturation process. Second, this study seeks to explore the effects of both mainstream media and ethnic media use on immigrants’ stigmatizing attitudes toward mental illness. Third, this study seeks to deepen understanding of the relationships between immigrants’ acculturation degree and internalized stigma, and their psychosocial responses toward
mental health issues, which ultimately lead to individuals’ behavioral reactions, drawing from the theoretical frameworks of situational theory of problem solving and the theory of planned behavior.

1.1 Significance of the Study

This study contributes to health public relations and community health disciplines both theoretically and practically. Theoretically, this study is significant in several aspects. First, public health scholars have taken enormous efforts into the understanding of how acculturation affects immigrants’ view of mental health and mental health services (Leong, Kim, & Gupta, 2011; Smith & Trimble, 2016). The path analysis model taken in this study may expand the scope of acculturation and health public relations research by suggesting that immigrants’ acculturation degree in the host country may not only directly affect their psychological and behavioral responses to mental health, but indirectly impact the effects of media exposure on how they feel and behave regarding mental health. Past studies have provided a great amount of evidence that immigrants will perceive mental health and its care differently according to their acculturation degree in the United States (Paniagua & Yamada, 2013). However, much of the existing research rarely employs a comprehensive theoretical framework, but only uses one single variable to measure immigrants’ attitudinal or behavioral responses toward mental health care. This study advances the theory by proposing an integrated model that combines acculturation theory with two widely applied strategic communication theories to systemically measure immigrants’ awareness, attitudes, and behaviors in relation to mental health services. Moreover, previous studies have examined media effects and acculturation effects on immigrants’ mental health knowledge and attitudes separately;
nevertheless, evidence of the indirect effects of acculturation on immigrants’ media use and their interpretations about mental health is limited. This study helps bridge the gap among these three variables by providing a model that comprehensively examines the relationships. This helps build up systematic theoretical knowledge in audience segmentation and dissemination of public health interventions.

Second, acculturation has been an important variable in the field of public health when examining immigrants’ health behaviors, particularly among ethnic minority populations. However, the majority of acculturation measurements were developed and tested only with Latino populations that may or may not be applied to other ethnic groups (Thomson & Hoffman-Goetz, 2009). Due to the lack of applications, this research describes an exploratory study designed to investigate the applicability of multidimensional acculturation measurement instruments in examining Chinese immigrants’ acculturation degree. By doing so, this study contributes to the operationalization of acculturation in the group of Chinese immigrants and provides practical implications to organizations that target this specific population.

Practically, this study seeks to fill the research gap that exists with Chinese immigrants’ mental health services needs. The research literature on Chinese immigrants’ attitudinal and behavioral reactions toward mental health is inadequate. This gap significantly impedes the provision of timely and effective treatment to the persons needed. Past research has demonstrated that health inequality problems in the Chinese community are often unrecognized because they are relatively difficult to recruit into research participation (UyBico, Pavel, & Gross, 2007). As one of the few to study subgroup of Chinese immigrants and separate them from the whole Asian American
immigrant population, this research will yield practical implications for mental health organizations in order to break the silence on mental health, decrease stigma, and increase utilization of mental health services in the Chinese immigrant community. Moreover, although this study does not intend to apply the findings to Asian Americans in general, the results of this study may be generalized to Asian immigrants from East Asia countries, such as Japan and South Korea, because “East Asian cultural sphere,” a group of countries in East Asia that were historically influenced by the culture of Mainland China, shares similar traditional beliefs and values (Reischauer, 1974). Findings of this study will suggest new directions for designing future interventions and campaigns related to mental health, and public health messages that involving broader issues that target Chinese or Asian immigrants from East Asian countries.

The literature review provides an overview of these concepts and theories but, first, it is necessary to review the importance of audience segmentation in health public relations field and some possible barriers of mental health services utilization among Chinese immigrants.

1.2 Audience Segmentation

In order to disseminate messages and persuade audiences effectively, health communication researchers borrowed and adapted a theoretical framework from the marketing field to create a social marketing theory. While the original marketing theory focuses on “tangible” products, social marketing theory emphasizes “nontangible” objects such as knowledge, attitudes, and health relevant behaviors. It explores approaches that can persuade audiences to change their cognitive thoughts or actual behaviors (Lefebvre & Flora, 1988).
theory of “consumer orientation” is the primary element. Formative research that examines audiences’ characteristics and needs provides a deeper understanding of individuals’ motivations and barriers to adopting behaviors (Lefebvre & Flora, 1988). In other words, to develop an effective health campaign, researchers must know “what drives, facilitates, and maintains the behavior of the target audience, as well as the channels of information distribution and communication preferred by the target audience” (Bellows, Anderson, Gould, & Auld, 2008, p. 170).

By dividing audiences into subgroups based on their characteristics and needs, communication practitioners are able to propose effective strategies that target different segments (Hallahan, Holtzhausen, Van Ruler, Verčič, & Sriramesh, 2007). Instead of addressing general stakeholders, segmentation enables organizations and public health professionals to identify subgroups and develop appropriate strategies that facilitate their conversations with specific publics. Kim, Ni, and Sha (2008) indicated that segmentation can not only enhance “cost effectiveness in reaching current/potential publics” but also increase “organization effectiveness in obtaining stakeholders’ and publics’ support and resources to achieve organizational strategic goals” (p.755). For example, subpopulations that are engaged in issues and motivated to adopt communication behaviors (e.g., information seeking and sharing) may aid non-profit organizations in shaping public opinion and pressing policymakers toward action (Grunig & Repper, 1992; Kim, Shen, & Morgan, 2011). In addition, those active audiences may be helpful in spreading information and reaching out to potential publics (Kim & Grunig, 2011). Therefore, it is important for organizations to segment audiences, to identify such active publics, and to examine their communication behaviors, while building relationships with
current/potential audiences or solving critical problems. Scholars believe that without identifying the publics and dividing them into subgroups according to their attitudinal reactions to issues, communication between organizations and the publics will not be effective (Grunig & Repper, 1992; Kim et al., 2008).

According to public relations scholars, one way to segment organizational stakeholders is by adopting the situational theory of publics that was developed by J. E. Grunig (1966, 1989) and that has been widely applied in public relations research and other disciplines (e.g., Lee & Rodriguez, 2008; Illia, Lurati, & Casalaz, 2013). The other criteria that need to be taken into consideration when segmenting Chinese immigrants in terms of mental health issues are their cultural identities. Studies have suggested that cultural identity of Chinese immigrants, such as ethnic identification and English proficiency, have resulted in the significantly low rate of using mental health services (e.g., Abe-Kim et al., 2007). People who have a higher degree of mainstream acculturation will be more likely to seek professional psychological services (Leong & Lau, 2001; Valencia-Garcia, Simoni, Alegría, & Takeuchi, 2012). Thus, understanding how Chinese immigrants make meaning of their cultural identity in the United States plays a critical role in segmenting the community for research examining the relevant publics’ actions of communicating and adopting a behavior advocated by mental health related organizations (Grunig & Repper, 1992). In other words, cultural factors or the situational factors from the situational theory of publics might all be the predictors of individuals’ communicative action, and thus can be helpful in assisting organizations in identifying the most immediate publics.
For these reasons, the study aims to examine relationships among Chinese immigrants’ media use, acculturation degree, variables of Kim’s and Gruing’s (2011) situational theory of problem solving, an extension model of the situational theory of publics, and the theory of planned behavior, in order to identify different publics and their communicative behaviors in terms of mental health services.

1.3 Barriers to Utilizing Mental Health Services

The research literature on mental health issues in Chinese immigrants is limited; therefore, this study searched for relevant studies in Asian immigrants. The phenomenon concerning underuse of mental health services has been observed in particular among Asian immigrants. “Nativity status (i.e., US-born vs. foreign-born)” and “generation status (first vs. other generations)” have been demonstrated to be the most effective predictors of services use among Asian Americans (Abe-Kim et al., 2007). The investigations found that frequency of mental health services utilization among Asians born in the United States were three times higher than that of immigrants. More specifically, first-generation Asians were less likely than second- or third-generations Asians to seek support for mental health problems (2.17% vs. 3.51% vs. 10.1%) (Abe-Kim et al., 2007).

The pressure generated from acculturation, cultural conflicts, financial struggles, and language proficiency are all risk factors of mental illness for immigrants (Yakushko, Watson, & Thompson, 2008). Meanwhile, barriers to using mental health care can be more frequent and have greater impact for first-generation migrants (Alegria et al., 2008). Saechao et al (2012) conducted six focus groups with immigrants from Iraq, Iran, Cambodia, Africa, Eastern Europe, and Vietnam and categorized possible barriers to
using mental health services into six themes. The themes include 1) competing cultural practices, 2) stigma toward mental health services, 3) language, 4) lack of information about the services, 5) lack of a perceived norm in country of origin for using mental health services, and 6) cost. Some barriers have also been demonstrated in the Asian immigrant’s community.

Leong and Lau (2001) categorized the barriers associated with mental health services use among Asian Americans into two dimensions: 1) culturally informed notions of mental illness (i.e., cognitive barriers; cultural values and beliefs) and 2) culturally based emotional responses (i.e., affective barriers; perceived stigma).

Cognitive barriers. Asian Americans shared similar conceptions that mental health problems can be resolved by self-control. Avoiding gloomy thoughts by one’s self can alleviate emotional distress. As a result of the culturally influenced notions, Asian Americans, especially Chinese, may seek alternative therapies, including seeing a priest (Ying & Miller, 1992), taking Chinese herbal medicine, and using acupuncture for emotional relief (Lin, Inui, Kleinman, & Womack, 1982). The findings are consistent with the barrier Saechao et al. (2012) proposed: competing cultural practices. Limited English proficiency also posed a significant problem for foreign-born Asians in terms of mental health help-seeking. A great amount of research has shown that language barriers created ineffective communication between patients and healthcare providers (e.g., Kung, 2004). First, health professionals may possess discriminative attitudes and behaviors toward immigrants due to their limited English proficiency and accents, thereby providing culturally insensitive services or refusing care (Spencer et al., 2010). Prior experiences of discrimination in healthcare settings may deter immigrants from being
engaged in help-seeking for mental illness (Spencer & Chen, 2004). Second, the limited ability to describe their emotional disorders may also hinder Asian immigrants from seeking professional medical treatment or being referred to mental health services (Meyer, Zane, Cho, & Takeuchi, 2009). Moreover, many Asian immigrants were not aware of mental health care provided in the United States and not familiar with the process and access to these services, due to their low English literacy (Saechao et al., 2012).

**Affective barriers.** Affective responses may also hinder Asian immigrants from seeking psychological interventions (Leong & Lau, 2001). Fear of labels, stigma, and discrimination can discourage individuals from seeking mental health treatment. These fears may have particularly significant influence on Asian Americans. In Asian cultures that emphasize collectivism and interdependence, family is often of the utmost importance. The family hierarchy, emotional restraint, avoidance of shame and saving “face” all may lead Asian immigrants from East Asia countries to the belief that revealing family or personal problems associated with the label of “crazy” may embarrass family members and the community (Ho, 1984; Shea & Yeh, 2008, p. 158; Zane & Yeh, 2002). The lack of acknowledgement of mental health problems may result in less interaction with healthcare providers and therefore in more difficulty seeking professional help for mental health problems (Augsberger et al., 2015).

Through a comprehensive understanding of Chinese immigrants’ barriers to mental health services utilization, tailored messages and interventions can be proposed to address the problems. For example, by providing more information about access to mental health resources and services in languages that the targeted community understands, the challenges generated from language barriers may be addressed. In
addition, anti-stigma interventions that incorporate Chinese cultural values may be effective in reducing the perceived stigma associated with mental healthcare in the community and in encouraging individuals to communicate about their problems. However, as noted, without identifying the audiences and dividing them into subgroups based on their characteristics, messages cannot be tailored and customized for a targeted community, making ineffective such communication and interventions.

1.4 Goals of the Study and Overview

To summarize, this study seeks to understand the effects of acculturation (i.e., cognitive barriers) and mental illness stigma (i.e., affective barriers) on Chinese immigrants’ psychological and behavioral responses in terms of seeking mental health care, and its mediating impact on the relationship between Chinese immigrants’ media use and their attitudinal reactions toward mental health problems. This research employs media use, acculturation theory, internalized stigma, the situational theory of problem solving, and the theory of planned behavior, through an online survey of Chinese immigrants in the United States. More specifically, Qualtrics was used to develop an online survey and the survey link was distributed to Chinese-relevant organizations in the United States as well as to Chinese immigrant-related Facebook private groups. Studying a specific audience with regard to the use of mental health care contributes to the goal of this research: to better understand perceptions, attitudes, communication, and behaviors surrounding mental health services utilization among ethnic minorities, thereby providing both theoretical and practical implications to the field of health communication and public relations.
The remainder of this research is organized as follows. The following chapter (Chapter 2) introduces theoretical frameworks of acculturation theory, the situational theory of problem solving, the theory of planned behavior, and the literature regarding mental illness stigma. The section illustrates the conceptual framework and derives hypotheses underlying this research. Chapter 3 discusses the method of conducting this particular research. As a quantitative study, the design of the questionnaire, measurements of the variables, and data collection and analysis will be explicated. Next, the results section details answers to research questions and the findings of hypotheses testing. The final chapter offers theoretical and practical implications based on the results. A discussion and a summary of conclusions from the findings will be provided.
CHAPTER 2  
LITERATURE REVIEW

Cognitive barriers (i.e., cultural beliefs) and affective barriers (i.e., perceived stigma) are regarded as the two reasons behind Asian Americans’ reluctance to utilize mental health care (Leong and Lau, 2001). This chapter explicates the two dimensions and relevant theoretical concepts.

2.1 Acculturation

Cultural identity is a wide-ranging concept that refers to “the totality of ones’ cultural self-definitions” and consists of several aspects (Schwartz, Zamboanga & Jarvis, 2007, p.364). Scholars suggested that a person’s cultural identification is a social interaction with the mainstream culture of the society that makes individuals identify with each other based on similarities and distinguish between each other according to differences (Gong, 2007; Malesevic, 2003). The process of the social interaction is called “acculturation” (Sam & Berry, 2010), a classical term that was proposed by Redfield, Linton, and Herskovits (1936) and has been widely used in different disciplines to explain ethnic minorities’ processes to establish cultural identity in a nation. The authors (Redfield et al., 1936) asserted,

Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand
contact with subsequent changes in the original culture patterns of either
or both groups (p. 149).

Through continuous communication and interaction with the new sociocultural
environment, an immigrant may be acculturated. As Kim (1982) explained, “The
acquired communication competence, in turn, reflects the degree of that immigrant’s
acculturation” (p. 380).

John Berry, a psychological scholar who has been seen as one of the founding
scholars in the field of acculturation and intercultural relations, proposed two independent
aspects to describe ethnic minorities’ processes of acculturation in the United States:
examining the connections individuals maintain with the cultures of their origin and the
participation they have in mainstream culture, scholars can comprehensively understand a
person’s cultural identity. Berry (1977) emphasized that it is important to study
acculturation through three different aspects, including psychological variables,
sociological approach, and cultural patterns. Only though the comprehensive
examinations based on the three aspects can an analysis concerning acculturation be
complete and meaningful. He (1980) then introduced several psychological variables that
can be potential factors of acculturation, such as attitudes, cognitive styles, personality,
and language. Acculturation occurs when the interactions of these factors with
individuals’ original culture and the dominant host culture appear.

Based on the two dimensions, Berry (2003) proposed four categories to describe
differences in individuals’ acculturation degree, including integration, assimilation,
separation, and marginalization. Integration occurs when an individual has not only
adopted the norms of the dominant host culture, but also retained the original values and beliefs from their culture of origin. Assimilation represents people who have completely adjusted to the new culture over their original culture. Separation refers to people who reject the host culture and embrace their culture of origin only. Marginalization occurs when an individual can accept neither the norms of the new culture nor those of his or her original culture. Among the four strategies, individuals who practice “integration” are assumed to encounter the fewest obstacles in adapting to a new culture.

The conceptual model of acculturation was tested by several scholars (e.g., Ward & Rana-Deuba, 1999; Kosic, 2002). A study in Nepal found that those who utilized “integration” strategy reported significantly less emotional stress than others, while people who adopted an “assimilation” style experienced fewer difficulties when interacting with the host culture (Ward & Rana-Deuba, 1999). Kosic (2002) suggested that assimilation strategy would be a better adaptive acculturation approach if the immigrants’ native and host cultures were similar.

In the past two decades, research on acculturation has resurged (Lakey, 2003). Researchers continue to propose new theoretical models and measured scales of acculturation; therefore, the conceptualization and operationalization of the concept have significant overlap across disciplines. For example, Felix-Ortiz, Newcomb, and Myers (1994) proposed a cultural identity measurement that explores individuals’ attitudes, behaviors, and familiarity with dominant host cultures, while Kim and Abreu (2001) developed a model that includes three patterns of acculturative change: behavioral (e.g., language use), cognitive (e.g., values and knowledge), and affective (e.g., choice of social circles).
Abstruse definitions, conceptual overlaps, and theoretical inconsistencies call for a comprehensive concept of “acculturation.” Matsudaira (2006) therefore reviewed 51 acculturation scales that were proposed between 1978 and 2004 to identify the conceptual and operational issues involved in defining and measuring acculturation. She examined the terminology that was used in the literature and concluded that a person’s culture of origin is usually referred to as the “home,” “ethnic,” and “heritage,” while one’s new culture is termed the “mainstream,” “host,” or “dominant” culture. The researcher then addressed an enduring debate in acculturation literature: dimensionality. Acculturation was once considered to be a unidimensional procedure that assumes an individual could fully assimilate into a new society, from unacculturated to acculturated (Dona & Berry, 1994). The instruments such as the Acculturation Rating Scale for Mexican Americans (ARSMA) (Cuellar, Harris, & Jasso, 1980) and the Short Acculturation Scale for Hispanics (SASH) (Marin, Sabogal, Marin, & Sabogal, 1987) were developed based on this rationale.

However, recent studies suggested that acculturation is a bi-dimensional or multidimensional process. The bi-dimensional notion assumes that a person can maintain his or her culture of origin when they meet new cultures. One of the measurements for bi-dimensional acculturation is Berry’s four acculturation strategies, also known as “modes of acculturation.” Another bi-dimensional scale is to measure the two orthogonal dimensions of original culture and mainstream culture (Rudmin & Ahmadzadeh, 2001; Zea et al., 2003). The measurement often includes subscales for both culture of origin and new culture and examines the degree of negative correlations between two subscales. Scholars believe that the bi-dimensional measure scales operationalize the concept of
acculturation better because the scales examine a much larger range of cultural factors compared to that of unidimensional measurements (Ryder et al., 2000). An example is the Bidimensional Acculturation Scale (BAS) (Marin & Gamba, 1996). The multidimensional model suggests that acculturation can only be captured by understanding multiple dimensions of the concept separately, including attitudes, cultural values, ethnic ties and interaction.

Based on the ideas of the bidimensional and multidimensional models, Marin (1998) proposed a conceptual framework that includes three levels of acculturative change: superficial acculturation, intermediate acculturation, and significant acculturation. Superficial level of acculturation refers to behaviors or values that are generally modest significant to a person and easily changed, involving learning from the new culture, such as media use and food preferences. Intermediate acculturation refers to changes in behaviors that have moderate personal significance or values to an individual and are relatively difficult to change (e.g., cultural values and self-identification). Finally, significant acculturation involves changes in a person’s core values, such as health beliefs and family values. Scholars believed that the multidimensional scales that measure different levels of acculturation might best capture the concept (Thomson & Hoffman-Goetz, 2009).

2.1.1 Media Use and Acculturation. Acculturation is the process when newcomers “become acquainted with and adopt some of the norms and values of salient reference groups in the host society” (Kim, 2003, p. 244). In the long process of acculturative change, mass media play a particularly critical role (Gudykunst & Nishida, 2001; Kim, 1977). Numerous studies with regard to media effects on acculturation
consistently showed that mainstream media and ethnic media in the United States played
different roles when immigrants meet the host cultures (Croucher, Oommen, & Steele,
2009; Lin, Song, & Ball-Rokeach, 2010; Moon & Park, 2007).

Media use has been shown to be a marker of acculturation (Jeffres, 2000; Moon &
Park, 2007; Shoemaker, Reese, & Danielson, 1985). Exposure to American mass media
allows immigrants to gain knowledge about the host cultures and facilitates greater
assimilation into the dominant society (Chaffee, Nass, & Yang, 1991; Jeffres, 1999; Kim,
1977; Peeters & D’Haenens, 2005). Research has demonstrated that immigrants who are
more frequently exposed to American media such as newspapers (Chaffee et al., 1991)
and television (Hall, Anten, & Cakim, 1999) tend to find American cultural values more
acceptable. In addition, mass media are immigrants’ main communication sources to
obtaining information about American culture when they have a limited social circle in
the host country (Chaffee et al., 1991; Dalisay, 2012; Hall et al., 1999). American
mainstream media use may be helpful for immigrants in learning English, understanding
American culture, and receiving information about current events (Dalisay, 2012;
Vincent & Basil, 1997).

On the other hand, ethnic media consumption can help immigrants maintain ties
with the cultures of their origin and sometimes impedes the process of acculturation
(Durham, 2004; Shiramizu, 2000; Viswanath & Arora, 2000). Ethnic media is defined as
media by and for ethnics in a host society with content in ethnic languages (Shi, 2009;
Viswanath & Arora, 2000). It is produced to serve ethnics’ political, economic, cultural,
and daily needs in the host country (Shi, 2009, p. 599); meanwhile, it helps preserve and
maintain ethnic culture and identity – endorsing ethnic pride, showing symbolic ethnicity,
and unifying ethnic individuals (Johnson, 2000, p. 246). For example, foreign-born parents not only exhibited a greater preference for consuming ethnic media, but they also persuaded their children to use ethnic media products (Lee, 2004; Sreneby, 2000). The main reason for immigrants’ ethnic media consumption was their desire to retain connections with their original cultures. However, factors such as level of education and language proficiency also influence immigrants’ choice of media. The studies of Asian immigrants in the United States bear testimony to this fact. Scholars found that immigrants who were more fluent in English and frequently associated with the members of the dominant culture would consume more English-language media (Lum, 1991; Hwang & He, 1999). Lee (2004) found that a lack of English proficiency and less familiarity with the host culture led to Korean immigrants’ higher exposure to Korean satellite television.

Although media effects on acculturation were well demonstrated in studies that were conducted in the late 1990s and early 2000s, recent investigations suggested that relationships between use of mainstream media and ethnic media, and acculturation are unclear and sometimes reciprocal. The concept of “translocalism” (Kraidy & Murphy, 2008) implied that both types of media could simultaneously facilitate and hinder immigrants’ integration to the new culture. Dalisay’s (2012) study suggested immigrants consumed ethnic media both to maintain their cultures of origin and to learn about the host culture. In addition, use of host culture media could also enable immigrants to oppose American culture due to certain negative news stories, thereby reinforcing their original cultures (Moon & Parkm 2007; Viswanath & Arora, 2000). The findings conflict with the idea of assimilation, which indicates that immigrants would reject ethnic media
once they adopt the consumption of mainstream media in the dominant culture. The conflicting notions once again show that acculturation is a slow, complex, and multidimensional process that can hardly be explained by a single factor or a linear relationship (Trimble, 2003).

Against this background, this research proposes the first path that connects media use with acculturation levels. Hypothesis 1 is formulated as follows:

_H1a: Consumption of American media, including both traditional media and digital media, will be positively related to the level of acculturation._

_H1b: Consumption of Chinese ethnic media, including both traditional media and digital media, will be negatively related to the level of acculturation._

### 2.1.2 Acculturation and Public Health

Attention to the influence of acculturation on ethnic/racial minorities in the discipline of public health has increased since reducing health disparities became one of the most important public health tasks in the United States. Health disparities refer to differences in the burden of disease or access to healthcare services and facilities. The phenomenon is particularly prevalent among racial/ethnic minorities (The Centers for Disease Control and Prevention, 2013). For example, Asian Americans are one of the fastest growing ethnic/racial minorities in the country, representing 5.6% of the U.S. population. The group is expected to grow to 41 million by 2050, when it will comprise 9.2% of the total population. Along with this growth of the population, Asian Americans experience growing health disparities in cancer, becoming the only ethnic/racial group in the United States where cancer is the leading cause of death. Due to the high prevalence of Hepatitis B and low screening rates, Asian Americans are at the highest risk for liver and stomach cancers and those cancers
associated mortality (National Institute on Minority Health and Health Disparities, 2016). However, such health inequality problems in the Asian community have largely been overlooked because of the prejudice of relatively positive health profiles (Gomez et al., 2010).

The patterns of disparities in healthcare quality among racial and ethnic groups can be explained by a wide variety of reasons. Cultural-identity factors have been documented to play influential roles (Facione, Giancalo, & Chan, 2000; Wu, West, Chen, & Hergert, 2006). Scholars suggested that it is important to recognize the contribution of acculturation to the differences in the quality of health and care services among ethnic minorities (Thomson & Hoffman-Goetz, 2009). The challenges and changes experienced in the acculturation process can potentially affect the health of ethnic/racial minorities in a positive or negative way (Abraído-Lanza, Armbrister, Flórez, & Aguirre, 2006). For example, acculturation is found to be associated with substance abuse (Lara, Gamboa, Kahramanian, Morales, & Hayes Bautista, 2005). More acculturated Latinos in the United States have been demonstrated to have a higher prevalence of drug use (Turner & Gil, 2002), alcohol consumption (Marin & Posner, 1995), and smoking (Coonrod, Balcazar, Brady, Garcia, & Van Tine, 1998). On the other hand, less acculturated Chinese Americans were reported as more frequent users of complementary alternative medicine, due to stigma concerns (Fang & Schinke, 2007).

Although the term of acculturation generally describes the process that individuals use to adopt new cultures’ values, beliefs, and behaviors (Clark & Hofsess, 1998), the definitions of the term vary across public health disciplines. Despite growing research on the relationships between acculturation and health outcomes, efforts to propose a
comprehensive conceptual and operational model of acculturation in public health continue to lag behind the use of simple linear and unidimensional measurements (Abraído-Lanza et al., 2006). Thomson and Hoffman-Goetz (2009) reviewed 134 journal articles that used the concept of acculturation between 1987 and 2007, to compare the acculturation definitions and measurements in published public health research. In terms of definitions, 60% of the studies suggested that acculturation is a unidimensional process (e.g., “Acculturation refers to the process by which immigrants totally adopt the attitudes, values, customs, beliefs and behaviors of a new culture” (Abraido-Lanza, Chao, & Florez, 2005, p. 1244)). On the other hand, 22% of the research describing acculturation as a process that simultaneously adopts the new culture and maintains the original culture, which refers to a bi- or multidimensional model. Thomson and Hoffman-Goetz (2009) suggested that the multidimensional definitions and measurements may be most effective in examining a person’s change in values, attitudes, and behaviors when they encounter a new culture, and the impacts on his or her health status. However, these common acculturation measures were developed largely for the populations of Mexican Americans and Central Americans; the scales are not known to be equally reliable and valid for other ethnic/racial groups. Due to the unclear definitions and measures, many public health researchers have called for a conceptual model of acculturation, to comprehensively explain the associations between acculturation and health (Abraído-Lanza et al., 2006; Salant & Lauderdale, 2003; Schwartz, Unger, Zamboanga, & Szapocznik, 2010).

2.1.3 Acculturation and Psychosocial Variables Regarding Health. What people know, what they believe and what they do are the essential questions in contexts of public
health issues. Understanding what people know about a health issue, what they think about the issue and individuals affected by it, and what they actually do to address the issue helps public health professionals to identify problems (WHO, 2008). The problems include knowledge gaps, cultural values, or behavioral patterns that may lead to larger public health issues such as health disparities (WHO, 2008). In ethnic/racial minorities with a large portion of immigrant population, acculturation levels may be a significant factor of a person’s knowledge, attitudes, and behaviors in relation to a particular health topic (Thomson & Hoffman-Goetz, 2009).

Studies have shown that acculturation factors, especially related to language proficiency, are important determinants of individuals’ knowledge of health issues. For example, a study revealed that Latinos were less aware of cancer genetics services compared to the general U.S. population, due to language barriers (Vadaparampil, Wideroff, Breen, & Trapido, 2006). Another research study suggested that acculturation played a role in the consistently low awareness of colorectal cancer screening among Asian Americans, particularly Korean Americans (Oh, Kreps, & Jun, 2013). Less-acculturated Korean Americans prefer to visit Korean-speaking doctors, who tend not to recommend screening tests such as a mammogram and colorectal cancer screening (Kim & Menon, 2009; Sohn & Harada, 2005). The cultural gaps contributed to low awareness and utilization rates of certain preventive health practices in the Korean community in the United States (Geiger et al., 2008).

The degree of adopting the cultural traits of the dominant culture also influences individuals’ adoption of sexual behaviors, especially when it comes to the people whose cultures of origin are relatively conservative (Deren, Estrada, Stark, & Goldstein, 1996;
Flaskerud & Uman, 1996). Correlations were found among acculturation, Hispanic women’s safe sex communication, and their risk behaviors (Rojas-Guyler, Ellis, & Sanders, 2005). More-acculturated Hispanic females tend to have a greater likelihood of sexual communication with new partners, and therefore report higher frequency of condom use. A study with a sample of 698 Asian American teenagers suggested that the most acculturated young adults were five times more likely to have had sexual activity than the least acculturated adolescents (Chris, Lahiff, & Barreto, 2006). In addition, an association between greater acculturation of adolescents and less frequent parent-children communication about sex was observed due to the disagreements between Asian values and American beliefs (Chung et al., 2007).

Similar patterns with respect to acculturation effects on health related psychosocial variables have been demonstrated in the context of mental health care utilization. An early study of Asian Americans’ attitudes toward mental health care suggested that the more acculturated Asian Americans were more likely to acknowledge their need for professional help, to be tolerant of mental health-associated stigma, and to be more comfortable revealing their problems (Atkinson & Gim, 1989). The recent studies consistently supported the findings that low acculturation would deter individuals from seeking professional psychological help (e.g., Abe-Kim et al., 2007; Valencia-Garcia et al., 2012). Those who are less acculturated may choose alternative care or services because their cultural beliefs emphasize that the root of mental health problems is spiritual and supernatural (Le Meyer, Zane, Cho, & Takeuchi, 2009). On the other hand, those who are more acculturated may be influenced by American mainstream
culture that defines mental health issues as illness and therefore utilize medical services to deal with the issues (Le Meyer et al., 2009).

Based on the existing research on Asian American mental health care utilization, the current study continues to explore acculturation effects on individuals’ awareness, attitudes, and behaviors in relation to the topic, with a particular focus on Chinese immigrants, by applying two strategic communication theories: the situational theory of problem solving and the theory of planned behavior. The following sections describe the two theoretical frameworks and review previous literature utilizing the two theories.

2.2 The Situational Theory of Problem Solving (The STOPS)

A number of communication theories can inform efforts to understand individuals’ awareness, attitudes, communications, and behaviors in relation to a variety of problems. An issue or a situation presents a person with opportunities for information seeking, information transmission, and information processing. The term “communicative action” is used to refer to general situations in which people are thinking about or trying to solve a problem in their lives (Kim et al., 2010). Communication theories assume that a person will perform communicative action in order to deal with the obstacles they encounter. The Situational Theory of Problem Solving (STOPS) was proposed based on this rationale (Kim & Grunig, 2011). The STOPS is an extension of the situational theory of publics (STP), a classical theory that was developed by Grunig (1966, 1989; Grunig & Hunt, 1984). The theory is considered the first “deep theory” of strategic communications (Aldoory & Sha, 2007, p. 339) and has been widely applied by numerous scholars (e.g., Major, 1999; Sriramesh, Moghan, & Wei, 2007).
The theory examines the effect of three independent factors – problem recognition, constraint recognition, and involvement recognition – on two communication behaviors – information seeking and information processing (Figure 2.1). Problem recognition refers to people’s abilities to recognize a problem (Grunig, 1997). Constraint recognition alludes to people’s perceptions of difficulties in the way they react to the problem. Involvement recognition is defined as people’s personal connections to a problem or a situation (i.e., the relevance of the problem). These factors then influence both active and passive communication behaviors (i.e., the information activity). The three factors also influence a person’s activeness in solving the problem. The STP purports that a person who recognizes the issue perceives fewer obstacles in the way of acting, and one who feels personally connected with the issue will be more willing to participate in information activity.

While STP has been widely and successfully employed to explain individuals’ communication behaviors in a variety of contexts, many scholars have also extended STP by incorporating other theories. The combination of the theory of reasoned action and the situational theory of publics has been applied to several studies to explore a wide range of individuals’ behaviors. Jin (2007) suggested, for example, that the variables from the integrated model can be considered strong predictors of college students’ information-seeking intention in terms of campus sexual violence issues. Werder and Schuch (2008) found that message strategies can powerfully influence problem recognition and attitude in regards to behavior, and make publics become active toward an organization. Another research study linking the two theories suggested the applicability of the combined framework in the context of college students’ nonprofit support (McKeever, 2013).
In addition to incorporating STP and other theories, scholars have also extended the theory by adding variables to the theoretical framework in order to enhance its segmentation power. For example, Sha (2006) suggested that the effects of the independent variables in the situational theory of publics vary depending on individuals’ cultural identification. That is, individuals’ problem recognition, constraint recognition, and involvement recognition differ based on their race or ethnicity. In addition, perceived shared risk experiences with media portrayals was added as an antecedent that influences the independent variables of STP, thereby affecting individuals’ communication behaviors (Aldoory, Kim, & Tindall, 2010). Health consciousness was added to understand people’s supporting behaviors to improve health (Zheng & McKeever, 2016). Individuals’ previous knowledge about vaccination safety and its side effects were added to explore their vaccination behaviors (Kim, 2016).

One of the most significant developments in terms of the extension of STP is the proposition of STOPS. Kim and Grunig (2011) had extended STP by dividing the dependent variable into a more generalized variable that includes six types of information behaviors. STOPS has been employed to examine organizations’ internal relations, individuals’ health related behaviors such as organ donations (Kim et al., 2011), online depression issues (Nimrod, 2013), and people’s cybercoping behaviors (Kim & Lee, 2013).

According to the STOPS, people with passive communication behaviors simply accept information offered to them, while active individuals make an effort to consume or seek out information about a problem or a situation (Kim & Grunig, 2011). Between the two groups, the active audiences become relevant publics whose actions can affect peer
attitudes and behaviors. As Grunig and Repper (1992) asserted, the three variables (i.e., problem recognition, constraint recognition, and involvement recognition) together predict not only when people will communicate but also specific active communication behaviors by the publics that lead to contribution of communication – “cognitions, attitudes, and individual and collective behaviors” (p. 137). Individuals’ active participation in information seeking and processing allows them to develop more organized cognitions, to change attitudes about a situation, and to engage in active behaviors that enable them to make a change in the situation (Grunig, 1989).

Both the STP and the STOPs are considered solid frameworks to analyze and segment publics in the field of mass communication. Without publics segmentation, we try to target “everyone” in the general population and are less effective in reaching specific groups in need. Therefore, it is important to divide a general population into a number of separate subgroups that are as homogenous as possible, but also extremely distinctive from one another. In the theoretical frameworks of STP and STOPs, the subgroups are active or aware publics, and latent or non-publics, based on individuals’ awareness, involvement, and communicative action in terms of a problem situation. Through publics segmentation, communication practitioners are able to avoid ineffective communications, and to identify and interact with the specific publics more effectively and strategically.

Scholars have attempted to extend the framework of STOPs by merging theories. For example, in order to examine the difference across publics in their willingness to express opinions in a hostile social situation, Lee and colleagues (2014) combined STOPs with the spiral of silence. Kim (2016) examined how framing factors and
communicative actions from different publics impact the outcomes of a crisis. Yoo, Kim, and Lee (2016) created an integrated health campaign model by combining health beliefs, media perceptions, and the framework of STOPS.

In addition, scholars once again recognized the similarities between the theory of reasoned action (TRA) and STOPS. Werder and Schweickart (2013) proposed an Integrated Model for Explaining the Communication Behavior of Publics, to expand knowledge on publics’ motivations to engage in communication and other behaviors that influence organizations. The model posits that an organization’s message strategies first impact a person’s situational beliefs (i.e., the independent variables of STOPS). The situational beliefs then influence the person’s cognitive antecedents, including attitude and subjective norms, which are the independent variables of TRA. The cognitive antecedents form the individual’s situational motivation and behavioral intention, thereby determining his or her communicative action and other behaviors related to the organization. The model provides an insightful understanding of organizational management and the communication process. Another study employing the combined framework of TRA and STOPS proposed an emerging theory of situational support in order to facilitate conversations between nonprofit organizations and their publics, and to mobilize support (McKeever, Pressgrove, McKeever, & Zheng, 2016). The theory explores individuals’ underlying motivation for organization support and mediating effects of key factors on the relationship between individuals’ motivation and behavioral intention. The new theoretical framework has been successfully applied to examine nonprofit communication and fundraising in different types of organizations and events.
(McKeever et al., 2016) and in different cultural contexts such as fundraising events in China (Zheng, McKeever, & Xu, 2016).

The STOPS has also been applied to health communication in a number of diverse areas, including communication and motivations about organ donation (Kim et al., 2011), mental illness communication in online communities (Nimrod, 2013), and coping with chronic illness in online support networks (Kim & Lee, 2013). Health and risk communication scholars recognize the similarities between the theory and critical factors relevant to public health research. For example, the idea of problem recognition in the theory is similar to the idea of an individual’s awareness of a health related problem; the rationale of involvement recognition is similar to the rationale of personal connections with the problem; and constraint recognition is similar to individuals’ self-efficacy perceptions (Aldoory & VanDyke, 2006; Aldoory et al., 2010). These similarities allow scholars to employ the theoretical framework to examine relevant health topics (e.g., Major, 1998; Aldoory, 2001).

2.3 The Theory of Planned Behavior (TPB)

There has been a great amount of research on the situational theory of problem solving; however, applications to mental health communication and services utilization are understudied. The current research seeks to bridge this gap by employing the STOPS’s variables related to attitudes, perceived subjective norms, perceived control over the behavior, and behavioral intentions about utilizing mental health care. In order to examine these variables, this research uses the theory of planned behavior.

The theory of planned behavior (Ajzen, 1985) was developed to better understand the psychosocial factors that determine human behavior and has been applied to predict a
wide range of health behaviors, including HPV vaccine uptake (Gerend & Shepherd, 2012), prevention of childhood obesity (Branscum & Sharma, 2014), undergraduate students’ binge drinking behavior (Norman, 2011), oral hygiene behavior (Buunk-Werkhoven, Dijkstra, & van der Schans, 2011), and fruit and vegetable consumption (Emanuel, McCully, Gallagher, & Updegraff, 2012).

As the extension of the theory of reasoned action (Fishbein & Ajzen, 1975, 1981), TPB postulates that people generally process available information systematically and consider the outcomes of their actions before performing a behavior. Behavioral intention is assumed to be the best predictor of a behavior, which in turn is shaped by individuals’ attitudes toward a behavior, their perceived subjective norms about the behavior, and perceived control over the behavior. The three factors in the theoretical framework are the key pieces of information that people take into consideration before they make a decision. The more positive the evaluations regarding a behavior are, the stronger the intention to perform the behavior (Figure 2.2).

In TPB, attitudes refer to individuals’ positive or negative perceptions about a specific behavior, formed by assessments of the outcomes or consequences of performing the behavior. An individual who believes that performing the behavior will generate positive outcomes will hold a positive belief toward the behavior. One the other hand, a person who believes a negative consequence will occur if performing the behavior will have a negative attitude toward the behavior. The factor has been demonstrated to significantly influence behavioral intentions (Ajzen & Fishbein, 1980).

The second component in TPB is subjective norms, which are defined as perceptions about whether those whom a person sees as important (such as family and
friends) will approve or disapprove of performing the behavior. Thus, a person believes that if his or her important referents agree with performing a behavior then it will have a positive subjective norm. However, a person who believes that performing a behavior is not acceptable by his or her important referents will hold a negative subjective norm. Social acceptability of a behavior plays a critical role in individuals’ evaluation processes of whether to perform the behavior or not. Whether to “act as others do or as one ought to do” influences a person’s intention to perform the behavior (Muralidharan & Sheehan, 2016, p. 204).

Finally, since the theory of reasoned action has been criticized for ignoring the impacts of self-efficacy when considering a behavior (Fishbein & Stasson, 1990; Tesser & Shaffer, 1990), Ajzen (1991) included “perceived behavioral control” in TPB in order to address the criticism. This component distinguished TPB from the theory of reasoned action. The theory suggests that a person’s perceived control over a behavior is determined by his or her evaluations of the ease and difficulty of performing the behavior, thereby predicting behavioral intents and real behavior.

A large body of research has demonstrated that these three variables are strong predictors of individuals’ behavioral intentions and actual behaviors in health contexts, particularly when a health behavior is difficult to maintain or change, in which perceived control over the behavior could play an important role (e.g., Fishbein, 2008; Hornik, 2007; McEachan, Conner, Taylor, & Lawton, 2011). Given mental health service utilization is usually associated with social stigma, requiring particularly difficult behaviors that need to be changed, this study applies the TPB to examine individuals’ behavioral intentions.
Based on the previously reviewed literature, this study seeks to test hypotheses and answer research questions related to acculturation theory, the situational theory of problem solving, and the theory of planned behavior. It proposes the first conceptual pathway in such research that combines the three theoretical frameworks in an attempt to better understand and explain Chinese immigrants’ mental health services utilization. Figure 2.3 illustrates the conceptual framework underlying this study. The first path connects acculturation levels with individuals’ psychosocial responses in terms of mental health and its professional care, and their communicative action and behaviors toward mental health care utilization. The model focuses on the direct effects of acculturation levels on Chinese immigrants’ cognitive and affective attitudes toward the subject and, in turn, their behavioral responses.

First, according to previous research studying the relationships between acculturation levels and psychosocial variables in relation to health issues, this study proposes the following hypotheses:

**H2:** Among Chinese immigrants, there will be a positive relationship between acculturation levels, and (a) problem recognition, (b) involvement, and (d) referent criterion with mental health problems.

**H2c:** Among Chinese immigrants, there will be a negative relationship between acculturation levels and constraint recognition with mental health problems.

**H3:** Among Chinese immigrants, there will be a positive relationship between acculturation levels, and (a) attitudes, (b) subjective norms and (c) perceived behavioral control toward mental health services.

Second, previous studies on the situational theory of problem solving and the
theory of planned behavior have shown the significant relationships between the independent variables of the two theories and individuals’ communicative action and behavioral intentions. Therefore, this study puts forward five hypotheses as follows:

**H4:** Among Chinese immigrants, (a) higher problem recognition, (b) greater involvement recognition, will positively predict the situational motivation in solving the problem of mental health services underutilization in Chinese immigrant community.

**H4c:** Among Chinese immigrants, higher constraint recognition will negatively predict the situational motivation in solving the problem of mental health services underutilization in Chinese immigrant community.

**H4d:** Among Chinese immigrants, higher referent criterion will positively predict communicative action.

**H5:** There will be a positive relationship between the situational motivation in solving the problem of mental health services underutilization in Chinese immigrant community and communicative action.

**H6:** Among Chinese immigrants, (a) attitudes, (b) subjective norms, and (c) perceived behavioral control toward mental health services will positively predict intentions to seek professional psychological help,

**H6:** Among Chinese immigrants, (d) attitudes, (e) subjective norms, and (f) perceived behavioral control toward mental health services will positively predict intentions to encourage others to utilize mental health services.

Health communication scholars have recognized the similarities between the STOPS and the TRA/TPB and have employed the two theories simultaneously to predict individuals’ behaviors, such as actions to intervene against campus sexual violence (Jin,
2007) and donations to health-related nonprofit organizations (McKeever, 2013). In addition, Kim, the founder of the STOPS, and his colleagues (2011) also acknowledge the importance of linking the theory to health behavioral intentions. Although the STOPS was originally developed to predict communicative behaviors, rather than noncommunicative behaviors (e.g., organ donation behaviors), the theory is believed to be applicable to predict a person’s likelihood of conducting an actual behavior (Kim et al., 2011).

However, the previous studies did not recognize the role of communicative action but simply integrated the variables from the two theoretical frameworks to test potential linear relationships. Given that communicative action has been demonstrated to be an influential predictor of an individual’s behavioral intentions to resolve an issue or a situation (Kim & Grunig, 2011), it is important to recognize the mediating role of communicative action in the combined framework. Based on this rationale, scholars proposed an emerging theory of situational support, with communicative action as a mediating variable and health-related behavior as the dependent variable, in order to remedy a deficiency between literature that focuses on communication behaviors and research that only focuses on health-related behaviors (McKeever et al., 2016). The model has guided research to demonstrate that individuals’ awareness and attitudes can influence their behavioral intentions through communicative action (McKeever et al., 2016; Zheng et al., 2016). Thus, this study will test the following hypothesis:

H7: Among Chinese immigrants, communicative action regarding mental health issues will positively predict behavioral intentions to (a) seek professional psychological help, and (b) encourage others to utilize mental health services.
2.4 Mental Illness Stigma

Although acculturation (i.e., cognitive barriers) may play an crucial role in forming immigrants’ attitudes and behaviors toward mental health issues, this study adds one more factor—stigma (i.e., affective barriers), the main cause of mental health services underutilization—in order to enhance the accuracy of individuals’ behavior predictions. Moreover, anti-stigma interventions have been shown to successfully increase positive attitudes and actions toward mental health treatment (Parcesepe & Cabassa, 2013). Thus, examining the relationships between individuals’ perceived stigma toward people with mental illness and their communication and behaviors concerning mental health care is necessary for this study.

The word stigma comes from the Greek word *stizein*, a distinctive mark placed on salves as their identification and a symbol of insignificance in the social structure. Stigma nowadays is therefore used to describe an invisible but distinguishing mark that is given by social disgrace to, again, identity and devalue certain groups of people, such as mental patients (Arboleda-flórez, 2002). The existence of mental illness stigma can be traced back to Ancient Greece, the time persons being mentally ill was considered as a shame and weakness, and have remained and penetrated into every culture even until these days (Arboleda-flórez, 2002). The problem of what causes stigma is still unanswered, but its deleterious effects in society is better acknowledged (Corrigan & Watson, 2002).

Mental illness stigma refers to negative perceptions and beliefs that create fear, rejection, avoidance, and discrimination toward people with emotional disorders (Corrigan & Penn, 1999). The discriminative attitude results in several negative consequences for people with mental illness, including low willingness to seek mental
health care, failure to adhere to treatments (New Freedom Commission on Mental Health, 2003), and increasing difficulties in and rejection by society (Corrigan & Shapiro, 2010; Pescosolido et al, 2007). Overall, mental health-associated stigma matters because it “sets the context in which individuals in the community respond to the onset of mental health problems, clinicians respond to individuals who come for treatment, and public policy is crafted” (Pescosolido et al. 2010, p. 1324).

Stigma can be assessed in two ways: one has external effects such as discrimination or delayed treatment-seeking, while the other one has internal effects that may cause psychological damage, which is so-called “internalized stigma” (Ritsher, Otilingam, & Grajales, 2003). Similar to the concepts of internalized racism or internalized homophobia, internalized stigma is the inner consequences of relating a person itself to negative stereotypes (Corrigan, 1998). No matter the level of discriminative attitudes and behaviors one is exposed to in society, internalized stigma is formed by one’s subjective perceptions of being devaluated and isolated that directly impacts his or her sense of self-esteem (Link & Phelan, 2001). It is a type of mental illness stigma that can be addressed by health professionals with individuals directly because of its inner impacts; however, due to its effects that may lead to psychiatric impairment, internalized stigma is regarded as one of the most difficult aspects of stigma to overcome (Ritsher et al., 2003).

2.4.1 Media Use and Mental Illness stigma. Many forces may have contributed to an inclination to see mental illness as a deficient issue in some way. Mass media, which have been demonstrated to be important sources of fostering the construction and dissemination of opinions (Gerbner, Gross, Morgan, Signorelli, & Shanahan, 2002) and
behaviors (Bandura, 2002), could be one of those. Research has shown that mass media is one of individuals’ main sources for information about mental illness (Wahl, 2004). The coverage of illness and disabilities in mass media not only represents public perceptions and attitudes, but also influences them, both intentionally (e.g., advertising and media campaigns) and unintentionally (e.g., news coverage) (Hafferty & Foster, 1994; Klin & Lemish, 2008). The ways in which mental health is constructed, presented, and interpreted in the coverage by mass media significantly influence the ways in which the general public understands the topic (Sieff, 2003).

Media coverage is viewed as the primary source of mental illness-associated stigma and the negative perceptions that mentally ill people are abnormal and dangerous (Dietrich, Heider, Matschinger, & Angermeyer, 2006; Goulden, Corker, Evans-Lacko, Rose, Thornicroft, & Henderson, 2011; Klin & Lemish, 2008). As early as 1957, misperceptions about mental health were found in the mass media (Nunnally, 1957). Decades later, researchers observed that the media still promoted negative stereotypes and images about mental health (e.g., Francis et al., 2004). These observations revealed different types of negative portrayal regarding mental illness in mass media, such as providing exaggerated or incorrect information, describing mentally ill persons as violent and dangerous, and stigmatizing mental health services (Klin & Lemish, 2008).

The negative presentations of mental illness in the mass media significantly shape the public’s understandings of people with emotional disorders. One of the early content analysis studies concluded that the presentations of mental illness in the mass media are “likely to contribute to...ignorance and neglect...perpetuate unwarranted views about mental illness...and frustrate efforts at health education and integration of those who
recovered from mental illness’’ (Signorielli, 1989, p. 330). A more recent study of the coverage of mental health issues in U.S. newspapers found that dangerousness was the most frequently-used theme in mental health related articles (Corrigan, Watson, Gracia, Slopen, Rasinski, & Hall, 2005). Studies also suggested that newspaper readers who were exposed to articles connecting emotional disorders with violent behavior would develop a greater likelihood to interpret a mentally ill individual as violent and threatening (e.g., Dietrich et al., 2006; Klin & Lemish, 2008). In addition to news stories, entertainment shows such as dramas and films are also influential on viewers’ attitudes and beliefs toward mental health, mostly affiliating mental illness with violence and dangerousness (e.g., Kerson, Kerson, & Kerson, 2000; Signorielli, 1989). With the rapid growth of information technology, mental disorders stigma now has penetrated into the Internet and online news channels. The findings of a quantitative content analysis examined the portrayal of schizophrenia in most read online news publications in U.S. suggested that sigma frames were predominant, suggesting even digital media also associate schizophrenia with violent and danger behavior (Gwarjanski & Parrott, 2017).

Stigmatization of mental disorders in media is prevalent worldwide (e.g., Clement & Forster, 2008). However, the majority of current research focuses on media portrayal of mental illness in one single country or culture. As communication scholars suggest, culture serves as an important factor that influences the frames and the descriptions in media content (e.g., Van Gorp, 2007). In addition, the mediated descriptions of health topics may represent and reflect cultural differences (Dong, Chang, & Chen, 2008; Zhang, Jin, Stewart, & Porter, 2016). For example, Yang and Parrott (2017) compared online news coverage of schizophrenia in China and the United States and found that the
online portrayal of schizophrenia was generally more severely stigmatizing in China than in the United States. The findings are consistent with previous studies that the stigma associated with mental illness was reported to be more prevalent in eastern cultures than in western cultures (Hsu et., 2008). The differences demonstrate the importance and needs of comparative studies using cross-cultural perspectives.

Although a few studies have examined the image of mental disorders in the mass media, research that investigates the impact of different types of media use on public interpretations is prominently absent, in particular when culture has a role to play in journalists’ production of the media content and audiences’ understanding of a news story (van Gorp, 2007). This research, therefore, takes a closer look at the relationships between immigrants’ mainstream/ethnic media use and their attitudes and beliefs toward mental illness, by asking the research questions as follows:

**RQ1a:** Among Chinese immigrants, what is the relationship between American media use (i.e., traditional and digital media) and perceived mental illness stigma?

**RQ1b:** Among Chinese immigrants, what is the relationship between Chinese ethnic media use (i.e., traditional and digital media) and perceived mental illness stigma?

### 2.4.2 The Impact of Mental Illness Stigma

In the United States, 56% of adults with a mental illness did not receive treatment, as of 2014 (Mental Health America, 2017). The mental health-related stigma has been demonstrated to be an important factor that hinders help-seeking, ranking fourth of ten healthcare barriers (Clement et al., 2015). A systematic review identified six types of associated stigma based on 144 relevant
studies from the past three decades found that treatment stigma and internalized stigma had consistent negative associations with help-seeking among the sample studies (Clement et al., 2015; Schomerus & Angermeyer, 2008). In other words, the desire to avoid the labels that seeking treatment usually brings and the experiences of internalized stigma such as embarrassment and humiliation are the main factors that impede people with mental illness from utilizing healthcare services (Corrigan, 2004; Schomerus & Angermeyer, 2008). Internalized stigma, in particular, was shown to be a mediator between public stigma and treatment avoidance (Vogel, Wade, & Hackler, 2007).

Therefore, this study examines the impact of internalized stigma on Chinese immigrants’ attitudinal and behavioral responses about mental health care.

**H8:** Among Chinese immigrants, there will be a negative relationship between perceived stigma, and (a) problem recognition, (b) involvement and (d) referent criterion with mental health problems.

**H8c:** Among Chinese immigrants, there will be a positive relationship between perceived stigma and constraint recognition with mental health problems.

**H9:** Among Chinese immigrants, there will be a negative relationship between perceived stigma, and (a) attitudes, (b) subjective norms and (c) perceived behavioral control toward mental health services.

In order to test the proposed hypotheses and explore these research questions, a new conceptual model is proposed (see Figure 2.3). This model combines two sequential pathways from media use to the independent and dependent variables of the situational theory of problem solving and the theory of planned behavior through acculturation and perceived stigma to examine which variables might be most relevant to communication.
and actual actions in terms of mental health services utilization. Figure 2.3 illustrates the proposed path diagram that depicts the relationships between the correlates of acculturation and perceived stigma as currently supported by the literature. Straight lines with arrows represent relationships with exogenous outcome variables to be analyzed in the study. The direction of the arrow symbolizes the direction of causality most clearly supported in the literature. Additional details related to the path model and the data analysis to be performed will be addressed in the data analysis section of Chapter 3.
Figure 2.1 Situational Theory of Problem Solving (STOPS)
Figure 2.2 Theory of Planned Behavior (TPB)
Figure 2.3 Conceptual Model
CHAPTER 3

METHOD

This chapter explains the methods that were used for this study and provides information about the questionnaire administration, survey measurements, and data analysis procedures, as well as the sample profile. An online survey was sent to Chinese immigrants in the United States to gather data on media use, acculturation degree, awareness, attitudes, and behaviors regarding mental illness in the community.

3.1 Questionnaire Administration

3.1.1 Definitions of Study Population. Respondents were asked to confirm that they are Chinese immigrants in the United States who (1) were born in China or Taiwan, and (2) reside permanently in the United States, (3) work without restrictions in the United States, (4) are now older than 18, and (5) had arrived in the United States after the age of 12. This questionnaire was only administered to first-generation immigrants who were born in China or Taiwan because these countries’ native or primary language is Mandarin. This study excluded immigrants from some of areas in the Greater China Region such as Hong Kong, Macau, Singapore, and Malaysia, where Cantonese or English is the first language, in order to ensure the homogeneity of the sample in terms of language preferences. In addition, this study only sampled immigrants who had arrived in the United States after the age of 12. People who immigrated to a new country when they were younger tend to assimilate to the new culture more rapidly compared to those who
were older at the time of arrival (Cheung, Chudek, & Heine, 2011). It is difficult to examine the effect of media usage on young immigrants’ acculturation process, because the original cultural identity and ability to speak their native languages may ultimately be discarded due to the quick assimilation of a new culture (Rumbaut, 1997). Rumbaut and Portes (2001) described young immigrants as the “1.5 generation” and found that these individuals who migrated to another country as young children are more similar to those who were born in the country but raised by first-generation immigrants. In order to accurately evaluate the influence of Chinese immigrants’ acculturation degree, the minimum age of the time of immigration of respondents was set at 12 years old (Rumbaut & Ima, 1988).

3.1.2 Data Collection. The questionnaire was pretested on 100 Chinese native speakers through a Chinese church in Columbia, South Carolina. The questionnaire was then revised according to the results of the pretest. Using the dataset, reliabilities of items between variables were checked. After the pretest, a survey email invitation was sent to more than 50 Chinese related organizations and associations across the nation, such as Chinese churches and local Chinese community clubs. According to research examining recruitment strategies associated with immigrants and minorities, “organizational snowballing” is the most effective recruitment approach (Mendez-Luck et al., 2011). The scholars suggested that investigators can access targeted population by identifying organizations and institutions in the local community. Through organizational referrals, researchers may have higher chances of locating possible qualified participants and reduce extra time and cost of recruitment process.
In addition, an online survey was shared through certain Facebook Groups that are designated for Chinese immigrants, such as a group called “Taiwanese in the United States,” which currently has 35,000 members. Facebook Groups are the platform for small group communication in which people share their common interests. Studies on health research recruitment, including in the contexts of women of advanced reproductive age (O’Connor, Jackson, Goldsmith, & Skirton, 2014), patients with Klinefelter’s syndrome (Close, Smaldone, Fennoy, Reame, & Grey, 2013), individuals with depression (Morgan, Jorm, & Mackinnon, 2013), and people living with HIV/AIDS (Yuan, Bare, Johnson, & Saberi, 2014), have demonstrated that social media is a useful tool to recruit research participants for sensitive topics.

The research proposal was submitted to the Institutional Review Board at the University of South Carolina before data collection started. The purpose of this study, information about the researcher, and the nature of this study, including voluntary participation, anonymity, and confidentiality was explained at the beginning of the questionnaire. If/when respondents agreed to participate, they were shown to the first survey question. Participants were able to quit the survey at any time with no penalty. With a topic related to mental health problems, respondents were also assured that there are no right or wrong answers to the questions, in order to prevent issues related to social desirability.

3.2 Questionnaire Design

A Mandarin Chinese version of the questionnaire was composed through the translation-back translation method, one of the most common translation approaches used by cross-cultural researchers (Willgerodt, Kataoka-Yahiro, Kim, & Ceria, 2005). An
English version of the questionnaire was prepared first and it was translated by a bilingual person who is a Mandarin Chinese speaker and a fluent English speaker. Another bilingual person blindly translated the Mandarin Chinese version of the instrument back to English. A group of bilingual researchers compared the original English version questionnaire and the second English version that was translated from Mandarin Chinese in order to verify the consistency of the content and establish the equivalence between English and Mandarin Chinese versions. The author is a native speaker of Mandarin Chinese. Recruitment and informed consent procedures were conducted in both Mandarin Chinese and English, based on participant preferences.

The online survey instrument included questions that were adapted from previous literature to measure the variables in the theoretical frameworks of acculturation theory, the situational theory of problem solving, and the theory of planned behavior, as well as the concepts of media use and stigma associated with mental health illness.

3.2.1 Edits After Pretest. Survey instruments were pre-tested with 57 Chinese native speakers through a Chinese church in Columbia, South Carolina. In March, 2017, the survey link was sent the pastor of the church to approximately 100 church members who were asked to participate voluntarily in the survey. There were 75 responses, and 57 of these were valid. Survey data were cleaned and reliabilities of items and correlations between variables were checked. All scales achieved reliability (Cronbach’s alpha, $\alpha$) between .64 and .94. The variable of ethnic interaction had low alphas and seemed problematic ($\alpha = .64$). This variable was measured by asking about respondents’ interactions with Chinese and Americans. The word “Americans” in the pre-test might be a concern because Chinese Americans are considered to be included in the category of
“Americans.” This researcher consulted the literature again and revised the wording of the questions. The word of “Americans” was changed to a specific description, Caucasians, Blacks, Hispanics, Asians, or other non-Chinese ethnic groups, to avoid confusion. The revised survey measures was submitted for IRB approval. Upon approval from the Institutional Review Board (IRB), the full survey was launched.

3.3 Measurements of Variables

Most of the measures in this survey were adapted from previous studies on acculturation theory, the situational theory of problem solving, the theory of planned behavior, and stigma associated with mental illness. Demographic measures were included in the survey, including gender, age, education level, income, location, years living in the United States, and age upon arriving in the United States.

3.3.1 Media Use. Media use was measured with a series of questions eliciting the respondents’ use of mainstream media and ethnic media (de Vreese & Neijens, 2016). Media exposure were measured by asking the respondents how much time they spend each day looking for information about 1) political affairs, 2) sport news or games, 3) entertainment, and 4) health/medical information from American print newspapers, television channels, websites, and social media, and U.S.-based Chinese language print newspapers, U.S.-based Chinese language television channels, Chinese websites, and Chinese social media. Response options were on seven-point scales, ranging from “Never,” “Less than 30 minutes,” “30-60 minutes,” “1-1.5 hours,” “1.5-2 hours,” “2-2.5 hours,” to “more than 2.5 hours.” Responses on four items for each media type were combined and averaged into a composite measure (American newspapers: $M = 1.31, SD = .62, \alpha = .89$; American televisions: $M = 1.85, SD = .98, \alpha = .80$; American websites: $M$
American social media: \( M = 1.17, SD = .38, \alpha = .90 \); Chinese newspapers: \( M = 1.32, SD = .61, \alpha = .89 \); Chinese television: \( M = 1.57, SD = .96, \alpha = .84 \); Chinese websites: \( M = 2.31, SD = 1.06, \alpha = .81 \); and Chinese social media: \( M = 2.47, SD = .47, \alpha = .86 \).

### 3.3.2 Acculturation

Acculturation was measured by using Marin’s (1998) three levels of acculturative changes, which include superficial acculturation (e.g., food preferences), intermediate changes (e.g., language use), and significant changes (e.g., cultural values and attitudes). The measure questions were adapted from previous research on acculturation (e.g., Marin & Gamba, 1996; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987; Phinney, 1992; Stephenson, 2000; Thomson & Hoffman-Goetz, 2009).

Respondents were asked two sets of questions for each acculturation dimension, in which one is the Chinese Orientation Subscale (COS), and the other is the American Orientation Subscale (AOS) (Cuellar, Arnold, & Maldonado, 1995). The scale has a total of 18 items as shown below (pp. 54). The means and standard deviations obtained for the Marin’s acculturation scales were as follows: AOS mean = 4.79, \( SD = .81, \alpha = .84 \); COS mean = 5.11, \( SD = .67, \alpha = .73 \).

The acculturation scores were calculated using the formula \( \text{Acculturation Score} = \text{AOS (mean)} - \text{COS (mean)} \) \( (M = -1.28, SD = 1.52) \). These scores were next transformed into a five-point ordinal acculturation scale based on the acculturation score distribution statistics. Acculturation scores greater than 2 standard deviations below the mean was Level 1 Very Chinese oriented \( (< -3.56) \). The score between 1.5 standard deviations and .5 standard deviations below the mean was Level 2 Chinese oriented to approximately balanced bicultural \( (\geq -3.56 \text{ and } \leq -2.04) \). The score in a range of .5 standard deviations
below and above the mean was Level 3 Slightly American oriented bicultural (> -2.04 and < -.52). The score between .5 and 1.5 standard deviations above the mean was Level 4 Strongly American oriented (≥ -.52, and < 1) and the score greater than 1.5 standard deviations above the mean was Level 5 Very assimilated; Americanized (> 1). The acculturation score was used to obtain an acculturation level for the participants by using the suggested cutting scores indicated in Table 3.1. A mean score of acculturation degree was 3.00 (SD = .98).

The following section explains the measure for the specific 18 items:

Food preferences. Food preferences were assessed with multiple items that asked how often “do you or your family cook western food,” “do you or your family eat western food,” and “do you or your family cook Chinese food,” “do you or your family eat Chinese food,” with options ranging from “1 = not at all” to “7 = very often.”

Language use and cultural practices. Respondents were asked to indicate their language use, including 1) language spoken, 2) linguistic proficiency, 3) music preferred, and 4) movie preferred. Language spoken was measured with multiple items that asked the extent to which they agree or disagree with the statements: “I speak Chinese at home often,” “I speak Chinese with my friends often,” “I speak English at home often,” and “I speak English with my friends often,” with options ranging from “1 = strongly disagree” to “7 = strongly agree.” Linguistic proficiency was assessed with items “I can speak Chinese well,” “I can write in Chinese well,” “I can read Chinese well,” and “I can listen in Chinese well.” Questions about new language proficiency were also asked, including statements such as “I can speak English well,” “I can write in English well,” “I can read English well,” and “I can listen in English well.”
Music and movie preferred were measured by asking respondents their music and movie preferences. The questions were “I watch Chinese-language only movies often,” “I listen to Chinese-language only music often,” “I watch English-language only movies often,” “I listen to English-language only music often.” Response options ranged from “1 = strongly disagree” to “7 = strongly agree.”

Ethnic interaction. Two sets of questions were utilized to measure ethnic interaction, including the original culture and new culture subscales. The subscale of the original culture include “I associate with people from China often,” “My friends now mostly are of China origin,” “I feel I have much in common with people from China,” and “I am active in organizations or social groups that include Chinese members mostly.” The new culture subscale is comprised of “I associate with Caucasians, Blacks, Hispanics, Asians, or other non-Chinese ethnic groups,” “My friends now mostly are Caucasians, Blacks, Hispanics, Asians, or other non-Chinese ethnic groups,” “I feel I have much in common with Caucasians, Blacks, Hispanics, Asians, or other non-Chinese ethnic groups,” and “I am active in organizations or social groups that include Caucasians, Blacks, Hispanics, Asians, or other non-Chinese ethnic groups mostly.” Responses to these questions ranged from “1 = strongly disagree” to “7 = strongly agree.”

Ethnic identification. Ethnic identification was assessed with multiple items that asked the extent to which they agree or disagree with the statements: 1) I like to identify myself as a Chinese, 2) I have a clear sense of my ethnic background as a Chinese and what it means for me, 3) I have strong sense of belonging to my own ethnic group as a Chinese, and 4) I feel a strong attachment towards my own ethnic group as a Chinese. Respondents were also asked to answer another set of questions about new culture...
adoptions. These questions are 1) I like to identify myself as an American, 2) I have a clear sense of my ethnic background as an American and what it means for me, 3) I have strong sense of belonging to my own ethnic group as an American, and 4) I feel a strong attachment towards my own ethnic group as an American. Responses to these questions ranged from “1 = strongly disagree” to “7 = strongly agree.”

3.3.3 The Situational Theory of Problem Solving. Variables in the situational theory of problem solving, including problem recognition, constraint recognition, involvement, referent criterion, situational motivation, as well as communicative action, were measured by adapting items from previous research (e.g., Aldoory & Sha, 2007; J. E. Grunig, 1997, 1989; Kim & Grunig, 2011; Sriramesh et al., 2007). Problem recognition was measured by asking the extent to which they agree or disagree with the following statements: “I think mental health is a serious social problem in the Chinese community,” “I am concerned about mental health issues in the Chinese community a lot,” and “Something needs to be done to improve mental health in the Chinese community.” Responses on three items were combined and averaged in to a composite measure (\(M = 5.51, SD = 1.07, \alpha = .81\)). Items measuring constraint recognition included “I do not think can make a difference and improvement regarding mental health issues in the Chinese community,” “I am afraid to take action to make changes for mental health issues in the Chinese community,” and “I find many obstacles in doing something for mental health issues in the Chinese community.” A composite index of constraint recognition was constructed by averaging the three items (\(M = 3.85, SD = 1.24, \alpha = .81\)).

Involvement recognition was measured with multiple items: “I recognized a strong connection between mental health issues and me or someone close to me,”
“Mental health issues affect my life or the life of someone close to me,” and “Mental health issues have serious consequences for my life and or someone I care about.” Responses on three items were combined and averaged in to a composite measure ($M = 4.63$, $SD = 1.67$, $\alpha = .93$). Referent criterion was measured through three items, including “I know how to deal with mental illness,” “I could easily come up with a plan to deal with mental illness,” and “I have a clear idea and direction to deal with mental illness.” A composite index of referent criterion was constructed by averaging the three items ($M = 4.28$, $SD = 1.39$, $\alpha = .92$).

Situational motivation in problem solving was measured by asking the extent to which they agree or disagree with the following statements: “I am curious about mental health issues,” “I frequently think about mental health issues,” and “I would like to better understand mental health issues.” A composite index of constraint recognition was constructed by averaging the three items ($M = 5.20$, $SD = 1.17$, $\alpha = .90$).

Communicative action in the theory was measured by dividing into six dimensions, including Information forefending, information permitting, information forwarding, information sharing, information seeking, and information attending, adapted from Kim and Grunig (2011). First, information forefending was measured using the following statements: “I have invested enough time and energy so that I understand mental health issues,” “I know where to go when I need updated information regarding mental health issues,” and “I easily judge the value of information regarding mental health issues.” For information permitting, respondents indicated their attitudes on the following three items: “I want to know about mental health issues from multiple sources,” “I welcome any information about mental health issues,” and “I am interested
in all views on mental health issues.” Information forwarding was assessed by asking respondents the extent to which they agree or disagree with the statements: “I talk about my opinions about mental health issues with my friends and coworkers,” “I forward social media posts about mental health issues,” and “I enjoy opportunities to educate others on mental health issues.” Measurement for information sharing used the same scale, and the items were: “I will be willing to talk to someone about mental health issues if they ask me,” “I talk about mental health issues when others bring the topic,” and “I participate in casual conversations about mental health issues.” In terms of information seeking, respondents were asked if they agree with the following statements: “I search for information about mental health issues on the Internet,” “I regularly visit Web sites relevant to mental health issues,” and “I regularly check to see if there is any new information about mental health issues on the Internet.” Finally, information attending was measured by three items, including “If I hear someone talking about mental health issues, I am likely to listen,” “If I see something on the news about mental health issues in surfing Internet, I would click and read it,” and “I pay attention to mental health issues when a news report appears on TV or newspaper news.” Response options to these questions ranged from “1= strongly disagree” to “7= strongly agree.” A composite index of communicative action was constructed by averaging the 18 items ($M = 4.78, SD = 1.19, \alpha = .88$).

### 3.3.4 Theory of Planned Behavior

This study also assessed the variables involved in the theory of planned behavior, including attitudes, subjective norms, perceived behavioral control, and behavioral intentions, by a series of questions adapted from previous research (e.g., Ajzen, 2006; Siegel et al., 2008). Attitudes toward mental
health services were measured by a 7 point scale, where 1= “strongly disagree” and 7= “strongly agree” with three questions: “If I experience an emotional problem, 1) it will be good for me to use mental health services, 2) it will be pleasant for me to use mental health services, 3) it will be worthless for me to use mental health services.” Reversed coding was performed in the third statement. Responses on three items were combined and averaged into a composite measure ($M = 5.61, SD = 1.19, \alpha = .95$). Subjective norms with regard to mental health services were measured using the following statements: “Most people who are important to me think that I should use mental health services if I experience an emotional problem,” “Most people with whom I am acquainted use mental health services when they experience emotional problems,” and “Most people whose opinions I value would approve of me using mental health services if I experience an emotional problem.” Response options ranged from “1= strongly disagree” to “7= strongly agree.” A composite index of subjective norms was constructed by averaging the three items ($M = 4.84, SD = 1.17, \alpha = .85$). For perceived behavioral control, respondents indicated on a 7-point Likert scale from 1= totally disagree to 7= totally agree on the following three items: “It would be easy for me to use mental health services,” “It is completely up to me whether or not I use mental health services,” and “I am confident that if I want to, I can use mental health services.” Responses on three items were combined and averaged into a composite measure ($M = 5.29, SD = 1.14, \alpha = .79$).

Behavioral intentions were measured through a series of questions that asked about participants’ (1) likelihood of seeking mental health services and (2) the possibility of encouraging family and friends to utilize the services. Respondents indicated their support for mental health service utilization on a 7-point scale, from 1= strongly disagree
to 7= strongly agree, to the following four questions: “I will seek counseling or support from friends and family members if I experience an emotional problem,” “I will take psychotropic medications if I experience an emotional problem,” “I will seek therapy or counseling services if I experience an emotional problem,” and “I will seek help or advice from a mental health professional if I experience an emotional problem.”

Responses on the four items were combined and averaged into a composite measure ($M = 4.79$, $SD = 1.00$, $\alpha = .79$). Respondents indicated their support for their family and friends using mental health service utilization on a 7-point scale, from 1= strongly disagree to 7= strongly agree, to the following four questions: “I will support my family and friends if they experience an emotional problem,” “I will encourage my family and friends to take psychotropic medications if they experience an emotional problem,” “I will encourage my family and friends to seek therapy or counseling services if they experience an emotional problem,” and “I will encourage my family and friends to seek help or advice from mental health professional if they experience an emotional problem.”

Responses on the four items were combined and averaged into a composite measure ($M = 5.57$, $SD = .97$, $\alpha = .73$).

3.3.5 **Internalized Stigma.** In addition to the variables from the three theoretical frameworks of acculturation theory, the situational theory of problem solving, and the theory of planned behavior, this study also measured individuals’ internalized stigma associated with mental health. The concept was assessed with four questions adapted from previous research (Ritsher et al., 2003). Respondents were asked to use a 7 point scale, where 1= strongly disagree and 7= strongly agree, with the following statements: “I would not socialize as much as I do if I had mental illness, because it might make me
look or behave weird,” “I would be embarrassed or ashamed if I had a mental illness,” “If I had a mental illness, I would avoid getting close to people who don't have mental illness, to avoid rejection,” “People would discriminate against me if I had a mental illness” and “If I had a mental illness, I would stay away from social situations in order to protect my family or friends from embarrassment.” A composite index of mental health stigma was constructed by averaging the four items ($M = 3.46, SD = 1.30, \alpha = .87$).

### 3.4 Data Analysis

This survey was designed to discover whether media use and acculturation might be related to individuals’ perceptions, attitudes, communicative action, as well as behavioral intentions related to mental health services utilization. Based on the hypothesis that the mechanism leading to communicative action and services utilization was impacted by individuals’ acculturation, perceived stigma, and attitudinal reactions regarding mental illness, a path model was developed utilizing a structural equation modeling procedure with maximum likelihood estimations for path coefficients (Yuan & Bentler, 2007). This study constructed the model with a sequential pathway from media use to service utilization through acculturation and another path way from media use to service utilization through mental illness stigma, based on published results indicating the two factors might significantly affect individuals’ mental health related behaviors (Figure 2.3). The path model in its entirety represents the hypothetical relationships of the constellation of variables most significantly related to media use, acculturation, stigma, and individuals’ communicative action and behavioral intentions in terms of mental illness, as supported by theory and research.
Path analysis, a type of structural equation modeling, was used to analyze the model and to evaluate the model’s goodness of fit with the data. Each of the rectangular boxes in the path diagram represents a measured variable, which is an indicator of a latent variable (Hatcher, 1996). For example, communicative action represents the total scaled score on the 18-item measurement, which in turn is an indicator of the latent variable communicative action. Straight lines on the diagram symbolize prediction, leading from predictor variable to outcome variable (Hatcher, 1996). In the statistical analysis, the mathematical model assumed a correlation of zero between any two unrelated variables on the model.

In this analysis, the fit measures included normal $\chi^2$, comparative fit index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR), as these are the most frequently used indices (Yuan & Bentler, 2007). The normal $\chi^2$ is the chi-square fit index divided by degrees of freedom (df), indicating a higher chance of the significance when the sample size increases. The CFI compares the substantive model to a base model about the better explanation for the covariance structure to determine the relative fitness. CFI values that exceed .90 suggest good fit of the model. The Root Mean Square Error of Approximation (RMSEA) estimates the lack of fit in a model compared to a saturated model. Values of RMSEA between .05 and .08 indicate the data provide a good fit to the model (Hu & Bentler, 1999). The Standardized Root Mean Square Residual (SRMR) provides information about the discrepancy between the observed and hypothesized correlation matrices. Based on Hu and Bentler’s (1999) guidelines, an SRMR ≤ .08 denotes an acceptable model fit. SPSS version 24 was used for descriptive statistics and Mplus version 8.0 was
used for structural equation modeling. A two-tailed p-value < .05 was considered statistically significant.

In the next chapter, results of the responses in collected questionnaires will be reported. Statistical tests will be conducted to test hypotheses and to address research questions.
Table 3.1 Cutting Scores for Determining Acculturation Level

<table>
<thead>
<tr>
<th>Acculturation Levels</th>
<th>Description</th>
<th>Cutting Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level I</td>
<td>Very Chinese oriented</td>
<td>&lt; -3.56</td>
</tr>
<tr>
<td>Level II</td>
<td>Chinese oriented to approximately balanced bicultural</td>
<td>≥ -3.56 and ≤ -2.04</td>
</tr>
<tr>
<td>Level III</td>
<td>Slightly American oriented bicultural</td>
<td>&gt; -2.04 and ≤ -0.52</td>
</tr>
<tr>
<td>Level IV</td>
<td>Strongly American oriented</td>
<td>≥ -0.52, and &lt; 1</td>
</tr>
<tr>
<td>Level V</td>
<td>Very assimilated; Americanized</td>
<td>&gt; 1</td>
</tr>
</tbody>
</table>

*Score means were used to calculate the Acculturation Levels. The 18 items are added and divided by 18 on the COS and AOS scales separately to obtain the score mean for each scale. These means were used in the formula: Acculturation Score = AOS (mean) – MOS (mean). (Cuellar et al., 1995).
CHAPTER 4

RESULTS

Before answering the study’s research questions and testing the hypotheses, this chapter outlines some of the demographic and other information revealed about respondents through the survey questions. Following general information about the sample, findings related to each research question and hypothesis are reported, along with some interpretation of the results. The discussion chapter provides additional interpretations of the findings, along with suggestions for future research.

4.1 Demographic Information of the Respondents

The survey was launched in the first week of October 2017 and initially received a total of 516 responses. The researcher then checked the validity of the data by checking the five questions at the beginning of the survey: “were you born in China or Taiwan?” “are you resided permanently in the United States?” “Do you work without restrictions in the United States?” “are you now older than 18?” and “had you arrived in the United States after the age of 12?” A response was invalid if the respondents were not able to answer the above five questions correctly. After ruling out the invalid responses, 445 valid responses remained viable for data analysis.

The respondents’ demographic characteristics are shown in Table 4.1. Of the final 445 survey respondents, 65.8% (293) were female and 34.2% (152) were male. Participants ranged in age from 19 to 67, with a mean age of 38.7 years old (SD = 8.19).
The annual household income was measured on a 10-point scale where 1 = less than US$10,000 and 10 = more than US$200,001, with the average being US$75,000 to US$99,999 (M = 5.57, SD = 2.47). Level of education was measured on a 7-point scale where 1 = elementary school and 8 = doctoral degree. The average level of education among survey respondents was “college degree” (M = 5.4, SD = .953).

In terms of residency location, 34.3% (153) of respondents lived in California, 12.4% (55) resided in New York, and 7.6% (34) were in Taxes, which very closely resembled the general Chinese population statistics (the top three states with the largest estimated Chinese American populations). 32.8% (146) of participants did not have a specific religion, 28.5% (127) was Buddhists, followed by Christians (26.5%, 118), and others (14.6%, 65).

Respondents were also asked to report their immigration situation. The average length of residency in the United States was about 14 years (SD = 9.19); the average age that the respondents migrated to the United States was 25 years old (SD = 7.89); and the average years that the participants have gone to school in the United States was nearly 4 years (SD = 4.22).

4.2 Use of Media Channels

A set of questions asked about mainstream media and ethnic media use among survey respondents. More specifically, respondents were asked to estimate how many minutes per day they use the following media channels, including both mainstream and ethnic newspapers, television, website, and social media, for political stories, sports news, entertainment, and health information. They were asked to select a response option, ranging from 1= 0 minutes to 7 = more than 2.5 hours. Of the media listed, participants
reported spending the most amount of time on a Chinese social media site such as LINE or WeChat ($M = 2.47, SD = 1.24$) and the least amount of time on an American social media site such as Twitter or Instagram ($M = 1.17, SD = .38$). Means and standard deviations for the types of media use are shown in Table 4.2.

4.3 Path Analysis Results

This study proposed a series of hypotheses using media use, acculturation, stigma, motivational antecedents, and mediation variables to predict mental health services utilization intentions. To test the hypotheses and the proposed conceptual model (Figure 2.3), maximum likelihood estimation was used to estimate the model parameters including path coefficients and variance estimates. The chi-square statistic is a test of the null hypothesis that the model fits the data. The likelihood ratio effectively tests the null hypothesis for goodness of fit of the model, and statistical significance was determined at the $p = .05$ level. Two alternative fit indices, the RMSEA Estimate and Comparative Fit Index (CFI), also were considered in the path analysis. Figure 4.1 shows the results of the path analysis, including path coefficients or parameter estimates for the pairs of variables in the equation that are significant. Table 4.3 shows the standardized parameter estimates for each path coefficient.

To evaluate the path analysis model, model-data fit indices, including chi-square, Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR), were observed. A higher $\chi^2$ value with $p < .05$ indicates a good fit of the data. CFI, SRMR, and RMSEA values were examined to indicate approximate fit of the model. CFI values of .90 or greater are considered indicative of acceptable overall fit (Medsker, Williams, & Hollahan, 1994)
The values between .05 and .08 for RMSEA and SRMR values less than .08 (Kline, 1998), are considered for an indicator of a well-fitting model. The analysis suggests an acceptable fit of the model to the data, with three of four indices satisfying Hu and Bentler’s (1999) proposed cutoff criteria for assessing model fit: \( \chi^2 (128) = 290.03, p < .001; \) CFI = 0.89; RMSEA = 0.055 (90% CI: 0.047, 0.063); SRMR = 0.06).

Although most hypotheses were statistically significant, the original path analysis model reported an acceptable model fit. Modification indices suggested several potential paths that could improve the overall model fit. However, modifications made to the model should be supported by theoretical frameworks instead of being driven entirely by statistical outcomes. Without the theoretical support, this study chose to analyze the results by using the original model.

The path analysis also produced standardized path coefficients for each direct effect of a variable on another variable. Path coefficients quantify the amount of change in a dependent variable that corresponds with a one-unit change in the independent variable. The standardized path coefficients in Figure 4.1 appear above or next to the arrows between variables. The path coefficients range in magnitude from -.23 to .37. The final model has been visually simplified by removing the hypotheses that are not supported and paths that were not significant (see Figure 4.1).

### 4.4 Research Questions and Hypotheses Results

#### 4.4.1 Results for Media Use and Acculturation Hypotheses. The first hypothesis predicted that American media consumption would directly predict acculturation (H1a) and Chinese television media would inversely predict acculturation (H1b), and was mostly supported. Time spent of reading American newspapers \( (\beta = .27, p < .001) \),
viewing American television (β = .19, p < .001), and using American websites (β = .29, p < .001) and social media (β = .27, p = .036) were positively related to acculturation. Time spent of viewing Chinese language television (β = -.20, p < .001), using Chinese websites (β = -.23, p < .001), and Chinese social media (β = -.18, p < .01) were inversely related acculturation. However, reading Chinese language newspaper was not related to acculturation (β = -.11, p = .17).

### 4.4.2 Results for Acculturation and STOPs Hypotheses.

H2 were proposed based on the literature and previous research on acculturation and the situational theory of problem solving. H2a-c predicted that there would be a positive relationship between acculturation levels, and problem recognition, involvement and referent criterion with mental health problems. As predicted, Chinese immigrants who were more acculturated would be more likely to recognize mental health problems in the community (β = .17, p < .05) and their personal connections to the problems (β = .14, p < .05). Thus, H2a and H2c were both supported. H2d predicted that Chinese immigrants with higher acculturation level would be less likely to recognize the constraints to deal with mental illness. However, the hypothesis was not supported by the analysis (β = .08, p = .88). Overall, in integrating the two theories together, acculturation can be considered as an effective predictor for immigrants’ problem and involvement recognition, but not for referent criterion and constraint recognition.

### 4.4.3 Results for Acculturation and TPB Hypotheses.

H3a-c were proposed based on the literature and previous research on acculturation and the theory of planned behavior. H3a predicted that there would a positive relationship between acculturation levels and attitudes, acculturation levels and subjective norms, as well as acculturation
levels and perceived behavioral control. All of the proposed hypotheses were supported except H3a. In other words, the results show that immigrants with higher acculturation level would be more likely to possess positive subjective norms ($\beta = .14, p < .01$) and perceived behavioral control ($\beta = .21, p < .001$) in terms of dealing with mental illness. However, there is no significant relationship between acculturation levels and attitudes toward mental health issues ($\beta = .05, p = .36$).

**4.4.4 Results for STOPS Hypotheses.** H4a-b predicted that there would be a positive relationship between problem recognition, involvement recognition, and situational motivation. As proposed, among Chinese immigrants, higher problem recognition ($\beta = .21, p < .001$) and greater involvement recognition ($\beta = .11, p < .001$) would positively predict higher situational motivation. Thus, H4a-b were supported. H4c predicted a negative relationship between constraint recognition about dealing with mental illness and communicative action regarding the topic. As predicted by the theory, among Chinese immigrants, higher constraint recognition would be negatively correlated with individuals’ situational motivation ($\beta = -.18, p < .001$). Thus, H4c was supported. H4d predicted a positive relationship between referent criterion and communicative action. The findings suggested a significant relationship between the two variables ($\beta = .24, p < .001$). Therefore, H4d was supported.

H5 predicted that there would be a positive relationship between situational motivation and communicative action. As proposed, Chinese immigrants who possessed a greater motivation in problem solving would be more likely to participate in communicative action ($\beta = -.18, p < .001$). Therefore, H5 was supported.
4.4.5 Results for TPB Hypotheses. The next two hypotheses were proposed based on the theory of planned behavior to determine whether individuals’ attitudes and subjective norms might have impacts on their behavioral intentions. Specifically, H6a-c predicted that Chinese immigrants’ attitudes, subjective norms, and perceived behavioral control toward mental health services would positively predict intentions to seek professional psychological help. As predicted by H6, individuals who possess more positive attitudes, subjective norms, and perceived behavioral control would be more likely to utilize mental health services ($\beta = .37, p < .001; \beta = .17, p < .001; \beta = .12, p < .01$). Therefore, H6a-c were all supported. H6d-f suggested another behavioral intention (i.e., encourage others to seek professional help can be positively predicted by attitudes, subjective norms, perceived behavioral control. Both H6d and H6e were supported, indicating that individuals who perceived mental illness and its associated subjective norms in a more positive way would be more willing to encourage friends and family to seek professional assistants ($\beta = .21, p < .001; \beta = .11, p < .01$). However, H6f predicting individuals’ perceived behavioral control would have positive impacts on the behavioral intentions of encouraging others to seek medical therapy was not supported ($\beta = .05, p = .23$).

4.4.6 Results for STOPs and TPB Hypotheses. A hypothesis was proposed based on the literature and previous studies on the relationships among the variables of both the situational theory of problem solving and the theory of planned behavior. H7 suggested that among Chinese immigrants, communicative action regarding mental health issues would positively predict behavioral intentions to (a) seek professional psychological help, and (b) encourage others to utilize mental health services. Results related to H7a-b both
show a positive relationship between communicative action and two behavioral intentions
\((\beta = .26, p < .001; \beta = .14, p < .01)\). Thus, H7a-b were supported.

4.4.7 Results for Media Use and Mental Illness Stigma Research Questions. In
order to explore the relationships between media use and mental illness stigma, this study
asked the following two research questions:

*RQ1a:* Among Chinese immigrants, what is the relationship between American
media use (i.e., traditional and digital media) and perceived mental illness stigma?

*RQ1b:* Among Chinese immigrants, what is the relationship between Chinese
ethnic media use (i.e., traditional and digital media) and perceived mental illness
stigma?

To explore RQ1a, and RQ1b a path analysis was conducted among four types of
American and Chinese ethnic media use, and Chinese immigrants’ mental illness stigma.
The relationships were all insignificant, except Chinese websites use. In other words,
most media exposure, regardless mainstream or ethnic media, have rare impacts on
Chinese immigrants’ perceptions regarding mental illness. However, Chinese immigrants
who had greater exposure to Chinese websites would be more likely to possess stigma
toward mental illness \((\beta = .20, p < .01)\).

4.4.8 Results for Stigma and STOPS Hypotheses. H8a-c predicted that there
would be a negative relationship between Chinese immigrants’ perceived stigma, and
their problem recognition, involvement, and referent criterion with mental illness.
However, no significant relationships were found among the three variables. Thus, H8a-c
were not supported. H8d predicted a positive relationship between individuals’ perceived
stigma and their constraint recognition about dealing with mental illness. As predicted by
the theory, among Chinese immigrants, stronger perceived stigma would be correlated with greater constraint recognition ($\beta = .22, p < .001$). Thus, H8d was supported.

4.4.9 Results for Stigma and TPB Hypotheses. H9a-c were proposed based on the literature and previous research on stigma and the theory of planned behavior. H9 predicted that there would a negative relationship between (a) perceived stigma and attitudes, (b) perceived stigma and subjective norms, as well as (c) perceived stigma and perceived behavioral control toward mental health services. Two of the three relationships were found significantly. The results show that immigrants with stronger perceived stigma would be more likely to possess negative attitudes ($\beta = -.12, p < .01$) and perceived behavioral control ($\beta = -.04, p < .05$) in terms of utilizing mental health services. However, there is no significant relationship between stigma and subjective norms toward mental illness issues ($\beta = -.03, p = .55$). Thus, H9a and H9c were supported.
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<thead>
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<th>Percentage (%)</th>
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<th>SD</th>
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<td>.10</td>
<td>N.S.</td>
</tr>
<tr>
<td>H3a</td>
<td>Acculturation -&gt; Attitudes</td>
<td>Positive</td>
<td>.05</td>
<td>N.S.</td>
</tr>
<tr>
<td>H3b</td>
<td>Acculturation -&gt; Subjective norms</td>
<td>Positive</td>
<td>.14</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>H3c</td>
<td>Acculturation -&gt; Perceived behavioral control</td>
<td>Positive</td>
<td>.21</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H4a</td>
<td>Problem recognition -&gt; Situational motivation</td>
<td>Positive</td>
<td>.21</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H4b</td>
<td>Involvement recognition -&gt; Situational motivation</td>
<td>Positive</td>
<td>.11</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H4c</td>
<td>Constraint recognition -&gt; Situational motivation</td>
<td>Negative</td>
<td>-.18</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H4d</td>
<td>Referent Criterion -&gt; Communicative Action</td>
<td>Positive</td>
<td>.24</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H5</td>
<td>Situational motivation -&gt; Communicative Action</td>
<td>Positive</td>
<td>.37</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H6a</td>
<td>Attitudes -&gt; Behavioral intention (self)</td>
<td>Positive</td>
<td>.14</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H6b</td>
<td>Subjective norms -&gt; Behavioral intention (self)</td>
<td>Positive</td>
<td>.17</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H6c</td>
<td>Perceived behavioral control -&gt; Behavioral intention (self)</td>
<td>Positive</td>
<td>.12</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>H6d</td>
<td>Attitudes -&gt; Behavioral intention (others)</td>
<td>Positive</td>
<td>.21</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H6e</td>
<td>Subjective norms -&gt; Behavioral intention (others)</td>
<td>Positive</td>
<td>.11</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>H6f</td>
<td>Perceived behavioral control -&gt; Behavioral intention (others)</td>
<td>Positive</td>
<td>.15</td>
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</tr>
<tr>
<td>H7a</td>
<td>Communicative action -&gt; Behavioral intention (self)</td>
<td>Positive</td>
<td>.26</td>
<td>&lt; .001</td>
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<td>Hypothesis</td>
<td>Pathway</td>
<td>Direction</td>
<td>Coefficient</td>
</tr>
<tr>
<td>---</td>
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<td>---------</td>
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<td>-------------</td>
</tr>
<tr>
<td>H7b</td>
<td>Communicative action -&gt; Behavioral intention (others)</td>
<td>Positive</td>
<td>.14</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>H8a</td>
<td>Stigma -&gt; Problem recognition</td>
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<td>.01</td>
<td>N.S.</td>
</tr>
<tr>
<td>H8b</td>
<td>Stigma -&gt; Involvement recognition</td>
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<td>N.S.</td>
</tr>
<tr>
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<td>.22</td>
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</tr>
<tr>
<td>H8d</td>
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<td>.10</td>
<td>N.S.</td>
</tr>
<tr>
<td>H9a</td>
<td>Stigma -&gt; Attitudes</td>
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<td>-.12</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>H9b</td>
<td>Stigma -&gt; Subjective norms</td>
<td>Negative</td>
<td>.05</td>
<td>N.S.</td>
</tr>
<tr>
<td>H9c</td>
<td>Stigma -&gt; Perceived behavioral control</td>
<td>Negative</td>
<td>-.04</td>
<td>&lt; .05</td>
</tr>
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<td>RQ1a</td>
<td>American press -&gt; Stigma</td>
<td>Unknown</td>
<td>.05</td>
<td>N.S.</td>
</tr>
<tr>
<td>American TV -&gt; Stigma</td>
<td></td>
<td>.09</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>American webs -&gt; Stigma</td>
<td></td>
<td>-.10</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>American social media -&gt; Stigma</td>
<td></td>
<td>.14</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>RQ1b</td>
<td>Chinese press -&gt; Stigma</td>
<td>Unknown</td>
<td>.05</td>
<td>N.S.</td>
</tr>
<tr>
<td>Chinese TV -&gt; Stigma</td>
<td></td>
<td>.05</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Chinese webs -&gt; Stigma</td>
<td></td>
<td>.20</td>
<td>&lt; .01</td>
<td></td>
</tr>
<tr>
<td>Chinese social media -&gt; Stigma</td>
<td></td>
<td>-.01</td>
<td>N.S.</td>
<td></td>
</tr>
</tbody>
</table>
* $p < .05$, ** $p < .01$, *** $p < .001$.
$\chi^2 (128) = 290.028, p < .001$; CFI = 0.89; RMSEA = 0.055 (90% CI: 0.047, 0.063); SRMR = 0.06

**Figure 4.1 New Working Model**
CHAPTER 5

DISCUSSION

Using a nationwide survey of 445 respondents in October 2017, this dissertation combined acculturation theory, the situational theory of problem solving, the theory of planned behavior, and the concept of mental illness stigma to examine Chinese immigrants’ motivations to communicate mental illness issues, utilize mental health services, and encourage others to seek professional help. The contribution of this research is significant in several ways. First, this study draws a comprehensive picture of immigrants’ mental health services utilization behavior in the United States, which distinguishes this study from existing research that only employs one single variable to measure immigrants’ attitudinal or behavioral responses regarding the issue of mental illness. Second, this study combines few well-designed and widely used social science theories and health communication concepts, and establishes a model that could be employed to effectively examine immigrants’ perceptions, attitudes, and behaviors toward stigma associated health issues. Finally, the findings contribute to a range of practical implications for health care organizations to improve the health of underserved populations in the United States by better identifying publics, proposing strategic messages, and implementing campaigns effectively.

This chapter first discusses major findings of this research in terms of both theoretical and practical implications. Then, this chapter provides suggestions for future
research that would build upon the current findings and add the existing research in the areas of health public relations.

5.1 Media Use and Acculturation

This study sought to examine the effects of media use on acculturation and mental illness stigma by proposing the following two hypotheses: Consumption of American media, including both traditional media and digital media, will be directly related to acculturation (H1a). And, Consumption of Chinese ethnic media will be inversely related to acculturation (H1b). Several conclusions may be drawn from the findings related to these two hypotheses. Although recent research suggested that the effects of media use on acculturation are unclear and sometimes reciprocal, the findings show that American media, including newspapers, television, websites, and social media, may generate positive impacts on immigrants’ acculturation process, which supported the assumption: the more frequent exposure to American media, the more acculturated the person was. Meanwhile, if an individual was more frequently exposed to Chinese media (ethnic media), he or she might be less acculturated. These findings suggest that American media was successful in providing real-life scenarios that cultivated immigrants regarding American values, beliefs, identity, as well as behaviors, whereas ethnic media plays an critical role in maintaining immigrants’ culture of origin.

Although the findings above are consistent with many media and acculturation studies, the results indicated that exposure to Chinese language newspapers was not related to acculturation degree. One of possible explanations is that, unlike Chinese satellite televisions, websites, or social media, Chinese daily newspapers in the United States not only include the stories that are exclusively related to the Chinese community
but also news happening in every corner of the United States (Hurh, 1998). Compared to other ethnic media channels that directly broadcast programs and contents in their native country, the hybrid messages reflecting both American and Chinese stories and values in the ethnic newspapers may diminish the effects on immigrants’ acculturation level (Moon & Park, 2007). For this reason, the hypothesized relationship between Chinese language newspapers and acculturation was not supported.

5.2 Media Use and Mental Illness Stigma

Mass media have been criticized for being the primary sources of distributing stigmatizing information about mental disorders (e.g., Clement & Forster, 2008 & Nawkova et al., 2012). However, the majority of existing studies examined news’ portrayal of mental illness in one specific media genre only. This research aimed to explore the effects of media exposure, including both mainstream media and ethnic media, on Chinese immigrants’ perceived mental illness stigma. The findings suggest that exposure to Chinese websites was the only media channel use that was related to immigrants’ perceived stigma toward mental disorders. Namely, immigrants who were more frequently exposed to Chinese websites would be more likely to possess negative stereotypes toward mental illness problems. Indeed, a previous study that compared the news coverage of schizophrenia in China and the United States found more stigmatizing terms in Chinese online news (Yang & Parrott, 2017). And thus high frequency users of Chinese websites might be more susceptible to discriminative messages and belief that those stigmatizing descriptions of mental illness are real and valid, thereby shaping their negative attitudes toward the issues.
As scholars indicated, more studies with cross-cultural perspectives are needed in mental health communication field. This research is one of the very first projects that compared the effects of host media and ethnic media exposure on Chinese immigrants’ perceived mental disorders stigma. Future studies should continue exploring the relationship between media exposure and immigrants’ stereotypes regarding mental illness. The findings and ideas could benefit from being retested through additional surveys and experimental research to see whether exposure to specific contents related to mental illness in different media channels influence immigrants’ perceptions about the health issue.

5.3 Acculturation, Mental Illness Stigma, and Attitudinal Responses

Culture and stigma have been regarded as two important indicators of individuals’ assessment of mental illness (Parcesepe & Cabassa, 2013). Considering these two variables as antecedents to immigrants’ attitudinal responses to mental illness, this study employs both the situational theory of problem solving and the theory of planned behavior to comprehensively examine immigrants’ cognitive and affective responses in terms of depression. The findings indicated that acculturation level was effective in predicting immigrants’ problem recognition, involvement recognition, subjective norms, and perceived behavioral control, whereas stigma was successful in forecasting their constraint recognition, attitudes, and perceived behavioral control.

Although both acculturation and mental illness stigma failed to predict all the attitudinal variables drawn from the theories, one interesting pattern was found based on the results. Those variables that were effectively predicted by acculturation are mostly related to individuals’ perceptions about the outer world. Problem recognition or
awareness is defined when someone recognizes the problem of the underutilization of mental health services, how that problem needs to fixed, and what are the possible solutions to that problem. Involvement recognition indicates individuals’ connections with the situation. And subjective norms refer to the perceived social pressure whether to execute the behavior or not. On the other hand, the factors that were significantly related to mental illness stigma are more likely to be people’s perceived ideas about the inner self. Constraint recognition means individuals see the obstacles that limit their capacity to fix the problem. Attitudes refer to individuals’ personal attitudes about the situation. And perceived behavioral control explains whether people believe that they have the ability to control their own behaviors.

One approach to explain the differences is to look at the definitions and the formation process of acculturation and mental illness stigma themselves. Acculturation is a process of adopting social, psychological, and cultural change, which explains the procedures in trying to learn and incorporate the language, values, or beliefs of the new country. Individuals’ perceptions regarding mental illness in the outer world, therefore, could be impacted by their assimilation to a new culture. On the flip side, mental illness stigma, in particular internalized stigma, is the deflation, shame, and withdrawal generated by implementing negative stereotypes to oneself (Ritsher et al., 2003). Thus, the consequences of applying the stereotypes to immigrants themselves might then evolve to the attitudinal responses about mental illness that are related to inner self, which can be defined as self-efficacy – a person’s beliefs in his/her ability to succeed in accomplish a task.
This distinction is important for understanding how people perceive mental illness and the utilization of mental health services from several different aspects. These findings are relatively new and need further studies to confirm the validity and applicability, but they may help health communicators focus their efforts on mental illness issues in immigrant communities by understanding the deeper layer of their mind regarding the problem. Future research could help explore the specific relationships between acculturation, stigma, and one’s perceptions about the outer world and inner self.

5.4 Perceptual, Attitudinal Responses and Behavioral Responses

The use of path analysis provides support for the theorized links between the key variables in the situational theory of problem solving and the theory of planned behavior. Immigrants who had higher ability to recognize the problem, perceive personal connections with the issue, and see lower obstacles when dealing the situation would have higher motivation to solve the problem, thereby increasing the likelihood of communicative action and behavior performance. Their attitudes, subjective norms, and perceived behavioral control also successfully predicted their behavioral intentions. In other words, people who possessed more positive attitudes, subjective norms, and perceived behavioral control about mental health services would be more likely to seek medical help when encountering mental illness. These findings demonstrated the usefulness of combining STOPS and TPB and applying them into explaining immigrants’ mental health perceptions and behaviors.

It was interesting to note, however, one’s perceived behavioral control failed to predict the behavioral intentions of encouraging others to utilize mental health services. Hesitance to encourage others to seek mental help in an organization or family context is
not unique, even though research has shown that social support and encouragement from
others influence one’s willingness to seek medical help (Clark-Hitt, Smith, & Broderick,
2012). It means that people might not perform bystander’s action even if they believe
they have the capacity to control their own behaviors. Meanwhile, in addition to
perceived behavioral control, both attitudes and subjective norms are stronger predictor
for the behavioral intentions of utilizing mental health services than for the behavioral
intentions of encouraging others to seek professional help. It helps health communicators
understand the importance of bystander intervention campaigns for mental health. One
issue that deserves attention in this dissertation is that perceived behavioral control is
measured as a predictor of individuals’ own intentions to perform behavior, which not
necessarily predict encouraging others to engage in a behavior. Future research is
recommended in order to explore the relationship between perceived control over other
people’s behavior and behavioral intentions.

5.5 Theoretical and Methodological Contributions

Through combining well-developed concepts and theories from public relations
and health communication research, this dissertation used a nationwide survey with 445
respondents to explicate the conceptual understanding of the antecedents that might lead
to behavioral responses to utilize mental health services and encourage others to use
mental care.

This study proposed a model combining acculturation, mental illness stigma,
STOPs, and TPB and executed a path analysis that provided empirical support for the
new model with acceptable model fit statistics ($\chi^2 (128) = 290.028, p < .001$; CFI = 0.89;
RMSEA = 0.055 (90% CI: 0.047, 0.063); SRMR = 0.063). It adds to existing research by
extending the situational theory of problem solving to explore individuals’
communication behaviors on their mental health services utilization and the likelihood of
encouraging others to seek professional help.

This study is one of the few studies that combines STOPS and TPB with cultural
and stigma factors in the context of a controversial health issue. Figure 4.1 shows a
working model that examines the role of mainstream and ethnic media use, cognitive
barriers (i.e., acculturation), and affective barriers (i.e., mental illness stigma) in the
theoretical framework of STOPS and TPB, and identified the dependent variables of
communicative action and behavioral intentions along a continuum.

Although STP and STOPS are both constructed based on solid conceptualizations
and empirical studies, public relations scholars suggest that the four independent
variables in the theory are not the only determinants of humans’ psychological behavior
(e.g., Grunig 1997, 2006; Aldoory & Sha, 2007). J. E. Grunig (1989) and many scholars
have emphasized the significance of individual differences, which may include other
variables as antecedents to the situational factors, such as individuals’ attitudes or
perceived social norms associated with certain issues or organizations (e.g., Sha, 2006;
McKeever, 2013). Adding antecedents to the situational factors of STOPS allows the
theoretical framework’s public segmentation function to be improved. For example, by
adding acculturation variable, this study investigates the effects of cultural factors on
situational perceptions. Such effects were mentioned in the past, particularly in the area
for global and international public relations (e.g., Sriramesh, 1992; Sriramesh & White,
1992; Sriramesh & Vercic, 2003). However, the literature regarding the role of cultural
factors in STOPS is limited (Sha, 2006, 2008) and has rarely addressed the phenomena in a single racial/ethnical community (Jang & Kim, 2013).

In public relations field, Sriramesh and Vercic (2003) suggested that acculturation allows public relations professionals to establish an appropriate value system that guides their organizational strategies in foreign countries. The degree of acculturation of a public relations practitioner may determine his or her qualification for international public relations practice (Culbertson & Chen, 2013). However, the idea has not yet been adapted and adopted to describe characteristics of stakeholders. In Jang and Kim’s study (2013) that aimed to extend the theory of intercultural public relations, Korean Americans defined their cultural identities based on the use of language, the length of United States residency and the people they are associated with (Jang & Kim, 2013). In fact, the factors that the participants used to make meaning of their cultural identities fits with the theoretical framework of acculturation by Berry (2003). John Berry, a psychological scholar who has been seen as one of the main establishers of the field of acculturation and intercultural relations, proposed two independent aspects to describe ethnic minorities’ processes of acculturation in the United States: individuals’ heritage-cultural practices and U.S. cultural practices (1974, 1980, 2003). By examining the connections individuals maintain with the cultures of their origin and the participation they have in mainstream culture, scholars are allowed to understand a person’s cultural identity comprehensively.

Decades of research in public health discipline have shown that levels of acculturation and help seeking behavior in terms of mental disorders are directly related to each other (e.g., Atkinson & Gim, 1989; Abe-Kim et al., 2007). In other words, individuals who are more acculturated by the mainstream culture in the United States
would be more likely to discuss their mental health problems with others, particularly with health professionals. Other research has also suggested that the degree of acculturation would result in different information seeking behavior in terms of health issues (Facione et al., 2000). Moreover, in public relations scholarship, Sha and Ford (2007) proposed, “racioethnic identification significantly affects four of five variables in the situational theory of publics: problem recognition, level of involvement, information processing and information seeking” (p. 389). That is, cultural identity of ethnic minorities can been seen as a significant index in segmenting organizations’ stakeholders and an effective indicator of individuals’ communicative action (Sha & Ford, 2007).

Therefore, conceptualizing and operationalizing cultural identity by using the theoretical framework of acculturation, strategic management of public relations, in particular “health public relations,” can move beyond simplistic definitions of cultural identity (i.e., race and ethnicity) and develop an adequate and appropriate approach to public segmentation within racial/ethnical communities for better communication. Against this background, the working model could be used in future research to explore individuals’ behaviors in terms of stigmatized illness/issues in cultural settings with a large foreign-born population. Specifically, the combination of social science theories and concepts helps explain the factors that may contribute to health behaviors among ethnic minority groups.

In addition, the proposed model verifies the generalizability of the situational theory in different cultural and social settings and in health related contexts. I believe that these findings contribute to the conceptual advancement of the situational theory in health public relations. The concept of health public relations is central to both academic and
health care industry that emphasizes the importance of mutually beneficial relationships with stakeholders include people who are at higher risk of illness and diseases and friends and family (Bardhan, 2002). Scholars believe that situational theory can help health communicators and practitioners segment publics establish the relationships through communication. By integrating situational theory with cultural and health related factors, the model may facilitate the function of public segmentation that allows for greater and better communication effects with stakeholders.

Second, although acculturation is a widely used concept in public health field, the majority of acculturation measurements were developed and tested with Latino populations that may or may not be applied to other ethnic groups (Thomson & Hoffman-Goetz, 2009). This study answered the call for a conceptual and operational model of acculturation to explain the relationships between acculturation and health issues, in particular among Asian Americans.

Even though this study does not intend to apply the findings to Asian Americans in general, the results of this study may be generalized to Asian immigrants from East Asia countries, such as Japan and South Korea, because “East Asian cultural sphere,” a group of countries in East Asia that were historically influenced by the culture of Mainland China, shares similar traditional beliefs and values (Reischauer, 1974). Findings of this study suggest new directions for future research that focuses on public health messages that involving broader issues that target Chinese or Asian immigrants from East Asian countries.

Besides contributing to theoretical and methodological development, the findings from this study also suggest a range of practical implications for health communicators
and public relations practitioners working for health related organizations that serve racial/ethnic minorities that aim to improve their healthcare quality.

5.6 Practical Implications

The ultimate goal of this dissertation was to conduct research that may help mental health organizations to break the silence on mental illness, decrease stigma, and increase utilization of mental health services in the Chinese immigrant community. In addition to providing theoretical value by combing acculturation, mental illness stigma, STOP5, and TPB to explore and help explain Chinese immigrants’ mental health services utilization behavior, this study provides practical suggestions for health communicators and public relations practitioners to improve the strategies to identify publics, propose messages, and implement campaigns and interventions.

5.6.1 Public segmentation in strategic management of health public relations.

Public segmentation plays an important role in strategic management of public relations (Hallahan et al., 2007). By dividing audiences into subgroups based on their characteristics, communicators and public relations practitioners are allowed to propose effective strategies that target different segments when establishing relationships or solving problems. In other words, instead of addressing general populations, through segmentation, organizations are able to identify subgroups and develop appropriate strategies that facilitate their conversations with the specific publics. Kim, Ni, and Sha (2008) indicated that segmentation can not only enhance “cost effectiveness in reaching current/potential publics” but also increase “organization effectiveness in obtaining stakeholders’ and publics’ support and resources to achieve organizational strategic goals” (p.755). For example, subpopulations who are engaged in issues and motivated to adopt
communicative action (e.g., information seeking and sharing) may aid non-profit organizations in shaping public opinion and pressing policymakers toward action (Grunig & Repper, 1992; Kim et al., 2011). In addition, those active audiences may be helpful in spreading out information and reaching out potential publics (Kim & Grunig, 2011). Therefore, it is important to segment stakeholders, identify such active publics, and examine their communicative behavior for organizations while building relationships with current/potential stakeholders or solving critical problems.

One way to segment publics is using STOPs that provides a conceptual framework to break down a general population into subgroups, including active public, aware public, latent public, and nonpublic. Kim et al (2011) proposed a public segmentation method, summation method, based on STOPs’ independent variables: problem recognition, constraint recognition, involvement recognition, and referent criterion. In order to enhance the accuracy of public segmentation, this study added three more factors from TPB to the summation method, including attitudes, subjective norms, and perceived behavioral control.

The summation method uses the midpoint of the survey sale of all variables as the cut-off point (e.g., 4 on a 7 point Likert scale) and recode the data into high (= 1) and low (= 0). For example, an answer with a rating of 5 for problem recognition will be recoded into high (larger than 4) using the midpoint 4 as the point of cut-off. After recoding all seven variables, this study simply sums up the recoded data, resulting in four possible values – 0/1 = nonpublic, 2/3 = latent public, 4/5 = aware public, 6/7 = active public.

A one-way ANOVA was conducted in which the four segmented publics is the independent variable and the communicative action, behavioral intentions to utilize
mental health services, and behavioral intentions to encourage others to seek professional help are dependent variables (See Table 5.1). The results showed that communicative action and two behavioral intentions are different such that active publics have highest scores, followed by aware publics, latent publics, and nonpublics. The segmentation results are consistent with the assumptions of STOPS.

5.6.2 Campaigns strategy. What can health communicators and public relations practitioners benefit from the abovementioned segmentation results? Scholars have suggested the importance of tailored messages for different publics, including active publics, aware publics, latent publics, and nonpublics (Grunig & Hunt, 1984; Kim et al., 2011).

Active publics are “a group of self-identified and self-organized people that arises in response to a problematic situation” (Kim et al., 2011, p. 175). In this research, active publics refers to people who have highest ability to recognize mental health services underutilization issues, perceive fewer obstacles to dealing with mental illness, and possess positive attitude and subjective norms regarding the issue. According to the current findings, immigrants with higher acculturation degree and lower internalized stigma could be categorized into “active publics.” The results show that greater acculturated immigrants in the United States might have greater problem and involvement recognition regarding the issues (e.g., Greater acculturate immigrants -> recognize the problem -> communicate about the issue -> perform the behavior). In addition, immigrants with lower internalized stigma would be more likely to possess positive attitudes, perceive fewer difficulties, and greater behavioral control in terms of seeking medical help (e.g., lower internalized stigma -> own positive attitudes -> perform
the behavior).

Relevant organizations may be able to utilize active publics’ communication capabilities to mobilize other types of publics, such as immigrants with lower acculturation level or who are relatively less engaged in the issue of mental health advocacy. Moreover, the results indicate that immigrants’ acculturation level is also associated with their perceived subjective norms. If they were recruited as “endorsers,” “advocates,” or “volunteers” for mental health in the community, positive social norms about utilizing mental health services might be established because of active publics’ communication ability and its impacts on other publics. Health communicators and public relations practitioners should make every effort to maintain the relationship with these active publics and encourage continued support for mental disorders care.

Aware publics refer to a group that “perceives the existence of a problem but are not as active as the active public,” whereas latent publics means people who “face a common problem but have not recognized it” (Kim et al., 2011, p. 175). To mobilize these two publics to the category of active publics, anti-stigma campaigns and interventions that tailored to Chinese immigrants are necessary. In this dissertation, mental illness stigma were found to be relevant to immigrants’ attitudes, constraint recognition, and perceived behavioral control. By implementing anti-stigma campaigns, therefore, Chinese immigrants might possess more positive attitudes, recognize fewer obstacles, or identify greater ability to deal with mental illness issues, leading to higher motivation to communicate about the problems and to accept medical care (e.g., anti-stigma campaigns -> recognize fewer obstacles -> communicate about the issue -> perform the behavior). Furthermore, knowing that communicative action about mental
health services is one of the main factors to predict intentions to seek mental care, health communicators and public relations practitioners should considering proposing communication campaigns that may encourage immigrants to openly discussing about mental illness and mental health services.

Nonpublics are people who are not aware of the issues and not affected by the problems (Kim et al., 2011, p. 175). Nonpublic in this dissertation may refer to immigrants who barely recognize the connections with mental illness issues, perceive many obstacles, and possess negative attitudes in terms of mental health services utilization. It is usually extremely difficult to effectively communicate with nonpublics directly due to their positions on the issue or the organizations’ limited resources. Many public relations practitioners, therefore, choose to exclude nonpublics from the main target audiences of their communication campaigns. It would be interesting to see how to transform nonpublics into latent publics, aware publics, and even active publics, respectively.

5.6.3 Media channel. The selection of media channels to disseminate campaign messages is important due to individuals’ preference of media use to obtain health related information (Tanner, Bergeron, Zheng, Friedman, Kim, & Foster, 2016). Therefore, this study also provided some practical implications for health communicators and public relations practitioners to select effective channels to deliver messages. Chinese immigrants in this research mentioned that they had a greater exposure to Chinese social media, Chinese websites, and American websites in one day. In other words, the abovementioned channels could be the most effective media channels for distributing mental health services information. Specifically, Chinese immigrants in the sample spent
more time acquiring health related information from Chinese websites ($M = 2.61, SD = 1.36$), followed by American websites ($M = 2.46, SD = 1.33$), American television ($M = 1.74, SD = 1.08$), Chinese social media ($M = 1.69, SD = 1.31$), Chinese television ($M = 1.57, SD = 1.09$), American social media ($M = 1.41, SD = .86$), Chinese newspapers ($M = 1.38, SD = .74$), and American newspapers ($M = 1.36, SD = .75$). This implies that mental health advocacy organizations should collaborate with primary Chinese and American websites immigrants frequently use for health information to disseminate strategic communications. Furthermore, this study found that the use of Chinese websites were the only media exposure that was associated with mental illness stigma. That being said, the more frequently immigrants used Chinese websites, the greater likelihood that immigrants would possess negative stereotypes toward mental illness they might possess. It once again shows the importance of partnering up with primary Chinese websites in terms of promoting mental health services and reducing associated stigma.

5.7 Limitations and Future Research

While making theoretical and practical contributions, this study has limitations that have to be addressed through future research. First, this study used organizational snowballing method to recruit participants from Chinese organizations in the United States and social media groups that are designated for Chinese immigrants. The sample, therefore, was purposive and not selected based on random selection. To improve the model’s validity, future research should replicate the research with populations by using respondent driven sampling. Respondent-driven sampling (RDS) is an alternative probability sampling approach that combines snowball sampling with a mathematical model to overcome the issues generated by non-random selection (Heckathorn, 1997,
RDS first selects a small number of participants in a non-random way (seeds) and asks the group to recruit a small number of people in their social networks to participate in the research. Once the peers seeds recruit have participated in the survey, they become seeds and are asked to recruit their peers. The procedure is repeated until the sample size is achieved. The dependence of the final sample on the initial non-randomly selected seeds is reduced through many rounds of sampling. After the recruitment stage, RDS calculates sampling weights to address the potential bias from snowball sampling and generated population-based estimates (Montealegre, Risser, Selwyn, McCurdy, & Sabin, 2013, p. 720). RDS is widely used to recruit hard-to-reach populations such as sex workers, people living with HIV, or drug users (Gile & Handcock, 2012) and had recently been applied to immigrant populations in the United States (Montealegre et al., 2013). Therefore, future research should improve the model’s generalizability by using RDS.

Second, this study tested the predictive abilities of the model by using path analysis without testing the full measurement model. The future research should improve the model’s validity and reliability by using structural equation modeling (SEM). Path analysis contains observed variables only and assumes that all variables are measured without error. Although the measurements in this study were all well-established by previous scholars, the use of SEM and latent variables might reduce measurement error and enhance internal validity of the model.

The third involves determining the direction of causality. The correlations found in the research may suggest but do not confirm any direction of causality. For example, the significant correlation between media use and acculturation may indicate that media
exposure, as was hypothesized, can contribute to the increase or decrease in immigrants’ acculturation level. The same correlation, however, can also indicate that mainstream or ethnic media use increases/decreases as a consequence of immigrants’ acculturation degree. That is, the direction of causality is unclear in the study, and the possibility of an opposite casual direction should not be ruled out when interpreting our findings.

Fourth, while media exposure was measured, it only included general media use, rather than the media channels people prefer to use to acquire mental health information. Future research should continue to explore immigrants’ media exposure, specifically focusing on mental illness information. Moreover, this study found that Chinese websites were used most frequently for health related information, and the exposure to Chinese websites was significantly correlated with mental illness stigma. Therefore, the role of Chinese websites in immigrants’ communicative action and behavioral intentions in terms of mental health services utilization requires future research and attention.

Finally, this study considered acculturation (i.e., cognitive barriers) and mental illness stigma (i.e., affective barriers) as two separated antecedents to immigrants’ perceptual and attitudinal responses based on literature (Cabassa, 2017). However, some scholars found that health associated stigma may changes, which occur as part of acculturation to American society and society (Cabassa, 2003). Although the relationship has not been tested in the context of mental illness stigma, it would be interesting to see whether the level of acculturation relates immigrants’ interpretations of mental disorders.

While limited in scope, this study provides relevant findings and proposes a new working model to examine immigrants’ mental health related behavior. The same survey could be adapted to similar samples in the United States or in other countries with large
populations of immigrants. It would be interesting to see how results might be different among different populations or differ because of the type of health issue. Replicating the model with different datasets is necessary in order to validate the findings from the current study.

5.8 Conclusion

In conclusion, this dissertation explored Chinese immigrants’ mental health services use in the United States, and contributed to the understanding of how immigrants’ personal, perceptual, and attitudinal differences work together to predict their communicative action and behavioral responses about utilizing mental health services and encouraging others to seek professional help. The findings provided methodological, theoretical, and practical contributions, and suggested potential directions for future study. More research in the future will help enhance the validity and generalizability of the proposed model in this study.

Of utmost importance to health communicators and public relations practitioners are the links between cultural, perceptual, attitudinal, and behavioral responses regarding mental health services. This study combined two social science theories, the situational theory of problem solving and the theory of planned behavior, with immigrants’ mainstream and ethnic media use, acculturation, and mental illness stigma, to propose a new working model. By continuing to explore communication and utilization behaviors related to mental illness, this dissertation can help to bridge the gap between health communication and public relations on related concepts and contribute to the newly developed research area, health public relations, to better understand immigrants’ health behaviors, in particular in the contexts of stigmatized health issues.
5.8.1 *Summary of Significant Findings.* After surveying 445 Chinese immigrants in the United States, there were several significant findings in this research, including:

1. The exposure to American media was found to be positively related to immigrants’ acculturation levels, whereas ethnic media use was negatively associated with acculturation degree.

2. The exposure to Chinese websites was positively relevant to immigrants’ perceived mental illness stigma.

3. Greater acculturation levels would predict higher problem recognition, involvement recognition, subjective norms, and perceived behavioral control, mostly regarding individuals’ perceptions about outer world.

4. Greater mental illness stigma would predict higher constraint recognition, negative attitudes, and lower perceived behavioral control, which are relevant to immigrants’ self-efficacy perceptions.

5. Problem recognition, constraint recognition, and involvement recognition were related to immigrants’ situational motivations in problem solving, which was found to be associated with immigrants’ communicative action. The findings verify the applicability of STOPS in immigrant populations.

6. Attitudes, subjective norms, and perceived behavioral control were associated with immigrants’ behavioral intentions in terms of mental health services utilization. The results were consistent with previous TPB studies.

7. Immigrants’ communicative action was related to their behavioral intentions, which successfully verifies the combination of STOPS and TPB.
In sum, this study contributes to the literature in health public relations by combining several important concepts and theories together. The segmentation based on the new working model from the discussion provides exploratory findings, and is worth further research.

5.8.2 Summary of Suggestions for Future Mental Health Advocacy. Based on the findings, the following suggestions are proposed for future promotions of mental health services in Chinese immigrant community:

1. Identity active publics (e.g., higher acculturated immigrants who possess more positive perceptual and attitudinal responses toward mental health), maintain relationships, and utilize their communication capacities to mobilize other types of publics.

2. Identify aware, latent, and nonpublics, establish relationships, and motivate them to move to the category of “active publics.”

3. Propose and implement Anti-stigma campaigns and messages that are tailored based on the Chinese immigrants’ interpretations of mental illness.

4. Collaborate with primary Chinese websites that immigrants frequently use to promote mental health services and reduce its’ associated stigma.
Table 5.1 Mean Differences of Communicative Action and Behavioral Intentions among Segmented Publics in Mental Health Services Utilization Issues (7 point Likert-type scale)

<table>
<thead>
<tr>
<th>Publics (N = 445)</th>
<th>Communicative action</th>
<th>Behavioral intention (Self)</th>
<th>Behavioral intention (Others)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonpublic (n = 60, 13.5%)</td>
<td>4.25 (.92)</td>
<td>4.23 (1.26)</td>
<td>4.42 (1.13)</td>
</tr>
<tr>
<td>Latent public (n = 192, 43.1%)</td>
<td>4.63 (.89)</td>
<td>4.73 (1.01)</td>
<td>5.15 (.84)</td>
</tr>
<tr>
<td>Aware public (n = 148, 33.3%)</td>
<td>5.03 (.93)</td>
<td>4.95 (1.18)</td>
<td>5.69 (.89)</td>
</tr>
<tr>
<td>Active public (n = 45, 10.1%)</td>
<td>5.35 (1.24)</td>
<td>5.22 (1.44)</td>
<td>5.98 (1.36)</td>
</tr>
</tbody>
</table>

* All tested mean differences among segmented publics by F-tests were significant at p < .05 Column means that do not share subscripts differ at p < .05.
REFERENCES


Kerson, T. S., Kerson, J. F., & Kerson, L. A. (2000). She can have a seizure maybe; then we can watch: The portrayal of epilepsy in film. _Social Work in Health Care, 30_(3), 95-110.


APPENDIX A

SURVEY QUESTIONNAIRE

Dear Friends,
My name is Queenie Li, and I’m a doctoral student in the School of Journalism and Mass Communications at the University of South Carolina. I am currently conducting a research study to understand Chinese immigrants’ media use and health behaviors. We strive to understand how to provide better health for minority and underserved populations, particularly for Chinese immigrants.
If you are a Chinese immigrant, I sincerely invite you to participate in my survey; your inputs will be very valuable to enhancing our understanding of how to enhance the quality of life among Chinese immigrants.
The survey will take you around 15-20 minutes. Your participation is voluntary, but I would greatly appreciate it if you could help. No identifiable information will be collected from you, and all your answers are confidential and will be used only for research purposes. In fact, we are required by federal government and university rules to protect participants’ confidentiality (see: http://orc.research.sc.edu/irb.shtml). If you have questions concerning your rights as a research subject, you should direct them to Thomas Coggins, Director of the USC Office of Research Compliance (803-777-7095, tcoggins@mailbox.sc.edu).

Before you begin, please answer the following questions first to make sure that you are eligible to participate in the survey.

1. Were you born in one of the following places?
   1. Mainland China
   2. Taiwan
   3. None of the above (Thank you for your participation. Please do not go on answering the questions.)

2. Do you reside permanently in the United States?
   1. Yes
   2. No (Thank you for your participation. Please do not go on answering the questions.)
3. Did you arrive in the United States after 12 years old?
   - Yes
   - No (Thank you for your participation. Please do not go on answering the questions.)

4. Are you currently older than 18 years old?
   - Yes
   - No (Thank you for your participation. Please do not go on answering the questions.)

If you are eligible for this survey, by proceeding you are indicating that you have read this statement and agree to participate in this study. If at any point during the study you determine you do not want to continue, you may stop. Only one person in a household is permitted to participate in this research.

Thank you for your time.

Queenie
Mainstream Media Use

The following questions are about your media use behaviors. Please indicate your level of time involvement with each media channel by choosing from the following options: 1 (Never), 2 (Less than 30 minutes), 3 (30-60 minutes), 4 (1-1.5 hours), 5 (1.5-2 hours), 6 (2-2.5 hours), or 7 (More than 2 hours).

1: In the past week, how much time do you spend each day looking for each of the following types of information from American social media, such as Twitter?
   a. Political affairs (e.g., political news or political commentary)
   b. Sport information (e.g., sports news or sport games)
   c. Entertainment (e.g., entertainment news or entertainment shows)
   d. Health/medical information

2: In the past week, how much time do you spend each day looking for each of the following types of information from American websites?
   a. Political affairs (e.g., political news or political commentary)
   b. Sport information (e.g., sports news or sport games)
   c. Entertainment (e.g., entertainment news or entertainment shows)
   d. Health/medical information

3: How much time per day have you spent, in the past week, on looking for each of the following types of information from American television channels?
   a. Political affairs (e.g., political news or political commentary)
   b. Sport information (e.g., sports news or sport games)
   c. Entertainment (e.g., entertainment news or entertainment shows)
   d. Health/medical information

4: In the past week, on average, approximately how many minutes per day have you spent on looking for each of the following types of information from American print newspapers?
   a. Political affairs (e.g., political news or political commentary)
   b. Sport information (e.g., sports news or sport games)
   c. Entertainment (e.g., entertainment news or entertainment shows)
   d. Health/medical information

Ethnic Media Use

The following questions are about your media use behaviors. Please indicate your level of time involvement with each media channel by choosing from the following options: 1 (Never), 2 (Less than 30 minutes), 3 (30-60 minutes), 4 (1-1.5 hours), 5 (1.5-2 hours), 6 (2-2.5 hours), or 7 (More than 2 hours).

1: In the past week, how much time do you spend each day looking for each of the following types of information from Chinese social media, such as Weibo?
   a. Political affairs (e.g., political news or political commentary)
b. Sport information (e.g., sports news or sport games)
c. Entertainment (e.g., entertainment news or entertainment shows)
d. Health/medical information

2: In the past week, how much time do you spend each day looking for each of the following types of information from Chinese websites?
a. Political affairs (e.g., political news or political commentary)
b. Sport information (e.g., sports news or sport games)
c. Entertainment (e.g., entertainment news or entertainment shows)
d. Health/medical information

3: How much time per day have you spent, in the past week, on looking for each of the following types of information from U.S.-based Chinese language television channels, such as SinoVision or ETTV American?
a. Political affairs (e.g., political news or political commentary)
b. Sport information (e.g., sports news or sport games)
c. Entertainment (e.g., entertainment news or entertainment shows)
d. Health/medical information

4: In the past week, on average, approximately how many minutes per day have you spent on looking for each of the following types of information from U.S.-based Chinese language print newspapers, such as World Journal or Sing Tao Daily?
a. Political affairs (e.g., political news or political commentary)
b. Sport information (e.g., sports news or sport games)
c. Entertainment (e.g., entertainment news or entertainment shows)
d. Health/medical information

Acculturation – Country of Origin

The following questions are concerned with some cultural activities in your daily life. Please indicate your attitude toward the following statements by choosing from the options: 1 (Strongly disagree/ Not at all) – 7 (Strongly agree/ Everyday).

1. How often do you or your family cook Chinese food?
2. How often do you or your family eat Chinese food?
3. I speak Chinese at home often.
4. I speak Chinese with my friends often.
5. I can speak Chinese well.
6. I can write in Chinese well.
7. I can read Chinese well.
8. I can listen in Chinese well.
9. I watch Chinese-language only movies often.
10. I listen to Chinese-language only music often.
11. I associate with people from China often.
12. My friends now mostly are of China origin.
13. I feel I have much in common with people from China.
14. I am active in organizations or social groups that include Chinese members mostly.
15. I like to identify myself as a Chinese.
16. I have a clear sense of my ethnic background as a Chinese and what it means for me.
17. I have strong sense of belonging to my own ethnic group as a Chinese.
18. I feel a strong attachment towards my own ethnic group as a Chinese.

**Acculturation – Host Country**

The following questions are concerned with some cultural activities in your daily life. Please indicate your attitude toward the following statements by choosing from the options: 1 (Strongly disagree/ Not at all) – 7 (Strongly agree/ Everyday).

1. How often do you or your family cook Western food?
2. How often do you or your family eat Western food?
3. I speak English at home often.
4. I speak English with my friends often.
5. I can speak English well.
6. I can write in English well.
7. I can read English well.
8. I can listen in English well.
9. I watch English-language only movies often.
10. I listen to English-language only music often.
11. I associate with Caucasians, Blacks, Hispanics, Asians, or other non-Chinese ethnic groups.
12. My friends now mostly are Caucasians, Blacks, Hispanics, Asians, or other non-Chinese ethnic groups.
13. I feel I have much in common with Caucasians, Blacks, Hispanics, Asians, or other non-Chinese ethnic groups.
14. I am active in organizations or social groups that include Caucasians, Blacks, Hispanics, Asians, or other non-Chinese ethnic groups mostly.
15. I like to identify myself as an American.
16. I have a clear sense of my ethnic background as an American and what it means for me.
17. I have strong sense of belonging to my own ethnic group as an American.
18. I feel a strong attachment towards my own ethnic group as an American.

In the second part of survey, we would like to know your personal opinions regarding mental health issues in the Chinese community. Please indicate your attitude toward the following sentences by choosing from the options: 1 (Strongly disagree) – 7 (Strongly agree).

**Problem Recognition**

1. I think mental health is a serious social problem in the Chinese community.
2. I am concerned about mental health issues in the Chinese community a lot.
3. Something needs to be done to improve mental health in the Chinese community.

**Constraint Recognition**

4. I don’t think I make a difference and improvement regarding mental health issues in the Chinese community.
5. I am afraid to take action to make changes for mental health issues in the Chinese community.
6. I find many obstacles in doing something for mental health issues in the Chinese community.

**Involvement Recognition**

7. I realized a strong connection between mental health issues and me or someone close to me.
8. Mental health issues affect my life or life of someone close to me.
9. Mental health issues have serious consequences for my life and someone I care.

**Referent Criterion**

10. I know how to deal with mental illness problems.
11. I can provide friends and people advice and instructions in terms of dealing with mental illness.
12. I have a clear idea and direction to deal with mental health issues.

**Attitudes**

1. If I experience an emotional problem, it will be good for me to use mental health services.
2. If I experience an emotional problem, it will be pleasant for me to use mental health services.
3. If I experience an emotional problem, it will be worthless for me to use mental health services. (Reverse Scored).

**Subjective Norms**

4. Most people who are important to me think that I should use mental health services if I experience an emotional problem.
5. Most of people whom I am acquainted use mental health services when they experience emotional problems.
6. Most people whose opinions I value would approve of me using mental health services if I experience an emotional problem.

**Perceived Behavior Control**

7. It would be easy for me to use mental health services.
8. It is completely up to me whether or not I use mental health services.
9. I am confident that if I want to, I can use mental health services.

**Mental Illness Stigma**

1. I would not socialize as much as I do if I had mental illness, because it might make me look or behave weird.
2. I would be embarrassed or ashamed if I had a mental illness.
3. If I had a mental illness, I would avoid getting close to people who don't have mental illness, to avoid rejection.
4. People would discriminate against me if I had a mental illness.
5. If I had a mental illness, I would stay away from social situations in order to protect my family or friends from embarrassment.

Just a few more questions now. For the next few questions, please tell us a little about your involvement with some activities regarding mental health issues. Please indicate your attitude toward the following sentences by choosing from the options: 1 (Strongly disagree) – 7 (Strongly agree).

**Situational Motivation in Problem Solving**

1. I am curious about mental health issues.
2. I frequently think about mental health issues.
3. I would like to better understand mental health issues.

**Communicative Action**

1. I have invested enough time and energy so that I understand mental health issues.
2. I know where to go when I need updated information regarding mental health issues.
3. I easily judge the value of information regarding mental health issues.
4. I want to know about mental health issues from multiple sources.
5. I welcome any information about mental health issues.
6. I am interested in all views on mental health issues.
7. I talk about my opinions about mental health issues with my friends and coworkers.
8. I forward social media posts about mental health issues.
9. I enjoy opportunities to educate others on mental health issues.
10. I will be willing to talk to someone about mental health issues if they ask me.
11. I talk about mental health issues when others bring the topic.
12. I participate casual conversations about mental health issues.
13. I search for information about mental health issues on the Internet.
14. I regularly visit Web sites relevant to mental health issues.
15. I regularly check to see if there is any new information about mental health issues on the Internet.
16. If I hear someone talking about mental health issues, I am likely to listen.
17. If I see something on the news about mental health issues in surfing Internet, I would click and read it.
18. I pay attention to mental health issues when a news report appears on TV or newspaper news.

**Behavioral Intentions**

1. I will seek counseling or support from friends and family members if I experience an emotional problem.
2. I will take psychotropic medications if I experience an emotional problem.
3. I will seek therapy or counseling services if I experience an emotional problem.
4. I will seek help or advice from mental health professional if I experience an emotional problem.
5. I will support my family and friends if they experience an emotional problem.
6. I will encourage my family and friends to take psychotropic medications if they experience an emotional problem.
7. I will encourage my family and friends to seek therapy or counseling services if they experience an emotional problem.
8. I will encourage my family and friends to seek help or advice from mental health professional if they experience an emotional problem.

**Demographic Information**

1. What is your gender? 1=Male   2=Female
2. How old are you? ________
3. How long have you lived in the United States? ______ Year(s)
4. How old were you when you first arrived in the United States? ______ Year olds
5. What is your present religion, if any?
   1= Christian
   2= Roman Catholic
   3= Mormon
   4= Jewish
   5= Muslim
   6= Buddhist
   7= Hindu
   8= Atheist
   9= Agnostic
   10= something else, specify ______________
   11= Nothing in particular
6. What city and state do you live in? _____ (City), __________ (State)

7. What is the highest level of education you completed?
   1= Elementary
   2= Secondary
   3= High School/ GED
   4= Some college
   5= Bachelor's Degree
   6= Master’s Degree
   7= Advanced Graduate or Ph.D.

8: Please indicate the following level of school you have received in the United States?
   1= Secondary
   2= High School/ GED
   3= Some college
   4= Bachelor’s Degree
   5= Master’s Degree
   6= Advanced Graduate or Ph.D.

9: How many years in total have you gone to school in the United States? ____ Years

10. What is your household annual income before tax?
    1= Under $10,000
    2= $10,000 - $24,999
    3= $25,000 - $49,999
    4= $50,000 - $74,999
    5= $75,000 - $99,999
    6= $100,000 - $124,999
    7= $125,000 - $149,999
    8= $150,000 - $174,999
    9= $175,000 - $199,999
    10= $200,000 or more

Thank you for taking part in this study.