ABSTRACT

FACTORS CONTRIBUTING TO DEPRESSION AMONG OLDER CHINESE AMERICAN ADULTS

By

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The purpose of this research was to explore depression among older Chinese American adults. Secondary data from the California Health Interview Survey were used to explore factors that impact depression among older Chinese American adults living in California. This study utilized several bivariate analyses to employ results including frequency, *t*-tests, one-way ANOVA, and correlation. The study found that language spoken by the respondent is directly correlated to depression. However, the study found that language barriers did not exist among the respondents within the healthcare setting due to similar languages spoken by their primary care provider. Furthermore, a significant relationship was found between older Chinese Americans and depression when the respondent had heart disease, arthritis, gout, and/or lupus. Although, there were results consistent with the literature, there were numerous insignificant relationships between the factors explored and depression.

FACTORS CONTRIBUTING TO DEPRESSION AMONG OLDER CHINESE AMERICAN ADULTS

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CHAPTER 1

INTRODUCTION

Problem Statement

There exists a wide discrepancy on the reporting of Asian Americans who have suffered from depression. Only 7 to 17% of Asian Americans have experienced some form of depression (Hwang, Chun, Takeuchi, Myers, & Siddarth, 2005; Yeung et al., 2010). Due to low self-reporting, the Asian American population suffered from untreated depression (Yeung, Yu, Fung, Vorono, & Fava, 2006). Therefore, it is important to study depression among Chinese Americans.

When Chinese Americans were assessed by the Center for Epidemiologic Studies Scale (CED-S), Chinese Americans produced low scores which showed that they did not have depression. Chinese Americans appeared to have a strong presence of somatic pain; specifically, arthritis, back and neck pain, and problems related to blood pressure and heart conditions. Often, this population created a disconnect between physical pain and depression and viewed both as separate contributions to overall well-being (Wu, Chu, Plassman, & Guo, 2010). Additionally, the quality of life appears to be greatly impacted by experiencing positive social relationships, stable economic status, and a favorable political situation.

Immigration to the United States took place in four main time periods. The first wave of Chinese immigration to North America occurred between 1848 and 1882 during

the Gold Rush. This time was considered to be the free immigration era for the Chinese (Takaki, 1998). Additionally, a large group of Chinese workers entered the United States through contracted labor and were referred to as Chinese laborers; they often worked for low daily or hourly wages and in poor working conditions (Roxas, 2009; Takaki, 1998).

The second wave of Chinese immigration occurred between 1882 and 1943, during the Chinese Exclusion Act. During this time, all persons of Chinese descent were prohibited from entering the United States, with the exception of spouses, students and scholars, diplomats, government officials, tourists, and merchants (Takaki, 1998). When this Act was originally enacted, the House of Representatives argued that Chinese were driving down the cost of labor and taking jobs away from Americans (Takaki, 1998). Furthermore, the House argued that the Chinese would tarnish the image of America (Chin, 2013).

Between 1943 and 1965, the Chinese Exclusion Act was repealed and a change in Chinese politics led to a wave of immigrants with well-educated backgrounds that traveled to the United States for advanced education and training or to enter the professional working environment (Roxas, 2009; Takaki, 1998). During the last wave, Congress passed the Immigration Act of 1965, which granted equal immigration quotas to Chinese as those of European decent (Takaki, 1998).

Today, Chinese Americans have advanced in their image within the United States; they made advancements from laborers, restaurant workers, laundromat owners and tailors to economist, scholars, medicine, science, and technology (Changfu, 2008). According to the results of the 2010 U.S. Census, there are about 4 million Chinese Americans living in the United States (Hoeffel, Rastogi, Kim, & Shahid, 2012). The

Chinese population has a 40% growth rate from immigration among Asian Americans and account for 23% of the Asian American population in the United States (Hoeffel et al., 2012). The Asian American population in the United States has found that 21.9% of the population are 62 years of age or older and, of that group, 57.0% are female (Hoeffel et al., 2012). Furthermore, 4.9 million are native born, 5.5 million are foreign born, naturalized citizens, and 4.2 million who are foreign born and not a U.S. citizen living the United States.

Purpose of the Study

The purpose of this research study was to examine the associations between language barriers, use of language brokers, and physical illness on the level of depression among older Chinese American adults.

Research Question

This study will explore the following questions:

1. What is the association between language barriers and level of depression among Chinese Americans?

2. What is the difference in the level of depression between Chinese Americans who used language brokers and those who did not?

3. What is the association between common physical ailments and the level of depression among Chinese Americans?

4. What is the association between demographic characteristics (gender, age, marital status, economic status, geographical location, and ethnicity) and the level of depression among Chinese Americans?

Definition of Terms

The following are definitions of terms that will be frequently used throughout this project:

Chinese Americans: "[Chinese] refers to a person having origins in any of the original peoples of China. Chinese Americans are the largest Asian American subgroup [including American born citizens of Chinese descent and immigrants]" (Hoeffel et al., 2012, p. 15).

Depression: An individual who suffers from depression is likely to experience a decrease in engagement in hobbies, changes in habits associated with eating, sleeping, weight loss or gain, and overall energy as well as difficulty focusing and decision making while experiencing suicidal ideation, development of a plan, and/or suicidal attempts (American Psychiatric Association, 2013).

English proficiency: Ability to read, write, and speak in the English language (Mui & Kang, 2006).

Language barriers: Difficulties understanding information from another person (i.e. medical staff and professions, service members) and inability comprehending information passed in daily conversations, which results in negative interactions (Zhang, Fang, Wu, & Wieczorek, 2013).

Language brokers: An individual who acts as a translator for someone else by translating from English to an individual's heritage language, whether in written or in oral form (Kim et al., 2014).

CHAPTER 2

LITERATURE REVIEW

Overview of Asian American Population

Studies on Chinese Americans have lacked concrete evidence on the factors contributing to depression (Hwang et al., 2005). In a case study, Yeung et al., (2006) found that tools used to assess depression are not culturally sensitive and work against cultural beliefs. A presence of cultural insensitivity results in 50% of participants refusing to be diagnosed with depression and instead accept only limited care for treatments of physical symptoms and case management (Yeung et al., 2006). Within the Vietnamese population, 46% of the participants met the criteria of being clinically depressed and 33% of the participants met the criteria of being severally depressed (Leggett, Zarit, Nguyen, Hoang, & Nguyen, 2012). They have been shown to dismiss additional services for depression and have sought support from family and friends (Fancher, Ton, Meyer, Ho, & Paterniti, 2010). Yeung et al. (2010) created a culturally sensitive assessment and found that 85% of participants screened positive for major depressive disorder. Those participants reported that they were not aware that they suffered from depression. Additionally, through the cultural stigma of mental illnesses, those participants would conclude that their condition was only present due to physical pain and were able to identify difficulties in their daily lives. Of those participants, only 4% declined further treatment for depression (Yeung et al., 2010).

This chapter will discuss the various themes found in the research. Among the most common indicators of depression for older Chinese American adults are physical health concerns. Through multiple physical health variables, a theme emerged illustrating depression disguised in somatic symptoms. Additionally, experiencing a language barrier was an indicator for increased levels of depression. Ironically, the use of language brokers also contributed to a heightened level of depression. When considering cultural factors, the acceptance of the diagnosis of depression and general mental health was considered taboo and shameful. Furthermore, low demographic characteristics, limited education, and negative life events dramatically increased the presence of depression.

Physical Health Concerns

Asian Americans experience a variety of physical health concerns including muscle pain, back pain, and constant headaches (Leggett et al., 2012). Within the Chinese American population, the most commonly reported health concerns include headaches, muscle soreness, lower back pain, insomnia, change in appetite, or fatigue (Kalibatseva & Leong, 2011). However, this population has also reported experiencing heart and chest pain, shortness of breath, and hot or cold spells (Mak & Zane, 2004). Appel, Huang, Ai, and Lin (2011) found that Asian American women have a higher rate of physical symptoms linked to depression including headaches, arthritis, heart related diseases, high blood pressure, cervical and lung cancer, faintness, and constant head and neck pain (Appel et al., 2004).

Chinese Americans tend to produce relatively low scores on the Center for Epidemiologic Studies Depression Scale (CES-D; Wu et al., 2010). Several studies have

found that Chinese Americans do not connect physical symptoms with depression (Yeung et al., 2010). For example, Chinese Americans only visit their primary care provider when experiencing physical symptoms, while refusing to acknowledge the connection between depression and physical symptoms (Yeung et al., 2010). Leung, Cheung, and Tsui (2012) found that of the 516 Chinese Americans contacted for the study, participants reported they would most likely reach out to family and friends (30.2%) for advice over physicians (15.7%), self-care (7.6%), religious leaders (5.0%), mental health professionals (4.7%), and herbal doctors (1.9%). Chinese Americans reported being more comfortable seeking care from friends and family due to speaking and sharing a common language and culture (Leung et al., 2012).

As Chinese Americans are screened for depression at a medical appointment, approximately 7% met the criteria for major depressive disorder and of those, 84% refused further assessment, treatments, and follow up contact (Yeung et al., 2006). Wu et al., (2010) found that physical health factors, language deficiencies, and social factors (Kim et al., 2014) are stressors leading to a decrease in social and physical activity, which minimized an individual's level of self-esteem. Only 28% of those suffering from depression were participating in regular exercise and only 6-7% were frequently contacting family and friends for support. Only 122 of the 296 who met criteria for depression were convinced to complete a psychiatric assessment and only 104 were confirmed with major depressive disorder after they were seen for physical pain (Yeung et al., 2010).

Hwang et al., (2005) found that the majority of the Chinese Americans who met criteria for depression immigrated at a later age in their lives. Of the 200 who were given

questionnaires, 177 of the participants who met criteria for depression were first generation immigrants and 69% of them immigrated to the United States after age 50 (Wu et al., 2010). Wu et al. (2010) found that physical pain was a major factor that contributed to the high level of depression. Studies have shown that chronic health conditions such as disabilities and the loss of mastery of daily living activities have produced a higher level of depression (Lin, Liu, & Jang, 2014).

Language Barriers

Language barriers were directly correlated to depression (Kim et al., 2014). When seeking services, language appears to be a reoccurring theme for negative interactions. Asian Americans have reported poor English proficiency in reading, writing, and speaking (Mui & Kang, 2006; Zhang et al., 2013). Chinese Americans who have self-reported fair or poor English language proficiency were found to experience depression (6.96%) and anxiety (7.59%) more likely than Chinese Americans who reported some English proficiency (Zhang et al., 2013). Furthermore, Asian Americans have reported that lacking proficiency in one of these means of communication has made coping in a new host culture difficult (Mui & Kang, 2006). Wu et al. (2010) found that those who have immigrated to the United States for less than 5 years yield a higher level of depression due to the added factor of social isolation. In addition, adult individuals over the age of 17 years have a heightened level of stress (Wu et al., 2010). They also found that parents experience frustration, feelings of being unfit parents, and shame for being a burden on their children (Wu et al., 2010). Children have been found to experience language barriers differently. They are able to grasp the concept of language at a faster rate in school whereas their parents struggle to find situations to learn and

practice (Wu et al., 2010). While children can serve as language brokers, this has been shown to increase the level of stress in Asian American parents.

Studies have also found that when children show elevated levels of disrespect toward their parents, the parents often suffer from more negative psychological experiences (Kim et al., 2014). Parents have reported feeling powerless and role reversal with their children when they utilize them as language brokers (Kim et al., 2014). Approximately 56% of the parents reported feeling disrespected by their children and 52% felt that their roles were reversed in the family structure. Additionally, 61% of adults reported experiencing negative feelings. Furthermore, 69% of the children interviewed reported experiencing negative feelings when used as language brokers (Kim et al., 2014).

Li and Hicks (2010) found that languages used in assessments produced lower levels of depression due to cultural insensitivity. Li and Hicks reported the assessments were not culturally appropriate because they did not express cultural values of modesty. Therefore, when using language brokers to translate the questions verbatim, Chinese Americans avoided answering questions that were skewed too far in any direction (Li & Hicks, 2010). Furthermore, Fancher et al., (2010) reported that Asian Americans favor physicians who speak the same language, in order to fully understand the situation. They also reported that physicians who come from a similar background are able to understand the culture and respect the customs (Fancher et al., 2010).

In a comparative study, Chinese Americans have a higher stigma score than Caucasian Americans (Hsu et al., 2008). Chinese Americans experienced diabetes, fever, somatoform major depressive disorder, non-psychotic major depressive disorder, and

psychotic major depressive disorder (Hsu et al., 2008). In this case study, Chinese Americans were 3 times more likely than Caucasians to feel a stigma toward major depressive disorders. Chinese Americans feel a higher level of fear and shame among mental health disorders and physical health concerns (Hsu et al., 2008).

In their case study, Mui and Kang (2006) found that 40% of the Asian American immigrant population experiences depression. Approximately 35% of Asian Americans tend to seek support and advice from family and friends due to a cultural difference in medical care (Leung et al., 2012; Mui & Kang, 2006). Within the family structure, members of the family are included in the decision making of medical care after treatment to the problem is assessed within the home or network (Fancher et al., 2010). The participants explained that there is a lack of understanding due to cultural or generational gaps between them, their children, and from the help they receive.

Within the Asian American population, Fancher et al., (2010) found that language, culture, stigma, and face, play a major role in depression. Through the use of the term "depression," participants felt that the word was too harsh and people within the culture commonly link depression with crazy. Furthermore, being associated with the term depression can create a poor reflection of moral character and poor upbringing by the family (Fancher et al., 2010).

In a comparative study, Asian Americans felt a higher level of stigma with depression than their Caucasian counterparts. In the age groups between 16 to 29 years old, 30 to 45 years old and older, all groups showed a higher level of stigma attached to depression among Asian Americans than Caucasians (Fogel & Ford, 2005). When comparing Asian Americans and Caucasians in a work environment and stigma, Asian

Americans felt a stronger sense of stigma by less than 10% (Fogel & Ford, 2005). However, when evaluating the stigma of depression among Asian Americans and their families, Asian Americans were 30% more stigmatized (Fogel & Ford, 2005). Among friends, Asian Americans were 8% more stigmatized than Caucasians (Fogel & Ford, 2005). Furthermore, there was a higher feeling of stigmatization among Asian American men than with Caucasian men (Fogel & Ford, 2005). Surprisingly, when participants were between the ages of 46 and 60 years old, the stigma attached to depression was the lowest. Both groups showed less than 8% difference in the stigmatization of depression in all categories of friends, employment, and family (Fogel & Ford, 2005).

Among the Asian American population, women continued to show the highest rate of stigma toward depression in all age groups compared to Asian American men (Fogel & Ford, 2005). Within the three categories, Asian American women had the largest difference within the family and reported feeling more afraid about the impact on the family (Fogel & Ford, 2005). The second category within the Asian American women was employment; and for men, it was friends (Fogel & Ford, 2005). Asian American women felt the most stigmatized among their friends; and for men, it was employment (Fogel & Ford, 2005).

Cultural Factors

The Chinese American culture struggles to associate depression with Westernized definitions due to cultural insensitivity leading to a low representation of self-reported depression (6.9%) while believing that the true amount of Chinese Americans affected by depression being 12% for men and 25% for women (Kalibatseva & Leong, 2011). Chinese Americans do not typically display their depression through westernized

definitions (J.Y Wong, Tran, Seong-Hyeon, Van Horn Kerne, & Calfa, 2010). They have reported that characteristics of individualism are commonly stressed leading to a culturally unacceptable mindset (Kalibatseva & Leong, 2011).

According to Yeung et al. (2008), when a culturally sensitive assessment was provided to Chinese Americans, the results were more accurate leading to 92% of those who screened positive for depression being later diagnosed with major depressive disorder. Furthermore, 51% of those who screened positive agreed to visit a clinic to be further assessed for depression (Yeung et al., 2008).

When Chinese Americans were assessed for depression, R. Wong, Wu, Guo, Lam, and Snowden (2012) found that Chinese Americans had on average 20 or more items of symptoms that are not listed in the criteria for depression in the *Diagnostic and Statistical Manual of Mental Disorders,5th Edition (DSM-5)*. Due to the lack of cultural sensitivity, Chinese Americans are left undiagnosed and untreated for depression. Additionally, 23.2% of the participants in the study by R. Wong et al. stated that they were not sure if they had experienced, dreamt, or imagined negative experiences. Chinese Americans identified religious support as a method for addressing negative thoughts and emotions rather than seeking support from mental health professionals (R. Wong et al., 2012).

Demographic Differences

Hwang et al. (2005) found that those who had lived in the United States for less than 14 years reported experiencing high levels of depression. About 5% of U.S. born Chinese Americans experience depression compared to 38% of Chinese American immigrants (Hwang et al., 2005). Surprisingly, Chinese American born (23.20%) are

more likely to experience suicidal ideation than Chinese American immigrants (8.25%; Zhang et al., 2013).

Among Asian Americans, 10% to 25% of women experienced depression and 5% to 12% of men experienced depression (Kalibatseva & Leong, 2011). Studies have shown that Chinese American women were 1.6-2 times more likely than their male counterparts to experience depression (Hwang & Myers, 2007; Hwang, Myers, & Takeuchi, 2000). Additionally, women tended to have signs of depression somatically (Leggett et al., 2012; Mak & Zane, 2004). When comparing the two genders, men were more likely to seek help from physicians and less likely to seek support from family and friends. However, women were more likely to seek help from the friends and family unit before considering seeking professional help. Both men and women have reported that seeking family and friend support, lead to relationship difficulties and judgments (Leung et al., 2012). On the other hand, men have been found to experience more traumatic events than women; but, on an overall level of depression among the populations, women continue to have a higher rate of depression (Birman & Tran, 2008).

Age was also a major factor of depression; Chinese American participants who were of 24 years and younger showed a lower level of depression compared to older adults ages 45 and older (Hwang et al., 2005; Hwang et al., 2000; Leggett et al., 2012; J.Y. Wong et al., 2010). Additional studies found that Chinese Americans over the age of 45 are 1.5 times more likely to experience depression and 2 times more likely to experience somatic depression (Mak & Zane, 2004). However, individuals who were 24 years of age and younger were more likely to participate in depression studies versus

older participants who commonly provide vague answers or leave questions unanswered (J.Y. Wong et al., 2010).

Within the population of 24 years of age and younger, the concentration of depression is impacted by a different set a variables. Within this group, the variables are concentrated on personal failures and interpersonal causes, as well as situational causes (J.Y. Wong et al., 2010). Among the older population, the root of their depression typically lies in biological causes, somatic consequences, duration, and methods of seeking professional help (J.Y. Wong et al., 2010).

While Asian Americans tend to avoid seeking help for depression, J.Y. Wong et al., (2010) reported that 28.3% of their participants who agreed to seek help and a majority of these participants were from a younger group. Half (46.9%) of those participants who refused to seek professional help were of an older age group (J.Y. Wong et al., 2010). Wong et al. found that those who refused to seek professional help suffered from biological symptoms, were of an older age, and felt that majority of their symptoms were physical and needed to seek help in those areas rather than addressing depression directly.

Education

Mak and Zane (2004) found that those who are less educated are more likely to experience higher levels of somatic symptoms. Chinese Americans who are educated up to high school are 1.5 times more likely to experience depression than Chinese Americans with a college education (Mak & Zane, 2004). Chinese Americans who were less educated were 23% more likely to experience somatization (Mak & Zane, 2004). Chinese Americans who did not graduate from high school had the highest level of

depression (Hwang et al., 2000). Studies also showed that women who are less educated are more likely to experience marital hardships that lead to an increase in depressive symptoms (Leggett et al., 2012). Based on the level of education, it became a predictor for level of competence and motivation to learn English (Birman & Tran, 2008).

Reviewing marital status contributes to the level of depression among this population; 68% of those who are married experience depression whereas only 23% of those who have never been married experience depression (Hwang & Myers, 2007; Mui & Kang, 2006). Financial hardships and daily strains have been shown to have a direct correlation with somatic depression. Mak and Zane (2004) found that Chinese Americans who experience financial hardships are 1.32 times more likely to experience depression. Chinese Americans who face daily strains are 1.68 times more likely to experience depression. While employment and economic status play a major role in depression, having emotional support from family and friends decreased the likelihood of experiencing depression by 25% (Mak & Zane, 2004).

Life Events

Studies found that stressful life events have impacted the level of depression among Chinese Americans (Hwang & Myers 2007; Li & Hicks, 2010). Mui and Kang (2006) found that those who have experienced stressful life events, such as loss of family, friends, and spouses, a serious illness or injury, being robbed or having home burglaries, relocating self or children moving far away have experienced depression. Chinese Americans reported experiencing stressful life events and lacking social support had impacted their level of depression (Li & Hicks, 2010; Sangalang & Gee, 2012; R. Wong et al., 2012). R. Wong et al. (2012) found that adaption to the environment caused

painful experiences, hopelessness, and poor social belonging. Due to difficulties in finding social, economic, cultural, physical, and religious adjustments in the United States, newly immigrated Chinese Americans often struggle with some depression that does not meet the criteria for depression in the *DSM-IV* and *DSM-5* (R. Wong et al., 2012). Studies have also shown that problems within the employment or academic environment were associated with depression. Experiencing a move and living far away from family and friends have influenced depression. According to Sangalang and Gee (2012) experiencing some family strain led to an individual being 1.83 times more likely to have depression. Additionally, adjusting to life in a new country or experiencing immigration difficulties has been found to be a factor of depression. Lastly, experiencing financial difficulties and/or serious illnesses have been found to contribute to depression for this population (Li & Hicks, 2010).

Hwang, Wood, and Fujimoto (2010) found in their study that Chinese American immigrant parents who have communication difficulties or cultural value differences with their children are more likely to experience depressive symptoms. Chinese American mothers were twice more likely to experience depression than their children and identified lack of support as main contributor of depression ($p < .001$; Hwang et al., 2010). Furthermore, Chinese American mothers identified communication as another factor of distancing from children and an added indicator of possible depression. With the use of a mediator, both Chinese American mothers and children found that their level of depression decreased by 20% (Hwang et al., 2010).

Chinese Americans who have dealt with immigration issues are nearly two times more likely to experience depression compared to those without immigration difficulties

(Leung et al., 2012). Chinese Americans who are victims of domestic violence are 1.32 times more likely to experience depression than those who have not (Leung et al., 2012). When living in close proximity to family and friends, Sangalang and Gee (2012) found that Asian Americans are more likely to speak on the phone, rely on their relatives for help, and provide moral support. On the other hand, those who have moved away or have social strain with family often experience high demands or arguments. When there is a strain or distance within the family, those individuals are 20% more likely to experience depression (Sangalang & Gee, 2012).

In a comparative study, the presence of a significant interaction between negative life events and social conflict are indicators for predicting depression. Those with more social conflicts were more at risk for depression (Hwang & Myers, 2007). When comparing support from the family, individuals who have familial support are less likely to experience depression than having support solely from friends (Sangalang & Gee, 2012). When a family or friendship strain is present, an individual is twice as likely to experience depression when it is a family strain and 8% more likely when it is a strain in friendships (Sangalang & Gee, 2012). Participants from this case study reported that they are less likely to depend on friends than on their family. Furthermore, those who have experienced a negative life event or experienced some sort of trauma had an increased likelihood of having a depressive episode than those who had not. Stress became apparent in Chinese Americans who were more acculturated (Hwang & Myers, 2007).

Mental Health

Hwang and Myers (2007) found that those with ~~a~~ previous psychiatric history are approximately 30% more likely to of experience depression. Common mental health

disorders that could help predict the presence of depression include dysthymia and several types of anxiety disorders including agoraphobia, general anxiety disorder, panic attacks, simple phobia, and social phobia (Hwang & Myers, 2007; Zhang et al., 2013). Some who experience depression reported feeling that it was due to a personal failure and were less likely to seek professional help. Those who viewed depression as a biological disorder were twice as likely to seek professional help (J.Y. Wong et al., 2010).

Additionally, worrying is found as a major symptom of depression (Birman & Tran, 2008; Leggett et al., 2012). Studies found that Chinese Americans who have symptoms of anxiety are 24.8 times more likely to show symptoms of depression **(**Birman & Tran, 2008; Leung et al., 2012). Asian Americans who live with generalized anxiety disorder tend to experience depression (Sangalang & Gee, 2012). Chinese American immigrants (6.59%) who are living with anxiety or depression are less likely to experience suicidal ideation than Chinese Americans born in the United States (17.52%; Zhang et al., 2013). Those living with anxiety are more likely to depend on their family than friends and the loss of a family relationship or strain within the family has proven to have a higher increase in depression (Sangalang & Gee, 2012).

Acculturation stress and depressive symptoms were present among Asian immigrant elders (Mui & Kang, 2006). Chinese Americans who struggle with acculturation are 1.71 times more likely to experience depressive symptoms (Leung et al., 2012). Experiencing alienation and low life satisfaction have also been shown to be directly correlated with depression (Birman & Tran, 2008). Lin et al. (2014) found that loss of social networks and acculturation have created higher levels of depression when an individual is experiencing chronic health conditions. Studies found that when an

individual is experiencing a chronic health condition, they are 15% more likely to lose contact with friends and family (Lin et al., 2014).

Those who have a higher level of acculturation reported having a higher level of reported depression. Studies found that those who are more acculturated have experienced a higher level of negative life events (Hwang & Myers, 2007). Furthermore, multiple signs of depression were found among those who experienced a negative event like domestic violence, financial hardships, or a negative historical event, e.g. regime change (Appel et al., 2011; Fancher et al., 2010). Additionally, shame influenced the likelihood of an individual seeking professional help. Those who were second or third generation Asian Americans were less likely to experience family shame but were more concerned about external shame (J.Y. Wong, Kim, Nguyen, Cheng, & Saw, 2014). They reported experiencing a loss of belonging among their peers and feeling of burdensome among their peers and families (J.Y. Wong et al., 2014).

Both external shame and family shame impacted depression. Individuals who felt that they were a shame to their family or experienced external shame reported low self-esteem and would commonly experience suicidal ideation (J.Y. Wong et al., 2014). Individuals who felt that they were shameful toward themselves yielded the highest rate of depression.

Conclusion

Chinese Americans identified their first-onset of depression when they experienced poor health, had another psychiatric disorder, were bilingual, felt high stress, and had low social support (Hwang et al., 2000). Asian Americans as a whole have been found to show symptoms of depression somatically (Kalibatseva & Leung, 2011; Yeung

et al., 2010). Chinese Americans specifically have displayed their somatic symptoms through heart related diseases, arthritis, and headaches (Kalibatseva & Leong, 2011; Mak & Zane, 2004). Therefore, research on this population living with depression is limited. Furthermore, cultural insensitivity in the evaluation process, treatment, and stigma attached to depression leads this population to display their symptoms of depression somatically (Hwang et al., 2005; J.Y. Wong et al., 2010; J.Y. Wong et al., 2014).

About a quarter of the Chinese American population are likely to be living with depression and showing their symptoms somatically (Mak & Zane, 2004). This population tends to be newly immigrated and lacking education, which prevents this population from understanding depression and being able to identify if they are experiencing a mental illness (Li & Hicks, 2010). Due to the cultural insensitivity of depression assessments, the Chinese American population tends to link their symptoms with physical concerns that are relayed to their primary care provider (Mak & Zane, 2004). Furthermore, due to limited English proficiency and experiencing stressful life events, Chinese Americans are more likely to dismiss questions about depression and accept symptoms of depression as a process of immigration (Li & Hicks, 2010).

CHAPTER 3

METHODOLOGY

Design

This study used quantitative data from a secondary source, the California Health Interview Survey (CHIS; 2014) collected by the University of California, Los Angeles Center for Health Policy Research (2011 to 2012). This survey interviewed one adult per household using a cross-sectional survey design. This study was exploratory and descriptive in nature examining how various factors were associated with depression among Chinese Americans. The study examined the following factors: (1) age, (2) gender, (3) economic class, (4) marital status, and (5) level of education. Furthermore, English proficiency was reviewed alongside the necessity for language brokers and competence in relation to depression. Depression among Chinese Americans was evaluated to assess how Chinese Americans display depression and where attention may need to be met to address a need for mental health services.

Sampling

The CHIS (2014) is conducted every 2 years and the data set used in this research was the fourth round of data collected by the University of California, Los Angeles Center for Health Policy Research. CHIS (2014) was collected through interviews with adults (18 and over) obtained through random digit dials of households. Through the method of random digit dial, the CHIS surveyed population is diverse and roughly

representative of the overall population living in California. Individuals over the age of 18 who identified as Chinese Americans were selected using a non-probability, purposive sampling procedure.

Data Retrieval

The data used for this research was secondary data retrieved from the CHIS (2014). The data has been previously collected by the University of California, Los Angeles Center for Health Policy Research. The researcher retrieved data for 20 variables. The CHIS was conducted with the use of a random digit-dial telephone survey within California. Data for the following variables were retrieved: health status and condition, mental health, health insurance coverage, access to health care services, and all other conditions that could impact the health of the household (See Table 1).

Data Analysis

The retrieved data was analyzed using Statistical Package for the Social Sciences (SPSS) version 21.0 to produce results. Descriptive statistics were used by the researcher to review patterns and trends among the chosen variables, depression, language barriers, language brokers, and health care issues. Several bivariate analysis tools were used to employ results for this study. A general frequency was used to review the demographics of the population. Additionally, independent samples *t*-tests were utilized to evaluate the impact on the dependent variable in relation to independent variables within this study. One-way ANOVA was used to review the significance of depression among different groups. Lastly, correlation was brought in to review the connection between depression and demographics in order to gather the significance of both variables.

Social Work Ethics

Through the use of secondary data, no names or personal information were provided to the researcher. By following the National Association of Social Workers' Code of Ethics, the researcher ensured that all human rights would be protected by maintaining anonymity of the participants by eliminating any answers that may provide linkage to any individual who has participated in the data collection process. The researcher reviewed the importance of human relationships by continuing to engage within the community to obtain consistent data on the Chinese American population. Dignity and worth of a person was considered to maintain the confidentiality of respondents who may be uncomfortable in disclosing personal information, specifically, mental health and cultural views. In order to provide service to the respondents, the data was reviewed to consider where areas of additional services could be added to better serve communities in need of mental health services that are culturally sensitive. Social justice was considered to help improve the overall well-being of a community who may have felt oppressed due to lack of representation from generalized assessments. By prioritizing an increase in competence among newly immigrated Chinese American in the new host country, competence could help to alleviate discomfort overall. Lastly, maintaining integrity to help build trust and comfort in social work practice for those who may be in a vulnerable position to seek services.

Relevance to Older Adults and Family

This research study addressed areas within the older Chinese American adult population that has had limited scholarly reviewed literature and specifically, the assessment process for depression. This study highlighted the likeliest indicators of

depression among the population. First, the importance of reviewing the presence of depression when evaluating physical health concerns and considering that the population commonly displays depression somatically. Secondly, the necessity of a comprehensive assessment of the individual's life events that may have promoted a stressful experience, which resulted in presence of depression. Third, the difficulties experienced by individuals with language barriers and the negative experience and outcome when children are used as the language brokers. Fourth, the importance of cultural sensitivity by word choice used in the assessment process, services provided, and an understanding of the difficulties in the acculturation process having had an impact on an individual's overall experience.

Relevance to Social Work and Multicultural Social Work Practice

This research study will benefit social work and multicultural social work practice by providing a link between depression and the Chinese American population. With the analysis of the data, a better awareness of the population will be understood through the dominating variables that contribute to depression within this population. Furthermore, common health concerns, historical events and common immigration struggles, fears, and how to provide culturally sensitive services when approaching the population to enhance service. By adding to the limited pool of literature, this research could inspire for more literature to be developed and more services to become tailored to an individual. Promoting precision medicine will enhance the competence of the Chinese American ethnicity as a whole and to develop a more accurate method of assessment and care.

Limitations

Some limitations of this research study included a lack of literature available on this population and inconsistent information. Also, additional factors that contribute to depression are not addressed through the use of this dataset and may not fully reflect the presence of depression within this population.

CHAPTER 4

RESULTS

Demographic Characteristics

The sample consists of 494 older adult subjects, ages 65 and older who identified themselves as Chinese and living in California. A majority of the participants in this study were women (58.5%), born outside of the United States (81.6%), naturalized citizens (74.1%), married (64.2%), had limited in English proficiency (48.4%) and were Chinese speaking only (41.1%). Some participants (38.2%) graduated High School or had some formal education, 12.3% had some college, an Associate's Degree, or vocational schooling, 29.3% had a Bachelor's, and 20.0% had a Master's and above. Furthermore, a large portion of the respondents lived in the United States for 15 or more years (67.2%) and owned their own home (57.5%).

When asked about whether respondents had difficulty understanding their primary doctors, 91.5% responded "No." However, a large portion of the primary doctors spoke Cantonese (20.6%), Mandarin (19.4), or English (29.4), Considering that the respondents have a primary doctor that spoke a common language, the need for a language broker was low (8.7%).

The report indicates that majority of the respondents felt their general health condition was in good health (28.1), fair health (27.5%), or very good health (23.9%). Only 10.7% indicated having excellent health (10.7%) or poor health (9.7%). Among the

different health concerns, 48.0% reported that they had high blood pressure, 34.2% had arthritis, gout, and/or lupus, 16.8% had diabetes, and 11.5% had heart disease.

Bivariate Analysis

A bivariate t-test and one-way ANOVA analysis was utilized to analyze the relationship between the language spoken and the level of depression that Chinese subjects experienced. Table 2 shows that there was a statistically significant relationship between languages spoken and level of depression experienced by Chinese respondents *(F* = 3.491*, df* = 3; *p* = 0.016). Chinese subjects who spoke only English (*M* = 1.0957, *SD* = .04022) experienced the lowest level of depression followed by Chinese and English speaking respondents (*M* = 1.2043; *SD* = .05630), and Chinese speaking only respondents (*M* = 1.3262; *SD* = .05702). Chinese respondents who spoke only other languages (*M* = 1.3895; *SD* = .09261) had the highest level of depression. However, there are no statistically significant relationship between understanding the doctor and the level of depression (*t* = 1.548*; df* = 467; *p* = 1.22). Furthermore there are no statistically significant difference between respondents who used a language broker and those who did not use a language broker in their level of depression (*t* = 1.472; *df* = 173; *p* = .143).

Table 3 presents the relationship between physical ailments and level of depression. There was no significant difference between those who had diabetes (*M* = 1.21821; *SD* = .71890) and those without diabetes (*M* = 1.2568; *SD* = .69806) in their level of depression (*t* = .288; *df* = 442; *p* = .773). Additionally, there is no significant relationship between those with high blood pressure (*M* = 1.2622; *sd* = .67984) and those without high blood pressure (*M* = 1.2727; *SD* = .73372) in their level of depression (*t* = =.158; *p* = .874). On the other hand those who had heart disease (*M* = 1.4528; *SD* =

.69520) had a higher level of depression (t = 2.011; df = 467; p = .045) than those without heart disease (M = 1.2452; SD = .70964). Furthermore, those who had arthritis, gout, and/or lupus (M = 1.3711; SD = .85354) had a higher level of depression (t = 2.246; df= 467; p = .025) than those without arthritis, gout, and/or lupus (M = 1.2161; SD = .61932).

Table 4 and 5 show the relationship between demographic characteristics and the level of depression experienced by Chinese respondents. There was no significant relationship between gender (t = -.718; p = .473), marital status (t = 1.966; p = .473), education (t = .828; p = .479), and level of depression.

Table 5 shows the relationship between annual income, age, and depression through correlation analysis. There is an inverse relationship between annual income and depression *(*p = -.144; p = .002). However, there is no significant relationship between age and depression *(*r = .03; p = .418).

TABLE 1. Frequency Distribution of the Population (n = 494)

Category	*n*	*%*
Gender		
Male	205	41.5
Female	289	58.5
Born in U.S.		
U.S. Born	91	18.4
Born Outside of the U.S.	403	81.6
Country Born		
United States	91	18.4
Mexico	4	.8
Other Latin America	3	.6
Asia & Pacific Islands	395	80.0
Other	1	.2
Citizenship		
U.S. Born Citizen	91	18.4
Naturalized Citizen	366	74.1
Non-Citizen	37	7.5
Years Lived in the United States		
1 Year or Less	3	.6
2-4 Years	6	1.2
5-9 Years	18	3.6
10-14 Years	44	8.9
15 Years or More	332	67.2
Marital Status		
Married	317	64.2
Never Married	31	6.3
Other (Living with Partner, Widowed, Separated, or Divorced)	146	29.6
Education		
High School and/or Less	171	38.2
Some College, Associates, Vocational	55	12.3
Bachelors	132	29.5
Masters and Above	90	20.0

TABLE 1. Continued

Category	*n*	%
Housing		
Own	284	57.5
Rent	168	34.0
Other Arrangement	38	7.7
Refused	4	.8
Receiving SSI (Supplemental Security Income)		
Yes	113	22.9
No	381	77.1
Receiving SSDI (Supplemental Security Disability Income)		
Yes	13	2.6
No	481	97.4
Feel Depressed		
All of The Time	5	1.0
Most of The Time	14	2.8
Some of The Time	25	5.1
A Little of The Time	64	13.0
Not At All	386	78.1
Feel Everything Is An Effort		
All of The Time	15	3.0
Most of The Time	13	2.6
Some of The Time	33	6.7
A Little of The Time	80	16.2
Not At All	353	71.5
English Proficiency		
English Only	94	19.0
Very Well / Well	161	32.6
Not Well / Not at All	239	48.4
How Well English is Spoken		
Very Well	59	11.9
Well	102	20.6
Not Well	160	32.4
Not At All	79	16.0
Inapplicable	94	19.0

TABLE 1. Continued

Category	*n*	%
Language Spoken At Home		
English	94	19.0
Spanish	1	.2
Chinese	203	41.1
Vietnamese	3	.6
Korean	1	.2
Other Asian Language (1 only)	5	1.0
English & Spanish	8	1.6
English & Chinese	97	19.6
English & Another Asian Language	4	.8
Other Languages (2+)	78	15.8
Hard Time Understand Primary Doctor		
Yes	42	8.5
No	452	91.5
Language Doctor Spoke		
English	145	29.4
Spanish	3	.6
Vietnamese	7	1.4
Korean	1	.2
Cantonese	102	20.6
Mandarin	96	19.4
Other	4	.8
Inapplicable	136	27.5
Needed Language Broker		
Yes	43	8.7
No	144	29.1
Inapplicable	307	62.1
Have a Primary Doctor		
Yes	434	87.9
No	60	12.1
General Health Condition		
Excellent	53	10.7
Very Good	118	23.9
Good	139	28.1
Fair	136	27.5
Poor	48	9.7

TABLE 1. Continued

Category	*n*	*%*
Any Kind of Heart Disease		
Yes	57	11.5
No	437	88.5
High Blood Pressure		
Yes	237	48.0
No	244	49.4
Borderline Hypertension	13	2.6
Diabetes		
Yes	83	16.8
No	386	78.1
Borderline or Pre-Diabetes	25	5.1
Arthritis, Gout, and/or Lupus		
Yes	169	34.2
No	325	65.8

TABLE 2. Language Variables versus Level of Depression

Category	*n*	Mean	*sd*	*F*	*df*	*p*
Language Spoken						
Chinese	187	1.3262	.05702	3.491	3	.016
Chinese and English	93	1.2043	.05630			
English	94	1.0957	.04022			
Other Language	95	1.3895	.09261			
Difficulty Understanding Doctor						
Yes	36	1.4444	.12876	1.548	467	.122
No	433	1.2540	.03383			
Used Language Broker						
Yes	40	1.5000	.84732	1.472	173	.143
No	135	1.2889	.78099			

TABLE 3. Physical Ailments versus Level of Depression

Category	*n*	Mean	*SD*	*F*	*df*	*p*
Diabetes						
Yes	78	1.2821	.71890	.288	442	.773
No	366	1.2568	.69806			
High Blood Pressure						
Yes	225	1.2622	.67984	-.158	454	.874
No	231	1.2727	.73372			
Heart Disease						
Yes	53	1.4528	.69520	2.011	467	.045
No	416	1.2452	.70964			
Arthritis, Gout, and/or Lupus						
Yes	159	1.3711	.85354	2.246	467	.025
No	310	1.2161	.61932			

TABLE 4. Demographic Characteristics versus Level of Depression

Category	*n*	Mean	*sd*	*F*	*df*	*p*
Gender (t)						
Male	199	1.2412	.67578	-.718	467	.473
Female	270	1.2880	.73537			
Martial Status (F)						
Married	304	1.2336	.63041	1.966	2	.141
Never Married	29	1.1724	.60172			
Other (Widowed, Separated, Divorced, Living with Partner)	136	1.3676	.87609			
Education (F)						
High School and/or Less	171	1.3099	.79917	.828	3	.479
Some College, Associates, Vocational	55	1.2545	.64458			
Bachelors	132	1.2652	.71899			
Masters and Above	90	1.1667	.45592			

TABLE 5. Correlation of Annual Income, Age, and Level of Depression (N=469)

Category	*r*	*p*
Annual Income vs. Depression	-.144	.002
Age vs. Depression	.03	.418

CHAPTER 5

LESSONS LEARNED

Overview of Study

This study analyzed the relationship between elder Chinese American adults 65 years of age and older and their level of depression. The main purpose of this study was to review which variables play a role in increased depression among this population. The variables accessed were the need of language brokers and language barriers alongside negative physical ailments and demographic factors.

This study emphasized the need for increased attention toward mental health services in certain areas within the healthcare system. When primary care providers speak a similar language, the need for a language broker will decrease. When physical ailments and demographic factors show a negative outcome, this population tends to display their depression somatically.

Similarities and Differences Within the Research

The findings in this study challenged the assumptions within the literature that all forms of health concerns impact the depression among Chinese Americans. According to the study, heart disease, arthritis, gout and lupus shows that depression is present among these participants, while those living with diabetes and high blood pressure have no correlation with depression. However, in the literature, Asian Americans have identified several physical health symptoms as indicators for depression (Kalibatseva & Leon,

2011; Yeung et al., 2010). Furthermore, muscle pain, back pain, and headaches are the most common indicators in the research as symptoms of depression (Appel et al., 2011; Leggett et al., 2012; Mak & Zane, 2004).

Another commonality within the research and study is that depression is directly influenced by income. Those with lower income tended to yield higher levels of depression while those with higher levels of income were less likely to experience depression, due to more access to care and knowledge of depression. Interestingly, those who experience financial hardship are 1.32 times more likely to have depression and those who have daily financial hardships are 1.68 times more likely to have depression than those without any financial hardship (Mak & Zane, 2004). However, if an individual does have financial hardships and emotional support from family and friends, their likelihood of experiencing depression decreases by 25% (Mak & Zane, 2004).

Like prior studies (Hwang & Myers, 2007; Li & Hicks, 2010), stressful life events have been found to impact the presence of depression among Chinese Americans. Immigrants are likely to experience numerous stressful life events that impact the likelihood of depression. Several events that may help to explain the increase in depression include: (1) experiencing a loss of a family member, friend, or spouse through death, daily contact, or distance from relocation (Li & Hicks, 2010; Mui & Kang, 2006); (2) health decline, serious injury, or a negative political experience (R. Wong et al., 2012); and (3) facing obstacles due to limited English proficiency.

Although there are similarities with the data and research, there are several differences. Unlike previous studies (Kim et al., 2014; Zhang et al., 2013; Wu et al., 2010), language was not seen as a problem among the Chinese respondents in the study.

Due to the lack of depression, Chinese respondents identified that they were able to understand their primary doctor because the doctor spoke a similar language. Furthermore, Chinese respondents did not need to employ a language broker, which decreased the likelihood of discomfort and incorrect information from a friend, family member, or their children (Kim et al., 2014).

Gender has been often viewed as an indicator for depression in previous studies (Birman & Tran, 2008; Hwang et al., 2000; Hwang & Myers, 2007; Kalibatseva & Leong, 2011). However, in this study, gender was not a predictor of depression and did not influence the likelihood of depression. While research shows that women are twice as likely to experience depression (Kalibatseva & Leong, 2011), males and female showed no relationship with depression in the study.

Previous studies have suggested that age was a major predictor of depression as those over the age of 45 are 1.5 times more likely to experience a depressive episode than those of a younger age (Hwang et al., 2005; Leggett et al., 2012). In this study, age has no correlation with depression. Those who are of an older age have no difference in likelihood of experiencing depression. Additionally, Chinese Americans are not likely to seek professional support for depression and focused their efforts on situational causes or personal failures (Wong et al., 2010).

Sixty-eight percent of individuals who are married experience depression compared to 23% of individual who have never been married (Hwang & Myers, 2007; Mui & Kang, 2006). For individuals who have been married, a study found that the presence of marital difficulties greatly impact depression (Mui & Kang, 2006). In this study, marital status did not play a role in depression. There were no differences between

respondents who are married, individuals who have never been married, those who are widowed, separated, or divorced, and individuals living with a partner when considering depression.

In some of the existing studies (Hwang et al., 2000; Leggett et al., 2012; Mak & Zane, 2004), education played a role in indicating depression among Chinese Americans. The studies found that those who had the least amount of education had more exposure to hardships and exemplified their symptoms somatically. Education, in this study, did not have an influence the presence of depression among the respondents. Depression appeared to be evenly distributed upon between all levels of education within the study.

Implications for Social Work Practice

The results of this study are relevant to social work practice and older adults because it focuses on the increased need of mental health services for an oppressed population. Through the results, the study shows that there is an increased need for mental health services in the Chinese American population. As this population has been shown to display symptoms somatically, it is important for social workers to advocate for more detailed assessment to test for depression. Furthermore, this research shows that due to results being shown somatically, social workers could raise the idea of concept of depression when patients are experiencing common somatic symptoms. When patients disclose that they have diagnosis of heart diseases, arthritis, gout, and/or lupus, it is important to keep in mind that depression is likely to be related.

Additionally, the study has shown that those who have a primary care provider are less likely to experience depression. Furthermore, a majority of those physicians in the study spoke a similar language as their patients, which showed an increased

understanding of information for the patient. It is important for social workers to advocate for physicians who speak a similar language if the patient has limited proficiency in the English language. On the other hand, if there are limited physicians who speak a similar language, it would be beneficial to have a variety of language brokers available. Providing language services for Chinese Americans with limited English proficiency could decrease depression among this population. It is important for social workers to advocate for the patients to fully understand the information provided in a medical setting.

Through this study, the demographics of the Chinese American population showed that income, gender, and education level did not impact their level of depression. This shows that anyone in this population could experience depression. However, those who have a lower annual income have shown to experience a higher level of depression. Therefore, it would be beneficial to provide additional mental health services in low-income areas and to educate these areas about depression and symptom presentation within the Chinese American population. By understanding how Chinese Americans are likely to display depression, social workers will be more alert in sensing the presence of depression.

Future Implications for Social Work

With this study, research on how to provide care can continue on the Chinese American population throughout the United States. This will help to develop a greater knowledge of the signs to identify depression and the factors contributing to depression among this population. Additionally, services and assessments that are culturally sensitive could be developed and implemented, which will lead to a more accurate

representation of the population affected by depression. It is also important to continue to tackle the stigma of mental illness as a whole and promote acceptance.

Limitations

The data provided in this study showed that there is a gap in the research. Due to the cultural aspect, there is a negative perception of mental illnesses among Chinese Americans. As mental illnesses are viewed negatively, Chinese Americans avoid the association with depression leading to limited research and data available. Therefore, it has been difficult to find a clear number of Chinese Americans who have been impacted by depression. Due to the low representation of Chinese Americans with depression, a limited amount of resources are widely available and known within their communities.

Additionally, the Chinese American population tends to experience depression somatically, which leads to a misrepresentation of the true number of individuals experiencing depression. Because of the misrepresentation, a portion of Chinese Americans may be unaware that they are experiencing depression. When reviewing the data, it appears that a large number of respondents in this study and others show that the population has a low number of individuals who experience depression. Due to mental health being a taboo topic within the culture, characteristics of depression are not widely recognized.

Furthermore, the research shows that the Chinese American population is less likely to expose personal dilemmas and seek professional help. This population tends to seek support from family and friends rather than community resources and professionals. Due to the fear of judgment within the community, symptoms could be minimized or overlooked. At times, due to the unlikelihood of seeking professional help, depression is

often left untreated and could eventually lead to somatic symptoms before the presence of mental illnesses are known.

Lastly, the data used in this study covered a limited geographic area, California. Due to a limited amount of geographic coverage, the research does not represent Chinese Americans as a whole. Furthermore, areas with smaller Chinese American representation could experience a different set of symptoms or exposure to stressful life events resulting in depression. Due to the limited geographic region covered in this study, additional research and data collection will be necessary to develop a stronger representation of the Chinese American population as a whole in the United States.

Conclusion

Factors that contribute to depression among the older Chinese American population include physical ailments like heart disease, arthritis, gout, and lupus as well as annual income. However in this study language did not appear to be a major factor of depression but there is a need for language brokers for those who have low English proficiency and do not have a primary provider who speaks a similar language. When reviewing depression for Chinese Americans, culture plays a large role in assessment of depression. Due to the low number of respondents self-reporting as depressed and non-traditional symptoms of depression, there is an inconsistent research on Chinese Americans living with depression.

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