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ABSTRACT

BARRIERS IN HEALTH CARE IN HMONG MEN AND WOMEN WITH CARDIAC DISEASES

Lauver's theory of care seeking behaviors is applied to identify perceived barriers to accessing healthcare in Hmong men and women that may influence care seeking behaviors. The purpose of this study is to identify barriers in accessing health care among Hmong men and women ages 50 to 80 with cardiovascular heart disease (CHD) and risk factors for CHD (e.g., diabetes, hyperlipidemia, and hypertension). A quantitative descriptive analysis was used to look at demographic characteristics while a multiple regression analysis was used to statistically compare correlations between barriers to care, risk factors for CHD, sex, and access to health care. The frequency of a participant's access to healthcare (annually) could not be predicted by sex or barriers to healthcare. However, there was statistical significance between risk factors for CHD by barriers to healthcare and sex. The top two barriers identified in both men and women were the use of complementary and alternative (CAM) therapies as primary treatment and fear of invasive procedures. The results of this study will be available for continued research efforts to develop an evidence-based practice model that minimizes barriers to health care access and improve the management of cardiac disease in the Hmong community. Further studies assessing the barriers to accessing health care in the Hmong population at the provider and systemic levels are also needed to have a better understanding of both patient and provider experience

Ying Thao
May 2019

Barriers in Health Care in Hmong Men and Women with Cardiac Diseases

by

Ying Thao

A project
submitted in partial
fulfillment of the requirements for the degree of
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APPROVED

For the School of Nursing:

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CHAPTER 1: INTRODUCTION

Health care workers continue to be challenged with providing culturally sensitive care to the changing demographic population in the United States (US). Health care organizations must ensure cultural competence to sustain the delivery of culturally sensitive care and patient satisfaction irrespective of ethnic minorities. One way to accomplish this is by identifying barriers to accessing health care in ethnically diverse patients. The Hmong is at risk for health disparities because of language barriers and cultural values and beliefs that are not consistent with the mainstream. For example, the Hmong are patriarchal, and women generally do not make major health care decisions. A male member such as her husband will be consulted before a health care decision is made (Johnson, 2002). By targeting both men and women in the Hmong community and identifying shared barriers to utilizing healthcare, any bias related to the disconnect of healthcare decision-making amongst Hmong men and women will be eliminated. The age group of 50 to 80 has been selected because elderly Hmong patients age 50 and up are less likely to adhere to medication regimen and to keep their doctor’s appointments (Wong et al., 2005).

Thalacker (2011) studied the cultural values and beliefs of the Hmong community and its impact on their health, particularly Hmong people who were diagnosed with hypertension. He found that because they were a group of people with unique perceptions of disease and treatments. They were less likely to comply with medication regimens. Diabetes (DM), hypertension (HTN), and hyperlipidemia are high among Hmong Americans and are risk factors for developing Coronary heart disease (CHD, Thalacker, 2011). Coronary heart disease (CHD) is the leading cause of morbidity and mortality in both developed and developing countries, yet, less than 50% of patients with risk factors for developing CHD have accessed care in managing their risk factors (Irmak & Fesci, 2010, p. 147). In addition, the rate of uncontrolled HTN is highest among minorities (Wong et al., 2005). According to the Third National Health and Nutritional Examination Survey (NHANES III), 43 million Americans have HTN, 32 million are not controlled, and 6 million are unaware of their HTN status (as cited in Wong et al., 2005, p.144). Asian Americans are at the highest risk for developing diabetes and the least likely to receive diabetes screening and management when compared to other ethnic minorities (Tung et al., 2017).

Hmong Americans are undiagnosed for their HTN and those who are diagnosed are not medically managed (Thalacker, 2011). In comparison to other populations treated for HTN, 49% of black males and 50% of Caucasian males control their HTN; whereas only 27% of Hmong Americans control their HTN (Wong et al., 2005, p.152). With statistics indicating high rates of uncontrolled HTN in the Hmong, it is important to identify and understand the most common barriers to accessing health care in this community.

Identifying barriers to utilizing health care in the Hmong community ages 50 to 80 will assist in prevention of chronic diseases such as myocardial infarction (MI). Potential barriers to accessing healthcare in Hmong patients may include language barriers, cultural values and beliefs in illness, social structure, and cultural incompetence of healthcare providers. Cultural competence is important in building trust and with encouraging the use of Western medicine in the Hmong. Understanding these differences will prevent misunderstandings and misinterpretations from both the health care provider, and the Hmong patient (Cobb, 2010). Identifying the barriers to utilizing care in Hmong men and women will also allow healthcare providers to have a complete understanding of where Hmong men and women are in the health care system in comparison to other ethnic minorities. Addressing the gaps in research of Hmong men and women with CHD is imperative because the Hmong population in the US is growing and there continues to be barriers to utilizing and trusting Western medicine in this population. It has been estimated that by 2030, ethnic minorities will account for 40% of the US population, exposing health care workers to more patients who do not share the same values and beliefs (Parish, 2004, p. 132).

There is limited research on the prevalence and risk factors for CHD in Asian Americans and they are often underrepresented in existing literature (e.g., Leigh, Alvarez, & Rodriguez, 2016). Additionally, current literature of Asian Americans has little to no account of the Hmong population (e.g., Leigh, Alvarez,

& Rodriguez, 2016). The purpose of this study is to identify the common barriers in the Central Valley Hmong population in accessing healthcare with cardiovascular diseases. Surveys will be given to identify barriers to seeking medical care such as a lack of knowledge and awareness, cultural conflicts, language barriers, education level, income, and reliance on alternative therapies such as using a Shaman rather than biomedical services.

Theoretical Framework

Barriers to accessing health care are important to identify to develop an evidence-based practice model that minimizes barriers to health care access and improve the management of cardiac disease in the Hmong community. Barriers such as the lack of knowledge of one's disease or the misconception that one's illness is not serious enough to seek medical treatment are few examples that may construe a patient's behavior and attitude towards their health. As a result, patients may be less likely to comply with medication regimen and with accessing healthcare. Lauver's theory of care seeking behaviors (TCSB) is used to identify perceived barriers to accessing healthcare in Hmong men and women that may influence care seeking behaviors.

Lauver's Theory of Care Seeking Behaviors

Theory Origins

The TCSB is a middle range theory proposed in 1992 and inspired by previous behavior theories such as the health belief model—focused on increasing engagement in health promoting behaviors—and Triandi's theory of behavior which sought to explain health behaviors (as cited in Lauver, 1992).

Concepts in the Model

The theory of care seeking behavior (TCSB) is different from other behavior theories because it aims to develop interventions that could promote the desired health behavior such as participation in primary and secondary prevention. Primary prevention includes health screening or early detection of a health condition while secondary prevention includes health maintenance of an existing health condition and preventing health sequelae. The theory assumes that the prospect of an individual engaging in health behaviors is influenced by multiple variables such as psychosocial; clinical and sociodemographic; and facilitating variables.

Psychosocial variables.

Psychosocial variables are objective and includes affect, beliefs, norms, and habits. Affect includes feelings such as anxiety, fear, or guilt associated with care seeking behaviors. Beliefs reflect the overall worth or value of the care seeking behaviors. Norms comprise of the perception of a morally correct behavior towards seeking care. Norms may be personal (one's own moral belief) or social—someone else's moral perception of care seeking behaviors (Lauver, 1992). For instance, the Hmong community is close-knit and negative experiences from one individual could be shared through word-of-mouth resulting in the reluctance to seek medical attention and mistrust of Western medicine from multiple members within the community, resulting in decreased access to healthcare (Johnson, 2002). Habits is one’s usual behaviors to seeking care such as receiving prompt treatment.

Facilitating conditions.

Facilitating conditions are objective—external—and are out of the individual’s control (e.g., transportation, insurance, and geographic location). Thus, facilitating conditions may enable care seeking behaviors when present—having transportation to a doctor’s appointment—or become barriers to care seeking behaviors if absent. Lauver (1992) theorized that although psychosocial variables can directly influence care seeking behaviors, it is insufficient by itself and will usually influence the interaction with facilitating conditions, resulting in decisions that affect care seeking behaviors.

Clinical and sociodemographic variables.

Clinical factors are the presence or absence of a symptom while sociodemographic factors include age, education, literacy, and risk factors for CHD (Lauver, 1992). Clinical and sociodemographic variables indirectly influence care seeking behaviors through its influence on the psychosocial variables (affect, belief, norms, and habits), which in turn, influences care seeking behaviors (Lauver, 1992). In Lauver’s original proposition of the TCSB in 1992, she suggested that further studies are needed to determine if there is a direct influence of clinical and socio-demographic variables on care seeking. However, more recent data using the TCSB supported that although clinical and socio-demographic variables more often influence care seeking behaviors indirectly, there may also be a direct influence (Yu, Lauver, Wang, & Li, 2019).

Validation of the Model and Use in Research

There are growing numbers of interventions guided by the TCSB. In one study, the theory was used to understand “Hmong women’s beliefs, feelings, norms, and external conditions about breast and cervical cancer screening” (Lor, Khang, Xiong, Moua, & Lauver, 2013). The findings of this study were consistent with the TCSB and found that Hmong women were embarrassed regarding breast and cervical cancer screening. The participants also reported uncertainties about the causes of cancer which may have heightened their reluctance to accessing breast and cervical cancer screening (Lor et al., 2013).

Relevance and Application of Lauver’s Theory for the Proposed Project

Given the Hmong’s high rate for uncontrolled DM and HTN, and the lack of research in the care seeking patterns of the Hmong with CHD or risk factors for CHD, Lauver’s theory will be used as a framework to identify barriers to accessing health care. These barriers fit into the different variables identified in Lauver’s TCSB model that influences care seeking behaviors. For example, the lack of transportation and health insurance will be identified in this study as structural barriers. Structural barriers fit into the TCSB model under external conditions. Sociodemographic factors such as age and education will fit into the psychosocial variables of the model.

Psychosocial variables will be identified in this study as social structural barriers and include use of complementary and alternative therapy (CAM) as primary treatment. Use of a shaman as primary treatment, fear of invasive procedures, mistrust of Western medicine, social structure—waiting on the clan leader or a male member for making major health care decisions—and mistrust in healthcare providers. Psychosocial variables are often influenced by the Hmong's cultural values and beliefs in health and illness, influencing their care seeking behaviors. Lauver (1992) stated that "if explanations for care-seeking behaviors were supported empirically for one condition, such as cancer, then these explanations could be tested in relation to care seeking for similarly threatening conditions and other health behaviors" (Lauver, 1992, p. 286). Thus, this study will apply the TCSB model towards identifying barriers influencing care seeking behaviors in Hmong men and women with CHD.

Conclusion

By identifying barriers influencing care seeking behaviors, health care providers can be made aware of the issues their Hmong patients encounter when seeking care and be better equipped with increasing accessibility of services to the Hmong population.

CHAPTER 2: LITERATURE REVIEW

Coronary Heart Disease: Myocardial Infarction

Coronary heart disease is the leading cause of death in the United States (US) in both men and women with the highest risk factors being hyperlipidemia, HTN, and DM (Deborah, James, Kalani, & Richard, 2012). CHD is also known as coronary artery disease (CAD) and results when there is a decrease in blood flow to the muscle cells of the heart termed myocyte (Bare, Cheever, Hinkle, & Smeltzer, 2014). The decrease of blood flow to the heart is usually due to a blockage secondary to atherosclerosis, which is the build-up of a plaque (Bare et al., 2014). The plaque is made up of cholesterol deposits inside coronary arteries that would normally supply oxygenated rich blood to the heart (National Institution of Health [NIH], 2014). When a plaque ruptures, it causes the formation of a thrombus (a blood clot), which narrows and hardens the coronary arteries and consequently, blood flow into the heart. A heart attack is also known as MI and will result if coronary arteries are completely blocked and the oxygenated blood flow of the heart is not restore (NIH, 2014). Individuals with a heart attack often complain of angina (chest pain), a heavy or crushing feeling to the chest, indigestion or burning, and dyspnea—difficulty breathing—that is not alleviated with rest (NIH, 2014).

Hmong people often associate disease with feeling ill and are reluctant to adhere to medication regimens for conditions that do not cause them to feel ill

(Thalacker, 2011). Therefore, increasing awareness of the seriousness of risk factors for MI such as HTN and DM can increase compliance with Western medicine. The Hmong were not exposed to Western medicine or education in Laos and had no knowledge of the anatomy and physiology of the human body (Cobb, 2010). As a result of low literacy in the Hmong, providers may find it challenging to educate their non-English speaking Hmong patients. Johnson's study of 20 participant's health beliefs and experiences in Western healthcare indicated that 100% of the participants spoke no English and had no idea of what organs were or how they functioned (p.130). Wong, Mouanoutoua, Chen, Gray, and Tseng's (2005) study indicated 91% of 323 Hmong participants had no education and 86% spoke no English. Wong et al.'s (2005) study suggested that a low level of knowledge in diseases such as HTN is often accompanied by low levels of awareness, treatment and control. Hence, socio-demographic information will be obtained. Educational information on CHD will be provided to participants to increase their understanding of risk factors for CHD and increase compliance with treatment (Thalacker, 2011).

Risk factors of Coronary Heart Disease

Although CHD is the leading cause of morbidity and mortality in the US, control of CHD risk factors has been suboptimal, with fewer than 50% of those with CHD managing their risk factors (Irmak & Fesci, 2010, p. 147). The development of an atherosclerotic plaque can be associated with lifestyle choices.

Life style choices are considered modifiable risk factors that can be reversible and include smoking, diet in saturated fats, obesity, inactivity, and HTN and DM management (Bare et al., 2014). However, non-modifiable risk factors cannot be changed and includes age, genetic predispositions, and ethnicity (Bare et al., 2014). According to the American Heart Association (AHA, 2015), hypertension—high blood pressure—affects one in three US adults and a leading cause of life-threatening conditions such as: heart failure, strokes, heart attacks, and kidney failure. Although lifestyle changes and medication adherence are both effective in preventing CHD and reoccurring heart attacks, Irmak and Fesci (2010) indicated that only half of those who were at risk for developing CHD implemented lifestyle changes. The National Examination Survey (NHANES) data from 1988 to 2012 indicated decreasing numbers in reports of anginal—chest pain—symptoms with 80% of those reporting being white, and only 5 % represented the Asian American population (Leigh, Alvarez, & Rodriguez, 2016). The Hmong population was not included in this NHANES data from 1922-2012. There were also no epidemiological studies on CHD "conducted on Hmong refugees arriving to the US from the 1970s to 1990s" (Culhane, Moua, Defor, & Desai, 2009, p.376). Culhane, Moua, Defor, and Desai's (2009) study of 1,426 Hmong refugees in Saint Paul, Minnesota from 2004 to 2006 indicated that upon arrival to the US, there were high rates of Obesity (48.7%), HTN (16.5%), hyperlipidemia (25.8%) and hyperglycemia (34.5%) in the Hmong refugees (p.

377). These statistics are important because they suggest existing risk factors of developing CHD in Laos that are undiagnosed and not medically managed. A potential explanation may be due to the lack of access to medical care and research of the Hmong before their acculturation to the US.

In another study by Yang and Mills (2008), an interview of 248 Hmong immigrants regarding their lifestyle changes since acculturation found that 63% were obese, 43% were unable to speak English, and 71% lived in poverty (Yang & Mills, 2008, p. 8). Yang and Mills (2008) suggested that the low socioeconomic status of the Hmong as well as their rapid immigration to the US have resulted in the change from a high-energy lifestyle and high fiber diet to a sedentary lifestyle with high saturated fat diet. These findings suggested risk factors for developing CHD such as unhealthy choices and are important to assess in the Hmong population because of their changes in diet and activity since acculturation to the US. Hesel, Mochel, and Bauer (2004) found the following:

> Groups immigrating into industrialized societies from agricultural communities are at increased risk for non-insulin dependent diabetes mellitus (NIDDM) and complications including hypertension and renal failure…increased rates of NIDDM are also found in groups with high levels of stress, disrupted social networks, social marginality, feelings of hopelessness and helplessness, and poverty. (p. 937)

The Hmong's unique cultural values and beliefs in health and illness can influence their care seeking behaviors and result in developing risk factors for CHD. Therefore, it is vital that while identifying barriers to accessing healthcare, participant is made aware of their health disparities and its correlation with their health conditions.

History of the Hmong

There is little research to indicate the historical origins of the Hmong people due to the lack of written form of communication and documentation of historical events (Cobb, 2010). However, the vast majority of elderly Hmong Americans populated in the US are from the mountains of Laos (Culhane et al., 2009). According to the 2010 US Census Bureau, more than 260,000 Hmong reside in the US with the largest settlements in California, Minnesota, and Wisconsin (as cited in State of the Hmong American, 2013, p. 9). These numbers have increased by more than 40% since year 2000 (State of the Hmong American, 2013, p. 9). Despite being a group of people who do not have a country of their own, many were recruited by the Central Intelligence Agency (CIA) during the Vietnam War and fought alongside the US military against North Vietnam (Culhane et al., 2009). Specifically, the Hmong were recruited in the 1960s and fought until the war ended in 1975 when they became victims of genocide inflicted by the North Vietnamese and Lao communists for their partnership with the US (Culhane et al., 2009). Therefore, many Hmong families fled for refuge in

Thailand and later immigrated to the US and other parts of the world such as France and Australia (Tatman, 2004).

Hmong Culture and Beliefs on Illness

Although some Hmong families have adopted religions such as Christianity, Catholicism and others, traditional Hmong families continue to believe in Animism. Animism is the belief that the spirit world is connected to the human world and that the balance between the two is significant in health and wellness (Cobb, 2010). When there is an imbalance between the two worlds, illness pursues. Many Hmong families treat illnesses and diseases with herbal remedies and through a spiritual healer called a Shaman. Shamans are believed to be “chosen” by the spirits through a calling, usually a long and serious illness (Hesel et al., 2004). The acceptance of the responsibility to train in the healing practice to become a Shaman is the only cure (Hesel et al., 2004). In Laos where Hmong families emigrated from, there was no knowledge of Western medicine, surgery, diagnostics, or human anatomy and physiology. They were limited with choices for healing and believed that if an individual was sick, a Shaman could heal them (Johnson, 2002). Therefore, Hmong families practiced Animism by using Shamans, who were well respected and played vital roles in their villages. Shamanic healers and rituals are an important part of the Hmong people’s lives and have been practiced for decades, persisting even as they acculturate (Hesel et al., 2004). Shamans continue to be important figures in the Hmong community today and a “source of connection for the Hmong between this world and the spirit world” (Tatman, 2004, p. 223).

Although many Hmong families believe in Western medicine, traditional Hmong treatments continue to be utilized. Feeding practices such as hot and cold food are employed for certain illnesses and conditions. For example, hot food and drink is encouraged for women who have just given birth—postpartum—to help prevent blood clotting. Postpartum women are also on a strict diet consisting of boiled chicken infused with fresh herbal medicines for 30 days (Levine, Anderson, & McCullough, 2004). Other home remedies include spooning or cupping and wearing amulets or religious symbols such as strings to ward off evil spirits (Tatman, 2004). A study confirmed that the Hmong, including those who also consult medical providers, continue to consult shamans for their health concerns (Hesel et al., 2004). A more recent study indicated that the Hmong are more likely to use Shamans and herbal medicine than biomedical health care providers, where health care providers were used only as a last resort (Deborah et al., 2012).

Cultural Competence

Cultural competence is important because the numbers of diverse ethnicity is increasingly high. Being aware and sensitive to the unique cultural needs of patients, health providers can minimize barriers to accessing healthcare. Cultural competence plays a major role in influencing the Hmong’s decision to utilize health care. Cultural competence is the ability of a healthcare provider to give care for individuals despite their gender, age, ethnicity, and cultural background. Sperry's (2012) research on Hmong cultural competency consisted of four components including: cultural knowledge, awareness, sensitivity, and action. Cultural knowledge consists of the Hmong's history, religion, gender, and acculturation, and how these variables can influence their care seeking behaviors (Sperry, 2012). Cultural awareness builds onto cultural knowledge and encompasses an understanding of the beliefs of Hmong Americans such as the value of spirituality in health and wellness (Sperry, 2012). Cultural action requires an understanding of the other three components and being able to respond appropriately to a given situation. Sperry stated that cultural competence develops when all four components are met and believes that cultural sensitivity is most important because it allows an individual to be open minded to diversity. Although many elderly Hmong patients cannot speak or understand English, they are sensitive to nonverbal communication from medical members and have complained of inappropriate tone of voice, facial expression, and body language that resulted in negative experiences (Johnson, 2002). The Hmong community is close-knit and such negative experiences are shared through word-of-mouth and lead to mistrust in Western medicine and decrease the utilization of health care.

Barriers to Cultural Competence

Language barriers.

Language barriers are often obstacles for both the health care provider and the patient. There was no written form of the Hmong language until the 1960's, making it useless to provide written information for elderly Hmong patients who could not read or write their own language (Cobb, 2010). Language barriers continue to be relevant because the Hmong language does not consist of many medical terms including the anatomy and physiology of the human body. This made it especially difficult for elderly Hmong patients to understand Western medicine, biotechnology, and surgery. In addition, words may become lost in translation. An example is the Hmong word *daj ntsej*; daj meaning yellow, and ntsej meaning ear. Daj ntsej can be translated as yellow ear when it actually functions as the English word pale (Cobb, 2010). Due to the lack of terms that can translate biomedical physiology and anatomy, language barriers contribute to negative experiences and a mistrust of Western medicine in the Hmong community (Johnson, 2002).

Social structure.

Social structure serves as a barrier for Hmong Americans because many lived in clan societies including extended family members who play significant roles in decision making. The social organization respects men more than women with the elderly being the most respected (Cobb, 2010). Traditionally, the Hmong was a patriarchal society and making major ethical decisions required elderly males and extended male members to come together (Thorburn, Kue, Keon, & Lo, 2012). The Hmong leader is a chosen male member of the clan and is often the eldest of the lineage. Hmong leaders will discuss healthcare plans for the family member and decide to approve or decline the healthcare choices of the patient (Cobb, 2010).

The clan leader plays a vital role in decision making are also involved in conflict resolution within the clan and other social and legal systems (Cobb, 2010). While the elderly holds a higher status, there may be a role reversal where the elderly member becomes critically ill or incompetent. The younger male member then gets the higher status and will make major decisions for the elderly patient (Cobb, 2010). In traditional Hmong families today, health care decision-making in respect to social structure is still exercised and often creates a barrier to providing culturally competent care. Barriers to accessing health care due to social structure occur because healthcare providers must understand why it takes longer for some Hmong patients to make a health care decision. Providers may experience frustration in situations where they are being asked multiple and repeated questions by various figures in the family.

Lack of diversity in healthcare.

Other barriers to providing culturally competent care include a lack of diversity in health care, poor communication between providers and patients, and systems of care poorly designed to meet the needs of a diverse patient population (Betancourt, Carrillo & Alexander, (2002). According to the US Department of

Health and Human Services report, cultural competence can be acquired through requiring cross- cultural training programs for medical staff; initiating quality care improvements such as utilizing culturally and linguistically appropriate patient survey methods; and the development of process and outcome measures that reflects the needs of multicultural and minority populations (as cited in Betancourt et al., 2002). Providing a culturally diverse medical staff will eliminate barriers to culturally competent care. A staff who shares the same cultural values and beliefs of the patients' will likely accept and understand their healthcare choices. The Hmong are more likely to provide accurate information if the health care provider communicates an understanding and genuine acceptance of their integration of Western and native healing (Rairden and Higg, 1992). According to a 2013 survey conducted by the National Council of the State Boards of Nursing (NCSBM) and the Forum of the State Nursing Workforce Center (FSNWC), 83% of registered nurses (RN's) were Caucasian and 17% reflected Asians, African American, Hispanic, American Native, and Native Hawaiian/Pacific Islander (as cited in American Association of College of Nursing [AACN], 2015). This underrepresentation of minority healthcare workers may serve as a barrier for providing prompt interpreters and a barrier to providing cultural competence.

Literature Review

Lor, Xiong, Park, Schwei, & Jacobs (2017) conducted a study on describing how Hmong people determine when to use Western or traditional healers; and the factors that influence this decision-making. An exploratory qualitative study was done on Hmong-speaking patients who had limited English proficiency (LEP) in the United States (US). The participants were recruited if they met the inclusion criteria of self-identifying as Hmong, spoke little to no English—, and had visited their primary care provider within one year. Because the study was part of a larger study done to identify barriers to receiving cancer screening in the Hmong population, other inclusion criteria included being eligible for preventative cancer screening. The eligibility for preventative cancer screening were women older than or equal to 18 and men older than or equal to 50. A semi-structured interview was done with each participant in a location of their choice including home interviews. A total of 11 participants were recruited including five men and six women. The interviews were audiotaped, translated into English through a collaborative approach amongst the research group members, and finally coded and categorized for conventional content analysis. Lor et al. (2017) found that the participants utilized both traditional and Western healing practices. However, their decisions on which to use as the primary treatment of illnesses were influenced by their perception of the cause of their illness and the effectiveness of the treatment option—traditional or Western (Lor et al., 2017). A limitation of this study was the data collection was from a single location in Wisconsin and therefore, the results cannot be generalized to the entire Hmong population. A strength of the study was being the first study that explores factors influencing how Hmong people decide on which healing practices to choose (traditional or Western).

Lee (2015) used a quasi-experimental research design to determine the relationships between the Hmong's acculturation to the US and their health care behaviors. The interactions between the participant's acculturation (independent variable), treatment choices, and perception of health status (two dependent variables) were also investigated. A total of 150 participants were recruited from two different outreach organizations in Sacramento, Ca. Lee (2015) collected demographic data such as the participant's gender, marital status, religion, and immigration status which were dichotomous variables analyzed using frequencies. Continuous variables such as the participant's age and length of stay in the US were analyzed using the means and standard deviation method. The continuous variables such as levels of acculturation, preferred choice of treatment, and perception of health status were calculated using Cronbach's alpha. In addition, a Pearson correlation and a two-way factorial analysis of variance (ANOVA) were used to further analyze the "relationships between the continuous variables such as levels of acculturation, preferred types of health care treatment scores, and the overall perceived health status" (Lee, 2015, p.6). Lee found that participants who were more acculturated were likely to prefer Western treatment than traditional cultural practices. The level of acculturation also had a statistically significant effect on treatment choices—western or traditional treatments—while gender did not indicate any statistical significance (Lee, 2015). Like Lor et al.'s (2017) study, a limitation of Lee's is the limited site of data collection affecting its generalizability. A strength of the study includes the clearly explained methodology and the charts used to illustrate the correlations of the variables such as tables and scatter plots.

Thorburn, Kue, Keon, & Lo (2012) used a qualitative exploratory research method to assess the medical mistrust and discrimination of Hmong men and women ages 18 and above. Thorburn et al. (2012) assessed the association between the mistrust and discrimination experiences on cervical and breast cancer screening in Hmong women. Men were included in the study because in traditional Hmong families, women did not make major health care decisions and would have to consult with a male member of the household (Johnson, 2002). Interviews were done face-to-face at a Hmong community in Oregon. A total of 83 interviews were done and analyzed using content analysis from December 2009 to May 2010. Interviews were done in a location of the participant's preference such as the participants' home, private room in a community-based center, or a community location (Thorburn et al., 2012). Questions were open-ended and evaluating the participants' negative experiences with Western health care and why some Hmong people mistrust the Western health care system. The interviews were audiotaped and transcribed into English. Content analysis of the transcripts were done using NVivo 8, where preliminary codes were generated. Thorburn et al. found that medical mistrust and negative experiences have negatively impacted breast and cervical screening. Some of the participants listed reasons for their medical mistrust as unfamiliarity with Western medicine, cultural and traditional practices, negative experiences, and fear of being involuntarily part of a study. A strength of this study is the engagement of Hmong community leaders which enhanced the credibility of the study in the Hmong community. A limitation of the study is that the participants were not asked about the "differences between their own feelings of trust and their comments about Hmong people more generally" (Thorburn et al., 2012, p. 769). While the participants could list in their opinions, reasons why the Hmong people mistrusted Western healthcare, when asked about their own level of trust, the participants stated that they trusted the Western healthcare system. The participants may have felt more comfortable sharing information on other's feelings rather than their own level of trust.

Tung et al. (2016) conducted a study on the racial and ethnic disparities in diabetes (DM) screening between Asian Americans and other adults. They analyzed pooled cross-sectional data from 2012-2014 behavioral risk factor surveillance survey (BRFSS) in the 42 states that utilized the module. The BRFSS is an "annual nationally representative telephone-based survey that collects information on the health-related risk behaviors and preventative health practices of U.S residents" (Tung et al., 2016, p.423). A total of 526,000 respondents were analyzed. To assess for racial and ethnic disparities, a multivariate logistic regression was used to indicate receipt of DM screening recommendation as a function of race and ethnicity. Tung et al. (2016) found that although Asian Americans had the greatest risk for DM, they were the least likely to receive recommended diabetes screening in comparison to other ethnic groups categorized as non-Hispanic whites, non-Hispanic pacific islanders, non-Hispanic American Indian, non-Hispanic Blacks, Hispanic/Latinos, and multiracial individuals. A limitation of the study was the self-reporting system used by BRFSS, where respondents self-reported receipt of DM screening recommendation and ethnicity. There was no way of validating the receipt of recommendations for DM screening. A strength of this study was the detailed limitations including indication that the study did not provide strong enough evidence linking patient attitudes towards healthcare and health disparities (Tung, et al., 2016).

Fang & Baker (2013) conducted a study on barriers and facilitators of cervical cancer screening among women of Hmong origin using a qualitative exploratory method. A community-based participatory research approach was also utilized by collaborating with a Hmong women's heritage association to recruit participants, translate, and transcribed data. A total of 44 participants were recruited through outreach flyers posted in places that were often visited by the Hmong community such as churches, local colleges, and Hmong community events in California. Interviews were audio recorded and analyzed using a back-and-forth translation process. Atlas.ti.software was used to code the English and translated transcripts to identify sociocultural and structural barriers to cervical screening. The sociocultural barriers included “lack of knowledge about the causes of cervical cancer, language barriers, stigma, fear, lack of time, and embarrassment of having cervical screening done” (Fang & Baker, 2013, p. 546). Structural barriers identified were “attitudes and practices of health care providers, lack of insurance, and quality of service provision at clinics for the uninsured” (Fang & Baker, 2013, p. 546). A strength of the study was conducting four different groups of Hmong women and analyzing how the changing sociocultural demographics among the participants influenced barriers to cervical screening. A limitation was having a larger participant who were younger and spoke some or were fluent in English. The perceived barriers to cervical screening among Hmong refugee women who cannot speak or have little to no education may significantly differ from those who do speak English, have some form of education, and are “Americanized”.

Gaps in the Literature

There are a few studies that have identified barriers to preventative care such cervical cancer screening and immunizations but literature on barriers to accessing health care in Hmong men and women ages 50 and older with cardiovascular heart diseases is limited. Lor, Xiong, Park, Schwei, & Jacobs’ (2017) identified factors influencing treatment choices such as perception and classification of illness, and efficacy of treatment choices. Lor et al.’s (2017) study provides health care providers with a better understanding of how perceptions of health may influence choosing between Western or traditional healing methods in the Hmong population. Perception of health is a potential barrier to utilizing Western medicine in the Hmong population and needs to be studied in greater depth. Thorburn, Kue, Keon, & Lo's (2012) study of medical mistrust and discrimination in health care identified unfamiliarity with Western medicine and cultural practices as reasons for medical mistrust in the Hmong population. This potential barrier to accessing healthcare is also important to identify in Hmong men and women ages 50 and older with cardiovascular heart diseases as traditional Hmong families are more likely to mistrust Western medicine and utilize traditional healing methods.

Tung et al.'s (2016) study concluded that interventions need to be done to ensure appropriate diabetes screening in the Asian American population. However, the Asian American participants in Tung et al.'s (2016) study had higher educational attainment and English fluency than the general Asian population, which does not reflect Hmong refugees ages 50 and older. Asian American are also a heterogenous population and analysis between the subgroups is crucial in revealing different patterns in health care. Identifying barriers to accessing care in the Hmong central valley ages 50 and older is important in understanding the correlation between barriers to care, risk factors for CHD (e.g., undiagnosed DM), and it's influence on the utilization of health care in the Hmong population.

Fang & Baker’s (2013) study identified some structural and sociocultural barriers to cervical screening in Hmong women at varying ages and suggested more studies be done to determine how these barriers influence access to care. By identifying barriers to accessing care in Hmong men and women ages 50 and older, we can focus on the Hmong population who were refugees, have little to no education, and have limited English literacy. This narrows the sociocultural demographics of the Hmong population and allows a focused study of barriers to care in Hmong men and women who are more likely to practice traditional healing methods. The 50 and older age range will also allow for study of the older and sicker population in the Hmong community.

CHAPTER 3: METHODOLOGY

Method & Data Analysis

A quantitative descriptive method will be used to identify the common barriers to accessing care in Hmong men and women with cardiovascular heart disease (CHD) or risk factors for CHD (e.g., HTN, DM, and hyperlipidemia). A multiple regression was used to statistically compare correlation between barriers to care, risk factors for CHD, sex, and access to health care. The dependent variables (DVs) include two levels (a) access to health care, and (b) risk factors for CHD. The independent variables (IVs) are (a) barriers to accessing health care with three levels: sociocultural barrier, structural barriers, and other barriers; and (b) sex, with two levels including male or female. The Null hypothesis (HO): The composite DV does not differ between barriers to care and sex (male or female). The alternative hypothesis (HA): There is a difference in the composite DV somewhere between barriers to care and sex.

Both independent variables of barriers to care (multinomial variable) and sex (dichotomous variable) are categorical while the dependent variables of access to health care is continuous and risk factors for CHD is categorical. A multiple regression would be most appropriate for analysis of correlations between the IV’s and DV’s. There was independence of residuals, as assessed by a Durbin-Watson statistic of 2.22—close to 2.0— meeting the third assumption of a multiple regression analysis. Using a scatter plot produced by SPSS, the relationships between the IV and DV can be said to be linear.

Sample Characteristics

The population of this study includes Hmong men and women ages 50 or older with coronary heart disease (CHD) or risk factors for CHD. These risk factors include those that are most prevalent in the Hmong community such as diabetes (DM), hyperlipidemia, and hypertension (HTN; Culhane, Moua, DeFor, & Desai, 2009).

Recruitment.

Statistical power analysis using G power (3.1.9.2) has been used to run a priority power analysis at 80%, using a moderate or medium (0.06) multivariate eta-squared, which calculated a total sample size of 94. Approximately 94 participants will be recruited through convenience sampling. The researcher will be handing out and posting participatory flyers at a local supermarket frequented by the Hmong community in Fresno, Ca. Permission to hand out and post up participatory flyers has been obtained from Asia Supermarket, Fresno, Ca. Data collection will take place between October 2018 to approximately December 2018. Snowball sampling will also be employed where individual participants will be asked to refer someone they know who meets the inclusion criteria for the study. This is also known as “word-of-mouth” and is an approach that is often consistent and preferred in the Hmong culture (as cited in Lor & Bowers, 2017).

To gain a sufficient sample size, the research participatory flyer will also be shared via social media such as Facebook. The first 47 men and 47 women who voluntarily participate and meet the inclusion criteria will be recruited for the study. Inclusion criteria are male or female ages 50 or older; self-reported Hmong who can read and write or speak in Hmong; willingness to participate; and self-reported history of CHD or risk factors of CHD (e.g., DM, HTN, and hyperlipidemia). The exclusion criteria include men and women younger than 50, and those with no prior history of CHD or risk factors for CHD. To maximize participation, a ten-dollar incentive will be given to each participant for their time. The incentive will be provided upon their completion of the survey and questionnaire.

This sample population is unique from other researcher samples because of the targeted age group and the comparison between male and female barriers to care. This is important to assess as cultural roles can influence decision making and perception of health care in traditional Hmong families; a common practice in older Hmong individuals.

Setting

A participatory flyer that includes the title and purpose of the research project and the researcher's contact information will be made available through social media and word-of-mouth. Those who are interested in being part of the study will reach out to the researcher at the contact information provided on the flyer. To retain the interest of potential participants in the case that the researcher is unable to answer the phone, there will be a message specific to potential participants recorded in Hmong. Because all participants will either read, write, or speak in Hmong, it will not be necessary to record a message pertaining to the study in English. A screening over the phone will be initiated using a questionnaire inquiring age, sex, and history of CHD or risk factors for CHD (HTN, DM, hyperlipidemia). If the participant answers “yes” to all the screening questions and has given oral consent for participation, he or she has met the inclusion criteria for the study. The researcher will have a single meeting with the participant in a location of their choice including Starbucks or in the comfort of their home. During this encounter, the researcher will give an oral description of the project and its purpose. Oral consent for participation will obtained for the second time and will include permission to interview and data collection to be used for this research study.

Instruments

Before surveying patients identify barriers to accessing health care, each participant will be given a questionnaire to obtain sociodemographic information such as birthplace, length of stay in the US, education, language(s) spoken, household income, age, employment, and religion. This questionnaire will also inquire how often each participant visits their primary care provider which will be used along with sociodemographic to determine any correlations amongst the participants.

Following, a survey will be given to identify the participants' barriers to accessing and utilizing healthcare. Barriers will be grouped into three categories including sociocultural barriers, structural barriers, and other barriers for meaningful subgroup analysis. Sociocultural barriers include language (e.g., lack of a translator or miscommunication); social structure; mistrust of health care providers or western medicine; and alternative treatment such as use a shaman or complementary and alternative medicine (CAM) as primary treatment; misconception of seriousness of illness (e.g., my condition is not that serious); and fear (e.g, fear of invasive procedures or fear of finding out the truth). Structural barriers include lack of insurance and transportation. Lastly, barriers not listed in the survey but identified by the participants will be grouped under others. Similarly, Fang and Stewart (2018) conducted a qualitative study assessing barriers that influenced community-based hepatitis screening and found that "protecting a family's reputation; fear of doctors, medical procedures, and test results, lack of trust in medical doctors and care services; and using Hmong herbal medicine and practicing spiritual healing were identified as sociocultural and traditional health beliefs" (Fang & Stewart, 2018, p. 1579). In another study, Fang and Baker (2013) identified structural barriers as transportation, insurance, attitudes of health care providers, and quality of services.

Surveys will be available in both English and Hmong for the convenience of the participants who are not able to read in English. A research study has been done on identifying barriers for recruiting minorities for research studies, particularly Hmong older adults (ages 65 and older) and found that the most common barrier for refusal to participate in research studies was a lack of trust in a researcher who could not speak in Hmong. Participants indicated that they were more likely to participate and trust a researcher whom they experienced reciprocity, one of which included “the absence of language barriers between the researcher and the participant” (Lor & Bowers, 2018, p. 224). To eliminate creating an unsafe or untrusting environment, the researcher is fluent in Hmong, can read and write in Hmong, and have interpreting experience for Hmong patients throughout her nursing career. There will also be a certified Hmong interpreter available should it be needed. The screening tools, sociodemographic questionnaire, and survey will be created by the researcher and have not been previously tested for validity or reliability. The survey was designed to be easy to administer and translate into Hmong. It has been reviewed and edited for accuracy in translation and readability by a Hmong Professor, Dr. Leepao Khang at California State University, Fresno, Ca. Before implementation of the survey, it has been administered to an elderly Hmong man and woman meeting the inclusion criteria. The purpose of administering surveys to the two volunteers prior to data collection was to test for readability, time spent taking the survey, and literacy.

Participation in the study has been anticipated to take approximately 30 minutes to complete. There will not be any isolation for data collection as the locations will be of the participant's choice allowing for privacy and confidentiality of participants. Data collection will be done completely by the researcher.

Upon completion of the survey and questionnaire, each participant will be provided with information of CHD including risk factors and signs and symptoms of an oncoming heart attack from the Centers for Disease Control (CDC's) website. The goal of providing this information is to obtain an opportunity to educate and inform the Hmong participants of potential complications of HTN, DM, and high cholesterol. As previously discussed, it is important to emphasize the seriousness of these health conditions because Hmong people often associate disease with feeling ill and may be reluctant to adhere to medication regimens for conditions that do not cause them to feel ill (Thalacker, 2011).

Limitations

A limitation that may be encountered includes dishonest responses in effort to give answers that the participants feel is what the researcher wants to hear, challenging the validity and reliability of the study. Language barriers and literacy is another potential limitation. Although some elderly Hmong participants can read and write in Hmong, there are a great number who are illiterate in both English and Hmong, making it difficult for healthcare providers and researchers to gather accurate data (Cobb, 2010). One of the inclusion criteria requires that participants can read in Hmong, limiting the success of data collection as potential participants who cannot read in Hmong were disqualified. Time may also be a potential limitation as the participant's may be reluctant to partake in the research study or may rush through the survey questions. Participants will be screened to ensure they meet the inclusion criteria before going further with the study. However, a potential limitation is the self-reported sociodemographic data and established diagnosis of coronary heart disease, hypertension, diabetes, and hyperlipidemia. Another limitation of the study is the self-made survey tool which has not been previously tested for validation and reliability. Lastly, the participatory flyers will be made available through social media increasing the geographic span to include participants from Visalia, Fresno, Sacramento, and Merced. However, there is limited geographic diversification as those outside of central California will not be included and limiting the generalizability of this project.

Implications for Practice

The results of this study will be available for continued research efforts to develop an evidence-based practice model that minimizes barriers to health care access and improve the management of cardiac disease in the Hmong community. By having a better understanding of the Hmong culture, their beliefs in health and illness, and the barriers to accessing health care, health care providers will be better prepared when working with Hmong patients with CHD. In addition, further studies assessing the barriers to accessing health care in the Hmong population at the provider and systemic levels is needed to have a better understanding of both patient and provider experience.

Potential Benefits

Identifying barriers to accessing health care in Hmong men and women with cardiovascular diseases is vital in establishing a trusting relationship within the Hmong community. The results of this study will be available for continued research efforts to develop an evidence-based practice model that minimizes barriers to health care access and improve the management of cardiac disease in the Hmong community.

Potential Risks

The target group of this study includes men and women ages 50 and older who may not speak English, have little to no education, and problems with transportation or language barriers. Therefore, many of these participants may not have access to annual checkup and screening. The psychological risk involved in this study may include guilt or negative feelings by the participants for not accessing health care and managing their health conditions. There are no identified social, physical, or economic risks as all the result gathered will be kept confidential and participation is completely voluntary. Any legal risks have been eliminated as all actions are aligned with Health and safety Code 24172. The “Research Subject Bill of Rights” as attached.

Risk Minimizing Precautions

No participants in this study will be identified except for demographic information obtained for statistical analysis. Participants will be reassured that all information will be used solely for the development and purpose of this project. Participants will be notified that the records of this study will be kept private. All data will be kept locked in a locker and no names of the participants will be mentioned in the research. Hard data will be destroyed as soon as the project has been completed. Reassurance will be provided to minimize feelings of guilt and resources will also be provided to each participant to assist with barriers to accessing health care. For instance, participants will be given information on The Fresno Center where services include assistance with reading and interpretation for mail that clients are unable to read, community outreach programs, social workers, case managers, mental health services, and more. Resources will also be provided on Fresno County's services which includes assistance with transportation. There will be no medical research on human being being done. There will be no special procedures such as radioisotopes, electrical equipment, or other invasive procedures.

Compensation of Subjects

There will be a ten-dollar cash incentive given to each participant upon their completion of the survey and sociodemographic questionnaire. Each participant is given a cover letter of the researcher including contact information and informed that he or she may contact the researcher to request for an electronic copy of the completed project should he or she be interested. Asia Super Market has contributed $100.00 towards this study, which will be used as incentives for the participants. All other costs and expenses will come directly from the research. There will be no compensation for sponsors including Asia Supermarket and all assistance provided to the researcher will be voluntarily.

Academic Background of Investigator

Investigator Ying Thao has been interacting with patients since high school 2006. As a high school student, Ying has volunteered at numerous hospitals including University Medical Center (UMC), Veteran's Affairs Hospital, and Community Regional Medical Center. Ying graduated from California State University of Fresno with her master's in nursing with a family nurse practitioner option in May of 2017. She has worked as a charge nurse at Arvin Health Care Center, Arvin, Ca with geriatric patients and has also worked as a registered nurse at Community Regional Medical Center in medical surgical. Ying is currently a Doctor of Nursing practice student at California State University Northern Consortium and is expected to graduate in May of 2019. Currently, she a part-time psychiatric instructor at Gurnick Academy of Medical Arts, Fresno, and a full-time nurse practitioner at kaweah delta urgent care clinic, Visalia, Ca. Ying hopes to pursue her psychiatric mental health nurse certificate in the future and to work together with health professionals in the Hmong community in mental health. Her goal is to bridge the gap between healthcare delivery and barriers to accessing care.

Consent Process

Verbal consent will be obtained from participants during phone screening and again during the in-person encounter with the participant. Written consent will not be obtained from the participants to avoid fear of signing into a long-term commitment. The purpose of the project will be explained to each participant and all participants will understand their involvement is voluntary and they may remove themselves from the study at any given time. A copy of the researcher's cover letter will be presented to each participant while obtaining consent, which will also include the purpose of the study. Participants will also be informed on the survey that by participating, they are giving consent to be a part of the study.

CHAPTER 4: RESULTS

Results of Quantitative Data Analysis

Patient Demographics

There was a total of 85 participants. Descriptive analysis was used to look at socio-demographics to calculate means, standard deviations (SD), counts, and frequencies. The average age of male participants was 60-years-old with females being 50-years-old. Participants had a mean age of 61 (SD 7.65). Forty-four percent (44%) were female and fifty-six percent (56%) were male. All Participants reported being born in Lao and approximately twelve (11.8%) of the total participants reported being able to speak both Hmong and English. Seventy-four percent (74%) reported speaking only Hmong. The average amount of years of lived in the US was 35. Twenty-five percent (24.7%) of 85 participants reported being employed while seventy-five percent (75.3%) were unemployed. The mean employment status was 1.75 (employed was dummy coded as one and unemployed as 2, SD 0.43). The total average monthly income was 900 dollars. More than half of the participants reported having no education (66%) while few reported having less than high school (20%), high school (3%), and some college (10%) education. More than half of the participants reported their religion being Animism (76%), fifteen percent (15 %) reported being Christian, and two-percent (2%) reported being Mormon.

Table 1

Sociodemographic Characteristics of 85 Hmong Men and Women

Variable	Frequency	Percent
Gender		
Male	48	56.4
Female	37	43.5
Languages spoken		
Hmong	74	87.1
Hmong and English	11	12.9
Age		
50-60	42	49.4
60-70	41	48.2
70-80	11	12.9
Level of Education		
No education	56	65.9
Less than high school	17	20.0
High school	3	3.5
Some college	9	10.6
Years in the US		
No answer	1	1.2
Less than 20	0	0
21-30	14	16.5
31-40	64	75.3
More than 40	5	5.9
Where were you born		
Laos	85	100
Monthly Household income		
No answer	4	4.7
500 or less	2	2.4
500-999	64	75.3
1,000-1,999	5	5.9
2,000-2,999	6	7.1
3,000 or more	3	5.4
Employment		
Employed	21	24.7
Unemployed	64	75.3
Religion		
No answer	3	3.5
Animism	65	76.5
Christian	15	17.6
Mormon	2	2.4

Risk Factors for Cardiovascular Heart Disease

Participants reported having either a history of HTN (72%), DM (69.4%), hyperlipidemia (58.8%), or obesity (24.7%). While more than half of the participants reported having HTN, DM, and hyperlipidemia, six percent (5.9%) reported having a history of a heart attack with four percent (3.9% of 5.9%) reporting seeking immediate medication attention. The 3.9% who reported not seeking immediate medical attention reported thinking their symptoms were not serious enough as a reason for delaying medical attention.

Table 2

Risk Factors for Cardiovascular Heart Disease

Variable	Frequency	Percent
History of diabetes	59	69.4
History of hypertension	62	72.9
History of hyperlipidemia	50	58.8
History of obesity	21	24.7
History of a heart attack	5	5.9
Did you seek immediate medical attention?	3	2.4

To further assess if there were any differences in risk factors for CHD and frequency of visit with a primary care provider (PCP) in men and women, descriptive frequencies were performed after splitting the data by gender. Women reported having less risk factors for CHD when compared to men. Of the 85 participants, 38% of men had a history of DM compared to 21% in female. Hypertension was seen in 36% of men and 26% in women while hyperlipidemia was reported in 60.4% of men and 56.8% of females (see APPENDIX A). While both men and women reported visiting a provider at least annually or every two to three years, there was a slight increase in the frequency of visit to a PCP in women (mean 2.19, SD 1.10) when compared to men (mean 2.60 and SD 1.20). Frequency of visit to a PCP was dummy coded as 1 (every 6 months), 2 (annually), and 3 (every 2-3years). Hence, the lower the mean, the more frequent the visits were to a PCP (see APPENDIX B).

Table 3

Frequency of Visit to Primary Care Provider

Variable	Frequency	Percent
Every 6 months	15	17.6
Annually	39	45.9
Every 2-3 years	19	22.4
Every 3-6 years	8	9.4
Does not recall last visit	4	4.7
Total	85	100.0

Barriers to Healthcare

Barriers to accessing health care was grouped into three categories including sociocultural barriers, structural barriers, and other barriers for meaningful subgroup analysis. Sociocultural barriers include language (e.g., lack of a translator or miscommunication); social structure; mistrust of health care providers or western medicine; and alternative treatment such as use a shaman or complementary and alternative medicine (CAM) as primary treatment; misconception of seriousness of illness (e.g., my condition is not that serious); and fear (e.g., fear of invasive procedures or fear of finding out the truth). Structural barriers include lack of insurance and transportation. Lastly, barriers not listed in the survey but identified by the participants will be grouped under others.

There was a total of 13 barriers to select from and participants were made aware to select all barriers that applied to them. While more than half of the participants identified having only sociocultural barriers (68.2%), one percent (1.2%) identified having only structural barriers (e.g., lack of transportation or insurance), and thirty-one percent (30.6%) of participants identified having both sociocultural and structural barriers.

Table 4

Sociocultural and Structural Barriers to Care

Barriers	Frequency	Percent
Sociocultural	58	68.2
Structural	1	1.2
Both	26	30.6
Total	85	100.0

The most common barrier identified amongst men were use of CAM therapies as primary treatment (82.4%) and fear of invasive procedures (83.5%), followed by lack of interpreters (64.7%) and use of a Shaman as primary treatment (64.6%). While in women, the most common barriers identified were fear of invasive procedure (83.3%) and use of CAM therapy as primary treatment (78.4%). The use of CAM therapy as primary treatment and fear of invasive procedures were identified in both men and women as the top two barriers to accessing health care. Although the study was quantitative, one participant shared that although CAM therapy is popular for its concurrent use with Western Medicine, it should not be used as primary treatment of health conditions. When asked if there were any barriers not mentioned in the survey, none of the participants referenced any (see figure 1).

Table 5

Barriers to Accessing Health Care

Variable	Frequency	Percent
Lack of an interpreter	55	64.7
Miscommunication	48	56.5
Social structure	12	14.1
Mistrust of western medicine	43	50.6
Mistrust of healthcare providers	38	44.7
Shaman as primary treatment	48	56.5
CAM therapy as primary treatment	70	82.4
Lack of knowledge of my condition	21	24.7
My condition is not that serious	64	75.3
Fear of invasive procedures	71	83.5
Fear of finding out the truth	48	56.5
Lack of insurance	2	2.4
Problems with transportation	27	31.8
Other barriers	0	0

Note: CAM = Complementary and Alternative Medicine

A multiple regression was used to statistically compare correlation between barriers to care, risk factors for CHD, sex, and access to health care. The dependent variables (DVs) include two levels (a) access to health care, and (b) risk factors for CHD. The independent variables (IVs) are (a) barriers to accessing health care with three levels: sociocultural barriers, structural barriers, and other barriers; and (b) sex, with two levels including male or female. The Null hypothesis (HO): The composite DV does not differ between barriers to care and sex (male or female). The alternative hypothesis (HA): There is a difference in the composite DV somewhere between barriers to care and sex.

A multiple regression was conducted predicting the correlations between the DV—access to healthcare—by IVs (barriers to healthcare and sex). Overall, the regression was not significant, *F* (2, 82) = 1.58, $p > .05$, $R^2 = .04$. There were no significant differences between barriers to healthcare ($\beta = .08$, *t* (82) = .70, $p > .05$) and gender ($\beta = - .20$, *t* (82) = -1.76, $p > .05$).

Table 6

Multiple Regression for Access to Healthcare by Barriers and Sex

	b	95% Confidence interval of *b*		*p* value
		Lower bound	Upper bound	
Barriers to care	0.079	-0.182	0.381	0.485
Sex	-0.197	-0.985	0.060	0.082

Note: Significant at the *p* value < 0.05 level

A multiple regression was also conducted to predict the correlations between the DV—risk factors for CHD—by barriers to healthcare and sex. Overall, the regression was significant, *F* (2, 82) = 8.29, $p < .05$, $R^2 = .17$. There were statistically significant differences in risk factors for CHD by the number of barriers to accessing health care; ($\beta = - .31$, *t* (82) = - 2.96, $p < .05$) and gender ($\beta = .36$, *t* (82) = 3.45, $p < .05$).

Table 7

Multiple Regression for Risk factors for CHD by Barriers and Sex

	b	95% Confidence interval of *b*		*p* value
		Lower bound	Upper bound	
Barriers to care	-0.310	-0.504	-0.100	0.004
Sex	0.359	0.275	1.025	0.001

Note: Significant at the *p* value < 0.05 level

Summary of Data Analysis

There was no significance between access to care by barriers to care and sex ($p > 0.05$). The null hypothesis is accepted in this regression. However, despite the *p*-value being insignificant, women (mean 2.19, SD 1.10) did report seeing their PCP's more frequently when compared to men (mean 2.60 and SD 1.20). In addition, the number of barriers to care increased as access to care (frequency of seeing a PCP) decreased ($b = 0.079$). However, because the results were not equally distributed, there was no significance between barriers and sex by access to healthcare. Overall, there is a small to moderate effect size ($R^2 = 0.17$) of risk factors for CHD by access to health care and sex. There was a negative correlation between risk factors for CHD and barriers to healthcare ($r = -0.022$). An increase in barriers to accessing health care showed a "decreased" or lower values reported as risk factors for CHD. The risk factors for CHD was dummy coded as 1 for yes and 2 for no. Therefore, having a lower number reported for risk factors for CHD indicated more yes's and hence, increased risk factors for CHD with increasing barriers to accessing healthcare. There was a positive correlation ($r = 0.26$) in the significance between risk factors for CHD and sex. Male compared to females were associated with higher risk factors for CHD. A potential explanation for this is the increase in frequency with visiting a PCP in women when compared to men (see APPENDIX B). Figure 2 in the APPENDIX illustrates how the answer options in the survey was dummy coded.

CHAPTER 5: DISCUSSION AND CONCLUSION

Discussion

This study is one of the first to examine the correlations between access to health care by barriers to health care and sex; and the correlations between risk factors for CHD (e.g., hypertension, hyperlipidemia, and diabetes) by barriers to healthcare and sex. The frequency of a participant's access to healthcare (annually) could not be predicted by sex or barriers to healthcare. However, there was statistical significance between risk factors for CHD by barriers to healthcare and sex. Those who reported more risk factors for CHD also identified more barriers to accessing healthcare. In addition, females reported having less risk factors for CHD when compared to men, which may explain the statistical significance between risk factors for CHD and sex. Hence, further intervention and studies could be done to reflect how increasing risk factors for CHD is associated with an increase in barriers to healthcare.

The most common barriers identified in both men and women were the use of CAM therapies as primary treatment (82.4%), fear of invasive procedures (83.5%), lack of interpreters (64.7%), and use of a Shaman as primary treatment (56.5%). One possible explanation for the use of CAM therapy being the number two barrier to accessing health care (82.4%) may be due to the Hmong's traditional cultural practices and beliefs in health and illness. Historically, the Hmong lived in the mountains of Lao's and had no access to medications or healthcare. Traditionally, medicinal herbs, coining, cupping, string tying to ward off evil spirits, and other traditional healing practices were used. Many of these healing practices continue to be popular today in especially traditional Hmong families (Tatman, 2004). This may also explain why use of a shaman as primary treatment was selected as one of the top five most commonly identified barrier (56.5%). The Hmong were limited with choices for healing and believed that if an individual was sick, a Shaman could heal them (Johnson, 2002). Shamans continue to be important figures in the Hmong community today and a "source of connection for the Hmong between this world and the spirit world" (Tatman, 2004, p. 223).

A potential explanation for fear of invasive procedures being the number one (83.5%) identified barrier to health care may due to the Hmong's traditional ideology that each person is comprised of three to ten souls and that an isolation or "separation" of any souls from the body would result in illness or death (Capps, 2011). It was believed that the soul could be loss if frightened (including fear of surgical procedures or fear due to being in an unfamiliar environment), loss of blood (e.g., blood transfusions), invasive procedures, weakness, age vulnerability (e.g., the very old and the very young; Capps, 2011). Lack of interpreters was identified as the third most common barrier (64.7%) and is an obstacle for both health care provider and the Hmong patient because there was no written form of the Hmong language until the 1960's. Despite the language being immediately taught to some Hmong in Laos, many left the country to seek refuge after the Vietnam war and did not have the opportunity to learn the language (Cobb, 2010).

Conclusion

Guided by the theory of care seeking behaviors (TCSB), barriers to accessing health care such as sociocultural (CAM therapy as primary treatment, fear of invasive procedures, and use of a shaman and primary treatment) and structural barriers (lack of transportation and insurance) were identified. Thirty percent (30%) reported having both psychosocial (referred to as sociocultural barriers in this study) and facilitating factors (referred to as structural barriers in this study) while one percent (1.2%) reported having only facilitating factors (structural barriers). There was no statistical significance between sex and access to health care, or between barriers to healthcare and access to healthcare. Hence, it cannot be predicted that by having more barriers to accessing healthcare, patients would be less likely to visit their primary care provider (PCP). Sex also could not predict whether a participant would have more visits to a PCP. This study supported the suggestion made by Lauver (1992) for further studies to determine if facilitating factors and socio-demographic factors by themselves can directly influence care seeking behaviors.

Limitation

The surveys were created by the researcher and has not been tested for reliability and validity. In addition, the inclusion criteria of the study consisted of a history of DM, HTN, hyperlipidemia, or MI. There was no way of confirming that the participants had an established diagnosis of these health criteria. Instead, each participant gave self-reported histories of meeting the inclusion criteria. Although the study was open to participants in the Central Valley ranging from Visalia to Sacramento, Ca., all 85 participants recruited were from Fresno, limiting the generalizability of the results.

The inclusion criteria required the participants to be able to read in Hmong, which limited the pool of study participants. Fifty-eight percent (58%) reported being able to read in Hmong and were able to complete the surveys with no assistance while forty-two percent (42%) reported being able to read some Hmong but expressed their preference of having the researcher read the questions out loud. By reading the questions out loud, participants reported it made the process easier and quicker. Time may have also limited the validity of the results as many of the participants were anxious to quickly complete the surveys. It would be advisable to have the surveys available online since the inclusion criteria required that all participants be able to read in Hmong. This would increase the success of recruiting participants from various parts of United States and increasing generalizability of findings.

Implications for Future Studies

Increasing provider awareness of the barriers to accessing healthcare in their Hmong patients with CHD will better equip them with increasing accessibility of services to this population. Understanding the Hmong experience and the differences in their cultural values and beliefs, will also better prepare healthcare providers to examine their own biases and provide culturally sensitive and competent care to this population. This study examines the barriers to accessing healthcare in Hmong men and women with CHD and can be used to raise awareness of the most common barriers identified. In addition, further studies assessing the barriers to accessing health care in the Hmong population at the provider and systemic levels is needed to have a better understanding of both patient and provider experience.

Although it is important to include research on Hmong people in Fresno as it is only second to St. Paul-Bloomington, Minnesota with the largest Hmong population in the US, it would be beneficial for future studies to increase the geographic of participants to include those who are not only outside of Fresno, but in other states as well. These states may include Minnesota (66,181) and Wisconsin (49,240) (as cited in State of the Hmong American, 2013, p. 9). According to the 2010 US Census Bureau, more than 260,000 Hmong reside in the US with the largest settlements in California (91,224), Minnesota (66,181), and Wisconsin (49,240) (as cited in State of the Hmong American, 2013, p. 9). The results of this study will be available for continued research efforts; however, more funding is needed to develop an evidence-based practice model that minimizes barriers to health care access and improve the management of cardiac disease in the Hmong community. Funding may also go towards incentives to increase success of recruitment. Statistical power analysis using G power calculated a total sample size of 94. However, only 85 participants were recruited in the study and a potential cause for the reluctance to participate was the incentive of ten dollars. There were a few complaints from potential participants regarding the incentive being too small and one individual commented that the amount was somewhat “disrespectful”. Another implication for future studies would be to collaborate with cardiologists or with primary care providers who serve a large Hmong population. By collaborating with providers, patients meeting the inclusion criteria's can be referred to the researcher and increasing the validity of reported past medical histories.

Implications for Practice

The results of this study will be available for continued research efforts to develop an evidence-based practice model that minimizes barriers to health care access and improve the management of cardiac disease in the Hmong community. In addition, minimizing barriers to health care access will promote desired health seeking behaviors. The results of this study could be applied in practice to raise awareness of barriers to accessing healthcare in Hmong patients with CHD. By having a better understanding of the Hmong culture, their beliefs in health and illness, and the barriers to accessing health care, health care providers will be better prepared when working with Hmong patients with CHD. The use of a shaman as primary treatment (56.5%) was reported as one of the top five barrier to accessing healthcare. Shamans are well respected members and are often leaders in the Hmong community (Johnson, 2002).

Mercy Merced's Partners in healing program is the first of its kind to implement the use of shamans in the hospital. The purpose of the program is to teach shamans regarding Western medicine and practices to develop an understanding and trust form the Hmong spiritual healer—shaman. By collaborating with trusted individuals in the Hmong community such as a shaman, the Hmong may be more likely to accept and trust Western medicine when they are referred by their trusted healer (Agency for Healthcare Quality and Research, 2010). A similar program implemented in Fresno would be beneficial in reducing barriers to accessing healthcare, increase trust in health care providers, and encouraged the utilization of Western medicine. Fresno (Hmong population of 31,771) is only second to Saint Paul-Bloomington, Minnesota (Hmong population of approximately 64,000) with the largest Hmong population in the United States (as cited in State of the Hmong American, 2013).

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APPENDICES

APPENDIX A: RISK FACTORS FOR CHD BY SEX

Table 8

Risk Factors for CHD by Sex

	Frequency	Percent	Mean	Standard Deviation
Male				
Diabetes	38	79.2	1.21	0.41
Hypertension	36	75	1.25	0.44
Hyperlipidemia	29	60.4	1.40	0.49
Obesity	16	33.3	1.67	0.48
Female				
Diabetes	21	56.8	1.43	0.50
Hypertension	26	70.3	1.30	0.46
Hyperlipidemia	21	56.8	1.43	0.50
Obesity	5	13.5	1.86	0.35

Note: CHD=Coronary heart disease. Mean is analyzed using dummy coding of yes=1 and no=2

APPENDIX B: FREQUENCY OF VISIT TO PCP BY SEX

Table 9

Frequency of Visit to PCP by sex

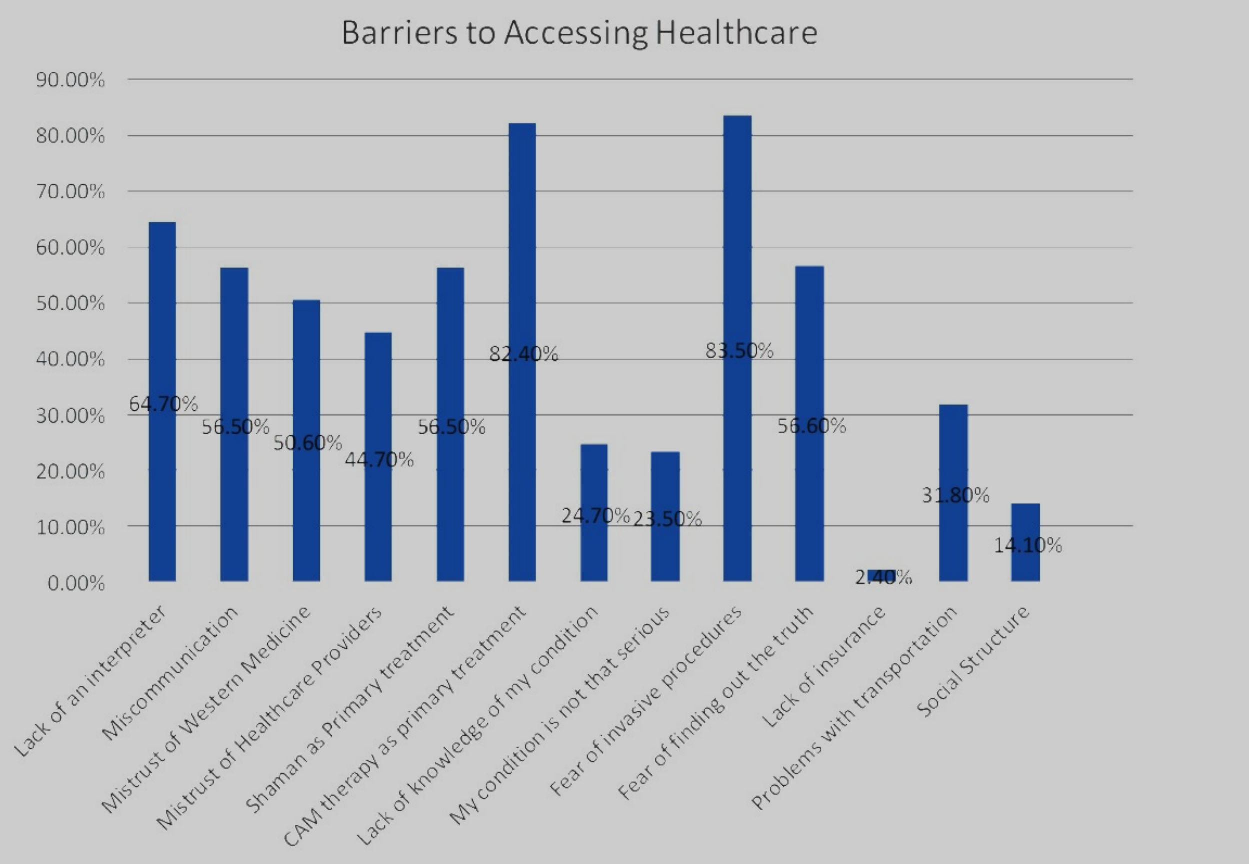
	How often do you visit a PCP
Male	
Mean	2.60
Standard deviation	1.20
Variance	1.44
Female	
Mean	2.19
Standard deviation	1.10
Variance	1.21

Note: PCP = Primary care provider

APPENDIX C: BARRIERS TO ACCESSING HEALTHCARE

Figure 1

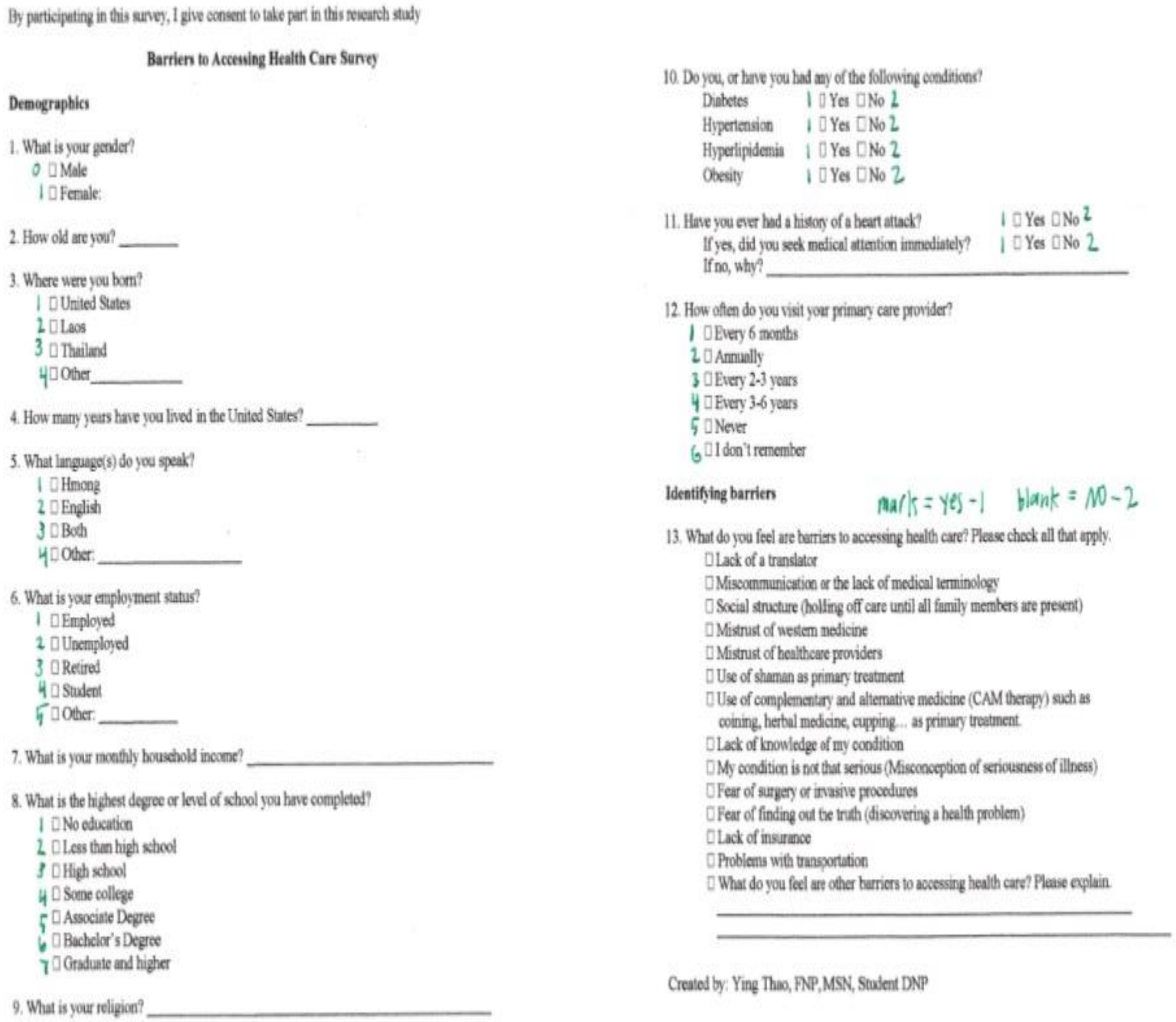
Barriers to Accessing Healthcare



APPENDIX D: SURVEY DUMMY CODED

Figure 2

Survey Dummy Coded



By participating in this survey, I give consent to take part in this research study

Barriers to Accessing Health Care Survey

Demographics

1. What is your gender?
   0 ☐ Male
   1 ☐ Female:

2. How old are you? ________

3. Where were you born?
   1 ☐ United States
   2 ☐ Laos
   3 ☐ Thailand
   4 ☐ Other___________

4. How many years have you lived in the United States? _________

5. What language(s) do you speak?
   1 ☐ Hmong
   2 ☐ English
   3 ☐ Both
   4 ☐ Other: _______________

6. What is your employment status?
   1 ☐ Employed
   2 ☐ Unemployed
   3 ☐ Retired
   4 ☐ Student
   5 ☐ Other: _________

7. What is your monthly household income? ___________________________

8. What is the highest degree or level of school you have completed?
   1 ☐ No education
   2 ☐ Less than high school
   3 ☐ High school
   4 ☐ Some college
   5 ☐ Associate Degree
   6 ☐ Bachelor's Degree
   7 ☐ Graduate and higher

9. What is your religion? _______________________________________

10. Do you, or have you had any of the following conditions?
    Diabetes 1 ☐ Yes ☐ No 2
    Hypertension 1 ☐ Yes ☐ No 2
    Hyperlipidemia 1 ☐ Yes ☐ No 2
    Obesity 1 ☐ Yes ☐ No 2

11. Have you ever had a history of a heart attack? 1 ☐ Yes ☐ No 2
    If yes, did you seek medical attention immediately? 1 ☐ Yes ☐ No 2
    If no, why? ____

12. How often do you visit your primary care provider?
    1 ☐ Every 6 months
    2 ☐ Annually
    3 ☐ Every 2-3 years
    4 ☐ Every 3-6 years
    5 ☐ Never
    6 ☐ I don't remember

Identifying barriers marks = yes - 1 blank = NO - 2

13. What do you feel are barriers to accessing health care? Please check all that apply.
    ☐ Lack of a translator
    ☐ Miscommunication or the lack of medical terminology
    ☐ Social structure (holding off care until all family members are present)
    ☐ Mistrust of western medicine
    ☐ Mistrust of healthcare providers
    ☐ Use of shaman as primary treatment
    ☐ Use of complementary and alternative medicine (CAM therapy) such as coining, herbal medicine, cupping… as primary treatment.
    ☐ Lack of knowledge of my condition
    ☐ My condition is not that serious (Misconception of seriousness of illness)
    ☐ Fear of surgery or invasive procedures
    ☐ Fear of finding out the truth (discovering a health problem)
    ☐ Lack of insurance
    ☐ Problems with transportation
    ☐ What do you feel are other barriers to accessing health care? Please explain.
    ____
    ____

Created by: Ying Thao, FNP, MSN, Student DNP

Note: Numbers written in are the dummy codes for each answer option

APPENDIX E: RESEARCH SUBJECT BILL OF RIGHTS

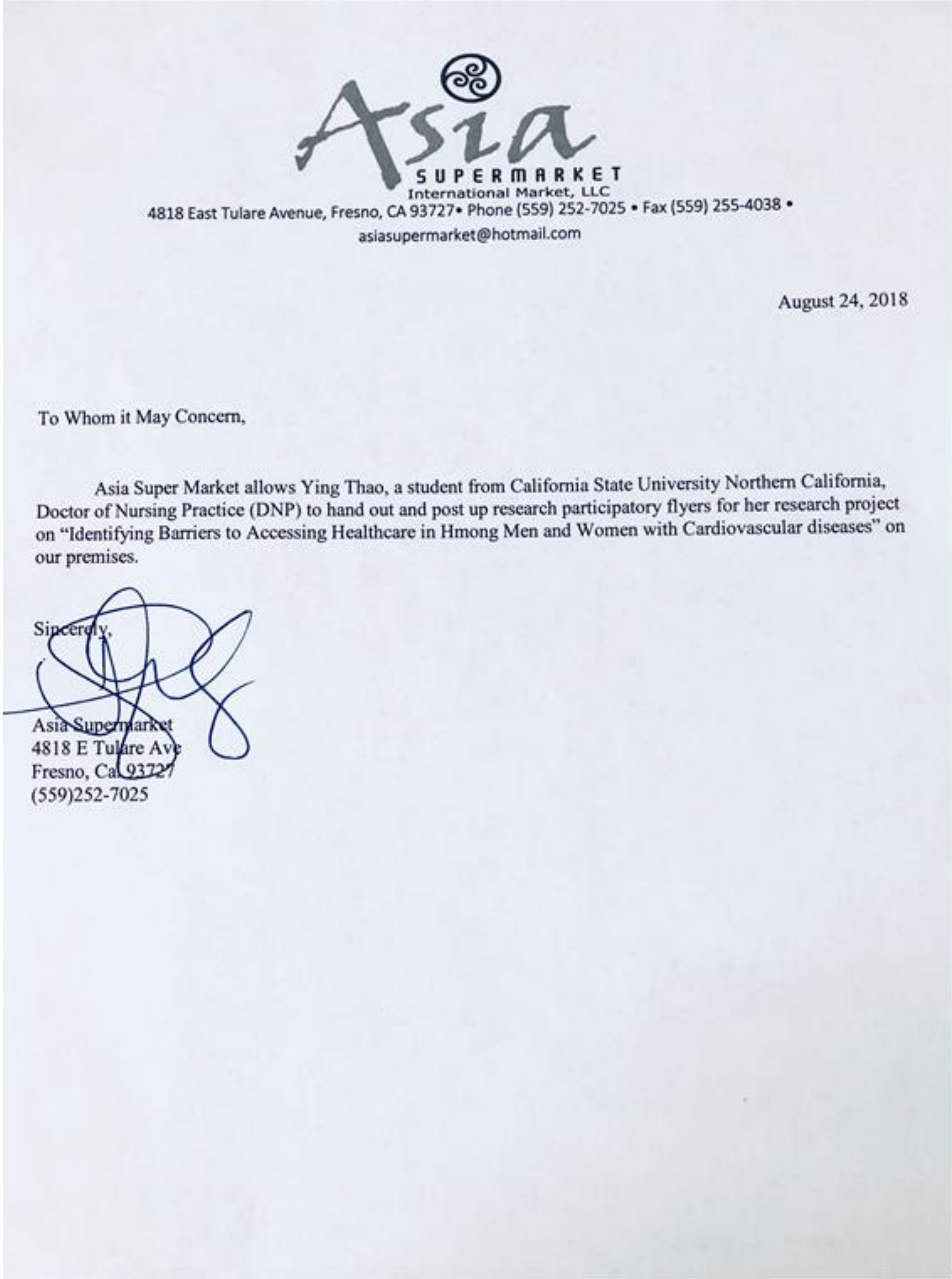
Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Ying Thao** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 01/23/2016.

Certification Number: 1965828.

APPENDIX F: APPROVAL FROM PARTICIPATORY INSTITUTION



Asia
SUPERMARKET
International Market, LLC
4818 East Tulare Avenue, Fresno, CA 93727• Phone (559) 252-7025 • Fax (559) 255-4038 •
asiasupermarket@hotmail.com

August 24, 2018

To Whom it May Concern,

Asia Super Market allows Ying Thao, a student from California State University Northern California, Doctor of Nursing Practice (DNP) to hand out and post up research participatory flyers for her research project on "Identifying Barriers to Accessing Healthcare in Hmong Men and Women with Cardiovascular diseases" on our premises.

Sincerely,

Asia Supermarket
4818 E Tulare Ave
Fresno, Ca. 93727
(559)252-7025

APPENDIX G: COVER LETTER IN ENGLISH

To whom it may concern,

My name is Ying Thao and I am a doctoral of nursing practice student at California State University of Fresno. I am conducting a study on identifying the most common barriers to accessing health care in Hmong men and women ages 50 and older with cardiovascular heart diseases and risk factors. The results of this study will be available for continued research efforts to develop an evidence-based practice model that minimizes barriers to health care access and improve the management of cardiac disease in the Hmong community. This research will also assist with increasing provider awareness of their Hmong patients with cardiovascular diseases.

You are being asked to participate in this study by identifying barrier to accessing health care including but not limited to transportation, insurance, language barriers, use of complementary and alternative method (CAM) as an alternative to Western medicine. All answers will remain confidential with only the investigator reviewing the responses. Participation is completely voluntary, and you may withdrawal from the study at any time.

There will be a ten-dollar incentive for your time and participation after the completion of the survey and questionnaire. The benefit of this study will not be directly to you but to encourage future studies to focus on identifying individualized management of each barrier identified, increasing access to health care, and management of cardiac disease within the Hmong community.

If you have any questions, please feel free to contact me at any time with your concerns. You may contact me at (559) 367-3831 or email me at yingthao@mail.fresnostate.edu should you be interested in an electronic copy of the completed research study.

Thank you for your participation and your time

Sincerely,

Ying Thao, MSN, FNP-C
Doctoral of Nursing Practice Student
California State University Northern Consortium

APPENDIX H: COVER LETTER IN HMONG

Rau leeg twg ua yuav txhawj xeeb

Kuv lub npe yog Yeeg Thoj, kuv yog ib tug ntxhais kawm kuv raim master mus ua ib tug kws kho mob nyob rau tim lub tsev kawm ntawv qib siab California State University of Fresno. Kuv tabtom kawm thiab yuav tshawb fawb txog txoj kev nrhiav kev kho mob ntawd peb hmoob coj txiv neej ua muaj hnub yug li ntawd 50 xyoo thiab laus zoj ua mob plawv thaib tej yam uas yuav ua tau kev muaj mob plawv. Kuv lub hom phiaj ntawd txoj kev kawm thiab kev tshawb fawb no yog los pab qhiab rau cov tub tshawb fawb paub txoj peb haiv neeg hmoob.

Thov noog txog ntawd nej txoj kev pab qhia txog txoj cos teem meem thaum nej mus nrhiav kws kho mob, xws li tsis muaj insurance, kev txhais lus, thiab ho xav li cas txog ntawd amelikas txoj kev kho mob, thiab lwg yam. Koj txoj kev pab qhia no yuav tsis pub hais tawm rau lwm leeg lwm tus. Yuav tsis tswv koj txoj kev pab qhiab tabsim yog koj tsis txaus siab pab qhiab los koj ntawm twg los taus.

Koj txoj kev koom tes nrog rau txoj kev tshawb fawb no yuav tau txais kaum duas tom qab koj tiav qhov kev tshawb fawb no. Txoj kev tshawb fawb no tes zaum yuav tsis raug koj, mam tabsim nws yuav pab rau cov tub tshawb fawb lawm nrhiav kev pab rau peb haiv neeg hmoob ua muag kev mob plawv thiab lwm yam uas yuav uas tau raws yus mob plawv.

Yog koj muaj lus nug dabtsi, thov hu tau tuaj rog kuv tham txua lub sib hawm. Xov toog yog (559) 367-3831. Los yog sauv ntawv tua rau kuv tu email yingthao@mail.fresnostate.edu yog tias koj xav tau ib daim qauv ntawm cov kev tshawb fawb no tiav.

Ua tsaug rau koj txoj kev pab thiab koj lub sib hawm.

Sincerely,

Ying Thao, MSN, FNP-C
Doctoral of Nursing Practice Student
California State University Northern Consortium

APPENDIX I: SURVEY IN ENGLISH

By participating in this survey, I give consent to take part in this research study

Barriers to Accessing Health Care Survey

Demographics

1. What is your gender?
   - ☐ Male
   - ☐ Female:

2. How old are you? _________

3. Where were you born?
   - ☐ United States
   - ☐ Laos
   - ☐ Thailand
   - ☐ Other______________

4. How many years have you lived in the United States? ___________

5. What language(s) do you speak?
   - ☐ Hmong
   - ☐ English
   - ☐ Other: ______________________

6. What is your employment status?
   - ☐ Employed
   - ☐ Unemployed
   - ☐ Retired
   - ☐ Student
   - ☐ Other: ____________

7. What is your monthly household income?

____

8. What is the highest degree or level of school you have completed?
   - ☐ No education
   - ☐ Less than high school
   - ☐ High school
   - ☐ Some college

☐ Associate Degree
☐ Bachelor’s Degree
☐ Graduate and higher

9. What is your religion?

____

10. Do you, or have you had any of the following conditions?

Diabetes	☐ Yes ☐ No
Hypertension	☐ Yes ☐ No
Hyperlipidemia	☐ Yes ☐ No
Obesity	☐ Yes ☐ No

11. Have you ever had a history of a heart attack? ☐ Yes ☐ No
If yes, did you seek medical attention immediately? ☐ Yes ☐ No
If no, why?

____

12. How often do you visit your primary care provider?
☐ Every 6 months
☐ Annually
☐ Every 2-3 years
☐ Every 3-6 years
☐ Never
☐ I don’t remember

Identifying barriers

13. What do you feel are barriers to accessing health care? Please check all that apply.
☐ Lack of a translator
☐ Miscommunication or the lack of medical terminology
☐ Social structure (holding off care until all family members are present)
☐ Mistrust of western medicine
☐ Mistrust of healthcare providers
☐ Use of shaman as primary treatment
☐ Use of complementary and alternative medicine (CAM therapy) such as coining, herbal medicine, cupping… as primary treatment.
☐ Lack of knowledge of my condition
☐ My condition is not that serious (Misconception of seriousness of illness)

☐ Fear of surgery or invasive procedures
☐ Fear of finding out the truth (discovering a health problem)
☐ Lack of insurance
☐ Problems with transportation
☐ What do you feel are other barriers to accessing health care? Please explain.

____

Created by: Ying Thao, FNP, MSN, Student DNP
Edited and Reviewed for accuracy by: Dr. Leepao Khang

APPENDIX J: SURVEY IN HMONG

Yog kuv teg cov lus nug nyob dai ntawv no, kuv tso cai rau kev koom tes ntawm kev tshawb nrhiav no.

Kev Nyuab Txwv Mus Khob Mob Thiab Mus Ntsib Kws Kho Mob

Thov teb cov lus nug nram qab no kom paub koj zoo me ntsis.

1. Koj yog poj niam los txiv neej?
   - ☐ Txiv neej
   - ☐ Poj niam

2. Koj muaj hnub nyoog li cas?________________

3. Koj yug nyob rau teb chaws twg?
   - ☐ Amelikas
   - ☐ Teb Chaws Los Tsuas
   - ☐ Thaib teb
   - ☐ Lwm qho chaws: _____________________

4. Koj nyob hauv teb chaws Amelikas tau pes tsawg xyoo lawm?______________

5. Koj txawj hais yam lus twg?
   - ☐ Hmoob
   - ☐ Amelikas
   - ☐ Lwm Haiv neeg lus: ________________

6. Koj puas ua haujlwm?
   - ☐ Tseem ua haujlwm
   - ☐ Tsis ua haujlwm
   - ☐ Tseem kawm ntawv
   - ☐ So haujlwm lawm
   - ☐ Lwm yam: ____________________

7. Ib lub hlis, koj tsev neeg tau nyiaj li cas? _________________________________

8. Koj kawm ntawv txoj twg?
   - ☐ Tsis tau muaj kev kawm ntawv
   - ☐ Tsawg dua ntawv qib nrab (High school)
   - ☐ Qib nrab (High school)
   - ☐ Kawm me ntsis ntawv qib siab

☐ Tiav daim ntawv ob xyoos (Associate Degree)
☐ Tiav diam ntawv plaub xyoos (Bachelor's Degree)
☐ Siab tshaj diam ntawv tiav plaub xyoos (Graduate and higher)

9. Koj txoj kev ntseeg yog dabtsis?
____

10. Koj puas tau muaj yam mob xws li nram qab no?

Mob ntshav qab zib	☐ Muaj	☐ Tsis muaj
Mob ntshav siab	☐ Muaj	☐ Tsis muaj
Mob nthav muaj roj	☐ Muaj	☐ Tsis muaj
Roj heev	☐ Muaj	☐ Tsis muaj

11. Koj puas tau muaj tus kab mob plawv nres? ☐ Muaj
☐ Tsis muaj
Yog muaj, koj puas tau mus nrhiav kev kho tam sim? ☐ Nrhiav
☐ Tsis nrhiav
Yog tsis tau nrhiav, vim lis cas?______________________________________

12. Koj mus ntsib koj tus kws kho mob ntau npaum li cas?
☐ 6 lub hlis ib zaug
☐ 1 xyoo ib zaug
☐ 2-3 xyoo ib zaug
☐ 3-6 xyoo ib zaug
☐ Yeej tsis tau mus ntsib kws kho mob
☐ Tsis nco qab lawm

13. Dab tsi ua kev nyuab txwv koj mus kho mob los mus ntsib kws kho mob? Thov khij tag nrho raws li koj xav thiab paub.
☐ Tsis muaj tus txhais lus
☐ Tsis nkag siab txoj kev kho mob thiab tsis paub kws kho mob hais li cas
☐ Tos tham nrog tsev neeg ua ntej yuav kho mob (social structure)
☐ Tsis nkag siab txoj kev kho mob nyob Amelikas
☐ Tsis ntseeg siab rau cov kws kho mob
☐ Ua neej ua yaij los kho mob ua ntej
☐ Siv lwm yam los kho mob xws li tshuaj ntsuab los yog siv nyiaj kuam
☐ Tsis paub txog kuv tus mob zoo

☐ Kuv tus mob tsis loj npau twg (Misconception of seriousness of illness)
☐ Ntshai tsam kws kho mob phais
☐ Ntshai tsam kws kho mob nrhiav tau lwm yam kab mob (discovering a health problem)
☐ Tsis muaj kev pov hwm kho mob (insurance)
☐ Tsis muaj tsheb thauj
☐ Puas muaj lwm yam ua kev nyuab txwv koj mus kho mob los mus ntsib kws kho mob? Yog muaj, thov piav qhia.

____

Tsim los ntawm: Ying Thao, FNP, MSN, Student DNP

Saib thiab kho los ntawm: Dr. Leepao Khang

APPENDIX K: PHONE SCREENING QUESTIONAIRE

Phone Screening

Male or female?

1.) Are you willing to participate in this research study voluntarily?
2.) What is your age?
3.) Do you have a history of cardiovascular heart diseases such as a heart attack (MI)?
    a. Do you have risk factors for CHD such as hypertension, diabetes, or hyperlipidemia?

APPENDIX L: PARTICIPATORY FLYER IN ENGLISH

Are you Hmong?

Are you age 50 or older and have either diabetes, hypertension, high cholesterol or heart diseases?

Are you interested in taking part in a study to Identify Barriers to Accessing Healthcare in Hmong Men and Women with Cardiovascular Diseases?

If you answered **YES** to all these questions or know anyone who may be interested, please contact:

Researcher: Ying Thao, FNP, MSN, DNP student
California State University Northern Consortium, Doctor of Nursing Practice
Phone: (559) 367-3831
Email: yingthao@mail.fresnostate.edu

Incentive: $10.00
Where?
I can meet you at any public location of your choice

CAN’T DRIVE? WE CAN MEET IN THE COMFORT OF YOUR HOME

APPENDIX M: PARTICIPATORY FLYER IN HMONG

Koj puas yog hmoob?

koj puas yog 50 rov sauv thiab puas muaj ntshav qab zi, ntshav siab, ntshav muaj roj, los yog muaj kab mob plawv?

Koj puas yees, los yog puas kam koom tes pab peb hmoob ntsoom niam txiv laus nrhiav ib txoj hauv kev los tiv thaiv tus kab mob plawv?

Yog koj tau teb **YES** rau cov lus noog thiab los yog koj paub ib leeg twg ua yuav pab tau, thov pab hu rau:

Kws tshawb fawb: Ying Thao, FNP, MSN, DNP student
California State University Northern Consortium, Doctor of Nursing Practice
Xov tooj: (559) 367-3831
Email: yingthao@mail.fresnostate.edu

Dej siab pub rau koj txoj kev pab: $10

Yuav ntsib qhov twb?
Kuv ntsib tau koj qhov twb los tau
Tsis muaj cheb los tsis ua li cas, kuv ntsib tau koj nyob rau tim koj tsev los tau ib yam.

APPENDIX N: RESOURCES FOR PARTICIPANTS

Resources

The Fresno Center contact information:

4879 East Kings Canyon Road, Fresno, California 93727, United States

Phone: (559) 255-8395 Fax: (559) 255-1656

Website: https://fresnocenter.org/

Fresno County Services:

Website:

http://fresno.networkofcare.org/aging/services/category.aspx?cid=26&targetgrp=

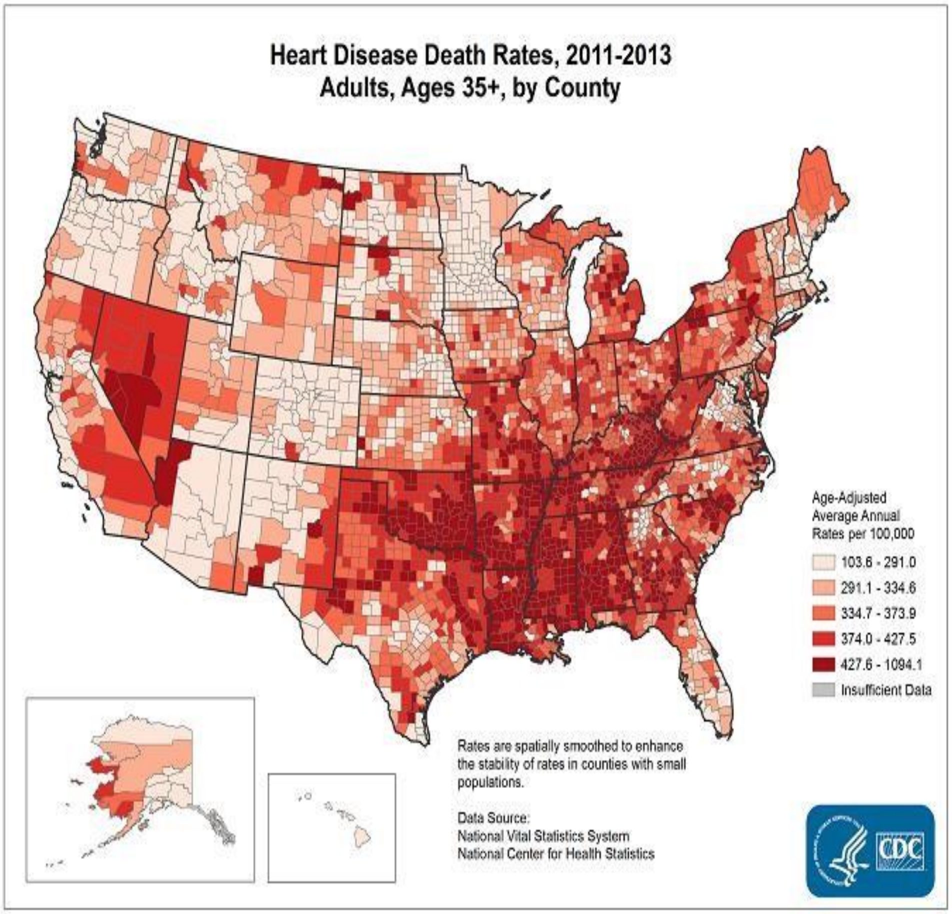
American Cancer Society Transportation Reimbursement:

Phone: (559) 451-0722

Address: 2222 W Shaw Avenue Fresno, CA 93711

APPENDIX O: CARDIOVASCULAR HEART DISEASE FACT SHEET

Heart Disease Fact



Heart Disease Death Rates, 2011-2013
Adults, Ages 35+, by County

Rates are spatially smoothed to enhance the stability of rates in counties with small populations.

Data Source:
National Vital Statistics System
National Center for Health Statistics

Sourc Interactive Atlas of Heart Disease and

Heart Disease Facts

- Heart disease is the **leading cause** of death for both men and women. **More than half** of the deaths due to heart disease in 2009 were in men.[1]
- About **610,000 Americans** die from heart disease each year—that's **1 in every 4 deaths**.[1]

- Coronary heart disease is the most common type of heart disease, killing about **365,000 people** in 2014.[1]
- In the United States, someone has a heart attack **every 42 seconds**. Each minute, someone in the United States dies from a heart disease-related event.[2]
- Heart disease is the **leading cause** of death for people of most racial/ethnic groups in the United States, including African Americans, Hispanics, and whites. For Asian Americans or Pacific Islanders and American Indians or Alaska Natives, heart disease is second only to cancer.[2]
- Heart disease costs the United States about **$207 billion** each year.[1] This total includes the cost of health care services, medications, and lost productivity.

Risk Factors

High blood pressure, high LDL cholesterol, and smoking are key heart disease risk factors for heart disease. About **half of Americans** (49%) have at least one of these three risk factors.[2]

Several other medical conditions and lifestyle choices can also put people at a higher risk for heart disease, including:

- Diabetes
- Overweight and obesity
- Poor diet
- Physical inactivity
- Excessive alcohol use

CDC's Public Health Efforts

- State Public Health Actions to Prevent and Control Chronic Diseases
- Million Hearts®
- WISEWOMAN

For More Information

For more information on heart disease, visit the following Web sites.

- Centers for Disease Control and Prevention
- American Heart Association*
- National Heart, Lung, and Blood Institute

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4. Heidenriech PA, Trogdon JG, Khavjou OA, Butler J, Dracup K, Ezekowitz MD, et al. Forecasting the future of cardiovascular disease in the United States: a policy statement from the American Heart Association. *Circulation*. 2011;123(8):933–44.

5. CDC. Million Hearts™: strategies to reduce the prevalence of leading cardiovascular disease risk factors(http://wwwdev.cdc.gov/mmwr/preview/mmwrhtml/mm6036a4.htm?s_cid=mm6036a4_w). United States, 2011. *MMWR* 2011;60(36):1248–51.

*Links to non–Federal organizations are provided solely as a service to our users. Links do not constitute an endorsement of any organization by CDC or the Federal Government, and none should be inferred. The CDC is not responsible for the content of the individual organization Web pages found at this link.