Health Issues for the Hmong Population in the U.S.: Implications for Health Educators

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Abstract

The Hmong population in the US has grown since 1975. According to the 2000 US census, there are more than 160,000 Hmong living in the US. New waves of Hmong immigrants are re-settling in the US. Over 15,000 Hmong have come to the US from Thailand as refugees since summer 2004. California, Minnesota, and Wisconsin are the States with the highest Hmong populations in the US. Minneapolis, Fresno, and Sacramento are the metropolitan areas with the highest number of Hmong residents. Health issues such as tuberculosis, hepatitis B carrier status, asymptomatic splenomegaly, sudden unexpected nocturnal death syndrome, post-traumatic stress disorder, injuries related to agricultural occupation, cardiovascular disease, diabetes, lower immunization rates, and cancer, pose major challenges for health education practitioners. Genetics, problems with access to health services, and diet-related issues appear to be important contributors for morbidity and mortality in this population. Although the Hmong born outside the US account for less than 0.5% of the foreign population in the US, they are an important group from a health education perspective.

Key Words: *Hmong, Cancer, Immigrants, Refugees*

INTRODUCTION

The US Hmong trace their cultural ancestry as an ethnic minority in China.[1] They re-settled in the mountainous regions of Laos, Thailand, and North Vietnam and came to the US as political refugees because of their involvement as US allies during the Vietnam War.[2] The Hmong living in the US come primarily from Laos. More than 200,000 Hmong left Laos as refugees since 1975 and relocated in Thailand. From these, 90% have come to US.[3]

Despite their increasing numbers in the US, little has been written about the Hmong in the US. A few studies focus on Hmong demographics and experiences with the educational system.[4-6] Others have emphasized gender issues,[7,8] family life,[9,10] and religious adaptation.[11,12] A dearth has focused exclusively on the health status of this population.[13-18] The purpose of this article is to discuss the health status of Hmong populations living in the US and the challenges they pose for the health education practice.

Hmong Communities in the US

The number of Hmong living in US has been difficult to determine. The data provided by the 2000 US Census estimates that there are 169,428 Hmong residing in US.[19] Data provided by the Hmong 2000 Census indicates that there is a total of 186,310 Hmong living in US.[20] The Hmong 2000 Census Study provided a comprehensive understanding of socio-demographic characteristics of Hmong populations living in the United States and its results are based on people who identified themselves as being Hmong. The Hmong National Development Organization indicates that the previous data under-represent the number of Hmong people actually living in US. According to this organization, it is estimated that about 275,000 Hmong are actually residing in US. Factors such as distrust in the government, previous negative experiences related to their identification of Hmong ancestry, and language barriers may account for this discrepancy.[20]

According to Pfeifer,[20] the states with the largest Hmong populations are California (65,095 Hmong), Minnesota (41,800 Hmong), Wisconsin (33,791 Hmong), North Carolina (7,093 Hmong), and Michigan (5,383 Hmong). The metropolitan areas with the highest numbers of Hmong are, in descending order, Minneapolis, MN; Fresno, CA; Sacramento-CA; Milwaukee, WI; and Merced, CA. The median age for the Hmong is 16.1 years while for the general US population is 35.3 years. About 56% of the Hmong population in the U.S. is younger than 18 years old. The average Hmong household size is 6.27 people in comparison to 2.59 persons in the general population.[20]

Regarding educational attainment, 50.7% of Hmong adults have less than 9th grade education (7.5% for the U.S. population) and 40.4% have completed high school or higher (80.4% for the general U.S. population). The median family income for Hmong is $ 32,076 and for US is $ 41,994. A total of 30.3% of Hmong living in US derive their income from public assistance compared with 3% in the general US population. The States with the highest poverty levels in Hmong populations are Alaska (70% of Hmong groups) and California (50% of Hmong groups). An estimated 34.8% of US Hmong populations have incomes below the poverty level as compared to 12% for the general US population. Income in the Hmong communities in US is mostly derived from working in manufacturing and agricultural jobs. Linguistic isolation (defined as no adults speaking English well or at all) was 34.8% in the Hmong compared with 4.1% in the US population.[20]

Health Issues in the Hmong Population

In the Hmong language, the word Hmong means "human being" or "free people".[21] The Hmong are an agrarian society originally from China. Thailand has been the primary area for resettlement for most Hmong refugees since 1975 when US agreed to locate between 1,000 and 3,000 Hmong in this Asian country. By December 1975, more than 140,000 Hmong had migrated to Thailand as refugees.[3]

Traditional Beliefs

Before exploring health issues in the Hmong, it is important to understand their health beliefs which differ from the allopathic model we are familiar with in US. The Hmong follow an animist religion. They believe in the influence of spirits in all facets of life. The Hmong community believes that life and death is a continuous circle with two specific end-points

(birth and death). Hmong communities believe that death is not the end of one's existence, but rather the beginning of a new cycle, elucidated in the reincarnation process, which allows souls to exist in the physical world again and again.[22]

The literature suggests that the Hmong continue to engage in ancestral worship and soul calling. Some Hmong believe that illness is caused by a departed ancestral spirit or the loss of one of the sick person's souls. Therefore, it is not surprising to find that some Hmong believe that illness is not a biological process, but rather results from the separation of body and soul which may or may not be related to offending an ancestor. Furthermore, ill health may result from the spirit wishing to depart the body it occupies in search of a better location.[23] Illness, therefore, may not be treated with allopathic medicine and can instead be treated by a traditional healer called a shaman. The shaman has duties similar to the ones of a psychologist, a doctor, and a minister.[22]

It is widely believed among this population that if a shaman's ritual of soul-calling fails to bring back the soul to the sick individual, the person can only get worse and eventually die.[13] Because of these beliefs, many Hmong may have difficulties understanding the concept of disease transmission through microorganisms and they may even refuse Western-based treatments.[24] Home remedies and herbal treatments are highly valued among the Hmong.

The importance of Western health care is in general recognized among Hmong communities, but traditional diagnosis and herbal or spiritual treatments are usually first used before biomedicine.[22] Conflicts between biomedical practices and Hmong beliefs are important to be studied. For instance, surgical removal of a body part may conflict with the Hmong belief in reincarnation. In addition, Hmong people may be hesitant to undergo anesthesia because they may fear a loss of their soul while being unconscious. After a general anesthetic, it may be necessary to perform a soul calling ceremony in the operating room to recall the lost soul.[22]

Health Issues for the Hmong

Tuberculosis, hepatitis B carrier status, asymptomatic splenomegaly , sudden unexpected nocturnal death syndrome, post-traumatic stress disorder, injuries related to agricultural occupation, cardiovascular disease, diabetes, lower immunization rates, and cancer have been documented as major concerns for the Hmong population in US.[25, 26] Hepatitis B carrier status in the Hmong has reached endemic proportions. The rates of obesity and Hypertension among Hmong children are higher than for the general population. Among young male adults, rates of asymptomatic splenomegaly are three times higher than for the general population of South East Asian refugees.[25]

Mental health issues are of special relevance for Hmong populations living in US. Of particular concern is the high number of sudden and unexplained nocturnal deaths in Hmong males recently immigrated to US.[25] This phenomena has been recently known as sudden unexpected nocturnal death syndrome.[26] Speculations have been made about the association of mental health issues such as post traumatic stress disorder, depression, and post emigration stress with these unexplained nocturnal deaths.[26]

In a study of felt health problems in the Hmong, Yang[27] indicated that participants in her study perceived family conflicts, youth delinquency, and mental health issues as the most important health problems in their communities. Mental health programs that involve close family and clan members seem to be a priority for the Hmong. Clans are important in keeping the mental and general well-being of the Hmong community. Newly-arrived Hmong will usually move to Minnesota, Wisconsin, Ohio, North Carolina, and California where large clan groups live.[22] The clan leader and the shaman are important sources of mental health support for this community.

Oxley & Lee[28] indicated that Hmong adolescents perceive pregnancy as a difficult event in life since it involves additional responsibilities and difficulties in time management. Added responsibility was described by the participants in Oxley and Lee's study, as having additional tasks they were not prepared for. Difficulties in time management referred to the scarcity of time to fulfill parental expectations, marriage responsibilities, and pregnancy care.[28]

Birth rituals are important in analyzing the health status of the Hmong. "In Hmong culture, mothers and mothers-in-law help at the birth, which often occurs in the squatting position, with the husband helping to cut the cord and wash the

newborn infant."[25] Hmong women dislike episiotomies. A woman needing a Caesarean section would prefer an epidural over general anesthetic because of concerns related to the loss of one of the souls. "The placenta is required for reincarnation and so it is usually buried at the place of birth".[25]

In the traditional beliefs of the Hmong, women in post-partum need to keep warm. Food and clothing are given to maintain heat, particularly during the first three days post partum. Taking baths and touching cold water are highly discouraged. Foods rich in carbohydrates, hot rice, and chicken soup are given to women during the first 30 days after delivery. Fish, pork, and eggs are discouraged during the first 10 days post partum. Cold foods such as fruits, vegetables, and cold drinks are not given to women in post partum. Exercise is also discouraged as it may cause dysfunction of internal organs.[25]

Newborns are on average 200g lighter, according to Queensland.[25] Traditional rituals such as placing a necklace on the newborn before the umbilical cord is cut, protects the baby from illness. In the Hmong belief system, praising the newborns may expose them to spirits who could harm the baby. This is why, it is common to hear messages such as "you are an ugly baby" as a way to confuse the spirits and protect the newborn.[25]

Breastfeeding for the first two years of life is common in the Hmong communities, although bottle feeding is becoming more prevalent. "An infant's first solid food is rice flour and water made into gruel. This may be started as early as one month but other foods are not introduced until one year. During pregnancy and lactation many women do not increase their caloric intake. Many do not include milk in their diet".[22]

Contraceptive use is lower in the Hmong as compared to other ethnic groups in US because having several children is highly valued. Contraceptive methods that suppress menstruation are not commonly used because not having menstrual flow is considered to be unhealthy and cause lack of energy, weight loss, and paleness. Sexual intercourse is prohibited during menstruation because this type of blood is seen as a contaminant.[25]

Yang[27] indicated that Hmong Americans face challenges in finding the words and appropriate language to describe illnesses not known to them prior to their arrival to the U.S. Examples of Hmong words created to described Western terms include "Taw Vwm (crazy foot=gout), Tes Vwm (crazy hand= gout), Ntshav Qab Zib (sweet blood=Diabetes), and Ntshav Siab (blood high= hypertension)".[27]

Family conflict, domestic violence, generation gaps, youth gangs, and poverty have been found to be major health-related problems for the Hmong.[27] Yang illustrated the relevance of dealing with family conflicts by citing multiple newspaper articles related to homicide and suicide in this population "The couple [mentioned in a newspaper article] were separated due, in part, to their cultural differences, which were described as resulting from the fact that the wife was more Americanized than the husband, and also in part, due to their disagreement on a decision to move the family back to California".[27]

A study of the Hmong in Fresno and the Central Valley of California indicated that lifestyle changes have increased the risk for chronic diseases among the Hmong. This study documented the increasing rates of cardiovascular disease and diabetes.[29]

Asian communities have reported higher rates of liver cancer associated with Hepatitis B exposure when compared to other populations.[16] The Hmong have been found to have higher rates of nasopharyngeal carcinoma, gastric cancer, hepatic cancer, and cervical cancer. Genetics, problems in access to health services, and diet-related issues appear to be important contributors for cancer morbidity and mortality in this population. In a study of cancer-related genetic polymorphisms, the Hmong were found to have important risk factors associated with cancer etiology and prognosis.[16]

A study conducted by Mills and Yang[18] suggested a high incidence rate of nasopharyngeal carcinoma (NPC) among Hmong living in Central California. Her[17] indicated that NPC was mostly found among refugees from Southeast Asia who have migrated to US since 1980. Genetic and environmental factors have been described as contributors to the high prevalence of NPC in the Hmong population. A study by Ng et al[30] documented a genetic risk for

this disease since it showed higher risk for Hmong who have had family history of NPC. Jia et al [31] found that the risk was higher for those who have three or more family members with NPC.

Among possible environmental and cultural factors for nasopharyngeal carcinoma is the ingestion of Cantonese-style salted fish, especially during childhood because carcinogenic volatile nitrosamines have been detected in Chinese salted fish.[32] Hildessheim and Levine [33] found that in addition to salted-fish, consumption of other preserved food and salted green mustard has been associated with NPC.

A study of cancer in the Minnesota Hmong population indicated that compared to the Minessotan population, the Hmong have increased proportional incidence ratios for gastric cancer, nasopharyngeal cancer, hepatic cancer, and cervical cancer. They also had decreased incidence ratios for prostate cancer, breast cancer, Hodking disease, and melanoma.[34]

Yang [35], in a review of all cancer cases in Hmong, Laotian, Thai, and Vietnamese between 1987 and 1994, found that the Hmong are particularly affected by cancers of the cervix, stomach, leukemia, nasopharynx, and lymphoma as compared to the general population, but at the same time, they also have lower rates for breast, colon, and prostate cancer. Yang added that Hmong populations present signs and symptoms of cancer at an earlier age than the general population but receive attention at late stages of the disease.

Mills and Yang[18] found that invasive cervix cancer rates in the Hmong were unusually high. According to these authors, many Hmong have a diagnosis and receive treatment for various cancer sites when they are at an advanced stage. Some cultural factors that may account for this situation are avoidance of Western medical care and fear of participation in screening programs. Mills and Yang[18] have made a call for close monitoring and follow up for patterns of cancer. Other risk factors for cancer deaths in the Hmong, as well as in the general population, are tobacco use, obesity, physical inactivity, and family history of cancer.[36]

New health challenges emerge now with the latest immigration wave of Hmong refugees selected by the Department of State for resettlement in US. They are coming from the Wat Tham Krabok (WTK) camp in Thailand, located 80 miles from Bangkok. An estimated 15,000 Hmong were expected to arrive to US in 2004 and 2005.[37] "For many years, the US State Department had not considered these Hmong refugees as candidates for resettlement to US. However, in December 2003, US officials shifted gears and declared that they would start processing Hmong refugee applications from WTK, Thailand beginning February 2004. The resettlement interviews will be limited to those Hmong refugees who are registered with the Thailand government and have been living at the Buddhist Temple since August 2003… about 31 percent are expected to come to California".[38]

The majority of the new Hmong refugees have relocated to California, Minnesota, and Wisconsin.[3] Federal, State and local programs have been designed to support relocation efforts. For instance, California has allocated $6 million dollars in programs aimed to increase refugee employment.[39]

Tuberculosis (TB) has been found to be a major problem among Hmong refugees. This health problem was detected among some newly arrived Hmong in California and other states. Many of the 6,000 Hmong in Thailand are not being allowed yet into the United States until people infected with the disease are treated. California has 20 confirmed cases of active TB among the 3,000 Hmong refugees who entered the state since June 2004. [40] Public health efforts adopted by health departments include tuberculosis screening and treatment. For instance, in Fresno County, more than 1,200 refugees have been screened for TB and other communicable diseases.[40]

The Centers for Disease Control and Prevention (CDC) announced the existence of drug resistant tuberculosis cases among Hmong refugees. CDC indicated that upon arrival in US, with funds from the Office of Refugee Resettlement's Preventive health program, Hmong refugees are screened and receive follow-up care in order to prevent the transmission of health conditions that could jeopardize the public's health.[41] According to CDC, "standard TB screening includes a chest radiograph (CXR) for persons 15 years of age or older, followed by sputum smears for persons whose CXRs are suggestive of active TB. In addition to standard TB screening, TB cultures

were recommended in May 2004 for Hmong refugees who have signs or symptoms of TB and CXR findings highly suspicious for TB, regardless of sputum smear results. Refugees diagnosed with TB are required to complete directly observed therapy (DOT) for TB before being allowed to travel to the United States."[42] A delegation from St Paul visited the refugees at the Wat Tham Krabok in Thailand and analyzed their health needs. According to the report presented by this delegation, protein malnutrition in children, depression, and anxiety are major health concerns for this population.[43]

According to the CDC [42], before entering US, Hmong refugees at the Wat Tham Krabok have been evaluated for the Human Immunodeficiency Virus (HIV), sexually transmitted infections, Hansen's disease (leprosy), mental disorders, and tuberculosis (TB). They also receive treatment of albendazole for intestinal parasites and vaccines, according to the age of the person, such as diphtheria and tetanus toxoids and pertussis (DTP) vaccine, tetanus and diphtheria toxoids (Td), oral polio vaccine (OPV), measles-mumps-rubella (MMR) vaccine, hepatitis B vaccine, and varicella vaccine.

Health Education Challenges for the Hmong Population in the US

The Hmong in US face many issues such as adaptation to US culture and understanding of a complicated health care system which, in many cases, is not congruent with their beliefs and practices. While Western medical principles are based on the scientific method, the Hmong believe that health and disease are directly related to the soul and the spirit. For the Hmong, there is no separation between the mind and the body. The lack of an understanding of health practices in US and the need for keeping their cultural roots have led the Hmong to seek health care services from traditional healers such as Shamans.

Health literacy is one of the major challenges that Hmong populations pose for health education practitioners. Hu[24] indicated that most of the Hmong who have migrated to US have little or no formal education. Older Hmong populations may rely on their children to communicate with health care providers and the explanation of health issues.[25] Health care providers are often caught between their desire to provide comprehensive care and their time limitations for the delivery of their services. Health education practitioners ought to recognize the importance of allowing sufficient time to establish a relationship of trust, respect, and mutual cultural understanding when working with the Hmong community.

Health educators are key players in helping Hmong communities acquire a level of health literacy that allows them to understand the health care system in US and interact with it in a context of equality. Health educators need to ensure that health literacy is a reality for Hmong communities. Health practitioners may wrongly believe that a Hmong client may be understanding health recommendations. According to Betancourt, "Hmong people are a very happy and hospitable people. Many times in teaching situations they will constantly nod and say, 'Yes.' Keep in mind that this means, 'Yes, I am listening to you,' not, 'Yes, I understand."[22]

Another challenge for health educators is the lack of familiarity and understanding of Western medicine among some Hmong communities[17]. The Hmong believe that a lost soul is a principal cause of disease and see health services as means to calling the soul back to the body.[14] Health care for the Hmong in US needs to integrate the Hmong animist beliefs and science-based services. The benefits of this integration have been demonstrated in Australia and in the Central Valley region of California.

In Australia, Hmong women are responded to their desire to bury the placenta after delivery, since disposing the placenta with regular hospital methods may lead to a loss soul and illness. In addition, arrangements are made with nutritionists and health promotion specialists so Hmong women in post-partum can have access to their traditional diets such as hot rice and chicken soup. Special attention has been given in Australia to provide same gender health practitioners for the Hmong population.[25]

In the Central Valley region of California, The MATCH coalition (Multidisciplinary Approach to Cross-Cultural Health) have a very innovative program called "Partners in Healing" in which Hmong shamans and traditional healers are invited, via the clan leader, to dialogue with physicians, health educators, and other health practitioners about their methods for diagnosis

and treatment. Shamans and health care providers learn from each other and discuss ways to work collaboratively. Thirty six shamans from Merced, California and surrounding regions have participated in this program. In this project, shamans are allowed to go to selected hospitals and other health care facilities to provide healing ceremonies to restore the soul to the body, while patients are receiving concomitant medical services. Additional services provided by this program include the training of Hmong health educators, mental health interpreters, as well as offering Hmong music dance lessons and after-school tutoring programs. General recommendations provided for health care practitioners in this program include not having direct eye contact with the Hmong clients and not touching their heads, since due to their animist's beliefs, the Hmong consider these practices to be disrespectful.[45]

Health education specialists also need to become aware of the various federal, states, and local programs available for newly arrived Hmong refugees. Examples of these programs include the services provided by the IRC [International Rescue Committee], such as airport pickup, financial and logistic support for refugees to access medical care, English language classes, school enrollment for children, and employment programs.[46] These programs have been designed by the IRC with a philosophical understanding that "…every refugee's greatest resource in successfully making the transition to life in the United States is him or herself. It is our job [IRC] to assist refugees in translating their strengths, skills and past experiences into assets in their new communities".[46]

Additional programs such as assistance with housing, food, clothing, and medical services are offered at the federal, state, and local level by Voluntary Resettlement Agencies (VOLAGs), Mutual Assistance Associations (MAAs), and community and faith-based organizations. The Refugee Cash Assistance (RCA) program, the Supplemental Security Income (SSI) and the State Supplemental Program (SSP) provide funds to help refugees in the process of adjusting to living in US.[38] By becoming familiar with these programs and their eligibility requirements, health education specialists could effectively explain these programs to the newly arrived Hmong and refer them to the appropriate agencies.

Vang[15] made a special call to health promotion practitioners and health educators to increase awareness levels among the Hmong of cancer-related risk factors, so diet-related behaviors can be adopted to reduce their risk. Nutritional awareness programs should be sensitive to the beliefs and needs of the Hmong community.

Health educators need to become culturally competent in understanding the traditions and beliefs of Hmong groups. In Fresno, California a course on Traditional Healing Methods for university students and health personnel, in which Hmong shamans explain and demonstrate their healing practices to attendees, is taught regularly. In this course, current and future health providers become knowledgeable of the Hmong traditional beliefs and explore ways to incorporate them in the delivery of health services.

Vang recommended that health education practitioners utilize theoretical frameworks such as the Health Belief Model and the Theory of Reasoned Action to understand Hmong beliefs, attitudes, intentions, perceptions, and behaviors. According to Vang[15], these theories could help health education specialists better understand why the Hmong may seek health care later than do other populations, and consequently design programs that enhance positive lifestyles and reduce cancer risk.

The Health Belief Model and the Theory of Reasoned Action provide a framework to identify underlying motives for behavioral change in minority populations. Barrett et al. have exemplified the importance of these two models when working with Hmong populations.[47] According to these authors "…while providers may feel that the principles of informed consent require an explanation of possible negative outcomes, Hmong patients (in general) do not want to hear about risks of long-term morbidity or mortality and may take such explanations as…'hexing'."[47] Such differences in beliefs between health care providers and Hmong clients can be identified through the Health Belief Model.

The Theory of Reasoned action can be illustrated in Berret et al.'s research. Berret et al. indicated that Hmong patients are more likely to look for treatment for acute and symptomatic illnesses, as opposed to chronic conditions such as

hypertension, diabetes, or hyperlipidemia.[47] The reasoning behind these actions come from the Hmong's perception of subjective norms in their cultural group. Subjective norms, in this case, are related to the cultural acceptance of symptomatic treatment and health literacy issues.

In increasing health literacy, the use of the story cloth, known as pa'ndau in Hmong communities, may be particularly useful. "The pa'ndau, composed of applique, cross-stitches, batik, and embroidery, incorporates Hmong personal family history, village life, the death and disturbance of war and emigration, and life in a new land. Pa'ndau, as an art form, reflects how the medium of an old tradition is also used to tell a more modern story of Hmong history and culture".[21] The Hmong did not have a written language until the 1960's when Christian missionaries standardized letters and figures for communication with Hmong communities. Prior to that, the Hmong communication patterns were based on oral and pictorial representations of their life experiences. Hmong communities have different dialects, among which the most commonly known are the dialects spoken by the "White Hmong" and "Blue Hmong," which are based upon the geographical region they come from.[21] The use of the story cloth in health education may serve as a culturally-sensitive way to increase health knowledge and risk factors awareness among Hmong communities.

The recommendations of Barret et al. could serve as an appropriate summary of guidelines for health educators interested in working with Hmong groups. First, Barret et al. suggest that interpretation from Hmong to English should be given in a context of mutual respect and appreciation. Second, health practitioners should show a caring attitude, with a happy demeanor and a positive attitude. Third, health educators need to recognize that the Hmong culture is changing and not all Hmong groups are the same. This implies that health education programs should be designed with the acknowledgement of such differences. Finally, health educators need to include the family and the clan leader in the decision-making process, providing them with the tools to understand and be critical of our health care system. Building on Hmong strengths and community resources is one of the major highlights of Barret et al.'s suggestions.[47]

Discussion & Recommendations

The Hmong population in US is rapidly growing. This group has cultural beliefs and health utilization patterns that pose challenges for health education practitioners. Health disparities such as an increased incidence of various types of cancer, tuberculosis, and post traumatic stress disorder, among others, should be a research priority for the health education practice.

Research oriented towards multicultural health issues should acknowledge the diversity within the Hmong community. Yang[27] exemplified the characteristics of the various rural groups living in US. "The Fresno Hmong community is influenced by Fresno's economy and social-political environment. Very few Hmong qualify to apply for the high skilled and seasonal jobs. Many Hmong in the Central Valley of California have turned to farming, but [their] agricultural skills have not been compatible with agribusiness in Fresno".[27] Yang added that in Georgia, the Hmong community has adopted Christian beliefs, while still retaining some animist's ideas. The Hmong in Michigan derive their income from owning and operating the food industry. In the state of Washington, the Hmong community is highly involved in the flower business. In North Carolina, most Hmong own and operate egg and poultry farms. In Yang's words[27] "Although each local Hmong American community may have developed some of its own characteristics, all of them also hold many things in common. They all share the continuity of attempting to preserve the perceived best features of the Hmong language and culture, while they are also in the ongoing process of developing a new Hmong American culture".[27]

The diversity in this community related to sources of income, cultural heritage, and language is evidently impacting the possibilities of the Hmong to access health care. A lack of economic resources, appropriate health information, access to technology, education, and political power have placed this group in the same disparities experienced by other minorities in US.

Traditional beliefs are of special relevance when addressing issues of health disparities in this population. The Hmong may be reluctant to comply with Western-based health recommendations because they conflict with

their view of the world. Failing to respect the clients' cultural beliefs may interfere with their need to adhere to treatment health regimes.[27]

As indicated by Vang[15], one of the health-related priorities in the Hmong population living in US is to expand their knowledge of risk factors associated with an increased incidence of cancer cases in this population. Risk factors associated with food intake and diets are examples of this need. Vang[15] indicated that Hmong populations need to become aware of the risks for nasopharyngeal carcinoma posed by the intake of salted fish, salted green mustard, pickled green mustard, and green mustard in brine.

Health care providers, especially those dealing with cancer care, should be bilingual and bicultural. Kundstadter[44] indicated that the major criterion used by the Hmong to select their health care providers is based on their Hmong speaking skills. Medical expertise and competency for this population are secondary to linguistic needs.[27]

A sub-population within the Hmong community that needs special attention is the group of new immigrants and refugees. Care for this population starts with the coverage of basic needs. Efforts to facilitate their adaptation to a new cultural environment should include offering English as second language classes, which are expected to make them more marketable to join the work force and consequently become financially independent.[37]

According to the International Rescue Committee [IRC], coordination of efforts should start "before the refugees leave Thailand, as Hmong and Thai-speaking caseworkers help sponsoring relatives with paper work and orient them on their rights and responsibilities." [37] The IRC also suggests that upon arrival to US , refugees need to receive a stipend that allow them to pay for health care, housing, food, an other essential expenses. Current health care for new Hmong immigrants ought to include screening and treatment for tuberculosis, human immunodeficiency virus, sexually transmitted infections, and mental disorders.[42]

The Hmong communities in US face the reality of keeping their own cultural roots and adjusting to the culture in US. As Yang[27] mentioned, there is a new emerging Hmong American community characterized by a cultural identity that combines traditions and beliefs from the original Hmong and American cultures. The acculturation process in Hmong refugees and its influence in health utilization create a fertile ground for research opportunities and program design among health education specialists and health practitioners in general.

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