

**Understanding Barriers to Prevention of  
*ntshav qab zib / nsthaav qaab zib* : A Hmong Perspective**

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**Hmong Studies Journal, Volume 10, 23 Pages**

**ABSTRACT**

The need to decrease health disparities has been widely documented in the professional literature, therefore, it is not surprising that one of the two goals listed in Healthy People 2010 is the reduction of health disparities in ethnic and racial communities in the United States. The research literature, however, shows that the majority of efforts to decrease health disparities have focused on the major racial and ethnic groups in the United State and few if any efforts have focused on the healthcare needs, practices, beliefs, barriers, and other health aspects of the Hmong community. The purpose of this study is to record barriers to addressing diabetes in the Hmong community. Data were collected using Photovoice, a qualitative data collection method which enables participants to record in photo format the issues they experience. Findings from the study identified several barriers to diabetes prevention in the Hmong community. Participants indicate 1) the environment as a major key barrier, 2) personal choices, habits, and life style and, 3) lack of a safe environment to access physical activity as factors contributing to the potential for developing diabetes.

## Introduction

Findings from the Racial and Ethnic Approach to Community Health (REACH) project, as well as many other studies, show that many members of minority groups report being in poor health, are less likely to have health insurance, and are less likely to seek health care (Agency for Healthcare Research and Quality, 2002, 2006; Carter-Pockras, 2002; Liao et al, 2002). The variation in the health status of minority populations compared to their White counterparts, have been termed *health disparities*, or what the National Institutes of Health have defined as the “differences in incidence, prevalence, mortality and burden of diseases and other adverse health conditions that exist among several population groups in the United States” (National Institutes of Health, 2000, p. 4). While many theories have been proposed to explain health disparities in the US, Kotkin-Jaszi (2008) concluded that “The reasons why we observe these disparities are not clearly understood and can be due to a variety of individual choices, differences in disease processes, systems barriers to care, or any combination of these factors” (p. 24). Regardless of the factors contributing to health disparities, the literature suggests that these conditions are more pronounced among recent immigrants to the United States (Aroian, Khatutsky, Tran, and Balsam, 2001; Tripp-Reimer, Choi, Kelley, and Enslein, 2001; Allen, Matthew, and Boland, 2004; Pylypchuk and Hudson, 2009).

The health status of immigrants to the United States is of particular concern to public health authorities since they present a unique health profile and experience difficulties not experienced by the general population. The literature suggests that recent immigrants are more likely to encounter language barriers in accessing the US health care system (Pylypchuk and Hudson, 2009; Perez, Gonzalez, Pinzon-Perez, 2006; Zarate and Perez, 2007), are less likely to have health insurance (Barlow, 2002; Grieco, 2004; US Department of Health and Human

Services, 2006), and may be more likely to rely on non-traditional healing methods (Henry, 1996; Pinzon-Perez, Moau, and Perez, 2005). Recent immigrants may also be employed in subsistence jobs (Capps, Forunty, and Fix, 2007) and reside outside urban areas where their limited access to health care services may endanger their health status and expose those around them to pathogens for which they have no immunity.

Research suggests that improving the health of immigrants will not only be beneficial to the new arrivals, but it could result in a positive outcome in terms of decreasing the public health risk to communities from spreading infectious disease (Kemp & Rasbridge, 2004). The CDC has further suggested that improving immigrants health can only be accomplished by improved diagnostics, heightened recognition, and effective medical interventions for the causative agents of disease that are affecting what they have called vulnerable populations.

### The Hmong Population

At the end of the Vietnam War, thousands of Hmong fled their homeland of Laos with many of them ending up in refugee camps in Thailand. Eventually, some of the Hmong refugees returned to Laos, while the vast majority of these refugees resettled to Western countries such as Canada, France, and the United States. The US Census estimated that close to 170,000 Hmong resided in the United States in 2000, however, research suggested that the Hmong population enumerated by the 2000 U.S. census is about 18% lower than the real figure. Data from the Hmong National Development estimated that more than 300,000 Hmong are now living throughout the United States mainly concentrated in California, Minnesota, and Wisconsin (Carroll, 2005). The Central California region has been a leading destination for refugee resettlement since the Vietnam War ended in 1975.

## Hmong Health

Despite their increasing numbers the Hmong remain among the most understudied racial/ethnic groups in the United States today (Johnson, 2002). The limited published information about Hmong appears to be derived predominately from anthropological case study, rather than from a public health or medical perspective (Johnson, 2002; Lo, 2001). The growing literature on the Hmong focuses primarily on health beliefs and practices (Barlow, 2002; Pinzon-Perez, Moua, and Perez, 2005), cancer (Butler, Yang, and Chen, 2005; Ross, 2003; Yang, Mills, and Jordan, 2004), use of Shamans (Pinzon-Perez, Moau, and Perez, 2005, and access to health care (Vang and Murrieta, 2002; Warner, 1998). Some studies observed that Hmong refugees had great difficulty understanding life in America, and issues such as communications, functioning in a modern world, and Western values and expectations (Johnson, 2002).

The literature suggests that when the Hmong arrived in the United States, they brought with them diseases such as tuberculosis, viral hepatitis, and parasitic infections. Data reported by the Centers for Disease Control and Prevention indicates that hepatitis B continues to be a concern among this population group (CDC, 2008a). In addition, due to their war and refugee experiences, many Hmong also arrived with mental health issues including depression and posttraumatic stress disorder (Her, 2004). The Immigrant and Refugee Health report concluded that Hmong, among other refugees, exceedingly have been diagnosed with diseases such as hepatitis B, tuberculosis, and parasitic diseases as well as increasing health problems.

One study found that most Southeast Asian cultures such as the Hmong, “do not subscribe to preventative health care practices or health maintenance as it is known in the United States” (Nutall & Filomena, 1997, p. 247). Research findings revealed that immunizations, the

germ concept and asepsis concept are not well understood in this culture (Reznik, MacDonald, Benardo, and Lemire, 2001).

The transition from living in the highlands and in refugee camps to residing as immigrants in industrialized nations have introduced new variables to the study of the health status of the Hmong (Detzner, Senyurekli and Xiong, 2008; Herr and Culhane-Pera, 2004; Muecke, 1983). The literature suggests, the Hmong are now facing health concerns such as hypertension, diabetes, dyslipidemia, obesity, metabolic syndrome and other health conditions such as heart attacks, strokes, and kidney failure as a result of their adaptation to the Western life style. These alarming health conditions – especially diabetes -- appear to be increasing and significantly affecting the Hmong community throughout the United States.

### Diabetes

Diabetes mellitus (types 1 and 2) has been declared a “national epidemic” due to its profound impact on the health status of US populations. Data from the Centers for Disease Control and Prevention indicate that some 18 million Americans suffer from diabetes mellitus; in fact, this condition can be found among the top 10 leading causes of death in the US (CDC, n.d.; CDC, 2004). In addition, it is estimated that some 6.2 million Americans have not been diagnosed with diabetes. Pre-diabetes, a condition in which blood glucose levels are higher than normal, but not yet high enough to qualify for diabetes diagnosis, affects an additional 12.1–17.5 million Americans (Zhang, Engergau, Vadez, Benjamin, Cadwell, and Narayan, 2003). Despite its high morbidity and mortality, diabetes mellitus continues to be a misunderstood condition.

### Diabetes Types

The scientific community recognizes two main types of diabetes each of which exhibit their own characteristics. Type 1 *diabetes mellitus* results when the body’s immune system

destroys the cells which are responsible for insulin production resulting in little or no insulin production. The body's inability to metabolize sugars results in a medical condition known as hyperglycemia (high blood glucose levels) which has symptoms including the need to urinate frequently – which could result in dehydration. Diabetic ketoacidosis, damage to the eyes, kidneys, and feet can be long-term effects of diabetes type 1. Type 1 diabetes can develop at any age, but usually starts in childhood or young adulthood and requires constant blood glucose monitoring as well as treatment with insulin (Alberti & Zimmet, 1998; CDC, 2008b).

Type 2 diabetes mellitus is often developed in adulthood, although it has been diagnosed in children as young as two, and is often related to being overweight or obese, family history, physical inactivity, and ethnicity among other risk factors. Type 2 diabetes is more prevalent among minority racial/ethnic groups than among Whites in the United States. Type 2 diabetes occurs when the pancreas does not produce sufficient amounts of insulin and/or the body develops peripheral insulin resistance.

Gestational diabetes mellitus (GDM) develops during pregnancy due to hormones released by the placenta which results in the body's inability to make enough insulin or process the insulin produced. Screening for GDM usually takes place between 24-28 weeks in the gestational period. Three to five percent of pregnant women develop GDM and in some cases it will become type 2 diabetes (Xiang, Peters, Trigo, Kjos, Lee, and Buchanan, 1999).

### Diabetes in California

It is estimated that some two million Californians suffer from diabetes mellitus and that number is expected to double by the year 2020 (Diabetes in California Task Force, 2003). Findings from the California Health Interview Survey on diabetes prevalence in the state indicated that the Central Valley has the highest diabetes prevalence of any region in California.

In fact, Tulare County ranked first and Kings County ranked second in age-adjusted diabetes prevalence rates for adults 18 and over, with prevalence rates of 10.2 and 8.8 respectively, compared with a statewide average of 5.9 (California Diabetes Program, 2009).

### Diabetes in the Hmong

Few studies have been conducted to investigate the impact of diabetes mellitus in the Hmong community despite the fact that Her and Mundt (2005) found that 41% of respondents in their sample were at risk for developing the disease. The high risk for diabetes in the Hmong is further confounded by little knowledge about the disease's etiology and misconceptions about the importance of diet and physical activity in everyday life (Kim, Harrison, and Kagawa-Singer, 2007; Johnson, 1995). These findings were corroborated by Perez and Cha (2007) in a sample in Central California.

Johnson (1995) found that some of the respondents linked the development of diabetes to their immigration to the United States. These findings appear to be supported by Culhane-Pera, Her, and Her (2007) who found that the Hmong blame not fitting into their adopted homeland as the root cause of diabetes. In fact, results from their study suggested that the Hmong perceive their inability to sweat fat, salt, sugar and other chemicals as the root cause of diabetes.

Similarly, Perez and Cha (2007) found a series of misconceptions including the perception that some western medicines will in fact poison the patient rather than helping them. The authors concluded that "Since majority of the Hmong are illiterate in their own language, brochures and handouts on diabetes prevention and education serve no purpose in this population. Since the Hmong community have little knowledge of the physiological functions of the human body and lack words in Hmong for direction translation of Western medical terminology, it will be difficult for a Hmong patient to understand the causes of diabetes without

direct interaction with health care professionals” (p. 13). Other studies have found that in addition to little understanding of the disease, the Hmong usually defer treatment for diabetes or sweet blood to Shamans (Culhane-Pera, Her, and Her, 2007; Perez and Cha, 2007).

### Purpose and Methods

The purpose of this study is to record barriers to addressing diabetes in the Hmong community. Data for this study were collected utilizing Photovoice techniques involving 10 Hmong females in Fresno County. Photovoice is a qualitative research strategy that is used to enable people to reflect upon community strengths and challenges, to promote critical dialogue and knowledge about personal and community issues, and to reach policy makers.

The stages of Photovoice as applied to this study included:

1. Conceptualizing the problem: A review of the literature and anecdotal data from the area suggested a dearth of knowledge about diabetes from the Hmong perspective
2. Defining broader goals and objectives: the limited information about diabetes in the Hmong community suggested the need to develop an understanding, from the Hmong’s perspective, of what contributes to diabetes in the community and the causes of it.
3. Training the trainers/conducting photovoice training: Study participants participated in one (1) three hour training session to receive an introduction of the purpose of the study, suggestions for taking the photographs, the use of disposable cameras as well as basic photographic concepts including lighting and framing of photographs. At the end of the training session, participants received their photographic assignments which would be “to record barriers to overcoming, preempting, or causing diabetes in Hmong community and provide narratives to these pictures.”



4. Taking pictures: Study participants were given two weeks to complete the assignment and corresponding journal entries.
5. Selecting photographs for discussion: At the end of the study period, participants participated in one discussion session designed to share their journal entries, experiences, and photographs. Participants selected the best pictures and wrote the entries listed in the discussion section.
6. Codifying issues, themes, and theories, documenting the stories. The PIs discussed the main themes identified in the pictures and narratives provided by the study participants.
7. Reaching policy makers, donors, media, researchers, and others who may be mobilized to create change. This manuscript represents the first step in achieving this goal.

## Results

Findings from this study suggest a variety of environmental factors contribute to the development of *ntshav qab zib / nsthaav qaab zib* in the sample population. Lack of opportunities for physical activity (Figure 1), personal choices about physical activity (Figure 2-3), and lack of appropriate and safe environments for children to play outdoors (see Figures 4 - 5) were identified as factors contributing to the potential for developing diabetes.

Figure 1



In explaining the content of the photograph, the author stated “this picture shows the challenge of maintaining physical activity at home. At home, my children like to play video games and watching [sic] television.”

In response to the question “How does this affect your life?” The author stated “My children lacking [sic] physical activities are major concerns for me. But I can’t blame them because I don’t have the time to take them to the park for recreational activities.”

In response to the question “Why do you think this strength or challenge exists in your community?” the author stated “My role as a mother, wife, and workers make exercise time a challenge for me and my family. I can’t always have the spare time to take my children outdoor for physical activities.”

In a critical analysis of feelings evoked by the photograph the author concluded “I am sad that I can’t spend more time with my children. I wish I have [sic] more time to spend with my children for outdoor activities.”

Figure 2



In explaining the content of the photograph, the author stated “My husband enjoy [sic] lying on the bed while he watch movie online, so whenever it’s lunch or dinner time, I usually serve him food while he’s on bed watching movie.”

In response to the question “How does this affect your life?” The author stated “eating first and exercise is the best thing my husband should do before he eats so he start to do that it can help him in many way.”

In response to the question “Why do you think this strength or challenge exists in your community?” the author stated “They don’t have the time to do their stuff like doing the things they enjoy so this causes them to do everything at the same time.”

In a critical analysis of feelings evoked by the photograph the author concluded “I feel my husband should eat his food sitting down to void himself from gaining weight.”

Figure 3



In explaining the content of the photograph, the author stated “I’m a busy woman. Everyday, I have kids to drop-off at different schools and I work at 8 o’clock every day, so I never have time to eat breakfast. I always eat foods on the go”

In response to the question “How does this affect your life?” The author stated “Due to my busy lifestyle, I never have the time and energy to exercise.”

In response to the question “Why do you think this strength or challenge exists in your community?” the author stated “I’m uneducated so I have to works at low paying rate job. I can’t afford to eat healthy and to buy healthy foods.”

In a critical analysis of feelings evoked by the photograph the author concluded “I think I should spend more time eating healthy foods with my kids.”

Figure 4



In explaining the content of the photograph, the author stated “My neighborhood is very filthy/trashing. I don’t let my kids go outside to play because I feel its [sic] not safe for my kids to go outside.”

In response to the question “How does this affect your life?” The author stated “Because my kids are not physical [sic] active, this can be an affect for diabetes in their future.”

In response to the question “Why do you think this strength or challenge exists in your community?” the author stated “I think because I lived in a poor neighborhood.”

In a critical analysis of feelings evoked by the photograph the author concluded “I feels [sic] that this photo showed that my neighborhood is very filthy and unsafe for my kids to access physical activities.”

Figure 5



In explaining the content of the photograph, the author stated “The street intersection is in front my child school, however, I have to drop my kids to school everyday because the street is very busy with lots of danger drivers; so I don’t let my kids walk to school.”

In response to the question “How does this affect your life?” The author stated “Walking to school can be a good exercise for my kids, but due to the danger [sic] environment, this limited my kids’ potential physical activity.”

In response to the question “Why do you think this strength or challenge exists in your community?” the author stated “I live in a very poor and violent neighborhood, it’s a major challenge for me and my kids to go outdoor for physical activities.”

In a critical analysis of feelings evoked by the photograph the author concluded “I think the city/government should improve my neighborhood.”

Study participants identified the easy access to fast foods as a contributing factor to the development of diabetes in the Hmong community (Figures 6-7)

Figure 6



In explaining the content of the photograph, the author stated “This picture shows an unhealthy eating habit. This is a challenge for people eat healthy foods.”

In response to the question “How does this affect your life?” The author stated “This made it easy for people to eat, but it also make [sic] it difficult for people to exercise and burning those extra calories. This means people are busy and found ways to get adequate care.”

In response to the question “Why do you think this strength or challenge exists in your community?” the author stated “This challenge exists because nowadays people are way too busy to prepare their meal. This is a easy access to get a meal with less time to wait.”

In a critical analysis of feelings evoked by the photograph the author concluded “Nice restaurant and very eye catching.”

Figure 7



In explaining the content of the photograph, the author stated “I see two vending machines with lots of different kind of chocolate snack bars and potatoes chips. This picture shows many unhealthy snack bars and potatoes chips that are very difficult to stay away from especially these vender [sic] machines are located in most public places such as mall, stores, or school settings.”

In response to the question “How does this affect your life?” The author stated “With many unhealthy snacks will affect my life to accessing adequate diabetes care because this fast snack will make my body weak and I might not want to see a doctor. In addition, when I gain weight by eating unhealthy snacks, I might have low self-esteem. Therefore, I might not want to go see a doctor to care for my diabetes.”

In response to the question “Why do you think this strength or challenge exists in your community?” the author stated “this is very challenge [sic] in my community because fat foods are almost every corner of public streets or places.”



### Conclusions/Recommendations

Healthy People 2010 listed the need to decrease health disparities for underserved groups as a national priority. Although many research studies have identified health disparity challenges among minority communities, this research effort is among one of the first attempts to focus on the healthcare barriers to addressing diabetes in the Hmong community.

Findings from this study have identified several factors contributing to diabetes in the Hmong community. Study participants identified the environment they live in as a major challenge and also as a key barrier to limiting their opportunities and choices about physical activity. Study participants also identified personal choices, habits, and lifestyle choices which also impact their ability to engage in physical activity. Finally, the study participants identified fast food as a contributor to the development of diabetes. Participants evoked hopeless feelings such as they are too busy working outside of their home and do not have enough time to spend with their children for recreational activities.

Recommendations for future study include but are not limited to the potential usefulness of a larger sample size. Although we were able to recruit great participants, the sample is very small. Future Photovoice efforts should also take into consideration the participants' educational backgrounds and knowledge as they are major factors in diabetes care. Also, findings from qualitative studies conducted by Johnson (1995) and Perez and Cha (2007) support that many Hmong lack diabetes disease knowledge. Therefore, consideration of diabetes education backgrounds and knowledge are important factors to consider when studying barriers to diabetes prevention and treatment among minority subpopulations in the United States.

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## Acknowledgements

The authors wish to thank the Central Valley Health Policy Institute for their financial support of this study and Ms. Lorena Ramos from the Central California Regional Obesity Prevention Program for comments on earlier drafts of this manuscript.

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Chia Thao is a graduate student in the Master of Public Health Program with an emphasis in Health Promotion at California State University, Fresno. Currently, Chia is the Student Coordinator for the Family PACT (Planning, Access, Care, Treatment) program which provides free family planning services to qualified Fresno State students at no cost. Chia's research interests center on improving minority health disparities in the United States. As a result of her passion, she was selected as a Ronald E. McNair Scholar. This has provided her with the opportunity to conduct two research projects under the guidance of her mentors Dr. Miguel A. Perez, Dr. Helda Pinzon-Perez and Dr. Kara Zografos. Her first research study titled "Hmong Health Care Practices in Fresno County: A Pilot Investigation" documented the importance of promoting health education and prevention to underserved ethnic groups including the Hmong community in Fresno County.

