

## **Perceived factors influencing health-related behaviors among Hmong American youth aged 14–25 years in the Sacramento, California Region**

**By**

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### **Abstract**

While obesity, type-2 diabetes, and cardiovascular diseases have risen among the Hmong population, limited research has investigated their health and nutritional status. This study examined the perceived factors influencing health-related behaviors among Hmong American youth, aged 14 to 25 years. Eight focus groups were conducted (n=44). More than half of the youth were either overweight or obese. Four themes were identified from focus group discussions: 1) dietary choices, 2) gender roles, 3) physical activity, and 4) smoking and alcohol. Results suggested that while youth perceived Hmong foods as healthier than American foods, many expressed concerns about losing cultural norms related to traditional diets and activity as they adopted the average American diet and became more sedentary. Healthier foods were associated with higher costs, longer preparation times, and less taste and flavor, and therefore, youth reported opting for more convenient and cheaper fast foods. Gender roles appeared to affect food acquisition, meal planning, and cooking practices. Youth emphasized that their parents influenced their perceptions of health-related behaviors; they also shared that parents lacked adequate knowledge about how dietary choices, physical activity, and substance use could impact health outcomes. Alcohol and smoking were noted as significant concerns, and such behaviors were influenced by the cultural normalization of underage drinking and smoking in the community. Findings suggest that nutrition and health-related interventions for Hmong youth would benefit from involving parents and elders while encouraging family- and community-driven activities.

*Keywords:* Hmong youth, Hmong diet, obesity, physical activity, substance use

### **Introduction**

The Hmong are an ethnic group originally from China, with roots dating back to 4,000 years (Hmong American Center, n.d.). Historically, the Hmong people have endured many hardships and trauma due to retribution, oppression, and multiple relocations (Yang, 2013,

2019). During the Secret War in Laos, the Hmong were recruited by the United States (U.S.) Central Intelligence Agency to assist with the war, and because of their involvement, the Hmong faced strong retaliation from communist Laos (Yang, 2013, 2019). As a result, most fled Laos, and starting in 1975, many post-war Hmong refugees resettled in the U.S. (Yang, 2013). Household data (2021–2023) indicates that an estimated 330,000 people in the U.S. identify as Hmong, of whom 33% (110,000) reside in California (Pew Research Center, 2025). The metropolitan areas in California with the largest Hmong populations include Fresno (35,000) and Sacramento (30,000) (Pew Research Center, 2025).

Acculturation is a dual process of cultural and psychological change that occurs as a result of continuous first-hand contact between two or more cultural groups and their individual members, with subsequent changes in the original cultural patterns of either or both groups (Berry, 2006b; Redfield et al., 1936). Berry (2006a) further explains that at the group level, acculturation involves changes in social structures and institutions, as well as in cultural practices. At the individual level, acculturation involves shifts in a person's behavior, including eating habits, clothing, and speech; however, the stress associated with acculturation can also lead to uncertainty, anxiety, and depression (Berry, 2006a).

Among the Hmong, acculturation to the U.S. has caused a shift from their traditional diets, which are rich in fresh vegetables and whole grains, and from physically demanding agricultural work, to a higher consumption of processed foods and more sedentary lifestyles (Franzen & Smith, 2009a). In an obesogenic, meaning contributing to obesity, American environment, the rates of type 2 diabetes, cardiovascular diseases, and infection-related cancers have increased among Hmong (Ali et al., 2020; Brown et al., 2025; Clarkin, 2008; Culhane-Pera et al., 2007; Lao et al., 2020; Thao et al., 2015; Xiong, 2023; Yang, 2013). Nutritionally, the

group's diets are found to be higher in saturated fats, trans-fatty acids, and sodium, while lower in fiber, vitamins, and minerals (Franzen & Smith, 2009a, 2009b, 2010; Lao et al., 2020; Mulasi et al., 2011a; Smith & Franzen-Castle, 2012).

Of particular concern is the increasing rates of obesity, hypertension, smoking, and alcohol use among Hmong youth (Arcan et al., 2014; Mulasi et al., 2010, 2011a, 2011b; Rooney et al., 2009; Saint Paul - Ramsey County Public Health [SPRCPH], 2015; Smith & Franzen-Castle, 2012). An estimated 1 in 5 children and adolescents in the U.S. have obesity, primarily affecting children from racial and ethnic minorities and low-income families (Centers for Disease Control and Prevention [CDC], 2024c). Obesity affects physical and psychological health and is associated with hypertension, diabetes, sleep apnea, low self-esteem, and depression (Sanyaolu et al., 2019). Similarly, substance use among youth, including underage drinking and smoking, is a significant public health concern in the U.S. Reports indicate that young people frequently binge drink, and underage drinking is linked to impaired judgment, interpersonal violence, injuries, and adverse effects on brain development (National Institute on Alcohol Abuse and Alcoholism, n.d.). Evidence also suggests a strong causal relationship between active cigarette smoking in young people and nicotine addiction, cardiovascular disease, impaired lung function, and asthma (National Center for Chronic Disease Prevention and Health Promotion, 2012).

Therefore, understanding factors that influence health-related behaviors among young people, including nutrition and substance use, is essential, as this information can guide policy changes and effective interventions. Additionally, health interventions targeting youth, a crucial stage in human lifecycle development, can help prevent chronic illnesses from progressing into adulthood. Research on the nutritional and health status of Hmong youth is notably lacking.

Therefore, the purpose of this qualitative study was to explore the perceived factors influencing health-related behaviors among Hmong American youth aged 14 to 25 years in the Sacramento, California region.

## **Methods**

Using the standard protocol (Krueger & Casey, 2014), the lead author (U.M.) conducted eight in-person focus groups with Hmong youth (n=44). Two research assistants, including our co-author, who is also Hmong (H.L.L.), accompanied the moderator during focus groups.

Before data collection, the focus group questions were reviewed by key Hmong informants in the community. Participants were recruited through flyers and announcements in local Hmong organizations, churches, and high schools. Participants (and their legal guardians, if under 18 years of age) provided written consent before the commencement of the focus groups. Each focus group was gender-specific, lasted 60 to 90 minutes, and included 4 to 7 youth. During focus groups, participants were asked open-ended questions with prompts regarding dietary behaviors, food purchases, use of food assistance, cooking practices, physical activity, and smoking and alcohol use. Researchers compensated the youth with a \$20 gift card for their participation in the study.

Focus groups were conducted until thematic saturation was reached, i.e., the point at which we had heard a range of ideas and did not identify any new themes or patterns in data (Krueger & Casey, 2014). Focus groups were audio-taped and transcribed verbatim for analysis. Four researchers independently coded the transcripts to identify relevant themes and subthemes, and any discrepancies in the data were resolved before further analysis (Krueger & Casey, 2014). Participants were assigned pseudonyms to maintain their anonymity.

Demographic data were collected, including sex, age, place of birth, and education level.

Height and weight were collected using standard procedures with outer heavy clothing and shoes removed (Frisancho, 2008). For youth between 14–20 years, body mass index (BMI) was calculated as weight (kg)/height (m)<sup>2</sup> and plotted on the CDC BMI-for-age gender-specific growth charts to obtain a percentile ranking (CDC, 2024b); guidelines rank underweight children as <5th percentile, healthy weight as 5th to <85th percentile, overweight as 85th to <95th percentile and obese children as ≥95th percentile (CDC, 2024b). For youth over 20 years of age, BMI was calculated as weight (kg)/height (m)<sup>2</sup> and categorized as follows: <18.5 (underweight), 18.5 to <25 (healthy weight), 25 to <30 (overweight), and ≥30 (obese) (CDC, 2024a).

Descriptive data were analyzed using IBM SPSS Statistics software (Version 28). Coded transcripts were analyzed using NVivo (Version 14), a qualitative data analysis software. The Institutional Review Board at California State University, Sacramento, approved this study.

## **Results**

### **Sample Characteristics**

Twenty-nine (66%) female (F) and 15 (34%) male (M) youth, ages 14–25 years, participated in the study (Table 1). Mean ( $\pm$  SD) age was  $19 \pm 3$  years. Thirty-seven (84%) were born in the U.S., and seven (16%) were born in either Laos or Thailand (Table 1). For youth born in Laos or Thailand, the average age at migration to the U.S. was 6 years, and the average number of years lived in the U.S. was 11 years. Fifty-two percent were enrolled in college, and 43% were in high school. Overall, 53% ( $n = 23$ ) were classified as overweight or obese based on BMI criteria (Table 1).

**Table 1.**

*Sample Characteristics of Hmong Youth.*

| Characteristic               | <i>n</i> | %  |
|------------------------------|----------|----|
| Sex                          |          |    |
| Female                       | 29       | 66 |
| Male                         | 15       | 34 |
| Birth location               |          |    |
| United States                | 37       | 84 |
| Laos or Thailand             | 7        | 16 |
| Education <sup>a</sup>       |          |    |
| High school                  | 19       | 43 |
| College                      | 21       | 52 |
| Body Mass Index <sup>b</sup> |          |    |
| Healthy weight               | 21       | 48 |
| Overweight                   | 10       | 23 |
| Obese                        | 13       | 30 |

*Note.* N = 44. The mean age of participants was 19 years (SD=3). Mean height was 157 cm (SD=8) and mean weight was 66 kg (SD=17).

<sup>a</sup> Education data for 4 participants was missing.

<sup>b</sup> Calculated using BMI-for-age percentiles for youth <20 years of age and standard BMI categories for youth older than 20 years.

**Focus Group Data**

The following four dominant themes with related subthemes were identified through focus group discussions: 1) dietary choices, 2) gender roles, 3) physical activity, and 4) smoking and alcohol.

***Theme 1: Dietary Choices***

Participants were asked to provide examples of Hmong and American foods, identify which foods they considered healthier, and whether they believed that their dietary behaviors impacted their health. Participants were also asked about their perceived barriers to eating healthier foods. Subthemes for this theme included (a) Hmong foods and American foods, and (b) barriers to eating healthy foods.

**Hmong Foods and American Foods.** Participants provided examples of Hmong foods, including white rice, vegetables such as mustard greens, cabbage, Chinese broccoli, bok choy, and bitter melon, and meats such as pork and chicken. Examples provided for American foods included chips, fries, hamburgers, pizza, spaghetti, breakfast cereals, cakes, and sodas. Overall, the youth found Hmong foods to be healthier than American foods, noting that Hmong foods were “steamed,” “boiled,” used “organic” ingredients, and had “less sugar” and “fewer preservatives.” American foods were described as “junk food,” “fast food,” “snacks,” and “deep-fried.”

Youth associated American foods with convenience and higher in calories, salt, sugar, and processed ingredients, as well as contributing to chronic diseases, including obesity, type-2 diabetes, and hypertension. One stated, “I think that Hmong food is way better, it’s really healthy in comparison to American foods because we don’t base a lot of our foods on oil, we grow our own veggies and kill our own meat (Molly, 18 years old [yo] F).” Another added, “American food plays a big part in our health issues (Ming, 20-yo M).” However, some found the use of excess salt and monosodium glutamate (MSG) in traditional Hmong cooking practices concerning, as one commented, “we all know what MSG does to your bone specifically, it just doesn’t help. The majority of Hmong people consume salt and MSG (Zang, 21-yo M).” Most youth agreed that an unhealthy diet could lead to chronic illnesses, including diabetes, obesity, and mental health concerns such as anxiety and depression. One pointed, “...now we have type-2 diabetes in both kids and adults and that’s because they don’t know what they’re consuming (Allen, 21-yo M).”

**Barriers to Eating Healthy Foods.** Youth mentioned cultural preferences for familiar foods in their households and a lack of culinary knowledge to prepare certain foods, including

some vegetables, as barriers to expanding their intake of healthier foods. One participant reflected,

The older generations like my mom...they don't eat or shop for carrots or broccoli because it's not something that we eat, they just don't know how to prepare it. Is it good being steamed? Being fried? And they don't know how to incorporate it into their usual cooking method, I think that's one reason why they don't cook it. (Paja, 23-yo F)

Youth also expressed that parental pressure to overeat in general was a concern, as one stated, "...my sister has been trying to lose weight, she's overweight. My mom doesn't really understand what losing weight is and going on a diet [is] so every single day she always pesters my sister, to come eat (Marie, 18-yo F)." Another female youth related to this sentiment.

When your parents cook they expect you to come eat and if you don't, it hurts their feelings because you're not really being respectful, even when you already ate 30 minutes before, they [parents] say, "it's ok, come eat again" they do that a lot. (Lily, 21-yo F)

Youth associated healthier foods with higher costs and thus chose fast food more often because it was considered less expensive and required no preparation time compared to more nutritious options. One commented, "It's expensive to eat healthy and buy fruits and vegetables compared to a dollar burger (Xiao, 16-yo M)."

Most youth reported using food assistance, including the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Supplemental Nutrition Assistance Program (SNAP), and campus food pantries. Food insecurity was identified as a barrier to healthy food consumption as one youth reflected, "they [food secure households] have enough money to buy different ingredients, make different meals, we didn't. I remember we didn't have cabbage for meat soup [we] just boiled meat [and ate] for 3 days [for meals] (Charlie, 21-yo M)."

Time was viewed as a barrier as most participants were in college and lacked time for meal planning or felt discouraged with the time it took to cook at home, as shared by one, “I spend a lot of time preparing the [healthier] food, so that drives me away from eating healthy (Yang, 23-yo F).” Taste and flavor preferences also influenced healthy eating, and youth agreed that sometimes “healthy food doesn’t taste as good (Se, 20-yo F).” In Hmong gatherings and celebrations, soda was usually the preferred beverage over water, as one stated, “there’s always gonna be soda...if you visit someone, they’ll [parents] offer you soda instead of water. Soda plays a big role. They [parents] would give it cause they think it is a luxury (Pao, 22-yo F).” Others found Hmong foods lacking in flavor and variety.

We can get very tired of eating it [Hmong foods]. Because it’s the same thing over and over again and it’s like Wow we want something different. Monday it’s boiled chicken with cabbage. And then the next day it’s boiled chicken with something else. It’s just so repetitive. (Calvin, 20-yo M)

### ***Theme 2: Gender Roles***

Questions about grocery shopping behaviors, including the location and the decision-maker regarding which types of foods to purchase, were asked. Participants were asked about who was responsible for meal planning and cooking, including the types of food they prepared at home and the perceived factors that influenced their decision to cook at home. Subthemes for this theme included (a) food acquisition and (b) meal planning and cooking.

**Food Acquisition.** Youth reported shopping at local Asian stores, farmers' markets, and some mainstream American chains for their groceries. When living with their parents, most youth mentioned that their mothers would decide what types of food to buy, plan meals, and do the cooking. Oftentimes, the wife’s decision would be based on what their husband preferred to eat.

One youth commented, “...she [mom] would get the food that my dad would like to eat, so the choices she made would be according to what my dad would want (Sarah, 23-yo F)”. Youth living independently would shop for themselves, prioritizing cost and convenience for their food purchases.

Youth explained that men in their families and communities hunted for food, including squirrels, birds, wild pigs, deer, elk, and occasionally bears. Males reportedly hunted and slaughtered meat in a group, especially during gatherings and celebrations, and this was viewed as a respect for Hmong cultural values and ensuring a nutritious source of protein. One stated, “We hunt wild pigs and process the meat at home, that’s real Hmong food (Jake, 20-yo M).” Slaughtering animals was also viewed as a ceremonial sacrifice to please the ancestors for their blessings, as another added, “every year we sacrifice...we tribute these animals and their spirits to our ancestors so our ancestors will protect us and the animals and their spirits will also protect [our] family (Tou, 19-yo M).”

**Meal Planning and Cooking.** Youth reported that females primarily managed meal planning, cooking, and cleaning in households because of cultural pressure and expectations, as well as defined gender roles. Additionally, males were not expected to learn how to cook, help with grocery shopping, or assist with household cleaning, except for cleaning the meat after hunting and slaughtering. Male youth mentioned that they would sometimes bring cooking ingredients and give specific instructions to females on “the way we would want it [a dish] made (Calvin, 20-yo M).”

Youth mentioned that young girls were taught to cook as early as 10–13 years of age in their families, especially if they were the oldest among siblings, as expressed by one, “I started cooking in 6th grade. I’m the oldest and my grandma taught me because I was the only girl there

(Katie, 18-yo F).” A few observed that traditional gender roles surrounding meal planning and cooking are beginning to shift due to changes in cultural and societal expectations for women. For example, sometimes men would help with cooking and child care when women were unavailable or working outside, as said by one, “when he [their brother] is not working...most of the time he’s cooking meals for us to eat, he’s the one home babysitting the kids (Mai, 23-yo F).”

Among youth living at home with parents or elders, traditional Hmong foods were commonly prepared by mothers and grandmothers. Families ate at Asian buffets and Vietnamese restaurants only during special occasions and celebrations. Youth reported eating out more frequently when living independently or while occupied with school and work responsibilities, and most perceived that dining outside the home contributed to their weight gain and other health concerns.

When I lived with my parents, we ate pretty healthy from what my mom cooked, but since I moved out [for college], I feel like my diet changed because I was able to access fast food, so that’s what made me gain more weight compared to when I was with my family. (Pao, 22-yo F)

Many expressed concern that the younger generation was not utilizing traditional Hmong cooking practices and cultural foods and ingredients due to Westernization.

The younger generation are starting to lose their roots, so they are not very familiar with the Hmong culture. So that will also affect their eating habits because they are not eating what Hmong people used to eat anymore and they are more geared towards the western culture. So I see that a lot, they are starting to eat more fast food and the American food. (Anita, 20-yo F)

### ***Theme 3. Physical Activity***

Participants were asked about the types of activities that youth engaged in as well as barriers to being physically active in their communities. Subthemes for this theme included (a) types and locations of activity and (b) barriers to activity.

**Types and Locations of Activity.** Youth participated in judo, karate, walking, hiking, running, swimming, dancing, strength training, and playing volleyball, basketball, badminton, and soccer. Physical activity was performed at school and college gymnasiums, as well as outdoor locations, including local parks and community centers. Youth were likely to exercise if accompanied by their friends or family members, or if working out in a group setting. Activities such as karate and volleyball were seen as ways to socialize and build community together. Physical activity was seen as a trend, as one mentioned, “I feel like the generation now it’s really into fitness. So I think that’s what kinda motivates me to wanna go workout is I see a lot people working out (Yang, 23-yo F).”

**Barriers to Activity.** Youth identified several barriers to physical activity, including concerns about neighborhood safety, particularly among females.

So if you’re living in safe community, then it’s safe but if you’re living in community where there’s a lot of like gang affiliations or a lot of shootings, it’s better to be in a group exercising or if you can go to a gym or a different place to exercise. (Tiffany, 17-yo F)

Youth expressed issues with finding time and motivation to exercise as one mentioned, “I don’t have the time to exercise, I would love to but when I have free time, most is used to study and do homework (Se, 20-yo F).” Videogaming was noted as another barrier for physical activity, and male youth spent significant time indoors playing videogames, as one remarked, “we play a lot

of games with everyone, a lot of people just sitting down trying to play as many games as possible, it causes laziness (Johny, 14-yo M).”

Most youth reflected that their parents had a significant impact on their physical activity choices. One shared, “...growing up you follow what your parents do, so if my parents were more active, I think that would influence me to be more active also (Pao, 22-yo F).” Many youth commented that their parents mainly led sedentary lifestyles and did not engage in regular physical activities, unlike traditional Hmong agricultural practices, which involved intensive physical labor.

My parents don’t really exercise that much because they constantly feel tired so they take naps a lot and they also watch a lot of movies. They don’t usually get off the couch. My mom loves gardening but she can only garden in our backyard which is a little plot of land which doesn’t give her a lot of exercise that much because in old countries when we farm, literally farm like acres of land, and by hand too, so that gave them a lot of activity to do per day. But then here it’s just a little few feet of land and then they just finish it and just go home and rest and then it’s really easy for them to just not do [exercise].

(Tracie, 23-yo F)

The youth stated that from their parents’ perspective, time spent engaging in physical activity was often viewed as a hindrance to education and job prospects. One reflected, “back in high school I did tennis for my school and my parents didn’t see that extracurricular being significant for me cause [they think] it wouldn’t help me with finding a job or helping my education (Ming, 20-yo M).” When activities were done outside the home, later in the evening, or at night, they were considered unsafe.

My parents feed their children into intimidation. ‘Don’t go outside because you’re going to get kidnapped, don’t be outside in the dark because at night you’re gonna go missing.’ So growing up I lived afraid of walking outside. When I was in high school I started walking almost every day [and] I realized that the world was safer than what my parents told me. (Zie, 21-yo F)

Staying out late in the evening and at night playing sports was also perceived as culturally inappropriate for the family’s image, particularly for females, as one described, “[being out late] will lose face or relatives will start rumor about me and then it’s gonna go back to him [father] and relatives are going to say he’s a bad parent (Julia, 19-yo F).” Staying out late was also considered unacceptable for male youth.

I think it’s just safety. They [parents] don’t want you to go out there and be like a bad person or something. As soon as the sun goes down, if you stay up late, they view you as a bad person, like a bad son, even if you’re not doing bad things. (Allen, 21-yo M)

#### ***Theme 4. Smoking and Alcohol***

Participants were asked if they viewed smoking as an issue among the Hmong youth and to share any perceived reasons for smoking behaviors. Youth were also asked whether they thought excessive drinking was an issue among Hmong youth and their perceived reasons behind alcohol consumption behavior. Subthemes for this theme included (a) smoking and (b) alcohol.

**Smoking.** Most youth agreed that smoking tobacco and marijuana was common, especially among male youth. As one said, “I’ve been around a lot of people who do that [smoke] around my age group and I just feel like it’s common. I’m surprised when they’re not smoking (Sarah, 23-yo F).” Stress was mentioned as a common reason to smoke, as one reflected, “...they [youth] are

stressed out because there are so many family issues that they can't handle. They just need a stress reliever or they wanna fit with everybody and they smoke (Marie, 18-yo F).”

Influence and pressure from friends and older male relatives were also identified as factors contributing to smoking behaviors among male youth. One stated, “My brother began smoking in high school...he got it from my dad cause my dad was smoking (Julia, 19-yo F).” Another added, “In the Hmong culture, mostly your uncles...they are the number one person who will always try to convince you [to smoke] (Kong, 16-yo M).” Some youth mentioned that older generations are normalizing smoking behaviors among males.

They [older generations] like to stick to their way only and they're more closeminded. So if you don't smoke then you're not a man, they don't want you to be around them, they put you down if you don't do it with them. It's like, “Oh you're not cool, you're not a man, just get away from us.” (Jake, 20-yo M)

Youth explained that providing education about the harmful effects of smoking could help reduce smoking rates among Hmong, as those who did not smoke were either aware of the health risks or had seen someone suffer from health issues due to chronic smoking.

My dad is from the older generation and elderly person. He does smoke regularly like three times a day or after a meal. There are cases where the Hmong youth smoke, but then more than most, half the time they don't because either they know better, and because they receive education for it already or they [have] seen it personally and they know the consequences, or they just choose not to do it cause it's just bad for their health. (Charlie, 21-yo M)

**Alcohol.** Participants described alcohol use as a major concern among both male and female youth, with some starting to drink as young as 13 years of age. One mentioned, “I grew up in that

environment where whenever I went to a Hmong event, there’s always like an after party of people drinking, till they’re knock out (Tracie, 23-yo F).” Male youth were pressured to drink alcohol to fit in with peers and family members with a cultural belief that “man should be able to handle alcohol at a young age (Zie, 21-yo F),” and drinking alcohol was viewed as a test of “who is better, who can hold alcohol better, it’s kind of a challenge between guys, it’s like a macho thing (Julia, 19-yo F).” Most youth agreed that alcohol consumption was viewed as a symbol of adulthood, strength, and respect for males.

It’s just cause of this pressure of appearing as if you’re a stand-up person or a cool person... just trying to fit in with another group ...and it spreads like wildfire, where everyone wants to join in [to drink alcohol] and feel good about themselves. (Tou, 19-yo M)

Youth in college engaged in regular drinking for socialization, as one said, “since I entered college, I see a lot of friends or people who are younger than me that will go out to night clubs...and then they consume a lot of alcohol (Mai, 23-yo F).” Similar to smoking, youth felt pressured to drink by their family members and friends, as one pointed, “...in the Hmong culture in a lot of events like weddings, it does require you to drink alcohol and uncles will even try to get you to drink too (Peng, 15-yo M).” Another added, “...if an elder gives you a can [of beer], and you don’t accept it, it’s considered disrespectful towards the elder (Kenny, 17-yo M).”

## **Discussion**

The purpose of this qualitative study was to investigate the perceived factors influencing health-related behaviors among Hmong American youth. Previous research on Hmong has mainly been conducted among adults or early adolescents, often within multiethnic samples (Arcan et al., 2014; Berge et al., 2015; Franzen & Smith, 2009a, 2010). This study provides

health-related data on Hmong American youth in Sacramento, CA, a metropolitan area with one of the largest Hmong populations in the country, and an understudied group. Through focus group discussions, youth shared their health-related perspectives as they navigated between preserving their sociocultural values and adapting to the mainstream American lifestyle. Our findings build on prior research (Franzen & Smith, 2009a, 2009b; Goto et al., 2010; Rooney et al., 2009) by showing how intergenerational expectations and gender norms could potentially affect Hmong youth's dietary choices, physical activity, and substance use behaviors.

### **Cultural Identity and Dietary Choices**

Youth perceived Hmong foods as healthier than American foods and valued traditional food practices such as using fresh vegetables and herbs, cultivating home gardens, and hunting and preparing freshly butchered meats. While these findings align with previous reports among Hmong (Franzen & Smith, 2009a, 2009b; Roche et al., 2015; Vue et al., 2011), our results provided additional insights, as most youth expressed concerns about losing knowledge of traditional Hmong diets and using hard physical labor for activity as they adopted the average American diet and became more sedentary. Thus, youth appeared to navigate challenges between preserving their traditional cultural values and adapting to life in the U.S.

One observation from our data concerns youth perceptions of the regular use of MSG in Hmong cooking. While some youth viewed MSG as unhealthy, Wahlstedt et al. (2022) explained that anti-MSG sentiment is rooted in the history of racism and xenophobia around Asian American foods in the U.S., rather than scientific evidence. This underscores the importance of cultural humility among health professionals, particularly dietitians working with Hmong clients, who must distinguish between culturally biased health claims and scientific nutritional guidance.

Most youth reported that their households utilized food assistance programs. Moreover, youth associated healthier foods with higher costs, longer preparation times, and less taste and flavor, and therefore agreed to choose convenient and cheaper fast foods. This observation could also indicate broader socioeconomic barriers to accessing healthy foods as observed in minoritized populations (Mokari-Yamchi et al., 2024; U.S. Department of Agriculture, 2025). For example, in the past, increasing rates of obesity among Hmong have been attributed to food insecurity, i.e., a household-level economic and social condition of limited or uncertain access to adequate food (Franzen & Smith, 2009a; Stang et al., 2007; U.S. Department of Agriculture, 2025). Although we did not evaluate food insecurity, 53% of our youth were either overweight or obese, possibly indicating that social determinants of health, such as economic stability to prevent food insecurity and access to healthy foods, might be influencing the youth's health-related behaviors (U.S. Department of Health and Human Services, n.d.). Evaluating household food insecurity using validated tools and examining its association with obesity and health-related behaviors would provide further understanding of Hmong youth's health.

### **Gender Roles and Shifting Dynamics**

Focus group findings provided insights into how traditional gender norms affected food preparation and dietary choices in Hmong households. Cultural pride associated with hunting and slaughtering meat among Hmong males indicated how food customs may reinforce gender roles. Consistent with previous studies (Franzen & Smith, 2009b; Roche et al., 2015), our study's youth pointed out that females in multigenerational households were primarily responsible for grocery shopping, food preparation, and cooking, often guided by paternal dietary preferences. Female youth in our sample were reportedly taught to cook as early as 10 years of age; past research indicates that cooking is usually viewed as a traditional family duty

for Hmong girls, preparing them for the future when they marry into their husbands' families (Franzen and Smith 2009b).

Another finding from our data was that cultural expectations around food preparation and cooking persisted even as youth pursued higher education and lived independently from their parents. For example, more than half of the youth were in college, and most reported gaining weight when not living with their families because home-cooked meals were not readily available.

Youth also observed evolving gender roles in food practices, with some males participating in food preparation and cooking, possibly indicating shifting gender dynamics. Involving males in cooking practices could help preserve traditional foodways and promote shared responsibility with females in Hmong households (Roche et al., 2015); therefore, culturally tailored nutrition interventions might benefit from engaging both males and females in their education.

### **Parental Influence on Dietary Behaviors**

Youth emphasized that their parents' attitudes regarding food choices, body size, and health influenced their health-related behaviors. Youth described that parents had limited understanding of the role of nutrition in preventing chronic health issues, and some were unfamiliar with how to use certain vegetables, such as broccoli and carrots, in cooking, since these are not typically included in traditional Hmong diets. Youth also noted that their parents often served soda to guests during celebrations, viewing it as a gesture of hospitality and a sign of luxury.

Some parents appeared to encourage youth to overeat as a way of showing their care, and they did not fully understand weight management for health. From a sociocultural perspective, a

heavier body size is associated with affluence and wealth in the Hmong community (Mulasi & Smith, 2010); however, with the rising chronic illnesses, overweight and obesity are no longer viewed favorably (Arcan et al., 2014, 2018; Goto et al., 2010). Reports on Hmong children and adolescents also indicate higher body image issues and unhealthy weight control behaviors with obesity (Arcan et al., 2014; Berge et al., 2015; Mulasi & Smith, 2010; Stang et al., 2007). These data, along with our findings, highlight the importance of increasing awareness among Hmong parents and youth about the association between unhealthy eating habits, negative body image, and the risk of developing eating disorders and psychological distress (Kenny et al., 2021; Zhou et al., 2022).

### **Barriers to Physical Activity**

Several barriers prevented youth from being physically active, including unsafe neighborhoods, a lack of time and motivation to exercise, prolonged periods of sitting, and a lack of positive role modeling from parents. Of all the reported barriers, parents appeared to have a significant impact on youth's activity behaviors. Youth explained that their parents did not fully understand the concept and benefits of physical activity because exercising was primarily associated with gardening or physical labor for them. Parents were generally not physically active themselves, and time spent on physical activity by youth was frequently viewed as a barrier to education and job prospects. In the past, Carter and colleagues (2007) found similar findings among middle schoolers; Hmong students believed that being physically active every day was less important to their family members than it was to non-Hmong students.

Another notable finding from focus groups related to cultural norms influencing participation in physical activity among females. Females reported feeling their parents' discomfort when staying outdoors later in the evening, which was based on cultural stigma

around females being out late and safety concerns. Thus, a lack of support from parents and grandparents frequently curtailed female youth's participation in evening sports or exercises. Reports among other Hmong youth have also indicated parents being restrictive and not allowing children to engage socially (Juang & Meschke, 2017). Yet, positive parental modeling and social support from parents, friends, and relatives has been associated with greater physical activity among adolescents and youth (Eisenberg et al., 2014; Mendonça et al., 2014). Youth in our study also stated that they were more likely to exercise when accompanied by friends or family, especially in activities like karate and volleyball that kept them engaged through social connections. Taken together, these findings suggest that family- and community-based physical activity interventions could be particularly effective in the Hmong culture, as also noted by Arcan et al. (2018), and involving parents could positively affect activity levels in children and youth.

### **Concern over Alcohol and Smoking Behaviors**

Focus group discussions also revealed cultural and social factors possibly influencing alcohol and tobacco use among youth. Among male youth, alcohol consumption and smoking were associated with masculinity and respect towards elders, especially when elders offered youth an alcoholic drink or a cigarette. In particular, younger males reported being pressured to drink alcohol or smoke by peers and elders during gatherings as a means of social acceptance, highlighting how substance use behaviors might occur within sociocultural and intergenerational contexts rather than individual choice alone.

Past reports among Hmong youth have shown increases in smoking (Burgess et al., 2014) and alcohol use (SPRCPH, 2015), and youth who report having a household member who smokes are more likely to use tobacco (Rooney et al., 2009). In the present study, participants

further emphasized that education about the health consequences of smoking may discourage tobacco use, particularly among those who had witnessed its harmful effects. These findings, along with prior data, suggest that substance use control programs for Hmong youth would benefit from involving elders, educating them about the harmful effects of smoking and excessive alcohol use, and promoting the youth’s social acceptance based on other outcomes, such as education and athletics.

### **Limitations**

This study has a few limitations that should be acknowledged. First, although data collection was stopped once thematic saturation was reached in the focus group discussions, results from our small sample in one geographic area cannot be generalized. Second, the sample primarily comprised females (66%); achieving a more balanced gender distribution during participant selection would strengthen future research.

Third, of the 44 participants, 7 (16%) were born in Laos or Thailand; these youth were fewer in number and participated in the same focus groups as those born in U.S. Notably, we did not observe differences in perceived health behaviors between youth born abroad and those born in the U.S. One possible explanation could be that for youth born in Laos or Thailand, the average age at migration to the U.S. was 6 years, and the average number of years lived in the U.S. was 11 years; previous reports have indicated that younger migrants tend to adapt faster to the host culture (Dow, 2011). Moreover, the duration of residence in the U.S. might also not be the best indicator of acculturation, as individual factors, such as socio-economic status and perceived experiences of discrimination, can affect how immigrants acculturate (Ramos et al., 2016; Titzmann & Lee, 2022). Thus, future studies among Hmong would benefit from examining the role of such individual differences while evaluating acculturation and health-

related outcomes. Additionally, conducting separate focus groups with youth born in Laos or Thailand would help compare their health perceptions with those born in the U.S.

Fourth, we did not interview parents in this study. Given that intergenerational relationships might affect youths' health-related behaviors, as our findings indicate, input from parents would have provided valuable context. Including Hmong parents' perspectives in subsequent investigations would help understand whether parental role modeling and family dynamics influence youths' health behaviors. Finally, additional research with Hmong youth could examine how the social determinants of health, for example, food insecurity and neighborhood safety, affect their health behaviors.

### **Conclusion and Recommendations**

In conclusion, this study contributes to the literature by examining perceived factors that influence health-related behaviors among Hmong American youth - an understudied population. The Hmong are a family-oriented community, and sociocultural values and intergenerational relationships may influence food choices, physical activity, and substance use behaviors, as reported by youth in our sample.

Our findings present important implications across multiple domains. From a sociocultural perspective, this study illustrates how youth navigate their identity as they balance traditional Hmong practices with mainstream American norms. Cultural expectations around cooking for females reflected gendered roles, yet gradual shifts in such expectations were also noted. Intergenerational relationships, especially with parents, seem to influence youths' perceptions of health behaviors; youth reported that parents lacked adequate knowledge about how dietary choices, physical activity, and substance use can impact health outcomes. From a socioeconomic status perspective, most youths' reliance on food assistance programs, along with

the perception that healthy foods are unaffordable, may indicate food insecurity and financial barriers to accessing nutritious foods.

Taken together, our findings suggest that nutrition and health-related interventions for Hmong youth would benefit from involving parents and elders while encouraging family- and community-driven activities. Based on our findings, we recommend a few strategies for community nutrition educators and other professionals working with Hmong youth. For individuals outside the Hmong community who support Hmong people with their health, it is important to understand the historical trauma, migration struggles, and cultural factors that shape communication styles and health-related decisions among Hmong. Collaboration with a registered dietitian nutritionist (RDN), preferably Hmong, is highly encouraged. For example, RDNs can lead grocery store tours to guide food selection and demonstrate healthy, flavorful, low-cost, and time-saving cooking techniques. They can also incorporate traditional Hmong ingredients into meals while introducing new fruits and vegetables. RDNs specializing in eating disorders can address weight and body image issues in collaboration with other clinicians, and those certified in diabetes can provide medical nutrition therapy to improve cardiovascular outcomes (Brown-Riggs, 2015). RDNs can further promote community well-being by connecting families with local farmers' markets that provide affordable produce.

Providing culturally and linguistically appropriate educational resources for Hmong youth and their parents is also recommended, particularly regarding the benefits of physical activity and the risks associated with smoking and underage or excessive alcohol use (SPRCPH, 2015). Finally, multidisciplinary collaboration, including mental health counselors trained in culturally appropriate care and social workers who can connect families to food assistance and

other resources, can help to improve the overall health and well-being of Hmong youth and their families (Tatman, 2004).

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