

# Primary Care Providers' Perceptions of Young Cambodian American Female Patients

Ivy K. Ho<sup>1</sup> · Sable A. Smith<sup>2</sup>

Published online: 29 August 2017  
© Springer Science+Business Media, LLC 2017

**Abstract** There are significant health disparities among Southeast Asian Americans. As an initial step toward understanding the psychosocial factors associated with these disparities, the present study examined primary care providers' perspectives of health status, healthcare utilization, health-related behaviors, and stressors among one subset of Southeast Asian Americans—Cambodian American women between the ages of 18 and 24 years. Interviews with five primary care providers indicated that cultural, historical, psychological and social issues were associated with health outcomes and health behaviors. Results also pointed to clinical considerations and research directions that would improve treatment and understanding of health problems among young Cambodian American women.

**Keywords** Cambodian American · Women · Primary care · Culture

## Introduction

Southeast Asian American women, specifically those of Cambodian, Vietnamese and Laotian descent, face significant health disparities compared to their non-Hispanic white counterparts. For example, they are more likely to die of cervical cancer and less likely to participate in cervical cancer screening [1]. Breast cancer is also disproportionately

common among Southeast Asian American women, and screening rates are low [2]. The purpose of this study is to take an initial step towards understanding psychosocial factors associated with health disparities among Southeast Asian American women. We focused on healthcare providers' perceptions of one specific group of Southeast Asian women, namely, Cambodian American women between the ages of 18 and 24 years (i.e., emerging adults).

We selected Cambodian Americans because Lowell, MA is home to the second largest Cambodian American population in the United States. The Cambodian Mutual Assistance Association of Lowell estimates that there are 30,000–35,000 Cambodians living in the city. Cambodian refugees first arrived in the United States in 1979 to escape the Khmer Rouge regime. In addition to trauma experienced in Cambodia, refugees spent years in refugee camps where living conditions were harsh. En route to the United States by sea, many refugees encountered pirates who robbed them and raped the women. Upon arrival at the United States, refugees and immigrants face prolonged stressors associated with language difficulties, low income, and low education [3].

In much of health disparities research, Asian Americans have been integrated into one monolithic group, despite vast diversity among Asian American ethnicities in terms of immigration history, socioeconomic status, and acculturation [4]. Disaggregated data that are specific to particular ethnic groups provide more valid information for programs and policies that address health disparities. Therefore, we seek to contribute to the literature specifically on Cambodian American health. There are several reasons for focusing on this particular population. First, most of the research on health of Cambodian Americans has focused on earlier immigrants and refugees who came to the United States in the 1980s in the aftermath of the

✉ Ivy K. Ho  
Ivy\_Ho@uml.edu

<sup>1</sup> Department of Psychology, University of Massachusetts Lowell, 113 Wilder Street, Suite 300, Lowell, MA 01854-3059, USA

<sup>2</sup> University of Massachusetts Lowell, Lowell, MA, USA

Khmer Rouge, with little work being conducted on their offspring who came to the United States as small children or who were born in the United States, and therefore grew up in this country. Little is also known about younger immigrants who arrived in the United States more recently. Third, Asian American women who are the daughters of immigrants are at risk for mental health problems [5]. One possible reason for this risk is the pressure from one's peers to conform to mainstream American culture coupled with the pressure from one's family to adhere to traditional gender roles. Given that mental health problems are strongly correlated with physical health problems, it is important to examine both mental and physical well-being of young Cambodian American women. Finally, there is evidence that parental trauma affects parenting styles and, in turn, the well-being of the offspring of refugees and immigrants who have undergone trauma. Cambodians refugees arrived in the United States after fleeing genocide and political upheaval during the Pol Pot regime. Posttraumatic stress disorder is prevalent among these refugees. The aftermath of trauma has a negative impact on how parents interact with their children [6], which may influence the well-being of the younger generation.

We adopted Bronfenbrenner's [7] ecological model for this study, which purports that an individual is influenced by multiple contextual factors. Proximal factors, such as one's family members and friends, may influence a young Cambodian American woman's health-related behaviors. For example, she may eat a traditional Cambodian diet at her parents' house, but eat mainstream American fast food when dining out with her peers. Distal factors, such as one's country and culture, can also be influential. For example, while preventive care is not emphasized in Southeast Asian countries [8], early detection of pre-symptomatic disease is encouraged in the United States. The contexts of one's country of residence and one's family of origin intersect when a young Cambodian American woman learns about recommendations for cervical cancer screening but is discouraged from receiving screening because her mother deems it unnecessary if she is healthy. Therefore, a complete understanding of the determinants of one's behaviors must take these contextual factors into account. As one step toward understanding healthcare seeking behaviors and health disparities among young Cambodian American women, we focused on one key constituent in these patients' healthcare experience, namely, their primary care providers. To date, the research on provider perspectives of Southeast Asian American patients have focused on providers' views on immigrant families of children with developmental disabilities [9], and on families of children with physical and mental healthcare needs [10]. To our knowledge, the

present research is the first to examine provider perspective of an adult patient population.

## Method

### Participants

This study was approved by the Institutional Review Board. Potential participants were nurse practitioners or physicians who worked in primary care settings in a local community health center and a local university's student health services center. They were notified of the study using announcements distributed over electronic mail to their work accounts, postal mail to their place of work, and at providers' staff meetings. A total of approximately 55 providers were invited via email or in person to participate in this study. Five participants volunteered. Participants were female primary care providers, ages 33–75 years. Two providers self-identified as Asian, and three self-identified as white. None of the providers identified as being of Cambodian ethnicity. Three of the providers (two nurse practitioners and one physician) worked at the local community health center, where 26% of the patient population are of Asian descent. The other two providers (both nurse practitioners) worked at the student health services center at a local university.

### Materials

#### *Demographic Questionnaire*

A short demographic questionnaire asked about age, race, and gender.

#### *Interview Protocol*

We developed a semi-structured interview (Table 1) that consisted of seven questions. Participants were asked to respond to these questions based on their impressions and experiences with 18- to 24-year-old Cambodian American female patients.

### Procedure

The first author interviewed each participant individually. Following completion of the demographic questionnaire, the provider was interviewed for 30–45 min. Each interview was audio recorded and then transcribed. Each participant received a US\$35 pre-paid Visa gift card as compensation.

**Table 1** Interview questions with regard to your Cambodian female patients ages 18–24 years...

1.	What health problems do they typically have?
2.	What are some positive characteristics of this patient population?
3.	What are some negative characteristics of this patient population?
4.	What are some of the stressors they face?
5.	How would you characterize their participation in preventive care?
6.	What are their substance use-related issues?
7.	How would you describe their adherence to medical treatment and advice?

## Analytic Approach

We adopted a qualitative content analysis approach, inducing coding categories from transcribed interview responses [11]. During the first round of analyses, both authors independently read and coded the transcripts for responses that were pertinent to issues relevant to primary health care (e.g., “misunderstanding,” “birth control use”). The authors then shared their codes with each other line-by-line and resolved discrepancies in coding. New, broader, categories were formed to subsume older categories (e.g., “misunderstanding” and “birth control use” were categorized under “adherence”).

## Results and Discussion

### Common Presenting Problems

Young Cambodian American women presented for treatment with a variety of problems, including acute infections and chronic health problems. Patients also often presented for reproductive health care, including gynecological examination and birth control.

Notably, providers also mentioned presenting problems that appear to be strongly linked to mental health, even though the providers themselves did not explicitly indicate the connection.

“I’ve seen several that might have vague complaints. I don’t know if it’s vague complaints might be something probably related to some mental health problems, depression, anxiety... Usually they say that they think a lot. That’s why they’re not able to sleep.” (Provider 1)

The example above alludes to *koucharang* [12], a culture-bound manifestation of emotional distress among Cambodians, characterized by “thinking too much,” intrusive thoughts and rumination. Although providers indicated that they readily referred these patients for counseling services, mental health problems carry stigma that poses a barrier for help-seeking from family members and from professional mental health providers [13]:

“And I find, too, especially with mental health, and this is true of several populations, but maybe some embarrassment if that’s the issue if I’m having anxiety or depression or feeling that I really can’t talk to my family because they’re not going to understand this as being an issue.” (Provider 5)

### Health-related Behaviors

#### Diet

Providers lamented that their young Cambodian American female patients tended to eat a typical, high fat, “American” diet. This is consistent with literature that acculturation is associated with negative changes in diet [14, 15]. One provider speculated that for many young Cambodian American women, eschewing traditional diet in favor of mainstream American food was one way of “fitting into” mainstream culture. Another provider noted barriers to maintaining a healthful diet, including time and financial constraints, as these young women often juggled work and school, and tend to eat fast food and neglect physical activity.

One provider shared that she believed “if Cambodian Americans are eating more Cambodian food, that’s a good thing” and that Cambodian Americans have a “distinct advantage” because traditional diet consists of plentiful fish and vegetables. While this perception is largely accurate [16], it is important to note two caveats. First, for many refugees who had experienced food insecurity, the availability of high-fat and high-calorie foods in the United States may lead them to eat in unhealthful ways. This, in turn, may influence their young adult children’s dietary choices. Second, the availability of ingredients to prepare traditional Cambodian food at home makes it more likely that young Cambodian Americans eat larger portions, leading to weight gain. Providers’ idealization of traditional Cambodian diet may lead them to neglect to ask specific questions about nutrition and eating habits, especially if young patients report eating home-cooked meals.

### Substance Use

Southeast Asian American communities are at high risk for substance use and abuse because of low income and exposure to substance use by family or peers [17]. Additionally, alcohol and drug companies target low-income ethnic minorities, placing a majority substance-selling outlets in close proximity to such populations [18]. The potential generational transmission of substance use, in addition to the multitude of exposure to advertising, may predispose second generation Southeast Asian Americans to use drugs as a way of coping with stress.

There was disagreement among the providers with regard to substance use, including alcohol consumption and smoking. One provider emphatically stated there was a high prevalence of substance use, while other providers reported low incidence of this issue.

“Oh my gosh. That’s huge. I mean, in Lowell in general, there’s a huge alcohol problem. I see that a lot in my young women, a lot of drinking. And that’s across the board. And a lot of weed. I see some other stuff occasionally... I think there’s a lot of alcohol and weed and alcohol-weed related incidents, like, oh, I had sex when I didn’t want to when I was drunk.” (Provider 2)  
 “I didn’t see much about illegal drug use in this population at all. Like I say, even the smoking also less in this population. And drugs either because we ask about marijuana and recreational drugs.” (Provider 3)  
 “Compared definitely to the young Cambodian men, definitely they have less of this [marijuana use]. Even compared to the American population, I would say they have probably less.” (Provider 1)

Although these providers worked at the local community health center and served similar populations, they had different assessments of the level of substance use among young Cambodian American female patients. There are several possible explanations for this discrepancy. First, the providers interviewed may in fact have different experiences regarding substance use among their young Cambodian American female patients. Second, it is possible that, when asked about substance use, patients underreport to their providers because of the fear of stigma and disapproval.

Incidentally, it is interesting that Provider 1 said, “Even compared to the American population...” By “American population,” she presumably was referring to the White American or majority population. This word choice implies that, compared to White Americans, Cambodian Americans were not “American.” This is consistent with the *perpetual foreigner* and *alien in one’s own land* microaggressions, detailed by Sue [19], whereby Asian Americans are frequently regarded as being outsiders, even if they were United States citizens.

### Adherence

Treatment adherence is another area of health behaviors on which providers gave differing views. On the one hand, one provider reported that her young Cambodian American female patients were valued and followed her recommendations, implying that these patients deferred to the authority and expertise of their healthcare providers.

“They listen to what the provider would suggest, and they’re open to, suggestions or recommendations. And usually they follow with a plan... They always say “what do you think is the best.” That’s why I think they value whatever the providers say because they always ask, “What do you think we should do?” or “What do you suggest?”” (Provider 1)

On the other hand, another provider expressed frustration at her patients’ lack of adherence.

“I’m never clear. I don’t always know why those things fall apart. Like I don’t always know why we have these conversations. We feel like we’re agreeing, we feel like we’re on the same page, we take the time. And then three months later, the kid -- you know, we’re back in the office with another asthma attack and the kid’s not taking the medication. You know, like that for me, I don’t always understand that what happens there.” (Provider 2)

Several factors may account for this lack of adherence [20]. Chronic conditions such as asthma require long-term medication regimens, and adherence to these regimens tend to decline over time, especially when patients juggle numerous stressors. Furthermore, Cambodian Americans are disproportionately of low-income. Patients and their families may not be able to afford to pay for medications, especially when these medications have to be taken long-term. Non-adherence may also be associated with mistrust of healthcare providers and Western medicine. Although there is some literature on such mistrust among first-generation Southeast Asian refugees and immigrants [21], to our knowledge, there has been no published research on adherence among Cambodian American youth. One provider talked about adherence to birth control. This suggests that research is needed on how traditional expectations to abstain from pre-marital sexual behavior may serve as a barrier to adherence to birth control and safer sex practices.

“I think particularly in relation to issues with birth control, it’s a struggle anyway in this population to get adherence. I’m never clear whether it’s a lack of understanding or whether it’s really like some of those social pressures to not be continuing or some, you know, guilt about having sex in the first place, ‘I

want to use birth control or what if my parents found out' or those kinds of issues that are really coming into play." (Provider 2)

## Barriers to Effective Healthcare Utilization

### *Family Factors*

The family can influence a young Cambodian American woman's decision to participate in preventive care. Preventive care is not emphasized in Southeast Asian countries [1]. Therefore, refugees and immigrants from Cambodia are not likely to encourage their children to seek preventive care. Furthermore, in terms of cervical cancer, for which participation in screening is low, Cambodian Americans misunderstand this ailment to be an "American disease" [22].

"[W]hat is a Pap smear and why is it important? Well, my mother said she never had those in her country or it never was that available and why is it important?" (Provider 5)

Of particular relevance to the youth population is the availability of vaccines that protect against certain strains of the human papillomavirus that cause cervical cancer. Many Cambodian families believe that receiving the vaccine promotes promiscuity, even though research suggests otherwise [23].

"But also an example of Gardasil, they will say, 'I'll ask my parents first.' [T]he older people think it makes you start to be sexually active. So they feel it's a lot of inference, like 'my mom does not want me to have that shot yet,' stuff like that." (Provider 1)

### *Knowledge*

A frequently cited barrier to effective healthcare utilization is lack of knowledge, both in terms of misunderstanding of healthcare topics and the lack of information of such topics. One example of misunderstanding of health issues is that of birth control.

"I mean, there are very basic things about birth control, like, the thing I hear all the time, 'If you use birth control, you're not going to be able to get pregnant later.' Or all of those hundred thousand myths, like, birth control is this really horrible thing that's going to destroy a part of you. And that's a constant uphill stream. And all those other things about sex that are just wrong, like, you can't get pregnant if you have sex during your period, or if you stand up afterward." (Provider 2)

Providers noted that family is not a source of information about birth control, and also about other health-related issues such as medication adherence.

"And I think that's, again, just a lack of education. I think if their parents were sitting down with you being like this is what sex is and this is what this looks like and this is when you get pregnant and this is how, then it's very different as opposed to like what you're learning at school." (Provider 2)  
 "But sometimes the lack of a knowledge base or lack of a support to ask say a mom or a sister certain things in regards to their healthcare, so in some ways I think they utilize us more and ask in general more pertinent questions." (Provider 5)

### *Access*

Lack of access is another barrier to effective healthcare utilization. As offspring of refugees and immigrants, many of whom received little education during the Khmer Rouge, and who are of low income and speak little English, these young Cambodian American women do not have the privilege of observing their parents navigating the United States healthcare system. Given this lack of familiarity with the process and mores, the United States healthcare system appears as a formidable labyrinth.

"So I think there are like just very basic things like, 'How does the healthcare system work?' I think if the family hasn't been in this country for very long, you don't know what that means...So there's very basic things like this is what -- you know, this is how you call a doctor's office." (Provider 2)

Another important barrier to access is the lack of financial resources to afford healthcare services. These include lack of insurance coverage and family poverty.

"I think it's a lot still to do with the insurance problem. Because I think that's the main one that's limiting their follow-up, if they lost their insurance or they changed their insurance so they couldn't follow up." (Provider 1)

"And then I find out later in the follow-up that maybe they didn't have the money for the medicine. Money is an issue... No one has a lot of money when they are in college. But money can be a barrier; it can be about getting treatment. Or they are waiting for their parents to get the medicine sometimes... They need their mother or father to do the medicine, or to get the medicine at the drugstore, but money definitely is a barrier." (Provider 4)

In addition to being a barrier to receiving treatment, financial constraints also impede adapting healthful habits and lifestyle.

“And they have parents who are not very well educated and who don’t have the savvy to sort of negotiate the way our food system works around here to buy healthy food and to cook healthy food and still stay within this tiny little budget, which is just very hard to deal with. And things like asthma, for example, very common triggers for asthma are things that are related to the environment that you live in, like are there cockroaches, can you be allergic to those things. Do you have carpeting in your house as opposed to hardwood floors? You know, those kinds of just go along with not having control over your own environment. If you had your own house, you could take care of those things. Or if you had money to change your own house, you could take care of those.” (Provider 2)

Indeed, income disparity is positively correlated with health disparity. For example, among women across the distribution of household income, women in the lowest 20% were significantly more likely to report depressive symptoms and fair to poor physical health, compares to women in the highest 20% [18].

## Stressors

### *Intergenerational Conflict*

Interpersonal conflict is a common source of strain in parent–child relationships within immigrant families [24, 25]. In particular, younger generation Asian American women may experience considerable stress from conflicting expectations from parents and from mainstream culture [5]. The providers we interviewed expressed similar observation.

“Recently I saw another young woman who was just struggling. Her parents really just expected her to be home all the time, and she really just wanted to be with her friends... And would be a struggle anyway, you know, and that’s a very common -- you know, going from where your family is the most important thing to where you’re sort of individuating. You know, that’s a very common issue, although mostly in America at 18 or 19, like you’re expected to hang out with your friends a lot of the time... But she’s not. She’s expected to be home all the time.” (Provider 2)

“You know the young women are very conscientious of their parents’ expectations and I also see some dichotomy there. If the young woman wants to be more like the Westerner, going out, clubbing, whatever, and the parents are not believing in that, that can cause

kind of a valley or an uncomfortable thing between the parents and I have seen that directly.” (Provider 4)

Intergenerational conflict has a negative impact on psychological health [24, 25]. It is plausible that, like other forms of stress, intergenerational conflict can have long-term behavioral (e.g., maladaptive coping behaviors such as substance use and poor self-care) and physiological (e.g., endocrine disruption, such as increased cortisol and other stress hormones) impact on physical well-being.

## Social Support

Social support is linked to positive health outcomes by increasing engagement in adaptive health-related behaviors, improving psychological well-being, and enhancing physiological functioning [26]. Conversely, a lack of social isolation has been linked to deleterious health effects [27] via poor coping and impaired physiological functioning. Although one provider reported that her young Cambodian American female patients had strong friendships, another observed that her patients were socially isolated.

“I think my Cambodian patients, the young women that I know, they stick together. I see groups of friendships that are really strong. But like, you know, there’s not six degrees of separation; there’s like two degrees of separation. But I also feel like that’s a beautiful thing because they come with each other to see me, they stick together when they’re having a hard time. Like there is that sense of having that social network, even though it’s not always -- they don’t always encourage each other to make really great decisions; they’re still there for each other, and I think that’s really huge.” (Provider 2)

“Yeah, I think I do see that they don’t have a strong support system like another group of women or several women. I have seen that and they are kind of by themselves floating around. And I do see that and I don’t know if the community centers have anything in place that like you know for a group or if any of the agencies alone will have this, I don’t know. But I don’t see that as a general rule.” (Provider 4)

The discrepancy between the perspectives of these two providers may be due to the differences in healthcare settings; Provider 2 worked in a community health center whereas Provider 4 worked in a university health center. For example, in a sample of Cambodian American university students [28], participants reported a decline in their access to social support upon entering university, and that the isolation might have had a negative impact on their academic performance.

## Conclusions and Recommendations

The present study gathered perspectives from primary care providers of their young Cambodian American female patients. Our findings indicated several psychosocial factors that may have both short and long term impact on health within this population. Based on these findings, we provide the clinical and research recommendations below.

Primary care providers ought to be mindful of symptoms of mental health problems among young Cambodian American female patients. These patients may present for primary care with somatic complaints that stem, at least in part, from psychological distress. Providers also need to be aware of culture-bound mental health problems, including *koucharang*, which may be initially presented as physical symptoms, but which may indicate underlying mental health issues.

Our findings suggest providers need to be aware not to subscribe to the model minority myth when treating young Cambodian American women. For example, “traditional” Asian meals were frequently perceived as being low fat and healthful, compared to fast food and other mainstream American meals. Providers ought to recommend low fat, high fiber diet and moderate portion sizes for their Cambodian American patients, while keeping in mind that nutritional counseling is also crucial even if patients report eating traditional Khmer food. The literature on acculturation and diet among Asian American youth suggests that, while these youth consume a combination of Asian and mainstream American diet, there is some variation among specific ethnic groups. As reviewed by Diep et al. [29], Hmong American girls consumed more high-sugar drinks than they did milk. Given that Hmong and Cambodian Americans share a common refugee history as well as current low SES, it is plausible that Cambodian American youth also consume a large amount of high-calorie drinks. As further evidence of acculturation and obesogenic health behaviors, among Asian American adolescents, acculturation in the sixth grade was predictive of lower levels of physical activity and higher consumption of fast food in the seventh grade [30]. There is a need for further focus on psychosocial moderators of diet and exercise among young Cambodian American adults. Furthermore, women who experienced food insecurity while pregnant may produce offspring may develop a frugal metabolism; these offspring are in turn predisposed to overweight when high caloric food is plentiful [31]. It is likely that Cambodian female refugees may have experienced food insecurity when pregnant before, during or after living in the United States. Unfortunately, little is known about behavioral and physiological factors related to weight within this population.

Regarding treatment adherence, providers need to be aware of age- and culturally-appropriate ways to enhance

adherence, including an understanding of how the family influences a young woman’s adherence, particularly in terms of birth control and sexual health. Young Cambodian American women’s decision to practice birth control, to receive vaccinations against cervical cancer, and to participate in cervical cancer screening may be influenced by their mothers’ own healthcare practices and by the family’s attitudes toward sex, birth control and preventive care. Healthcare providers may be the best source of information about birth control and sexuality, given the stigma of premarital sex at home these patients may face at home.

Although research on substance use among young Cambodian American women is scarce, Southeast Asian American communities are at high risk for substance use and abuse because of psychosocial risk factors such as poverty and exposure to substance use from advertisers and from family or peers [17, 32, 33]. Substance use may be one behavioral pathway between stress and health outcomes. Our results suggest that younger generation of Cambodian American women experience multiple stressors, including intergenerational conflict and occupying multiple roles within the family. In addition to substance use, poor diet and lack of exercise are other health-related behaviors that may be associated with poor health within this population.

Providers listed several barriers against effective healthcare utilization among young Cambodian American women. Many of these barriers stem from growing up in impoverished refugee families. The link between income and health disparities has been well-documented, and more research is needed to understand the underlying pathways [34]. Among young Cambodian American women, research needs to examine the roles of acculturation, gender, race and other psychosocial variables. Next, young Cambodian patients may also need help navigating the healthcare system, including making appointments and obtaining insurance coverage. In offering guidance, providers should be mindful that, despite being adults, these patients might not have the autonomy to make healthcare decisions independently, given the influence of senior family members in some Southeast Asian communities [21].

This study has several limitations. First, we only interviewed a small number of providers, and therefore may not have gleaned a broad enough picture of how providers perceive their Cambodian female patients. This limitation is offset by two factors: We used a structured interview, which promotes data saturation even with a small sample [35]. Furthermore, given our focus on a specific, under-researched, population, the information gathered from even a small sample can be valuable for practitioners and researchers [36]. A second limitation of the study is that all providers interviewed were women. Young Cambodian women may present differently to male providers, who may in turn offer unique perspectives. This may be especially true with

regard to issues that pertain to sexual health and birth control. Third, we were unable to explore differences in perspectives between providers who primarily treated women in the community and providers who primarily treated college women. Level of education is linked to one's ability to process healthcare information [37]. Therefore, college women may demonstrate better understanding of and better adherence to treatment recommendations. Finally, the results of this study should be considered preliminary in light of the small sample size and the descriptive nature of the data analysis.

In conclusion, results of the present study suggest avenues both for further research and for ways to enhance treatment delivery, with long-term potential of increasing effectiveness of healthcare utilization and reducing health disparities. Current literature on healthcare utilization among Cambodian women is almost exclusively focused on older generation refugees; given that these refugees' offspring are now young adults, attention on the younger generation and the contextual factors that influence their health is timely.

**Funding** This study was funded by the University of Massachusetts Boston Institute for Asian American Studies, Research Fellowship Program.

#### Compliance with Ethical Standards

**Conflict of interest** All authors declare that they have no conflict of interest.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

## References

- Ho IK, Dinh DT. Cervical cancer screening among Southeast Asian American women. *J Immigr Minor Health*. 2011;13:49–60.
- Leong-Wu CA, Fernandez ME. Correlates of breast cancer screening among Asian Americans enrolled in ENCORE<sup>plus</sup>. *J Immigr Minor Health*. 2006;8:235–53.
- Dinh KT. The A-B-C in clinical practice with Southeast Asians: basic understanding of migration and resettlement history. In: *Handbook of mental health and acculturation in Asian American families*. Totowa, NJ: Humana Press, Inc.; 2009. pp. 123–41.
- Wong C, Hosotani H, Her J. Information on small populations with significant health disparities: a report on data collected on the health of Asian Americans in Massachusetts. Boston, MA: University of Massachusetts Boston Institute for Asian American Studies; 2010.
- Noh E. Asian American women and suicide. *Probl Responsib Heal Women Ther*. 2007;30:87–107.
- Field NP, Muong S, Sochanvimean V. Parental styles in the intergenerational transmission of trauma stemming from the Khmer Rouge regime in Cambodia. *Am J Orthopsychiatry*. 2013;83:483–94.
- Bronfenbrenner U. *The ecology of human development: experiments by nature and design*. Cambridge, MA: Harvard University Press; 1979.
- Taylor VM, Jackson CJ, Schwartz SM, Yasui Y, Tu SP, Thompson B. Cervical cancer control in a Cambodian American population. *Asian Am Pac Isl J Health*. 1998;6(2):368–77.
- Choi KH, Wynne ME. Providing services to Asian Americans with developmental disabilities and their families: mainstream service providers' perspective. *Community Ment Health J*. 2000;36(6):589–95.
- Khuu BP, Lee HY, Zhou AQ, Shin J, Lee RM. Healthcare providers' perspectives on parental health literacy and child health outcomes among Southeast Asian American immigrants and refugees. *Child Youth Serv Rev*. 2016;67:220–9.
- Mayring P. Qualitative content analysis. *Forum: Qualitative Social Research*, 1(2). <http://217.160.35.246/fqs-texte/2-00/2-00mayring-e.pdf> (2000). Accessed 12 May 2017.
- D'Avanzo CE, Frye B, Froman R. Culture, stress and substance use in Cambodian refugee women. *J Stud Alcohol*. 1994;55:420–26.
- Spencer M, Chen J, Gee G, Fabian C, Takeuchi D. Discrimination and mental health-related service use in a National Study of Asian Americans. *Am J Public Health*. 2010;100(12):2410–7.
- Akresh IR. Dietary assimilation and health among hispanic immigrants to the United States. *J Health Soc Behav*. 2007;48:404–17.
- Landale NS, Oropesa RS, Llanes D, Gorman BK. Does Americanization have adverse effects on health? Stress, health habits, and infant health outcomes among Puerto Ricans. *Social Forces*. 1999;78:613–41.
- Stockton P Nutrition and fasting in Cambodian culture. 2001. <https://ethnomed.org/clinical/nutrition/nutrition-and-fasting-in-cambodian-culture>. Accessed April 7, 2015.
- Friis RH, Forouzesh M, Chhim HS, Monga S, Sze D. Sociocultural determinants of tobacco use among Cambodian Americans. *Health Educ Res*. 2006;21:355–65.
- Lee JP, Lipperman-Kreda S, Saephan S, Kirkpatrick S. Tobacco environment for Southeast Asian American youth: Results from a participatory research project. *J Ethn Subst Abus*. 2013;2:30–50.
- Sue DW. *Microaggressions in everyday life: race, gender, and sexual orientation*. Hoboken, NJ: John Wiley & Sons; 2010.
- Dunbar-Jacob J, Schlenk E, McCall M. Patient adherence to treatment regimen. In: Baum A, Revenson TA, Singer J editors. *Handbook of health psychology*. New York: Psychology Press; 2012. pp. 271–92.
- Johnson SK. Hmong health beliefs and experiences in the Western health care system. *J Transcult Nurs*. 2002;12:126–32.
- Taylor VM, Jackson CJ, Schwartz SM, Yasui Y, Tu SP, Thompson B. Cervical cancer control in a Cambodian American population. *Asian Am Pac Isl J Health*. 1998;6:368–77.
- Mayhew A, Mullins TLK, Ding L, Rosenthal SL, Zimet GD, Morrow C, Kahn JA. Risk perceptions and subsequent sexual behaviors after HPV vaccinations in adolescents. *Pediatrics*. 2014;113:1–8.
- Dinh KT, Nguyen HH. The effects of acculturative variables on Asian American parent-child relationships. *J Soc Pers Relatsh*. 2006;23:407–26.
- Dinh KT, Weinstein TL, Tein JY, Roosa MW. A mediation model of the relationship of cultural variables to internalizing and externalizing problem behavior among Cambodian American youth. *Asian Am J Psychol*. 2013;4:176–84.
- Berkman LF, Glass T. Social integration, social networks, social support, and health. In: Berkman LF, Kawachi I, editors.



- Social epidemiology. New York: Oxford University Press; 2000. pp. 137–73.
27. Cacioppo JT, Hawkley LC. Social isolation and health, with an emphasis on underlying mechanisms. *Perspect Bio Med.* 2003;46:S39-S52.
  28. Chhuon V, Hadley C. Factors supporting Cambodian American students' successful adjustment into the university. *MUSE.* 2008;49:15–30.
  29. Diep CS, Foster MJ, McKyer ELJ, et al. What are Asian American youth consuming? A systematic literature review. *J Immigr Minor Health.* 2015;7:591–604.
  30. Unger JB, Reynolds K, Shakib S, Spruijt-Metz D, Sun P, Johnson CA. Acculturation, physical activity, and fast-food consumption among Asian-American and Hispanic adolescents. *J Community Health.* 2004;29:467–81.
  31. Sapolsky RM. *Why zebras don't get ulcers.* New York: Henry Holt and Company; 2004.
  32. Moore RS, Lee JP, Ammirati A. Social values and cultural imagination: approaches to tobacco prevention among Asian migrants and immigrants. Mayntooth: European Social Anthropology Association; 2010.
  33. Wieca JM, Lee V, Hodgkins J. Patterns of smoking, risk factors for smoking, and smoking cessation among Vietnamese men in Massachusetts (United States). *Tob Control.* 1998;7:27–34.
  34. Subramanian SV, Kawachi I. Income inequality and health: what have we learned so far? *Epidemiol Rev.* 2004;26:78–91.
  35. Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. *Field Methods.* 2006;18:59–82. doi:10.1177/1525822X05279903.
  36. Baker SE, Edwards R. How many qualitative interviews is enough? Expert voices and early career reflections on sampling and cases in qualitative research. Southampton, UK: National Centre for Research Methods Review Paper; 2012. <http://eprints.ncrm.ac.uk/2273/>. Accessed May 12, 2017.
  37. Suls JM, Davidson KW, Kaplan. RM. *Handbook of health psychology and behavioral medicine.* New York: The Guilford Press; 2010.