Published in final edited form as:

Ethn Health. 2014 June ; 19(3): 311–327. doi:10.1080/13557858.2013.776013.

Breast and Cervical Cancer Screening: Exploring Perceptions and Barriers with Hmong Women and Men in Oregon

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Abstract

BACKGROUND—Hmong women are reported to have very low rates of breast and cervical cancer screening compared to other Asian and White women in the U.S. Reasons for low cancer screening rates among this population are not well understood.

METHODS—This qualitative study (n=83) explored Hmong women and men's perceptions of breast and cervical cancer and cancer screening, women's experiences with breast and cervical cancer screening, and health care system barriers to screening.

RESULTS—Hmong women and men perceived breast cancer to be more severe than other types of cancers. Participants believed that breast cancer is curable if detected early. Cervical cancer was not well understood and was of greater concern than breast cancer because of its location within the body and its consequences for reproduction. In general, few participants had personal experiences with breast and/or cervical cancer. Overall, women and men had positive things to say about screenings for breast and cervical cancer, expressing that screenings offered a “proof of illness.” The majority of women did not report any concerns with the exams themselves, although some discussed embarrassment, pain, and discomfort. Barriers to screening included lack of health insurance, making co-payments, language, and issues related to scheduling appointments. Barriers differed for younger and older women.

CONCLUSION—Results of this study provide new insight into perceptions, experiences, and barriers to breast and cervical cancer screening among Hmong women and men. These findings have implications for developing culturally appropriate interventions to increase breast and cervical cancer screening in this population.

Keywords

cancer; early detection of cancer; Asians; Hmong

More than 246,000 new breast and cervical cancer cases are expected to be diagnosed in the United States (U.S.) in 2013 (American Cancer Society 2013). Although the cancer incidence and mortality rates for breast and cervical cancers are lower among Asian Americans compared with other racial/ethnic groups in the U.S., there are marked differences in incidence and mortality rates among Asian American sub-groups, specifically Southeast Asian American women (Cambodian, Lao, and Vietnamese). Breast cancer incidence is high among Cambodian (38.2 per 100,000), Lao (36.9 per 100,000), and Vietnamese (52.8 per 100,000) Americans (Miller *et al.* 2008). Furthermore, cervical cancer incidence rates are significantly higher among Cambodians, Lao, and Vietnamese American women compared to non-Hispanic White women (12.3, 24.8, and 16.8 vs. 8.1 per 100,000) (Miller *et al.* 2008). To our knowledge, there are no national data on breast and cervical cancer incidence rates for the Hmong.

The Hmong people are an ethnic minority group who immigrated as refugees to the U.S. from Southeast Asia in the 1970s with the most recent arrival of refugees between 2004–2006. The Hmong are best known for having fought alongside the U.S. in the secret war in Laos, which occurred during the Vietnam War (Hamilton-Merritt 1993). There are over 260,000 Hmong living in the U.S., with the largest communities in California, Minnesota, and Wisconsin (Hoeffel *et al.* 2012).

Cancer screenings (e.g., mammograms and Pap tests) are effective for early detection of breast and cervical cancers, which can lead to appropriate medical care and prevent untimely death (American Cancer Society 2011). Southeast Asian American women, specifically Hmong women, underutilize these tests (Tanasiri *et al.* 2001, Yang *et al.* 2006, Fang *et al.* 2010). For example, a study with Hmong women in California found that only 52% of Hmong women aged 40 and older reported ever having had a clinical breast exam (CBE), and only 30% reported ever having received a mammogram (Tanasiri *et al.* 2001). Similarly, studies have shown low cervical cancer screening rates among Hmong women (Yang *et al.* 2006, Fang *et al.* 2010). Hmong women are also more likely to be diagnosed with late-stage cancer, and a higher number choose to forgo treatment compared to other Asian and White women (Yang *et al.* 2004).

Reasons for low breast and cervical cancer screening rates among Hmong are not well understood. Few studies have been conducted with Hmong women (Tanasiri *et al.* 2001, Yang *et al.* 2006, Tanasiri *et al.* 2007, Fang *et al.* 2010) and, to our knowledge, only one study has included Hmong men on this topic (Tanasiri *et al.* 2007). Culture and traditional health beliefs are thought to influence Hmong women's cancer screening behavior (Parker and Kiatoukaysy 1999, Her and Culhane-Pera 2004, Baisch *et al.* 2008). The Hmong are traditionally patrilineal and patriarchal where men make the decisions to protect the well-being of the family, including health care and treatment decisions (Parker and Kiatoukaysy 1999, Baisch *et al.* 2008); thus, men can potentially influence Hmong women's cancer screening behavior (Cha 2003, Johnson 2002, Lee and Vang 2010). The Hmong's belief in the spiritual etiology of cancer and their fatalistic attitudes toward cancer have also been identified as potential barriers to cancer screening (Parker and Kiatoukaysy 1999, Baisch *et al.* 2008). In addition, for many Hmong women, CBEs, mammograms, and Pap tests are unfamiliar and regarded as invasive screening practices (Parker and Kiatoukaysy 1999,

Johnson 2002, Cha 2003, Her and Culhane-Pera 2004, Baisch *et al.* 2008). Hmong women are at high-risk for health problems due to poverty, lack of education, low English proficiency, lack of acceptance of the biomedical model of preventive care, and gender defined roles (Tanasiri *et al.* 2001, Lee and Vang 2010).

Most studies with the Hmong, to date, have been conducted in California, a state with one of the largest Hmong communities (Tanasiri *et al.* 2001, Yang *et al.* 2006, Fang *et al.* 2010). Studies in areas of the U.S., such as in Oregon, that have smaller Hmong populations and where few or no culturally specific cancer prevention services exist are lacking. We approached this study from the perspective of an ecological framework, recognizing that the behavior of individuals are influenced by the context in which they live and their interactions with the social systems surrounding them. Health-seeking behaviors are influenced by factors at different levels, including intrapersonal factors, interpersonal processes and primary groups, institutional factors, community factors, and public policy (Flay and Petraitis 1994, McLeroy *et al.* 1988). In this article, we present exploratory findings on the following research questions: (1) What are Hmong women and men's perceptions of breast and cervical cancer?; (2) What are Hmong women and men's perceptions of CBEs, mammograms, and Pap tests?; (3) What are Hmong women's experiences with breast and cervical cancer screening?; and (4) What health care system factors pose barriers to breast and cervical cancer screening for Hmong women?

METHODS

We conducted in-depth interviews with Hmong women and men in Oregon. Throughout the study, a Community Advisory Committee, consisting of Hmong community leaders and other Hmong community members (e.g., medical student, medical doctor, and a woman interested in cancer), provided guidance on the project. This study was approved by Oregon State University's Institutional Review Board (IRB).

Research Team

The research team included two investigators, one of whom is a Hmong woman, and a member of Oregon's Hmong community. The investigators collaborated on all phases of this project, from conception and design through analysis and interpretation. Other research team members included, but were not limited to, bilingual, bicultural Hmong interviewers; these individuals were recruited from the community, were trained by the investigators in project-specific procedures, and assisted with recruitment and data collection for the in-depth interviews.

Participants

Interviews were conducted between December 2009 and May 2010 with a purposeful sample of Hmong women and men. Our goal was to interview women and men, as well as younger (ages 18–39) and older (ages 40+) Hmong, with a target of 20 participants per sex/age group. To be eligible, participants had to self-identify as Hmong, be aged 18 years or older, and live in Oregon. Men were included in this study because of their role in medical decision-making and their potential influence on breast and cervical cancer

screening behavior. We selected a broad age range because women were recommended, according to American Cancer Society (2011) guidelines, to begin clinical breast exams and Pap tests by their early 20s. In addition, men of all ages could potentially influence screening through their roles as husbands, sons, and fathers, etc. We set the target sample size for each sex/age group at 20 in order to have sufficient numbers of participants within each of these groups to identify a broader range of perspectives and to explore group differences in themes.

To obtain a diverse representation of Hmong clans, socioeconomic status, and acculturation, we used multiple recruitment strategies, including placing printed materials (in English and Hmong) at community locations, making announcements at community gatherings, and using referrals. A recruitment script was used to provide additional information to individuals, determine their interest and eligibility, and schedule interviews. We completed eligibility screening with 86 individuals, of which 84 were eligible. All of those who met eligibility criteria participated in the study. In total, 84 interviews were conducted; however, one interview was not useable because the IRB approved protocol was not followed, resulting in a final sample of 83 participants (44 women, 39 men), representing 12 of the 17 Hmong clans in Oregon.

Data Collection

One investigator (a Hmong woman) and trained bilingual, bicultural Hmong staff conducted the interviews. Interviewers used an informed consent document to explain the study to participants, and participants gave oral consent to participate. Based on participant preferences, interviews were conducted in Hmong, English, or both. Interviews lasted 45–120 minutes. Participants were offered \$25 for their participation and up to \$10 each for childcare and transportation.

Measures

In an initial phase, the investigators interviewed 17 key informants who were members of the Community Advisory Committee or other knowledgeable persons from the local Hmong community. The purpose of the key informant interviews was to inform the development of the interview guide and the recruitment and data collection plans for the primary data collection effort. Building on those findings, we developed two versions of semi-structured interview guide, one for women and one for men. The semi-structured interview guides covered numerous topics. Of particular relevance to the present analyses, topics included perceptions of breast and cervical cancer; CBE, mammogram and Pap test screening experiences; and health system related barriers to breast and cervical cancer screening. Examples of interview questions in the interview guide for women included: *What do you think about breast cancer compared to other types of cancer?*; *What do you think about mammograms?*; and *Please tell me to what extent each of the following things makes it harder for you to get screened for breast or cervical cancer – health insurance? Getting appointments?* Hmong men were asked about their knowledge of cancer in general, breast and cervical cancer, and the barriers to breast and cervical cancer screening among the women in their family. Other interview questions asked about the participant's place of

birth, marital status, educational attainment, and health insurance coverage among other topics.

Data Management and Analysis

Interviews were audio recorded and transcribed verbatim. Interviews conducted in English were transcribed by either a transcription firm or a project staff; these interviews were verified for quality and accuracy by the Hmong investigator and a research assistant. Interviews conducted predominantly in English with some Hmong language were transcribed and Hmong sections were translated into English by the Hmong investigator. Interviews conducted entirely in Hmong were simultaneously transcribed and translated into English by a Hmong employee at a transcription and translation firm. The Hmong investigator verified translation of the Hmong transcripts for translation accuracy by listening to 10 minutes of the beginning, middle, and end of the interviews. We communicated back and forth with the transcriptionist until we agreed on an accurate translation. We also consulted the Community Advisory Committee to clarify questions on translations.

Transcripts were coded and analyzed using NVivo 8 (QSR International, Cambridge, MA). The data were analyzed using content analysis (Hsieh and Shannon 2005; Neuendorf 2002). Using this method, coding categories were derived directly from the transcribed text through an iterative process. First, research team members independently reviewed a subset of transcripts, which were selected to reflect the pool of participants based on gender, age, and language, to generate preliminary codes. Through a consensus process, the research team compared, discussed, and refined a list of codes (i.e., codebook). Then, each transcript was independently coded in its entirety by at least two research team members, using the codebook. New codes that emerged were discussed by the research team and added to the codebook. Two research team members (the Hmong investigator and a research assistant) jointly analyzed the coded text for selected topics, identified themes, resolved any differences in coding, and selected quotations to illustrate themes. Differences in themes were examined by gender and age. Because younger (aged 18–39 years) participants were more likely to have been born in the U.S.; understand, speak, read, and write English; and have completed four years of college or higher (data not shown), we used age as a proxy for acculturation. To verify if our interpretation of the results were accurate, we discussed our main findings with the Community Advisory Committee.

RESULTS

Participant characteristics are summarized in Table 1. Reports of ever had a CBE, mammogram, and Pap tests are presented in Table 2. Time since last CBE, mammogram, and Pap tests for women are presented in Table 3. Most women aged 18–39 years reported having had a CBE and Pap test at some point in their lives (68% and 80%, respectively). Most women aged 40 and older reported having had a CBE (84%), mammogram (79%), and Pap test (90%). Description of themes and illustrative quotes are presented in the following section. For each quotation, we noted the participants' sex and age by decade.

Perceptions of cancer, breast cancer, and cervical cancer

Cancer—When asked about cancer in general, Hmong women and men shared four predominant concerns: fear, hopelessness, the sense that cancer is a life-ending illness, and that there is no cure. Older and younger women and men described cancer using the same words (i.e., loss of confidence, shock, and incurable). A woman in her 40s described cancer this way, *“I think the word cancer is maybe, you would tag kev cia siab [feeling of hopelessness]... I haven’t seen any person get cured to live.”* An older man (60s) described the shock of hearing someone has cancer, *“When I hear cancer, my hair raises. Because if it’s cancer, it cannot be cured. Then you poob siab [discourage/despair/shock], there is only a high chance of death.”* Another man (50s) described the loss of confidence and sense that survival is not possible, *“Cancer for me is, ‘oh, can they fix it?’ It is something new that I don’t know if the doctor can cure it or not. For me, I would tu siab nrho [lose confidence or lose faith completely]. Once cancer is there, you can’t run away from it... just a few will get away with it, where they [person with cancer] are able to get help, but for most, if they [doctors] say cancer, then I see they [person with cancer] don’t live very long.”* Some respondents did not differentiate between types of cancer; rather, they viewed all cancers as leading to death.

Breast and cervical cancer—When asked specifically about breast cancer, the majority of women and men considered this type of cancer to be different from other cancers. Participants stated that, unlike other forms of cancer, if breast cancer is detected early there is a good chance for successful treatment. *“I think that if its breast [cancer]...you can remove it and it’ll be fine...then you’re back to being the same because you have seen a lot who’ve had breast cancer, they [doctors] have treated them [breast cancer patients] to be better,”* remarked one woman (40s). Most men shared the same sentiment. For example, a man (40s) stated, *“... if you find out about breast cancer in the beginning then it is much safer to treat and it is curable.”* Participants also perceived breast cancer differently than other type of cancers because breasts were seen as an external part of the body, suggesting that removing the cancer would be easier than if it was in another part of the body [internal organ] as stated by one woman (40s), *“If you have breast cancer you can remove it, but if you have it in your body, you can’t just cut and remove it.”* Another woman (50s) agreed, *“The breast is on the outside, but everything else is inside.”*

Younger women commented that breast cancer was not as common among Hmong or Asians and considered it more prevalent among Whites and other racial/ethnic groups. Women discussed they had heard a lot about breast cancer in the mainstream media, but perceived the risk as pertaining to White women. A young woman (30s) stated, *“It [breast cancer] mainly affects females, mainly Caucasians, not so much Asians.”* This belief was shared by many participants because they did not have personal experiences with breast cancer; thus, felt that Hmong people were not affected by the disease. A woman in her late 30s shared, *“With our Hmong people, I haven’t heard of many, maybe just one or two. For other races, I have heard of many before...”* Another woman (30s) stated, *“It’s [breast cancer] just something that’s never really hit the Hmong people, especially me. I don’t think of breast cancer as being one of the main cancers that does hit us [Hmong people].”*

Cervical cancer was of greater concern to women. Among men, most reported that they have never heard of cervical cancer or paid much attention to it because it is a “*disease that affects women*.” Participants often compared cervical cancer to breast cancer, sharing that it is harder to detect and cure because of its location in the body. One female (50s) stated, “*The pain in your breasts is already painful enough if you have the pain elsewhere like your siab [liver] or in your nrog cev [inside your body, inner being] then maybe you won’t be alive.*” A man (40s) spoke of the danger, “*I think that cervical cancer is dangerous because it is deep inside the body.*” Others were concerned about cervical cancer’s effect on reproduction. A woman in her 30s spoke of the risks cervical cancer poses, “*It’s akin to breast cancer except that it’s more serious because you lose a chance to create... to have life... to create life and have a family of your own...*”

Perceptions of CBEs, mammograms, and Pap tests

We asked women and men about their perceptions of breast and cervical cancer screening tests. The majority of participants felt that CBEs are valuable because they detect cancer in time for treatment. A small number of women and men commented that women may be shy or embarrassed about getting a CBE. Among women who expressed shyness, all but one stated that shyness neither prevented them from getting this exam, nor caused them to have a negative perception of CBEs. The majority of women and men felt that a mammogram image offers “*proof of illness*” and can help detect cancer early.

Most men were unfamiliar with Pap tests; of those who were familiar, comments were positive. The majority of women thought Pap tests were effective at detecting cancer. Women discussed positive aspects of the Pap tests, but expressed concerns about the potential for exams to be painful, uncomfortable, or embarrassing, though all still reported receiving the test. A small number of older women discussed feeling embarrassment and being modest about exposing their bodies.

Experiences with breast and cervical cancer screening

Men had little to say about women’s experiences with breast and cervical cancer screening; consequently, we did not include their comments in this analysis. The majority of women reported positive experiences; they described the tests as routine, informative, and easy. Women did not always distinguish between CBEs, mammograms, and Pap tests. A woman in her 50s stated, “*When I got screened... it was good. I didn’t know how I was doing, so when I got there the doctor did tell me that people who have breast cancer is like this...the lump in the breast will be like this. So, it made me think it is good that I went to get examined.*” A woman in her 30s shared, “*It made me feel comfortable, I was not scared, it’s just routine to me.*” Others talked about screening as a reassurance of good health; for example, one woman (40s) said, “*Getting screened I think it has more good things for you because in this country there are a lot of sickness. So if you get screened for one thing and they say you don’t have it then you already tso siab [have faith, confidence] that you don’t have that sickness.*”

Women who discussed negative experiences with screening mentioned modesty, shyness, and embarrassment. Specifically, when talking about mammograms and Pap tests, women

indicated feeling pain and discomfort. Many women felt that the necessity and/or importance of screening exams outweighed concerns. *“For women we are shy, right? ... There are times when you feel uncomfortable, but you know at the same time it is very important, so you gotta do it”* (woman, 30s).

A small number of women in our study reported never having been screened. Women in these groups thought screening was not necessary for various reasons, including being asymptomatic, having no family history of breast or cervical cancer, not having a doctor's recommendation, having had a hysterectomy, not being pregnant, and not wanting to get screened. When asked why she does not get a Pap test, one woman (40s) replied, *“...it's like your heart wants to go, but you feel that since your body is healthy then you just haven't gone. I don't have anything to complain about or worry about.”* Another woman (20s) gave this response about not getting a Pap test, *“Well, I think it's because no one ever asked me! Even though I've seen a doctor many times, no one ever asked me...”* When asked about reasons for not getting a mammogram, a woman in her 50s replied, *“I've only done it once... I got examined and they said there were no problems, I'll wait longer before I go. I don't want to go every year.”* Another woman (50s) stated, *“I don't have the money to and I don't have any sickness, so I'm not going.”*

Health system barriers to breast and cervical cancer screening

We asked participants about aspects of the health care system that pose barriers to breast and cervical cancer screening. Three predominant barriers emerged: 1) insurance coverage and co-payments; 2) language barriers; and 3) issues related to making appointments (e.g., scheduling, referrals, and location of services). Differences in responses were notable between younger and older women. Among older women, the most prevalent concerns related to language barriers such as filling out forms, lack of insurance, and ease of access to medical offices (e.g., location and transportation barriers). For younger women, the most common barriers related to lack of insurance and co-payment issues and scheduling appointments. Responses from older and younger men supported these concerns.

Insurance coverage and co-payments—Concerns about lack of health insurance and co-payments were commonly cited by Hmong women and men. A woman in her 50s shared, *“If you have insurance then that is what can help you more. Because in this country if you don't have insurance, even if you are sick, they can't help you, right?”* Co-payments were seen as an unnecessary cost if someone was not convinced they needed to be screened. Participants' responses reflect an underlying lack of understanding of the importance of screening in the absence of symptoms. As a young man (20s) explained, *“...they're feeling ok...it's like why waste my co-payment to go get checked when I feel completely fine...”* A man (40s) described the dilemma of paying for something that may be unnecessary, *“For some reason, for Hmong culture... if you have to spend out of your pocket to get screening or the testing or anything.... They would rather not do it.”*

Language barriers—Language was discussed as a barrier by all the women and men in our study. Younger people talked about language as a barrier to screening for the older generation, and older Hmong women and men talked about how language directly impacted

their interactions with providers and health seeking behavior. Participants expressed a major concern that communication and understanding is limited when a provider and patient do not speak the same language. An older woman (60s) stated, *“Communication is difficult... because even if you go, there isn’t someone to speak for you there, so if I go, I won’t know anything. So when we talk, we won’t understand each other.”* A woman in her late 50s shared, *“If [I] know the language, then I want to get screened, but I haven’t gone since I don’t know the language or know how to read and write, so it is hard. That’s why I haven’t done it. I’m willing to let them screen me.”*

Participants also discussed how language was a barrier to accessing and using screening services. Language proficiency was described as a barrier when scheduling appointments, completing forms, communicating with office staff and providers, locating services and using interpreters. English literacy (written and oral) was perceived as problematic, especially among older participants. A man in his 50s talked about the impact of the Hmong’s recent history in the U.S. on women’s literacy, *“... if you don’t know how to fill out paperwork then you will need the interpreter to help also because we have been here for 30 or 40 years and we work all the time so we don’t have a good education, so we don’t know how to read well, so there are problems. They need a lot of help with paper work.”* Older women expressed frustration about being dependent on others as a result of poor literacy skills. A woman in her 50s shared, *“... for us older people, when you get there you don’t know the language so you stand still then it’s not that you’re mad, the people at the front are mad at you because you come but you don’t know the language. Why did you come?... If you don’t know the language when you get there they don’t even say a word to you... they just hand you a piece of paper ... you don’t know what to write.”* Another older woman (50s) remarked, *“I don’t know how to read the forms so I don’t know what it means, so I don’t know how to fill it out. When they ask you, in the past what kinds of sickness have you had, I won’t know how to answer that so I might make a mistake.”*

Women and men also talked about the pros and cons of using interpreters. Although many participants felt that interpreters were helpful, even more expressed concerns about the difficulty of finding competent Hmong interpreters. Some felt interpreters lacked knowledge of medical terms and might not understand providers’ explanations of symptoms or treatment options, or be able to clarify diagnoses. Others felt that interpreters may know English and medical terminology, but lack the skills to explain providers’ comments to patients and families. Additionally, others discussed the challenge of discussing health problems via an interpreter and not directly with their provider. A man in his 50s described his discomfort using an interpreter in these words, *“... finding interpreters is hard because like I said to you, you want to tell them everything, but you don’t feel comfortable in doing so. So when they [interpreters] ask you questions, you just answer those questions. It is not as good as if you could talk for yourself.”*

Making appointments, referrals, finding time, location, and transportation—

Women and men, including young and old, discussed challenges related to appointments. A man (40s) stated, *“I don’t know why when you make appointments, it takes so long. That is hard.”* An older woman (50s) complained about automated telephone systems. *“[It is hard] because they don’t have a person there all the time that can just speak to you. You press the*

numbers and you keep going and then it does not reach the person so you can't go." Young women, in particular, mentioned time as a barrier. They noted the challenges of leaving work or arranging for childcare to go to appointments. Some women found the referral process frustrating. As a woman in her 30s discussed, *"I feel like I get passed around and so... I was really hesitant when my family doctor referred me... 'cause I thought, 'Oh my gosh, I've already talked to her twice, now I have to go and explain it to someone I don't even know...all over again.'"* Older women discussed the challenges of traveling to appointments in unfamiliar or far-away places. *"You know, even if you're looking for a hospital, you can't find it. Driving, you don't know what streets to take to get there. When you get to the hospital, you don't even know the language, what can you say to them, so you can find the room you will be screened in"* (woman, 50s). Participants also discussed that Hmong, particularly elders, often rely on family members for transportation to appointments. One man (40s) stated, *"Most of the time, if they can't find someone to help drive them to their appointments, chances are they will just simply not go through with it [go to the appointment]."*

DISCUSSION

This study provides new insight into the perceptions, experiences, and barriers to breast and cervical cancer screening for Hmong women. Overall, few participants in our study had personal experiences with breast and/or cervical cancers. Furthermore the Hmong men in our study, in general, had less knowledge than the women about breast and cervical cancers. Both women and men perceived breast cancer to be less severe than other cancers. Participants believed that breast cancer is curable if detected early – a sentiment not previously noted in the literature (Baisch *et al.* 2008, Lee and Vang 2010).

In general, Hmong women and men knew less about cervical cancer and Pap tests. Participants discussed the fear of developing cervical cancer and believed the consequences of cervical cancer diagnosis are greater than for breast cancer. Our findings suggest that interventions could leverage beliefs about breast and cervical cancer held by Hmong women to improve women's understanding of these cancers, potentially leading to increased cancer screening. Some women reported that they are aware of breast cancer, in part, through the media. Many women, however, believed that breast cancer does not affect Hmong women; rather, it is a White woman's disease. Providers could inform Hmong women that although breast cancer rates may be higher among White women, cancer is a disease that does not discriminate and affects all women. Furthermore, media messages could be more inclusive of images and information that are more relevant to women of color, especially Asian Americans.

A majority of the women in our study described breast and cervical cancer screenings as necessary and were not deterred from obtaining screenings. We anticipated that participants would express stronger objections about the personal and invasive nature of these procedures, factors that have been shown to be a barrier to screening (Schroepfer *et al.* 2010, Tanjasiri *et al.* 2001). This could be reflective of our study sample, which included younger and more highly educated women who might not have been as influenced by issues of modesty as a sample of exclusively older women would have been. Rather, participants

voiced concerns about health care system barriers to screening such as lack of insurance, the high cost of co-pays, the laborious nature of making appointments, finding time, language barriers, and transportation. Of particular concern, some participants shared the belief that spending money on a co-payment for screening was not worthwhile if one did not have symptoms and the result was a negative test, suggesting some Hmong women and men may not fully understand the purpose and value of screening, specifically Pap tests. The findings from this study are a reminder that the Hmong are not homogenous and that beliefs and behaviors towards cancer and cancer screening may vary. Future studies to further understand and confirm our findings regarding the extent to which specific experiences and/or issues are shared by the Hmong more broadly should be pursued with a large scale, population-based sample.

In our study, language was a unifying theme underlying multiple barriers to screening. The role of language was discussed within the context of scheduling appointments, transportation, locating offices, interactions with clinic staff, filling out forms, and communicating with providers and interpreters. The anxiety and discomfort expressed about efforts to negotiate a health system that operates only in English was a clear deterrent to screening. Although patient navigator-type programs can address some of these concerns (Ramirez *et al.* 1995, Burhansstipanov 2005, Nguyen and Kagawa-Singer 2008), Hmong participants expressed the need for reliable, adequate, and culturally sensitive interpreter services. Properly trained medical interpreters can facilitate effective communication between providers and patients, which can lead to improved understanding of illness and treatment, and better health outcomes (Hornberger *et al.* 1997, Jacobs *et al.* 2001). As indicated by the responses of our study participants, there is a lack of trained Hmong medical interpreters, which may influence some Hmong's health seeking behavior. In addition, future studies are needed to address how structural (e.g., location of services) and institutional barriers (e.g., administrative process) impact the treatment of patients from different cultures at all points of care from the initial point of contact to follow-up care (authors' names removed for blind review).

A small number of study participants shared that although screening is important, they had not been screened. When asked why, reasons were related to insurance and cost. Furthermore, given that modesty has been reported as a concern for Hmong women in terms of obtaining physical examinations and cancer screenings (Barrett *et al.* 1998, Cha 2003, Baisch *et al.* 2008), we had expected women to mention cultural issues as barriers to screening, but few cited issues of modesty and embarrassment. Overall, women in this study were younger, had more education, and had greater English proficiency than Hmong women in other studies (Tanjaisiri *et al.* 2001, Yang *et al.* 2006, Baisch *et al.* 2008); thus, they may be more acculturated and feel that modesty and privacy are not deterrents to screening than participants in other studies. Changes in Hmong culture might have some influence as women become increasingly educated and acquire the knowledge and skills to determine their own health decisions. Examining how culture change among the Hmong population and subgroups of Hmong (e.g., by age, geographic location) influences health seeking behavior and medical decision-making, especially toward cancer screenings, deserves further investigation.

Other women remarked that they had not been screened because their providers had not recommended it; both younger and older Hmong women discussed lack of provider recommendation. One of the most significant predictors of cancer screening is a doctor's recommendation (Pham and McPhee 1992, Breen *et al.* 2001, Nguyen *et al.* 2002, Taylor *et al.* 2004, Ho and Dinh 2011). Providers play an important role in motivating women to get screened and should be integrated into screening interventions. Providers can diligently send out reminders and encourage women to routinely get screened. Furthermore, a large portion of our study participants reported seeking preventive care. The type of preventive care participants sought was not asked; however, we suggest that providers take advantage of the opportunity during office visits, if they do not already, to provide information (both written and oral) on the purpose of early detection and the screening process.

Quantitative cancer screening data exist for Hmong in states with large Hmong populations; however, such data have not previously been collected in Oregon. Surprisingly, most women in this study reported having been screened for breast and cervical cancer at some point in their lives. Although we did not ask women about the frequency with which they received CBEs, mammograms, or Pap tests, we asked about the last time they received these screenings. We found that a high percentage of women, at the time of data collection, reported being screened within time periods that follow national screening guidelines (American Cancer Society 2011). Our data differ from studies conducted in California that found lower breast and cervical cancer screening rates among Hmong women (Tanasiri *et al.* 2001, Yang *et al.* 2006). These results suggest that the Hmong women in our study may be different from those in other Hmong communities in the U.S. The Hmong in Oregon live in an area with fewer culturally specific services and providers, and, perhaps, possess other community assets, which have protective effects (e.g., access to insurance through the Oregon Health Plan, a Medicaid program; greater cohesiveness; more social integration). The differences in breast and cervical cancer screening rates between our study and others warrant further investigation.

This study has several strengths. Its qualitative nature allowed us to explore perceptions that underlie breast and cervical cancer screening behaviors among Hmong women and men. The success of this study was, in part, due to our collaborative approach with community members who played an integral role in the development and implementation of the study. Community Advisory Committee members also worked with the research team on interpretation and dissemination of study findings. Community members attended a celebration of the project at which they learned about the project findings, and where we honored the Community Advisory Committee and thanked the Hmong community. In addition, interviewing both women and men provided a richer, more robust and comprehensive account of Hmong women's perceptions, experiences, and barriers to screening.

There are also limitations worth noting. As with most qualitative studies, our findings are not generalizable. The participants may differ from non-participants in their views on and comfort with discussing breast and cervical cancer screening, and the Hmong community in Oregon may differ from other Hmong populations in ways that could impact screening. In addition, the interview questions pertaining to barriers focused specifically on health care

system barriers to screening; thus, other barriers to screening may not have been captured. Also, participants sometimes responded using language that suggested a hypothetical situation or talked about people other than themselves or the Hmong as an entire group (e.g., peb Hmong). Given that many of these topics are sensitive in Hmong culture, we believe that some participants might have been more comfortable sharing information by referencing others rather than themselves. Alternatively, some participants might have misunderstood the meaning of questions, perhaps due to unfamiliarity with research studies or to how questions were translated. In addition, we recognize that there are various ways to measure acculturation, and in this study, we used age as a proxy for acculturation. We did not collect data on length of time in the U.S., a factor that might influence the level of exposure to and familiarity with breast and cervical cancer information and screening. Overall, the Hmong share many similarities; however, participants in this study have shown that there are also important differences between group members. Our findings add new insights into the Hmong's screening behavior and can guide future research and program development.

Despite these limitations, our findings point to areas where additional studies are needed to further understand screening practices related to breast and cervical cancer screening. Our findings indicate the need for greater cervical cancer education and prevention among Hmong women and men. Also, language continues to be a barrier for the Hmong, indicating that structural and institutional changes are still needed to address issues of accessibility and quality of care for this population. Furthermore, cultural factors that once impacted Hmong women's cancer screening behavior may not have as much influence on Hmong women today. Special attention should be paid to young Hmong women to ensure that they will continue to adhere to recommended screening guidelines, as well as to older women who may need help accessing and navigating cancer screening services. These results also have implications for how programs and services can better meet the needs of Hmong women and, ultimately, improve screening behavior.

Acknowledgments

The authors would like to acknowledge the Hmong Breast & Cervical Cancer Project community advisory committee for their guidance throughout the project. Also, we would like to thank Oregon's Hmong community for their support and engagement in this study. The project described was supported by Award Number R21CA139147 from the National Cancer Institute. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Cancer Institute or the National Institutes of Health.

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KEY MESSAGES

Hmong women and men were more familiar with breast cancer compared with cervical cancer. Some Hmong women believed that breast cancer affected mostly White women, and most did not have any personal experiences with the disease. Most women reported having been screened for breast and cervical cancer, believed that screening is important, and reported positive screening experiences. Barriers to screening included lack of health insurance, making co-payments, language, and issues related to scheduling appointments.

Table 1

Participant Characteristics (n = 83)

Characteristic	Women (n = 44) Mean (SD) or n (%)	Men (n = 39) n (%)
Age, years M (SD)	38.2 (12.9)	39.5 (13.7)
18–39	25 (57)	20 (51)
40+	19 (43)	19 (49)
Married	37 (84)	31 (80)
Education		
No school or only kindergarten	10 (23)	1 (2)
Grades 1–11	6 (14)	4 (10)
Grade 12 or GED	10 (23)	10 (26)
Some college	8 (18)	17 (44)
College degree or higher	10 (23)	7 (18)
Health status		
Excellent	3 (7)	3 (8)
Very good	8 (18)	4 (10)
Good	23 (52)	24 (62)
Fair	10 (23)	6 (15)
Poor	0 (0)	2 (5)
Has health insurance	38 (86)	31 (80)
Has personal doctor or health care provider	29 (66)	22 (56)
Had routine check-up within past 2 years	25 (57)	21 (54)
Ever seeks preventive care	27 (61)	17 (44)
Place of birth		
Foreign-born	25 (57)	26 (67)
U.S.-born	18 (43)	13 (33)
Understand English pretty well or very well (n = 72)	34 (77)	24 (86)
Speak English pretty well or very well (n = 81)	34 (79)	29 (76)
Read English pretty well or very well	31 (70)	29 (74)
Write English pretty well or very well	30 (68)	28 (72)
Language Preference		
Hmong only	13 (31)	5 (15)
English only	2 (5)	2 (6)
Both	27 (64)	27 (79)

Table 2

Ever had clinical breast exam (CBE), mammogram, and Pap test for Hmong women (n = 44)

Characteristic	Ever had a CBE n (%)	Ever had Mammogram n (%)	Ever had a Pap test n (%)
Women			
Age 18–39	17 (68)	1 (4)	20 (80)
Age 40 and older	16 (84)	15 (79)	17 (90)

Table 3

Time since last clinical breast exam (CBE), mammogram, and Pap test for Hmong women (n = 44)

	Time since last CBE n (%)	Time since last mammogram n (%)	Time since last Pap test n (%)
Women			
Age 18–39			
Never	8 (32)	24 (96)	5 (20)
Within past year	9 (36)	1 (4)	12 (48)
Within past 2 years	5 (20)	--	6 (24)
Within past 3 years	2 (8)	--	2 (8)
4 years or more	1 (4)	--	--
Age 40 and older			
Never	3 (16)	4 (21)	2 (10)
Within past year	8 (42)	10 (53)	5 (26)
Within past 2 years	3 (16)	3 (16)	6 (32)
Within past 3 years	2 (10)	1 (5)	1 (5)
4 years or more	3 (16)	1 (5)	5 (26)