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## Young Asian Americans' knowledge and perceptions of cervical cancer and the human papillomavirus

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### Introduction

Cervical cancer is a well-documented, major health disparity among Asian American women (1,2, 3). Vietnamese women are diagnosed with the disease at a rate five times higher than the US Caucasian female population (3). High rates of invasive cervical cancer have been documented among Chinese and Filipino women as well (4, 5).

Studies with Asian American women indicate that lack of knowledge about cervical cancer and Pap testing, not having a regular source of care, and cultural attitudes towards sexual activity are important factors associated with this disparity and lower rates of cervical cancer screening (6). A study among Asian American female university students, including Chinese, Korean, Vietnamese, Japanese, and Filipino women between the ages of 17 and 30 years of age found that only 32% had ever had a Pap test as compared to 70% of Caucasian women at the same campus (7). In a study among Asian women in Los Angeles, only 48% of Filipino women and 41% of Korean women received Pap tests within the recommended timelines (8). In a population-based survey in Seattle, only 68% of Vietnamese women had received a Pap test during the preceding three years (9). Data from respondents to the Houston Asian American Health Needs Assessment (AsANA) study indicated that cervical cancer screening among Chinese and Vietnamese females in the Greater Houston area was lower than that for other racial/ethnic groups in Texas (10). While 84% of White women, 91% of Black women, and 79% of Hispanic women in Texas had had a Pap test in the last three years (11), only 70% of the Chinese and 66% of the Vietnamese women reported having cervical cancer screening. In 2006, approximately 84% of U.S. women 18 years and older reported having had a Pap test within the past three years (12).

Several investigators have reported on the development of educational programs to increase awareness of the risks of cervical cancer and HPV among Asian and Pacific Islander women. Lam et al. concluded that media education campaigns can increase Vietnamese women's awareness of the importance of Pap tests, but lay health workers are more effective at encouraging women to actually obtain the tests (13). Jackson et al. developed a culturally relevant video and pamphlet to educate Chinese American women about cervical cancer

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screening and evaluated it among women who had never had a Pap test (14). Combining intervention materials with visits by a female Chinese outreach worker and follow up telephone calls resulted in a higher percentage of self-reported Pap tests among these women (61%) compared to women who received the intervention materials alone (47%) and those in a control group (34%). These studies among others concluded that it is important to consider cultural beliefs concerning health and cancer screening in designing health education campaigns to increase screening for cervical cancer (8, 9, 14–21).

The Asian American Health Coalition of Greater Houston, Inc (AAHC), a 501(c)(3) community-based organization, was contracted by a health promotion agency to conduct 6 ethnic and gender-specific focus groups with at least 48 low-income members of the local Vietnamese, Filipino, and Korean community to increase understanding of their knowledge and perceptions regarding cervical cancer, cervical cancer screening, HPV, and sources of health information.

The AAHC partnered with the Center for Research on Minority Health (CRMH) at M.D. Anderson Cancer Center to assist them in conducting this project because the CRMH researchers had extensive experience in focus group research among minority populations, including Asian Americans. The major objectives of the study were to:

- identify beliefs of Vietnamese, Korean, and Filipino men and women, ages 18 to 29 years, residing in the Greater Houston area, about cervical cancer, cervical cancer screening, HPV,
- identify motivators, barriers, and psychosocial predictors of cervical cancer screening
- review proposed cervical cancer and HPV materials, including information about the HPV vaccine, to develop culturally appropriate and sensitive text, graphics, and design.

The ultimate goal was to disseminate findings from these focus groups to increase understanding of these communities' perceptions of cervical cancer and HPV among healthcare professionals, researchers, and community members to develop programs to address this cancer disparity effectively.

## Methods

Eligibility criteria for focus group participants required that all subjects were self-identified Korean, Filipino, Vietnamese adults, 18–29 years old, with a high school education or less (but none less than 4th grade), able to read and speak English and either Korean, Vietnamese or Tagalog, have a lower socioeconomic status (SES), and not be currently pregnant. The proposed educational materials were designed for these specific individuals who were considered at highest risk and in need of increased knowledge about the disease, screening and ways to minimize risk. This group was also considered likely to be sexually active, hence, the availability of HPV vaccines would be relevant to them.

Participants were recruited through key community leaders, Asian community based organizations, churches, temples, student organizations, WIC programs, Asian email lists,

universities, low-income housing projects, and word of mouth. A recruitment flyer describing the study, including a phone number for individuals to call if they were interested in participating in the study, was designed and distributed in the community. Individuals who expressed an interest in participating were screened for eligibility by the recruiters or by bilingual study staff.

All participants signed informed consent statements and completed a demographic questionnaire providing their age, birthplace, marital status, education level, and for females, whether they ever had a Pap test.

Six focus groups with additional interviews to attain the desired number of study participants were conducted during August, 2007. Bilingual facilitators, health care professionals of the same Asian ethnic group as the participants, conducted the focus groups and most of the interviews. Facilitators and recruiters were trained by CRMH staff in the informed consent process, confidentiality issues, and focus group methodology.

Based on the participants' preferences, the Korean and Vietnamese focus groups were conducted mostly in Korean and Vietnamese, respectively, while the Filipino groups were conducted in English. A discussion guide was used to ask questions on specific topics. Each session was audio-taped with notes taken by bilingual assistants. Participants reviewed the in-language brochure and posters designed for their ethnicity and received a \$20 gift card to a retail or grocery store upon completion of their participation.

At least two dates were scheduled for focus groups for each of the three ethnic populations. The two Korean focus groups were conducted at a Korean church. The two Filipino groups were conducted at a Filipino restaurant. One of the Vietnamese groups was held at a public library and the other at a Vietnamese social service agency. To obtain the desired number of study participants and address difficulties in recruitment and retention (see Discussion section), additional interviews were conducted at a restaurant, university, home, home health care agency and in the CRMH.

To protect confidentiality, study participants were instructed not to provide their names on the demographic forms and advised to use only their first names or a pseudonym in the discussion groups. Study ID numbers were assigned to each participant and demographic forms were detached and stored separately from the informed consent documents. Confidentiality of participants was also maintained by deleting the names of the focus group members from the audio-tapes and transcripts and securing all data in a locked office. Only authorized research staff had access to the consent documents and data.

The study, Protocol 2007-0101, was approved by the Institutional Review Board of the University of Texas M.D. Anderson Cancer Center.

## Results

### Participants

Twenty-eight females (8 Korean, 10 Vietnamese, and 10 Filipino) and 24 males (8 from each Asian ethnicity) participated in the study, for a total of 52 subjects. Mean age was 24.4 years

for males and 24.7 for females. The majority were single. Of the 48 participants who specified their birthplace, 31 (65%) were born in Asia, i.e., Vietnam, the Philippines, or Korea. Only 12% of the Koreans were born in the US, compared to 28% of the Filipino and 50% of the Vietnamese participants. Seventy-seven percent of the participants had 3 or more years of college, with only 4 participants reporting only a high school education. See Table I.

### **Cervical cancer screening**

Rates of Pap testing were 13% and 10% for the Korean and Vietnamese females, indicating that only one in each group had had a Pap test. Among the Filipino females, 7 of the 10 participants reported having had a Pap test.

Table II summarizes the responses to the questions concerning knowledge of cervical cancer, HPV and cervical cancer screening.

### **Cervical cancer and HPV**

Participants were asked if they had ever heard of cervical cancer, cervical cancer screening or HPV. Among males, only 50% of the Vietnamese had ever heard of the disease compared to 63% of Koreans and 100% of Filipinos. Among females, 63% of Koreans reported that they had heard of cervical cancer, while 90% of Filipinas and all of the Vietnamese had heard of it.

Regarding knowledge of cervical cancer screening, males again reported less awareness. Only 25% of the Korean males, 50% of the Vietnamese and 88% of the Filipino males said they had heard of the Pap test, as compared to 38%, 80% and 90% of their female counterparts.

In regards to having knowledge of HPV, 25% of the Korean males, 50% of the Vietnamese and 100% of the Filipino males responded “yes.” Among the females, 38% of the Koreans, 50% of the Vietnamese and 90% of the Filipinas had heard of HPV.

### **Knowledge content**

Study participants were asked to describe briefly what they knew about cervical cancer, Pap tests and HPV. For cervical cancer, general themes from the male participants of all Asian ethnic groups were that cervical cancer was caused by HPV, it was a fatal disease, it occurs only in females and it was linked to infertility. Comments from female participants included: cervical cancer is associated with early age sexual activity and multiple partners, the HPV virus, it impacts Asian women disproportionately, it is relatively rare, it is preventable, and is characterized by abnormal cell growth.

When asked about the Pap test, responses varied not only by gender, but by ethnicity as well. At least two males from each Asian ethnic group said that they knew nothing about the test. Vietnamese and Filipino males were able to provide more details on the procedure, including comments such as

“It is a cervical cancer test done by a physician involving a tissue sample from the cervix.”

“Women get checked by a doctor every year for this.”

“Doctor checks the cervix through the vagina.”

Almost all of the female subjects were familiar with the Pap test, although several Vietnamese females had little or no knowledge of it. Among the Korean females, their comments were that the test was for those who were sexually active or after delivery of a baby. The Filipinas provided the most detailed description of the procedure. Their comments included

“The doctor does 3 swabs and sends it to lab for detection of any abnormalities such as gonorrhea, chlamydia, etc.”

“Pap test is used to determine the presence of HPV. Women should take this exam after being sexually active or by age 18.”

For HPV, nine (38%) males said that they knew little or nothing about the disease. However, themes that emerged from other male participants were that HPV was a sexually transmitted disease and some knew that a vaccine had been developed to prevent the disease. Some knew that it was associated with cervical cancer. Most believed that it was a disease that only impacted females.

Only three females reported knowing little or nothing about HPV. Many of their comments were in regards to the HPV vaccine, specifically *Gardasil*, its availability and recommended dosage. They reported that it was a sexually transmitted disease that can lead to cervical cancer. Again, the Filipino females were able to provide the most detailed information about the virus, describing symptoms, transmission and treatment.

### Sources of information

The study participants were asked about the source of their information regarding cervical cancer, Pap tests, and HPV. Among males, the most frequently reported sources were television, school or classroom, internet, and family and friends. Among females, television, family and friends, doctor or health professional and school/classroom were the most frequently named sources. Other information channels were radio, elected officials, worksite, magazines, books, pamphlets and organizations such as the Collegiate Cancer Council and other social groups.

### Review of the educational brochures and poster

After the discussions regarding cervical cancer, Pap tests and HPV were completed, the study participants were presented with the educational brochure and poster designed for their specific ethnic group and allowed a few minutes to review the material. Future publications will describe in detail the themes that emerged and the differences and similarities regarding perceptions of these educational materials between these three Asian ethnic groups. Recommendations for changes in the educational materials to make them more culturally relevant will also be discussed.

## Conclusions

The study increased our understanding about the knowledge, attitudes and behaviors of young Asian American adults regarding cervical cancer, screening and HPV. It confirmed the perception that this group of Asian Americans needed information about their risks for cervical cancer and HPV and how to prevent these diseases, replicating the findings of similar studies (22–24). Although this was a small sample size, the females in this study reflected low rates of cervical cancer screening as observed in population surveys among Asian American women (8, 15, 25, 26). Asian males had less awareness of HPV and cervical cancer than Asian females. Filipina females appeared to have the greatest amount of detailed information regarding these topics.

There were also distinct differences between the three Asian ethnic groups. Preference for Asian language during the focus group discussion was strongest among the Korean participants, intermediate in the Vietnamese group and least among the Filipino participants. These differences might be due to the immigration history of each ethnicity. Some historians report that Filipinos were the first Asian group to come to America in 1587 (27), while the majority of Vietnamese arrived in the US during the 1970s (28).

Sources of information on cervical cancer and HPV were similar for males and females, however, females included doctors and health professionals as important channels for health information. Almost all participants expressed some degree of willingness to act on the information provided during these focus group sessions.

## Discussion

In addition to accomplishing the study goals, this project revealed several unique insights regarding cervical cancer and HPV and young Asian Americans. First, it is the only study to our knowledge to include young Asian males in discussions on this topic. Because many Asian females require the permission and support of their male relatives to seek gynecological care, their comments and inclusion were critical in providing recommendations for the design of educational and awareness campaigns for this community.

Results indicated that young Asian American adults are interested in learning about HPV and cervical cancer, but still hold relatively conservative views about sexually related health topics. Over half of the study participants were born in Asia, therefore, the results of our study may not be relevant to Asians born in the US. One would speculate that acculturation, defined as years in the US, would correlate with attitudes towards sexual practices. However, Filipina women in this study had the highest percentage of cervical cancer screening which might have been a reflection of the high number of Filipinos in the health professionals, i.e., nurses, with a greater knowledge of the need for Pap tests. On the other hand, Filipino female participants also expressed the stigma associated with being seen reading materials about gynecological examinations and the social implications it would have regarding their moral values.

Several female participants perceived that Pap testing was only for women who are married or who have delivered a child. Premarital sexual behavior was generally still not acceptable in their cultures and seeking gynecological examinations prior to marriage would implicate personal promiscuity. Cultural beliefs towards prevention remain strong. Many Asian Americans hold to the belief that cancer screening reveals problems that were not a concern before (18, 19). If there are limited resources for health care, it may be better not to know about a disease or condition. Male participants held traditional gender roles, expressing that HPV and cervical cancer were only female concerns. They said that they would practice safe sex, use condoms and selectively choose sexual partners, but did not discuss abstinence as an alternative way to avoid HPV.

Although the development of culturally and linguistically appropriate educational materials is important in educating Asian Americans about their risk for HPV and cervical cancer, public health officials should recognize that there are barriers to preventive health care for many in this community. These include the lack of understanding of the importance of preventive screenings by both Asian health consumers and health professionals, the lack of health care professionals with Asian language skills, a cultural emphasis on family rather than individual well-being, gender-specific beliefs about modesty, religious beliefs, and fear of finding a health condition for which there is no cure.

This was revealed by the challenges we faced in recruiting lower income, less educated Asian Americans. Individuals who met the lower socioeconomic criteria were reluctant to participate and had many personal barriers to participation, such as a lack of understanding of the importance of research, child care needs, transportation barriers, limited English proficiency, and work schedule conflicts. They left the sessions early or called to cancel their participation. Future research with low SES Asian Americans will focus recruitment efforts on English as a Second Language (ESL) classes and other educational programs for new immigrants, social service programs, and Asian owned businesses. Focus groups or interviews may be conducted at low-income housing projects.

Finally, the use of traditional focus groups may be inappropriate for collecting health information from some Asian individuals. After discovering that some individuals were reluctant to share their opinions in a group, the research team decided to give each participant a copy of the discussion guide during the focus group, and encouraged them to “follow along” and write any comments that they were not able to express aloud. This resulted in much more information than was gleaned from oral discussions alone. We recommend this modification to other researchers who might be conducting qualitative research with Asian or other immigrant populations. Online focus groups have also been used to overcome the problem of individuals being hesitant to share their thoughts openly in a face-to-face group (29).

Based on the results of this study and the health needs assessment we conducted among the Chinese and Vietnamese communities in Houston, we hope to improve our understanding of the factors and barriers associated with cervical cancer screening. We can then begin to develop relevant educational programs and facilitate access to early detection programs.

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**Table 1**

Demographic characteristics and responses of participants

	Korean		Vietnamese		Filipino	
	Males	Females	Males	Females	Males	Females
Gender	8	8	8	10	8	10
Mean Age (yrs)	24.3		23.9	23.9	25.1	25.7
Single	75%	88%	100%	100%	88%	90%
3+ yrs College	75%	63%	75%	70%	100%	90%
Had Pap		13%		10%		70%
Ever heard of (% Yes)						
HPV	25%	38%	50%	50%	100%	90%
Cervical cancer	63%	63%	50%	100%	100%	90%
Pap test	25%	38%	50%	80%	88%	90%

**Table II**

Knowledge of Asian young adults regarding HPV, cervical cancer and Pap tests

What do you know about:	Males (n=24)	Females (n=28)
HPV	Sexually transmitted disease Virus Vaccine developed A female disease Related to cervical cancer	Sexually transmitted disease Virus related to cervical cancer <i>Gardasil</i> , series of 3 shots Symptoms are wart-like growths Preventable
Cervical cancer	Caused by HPV Fatal Only in females Associated with infertility	Associated with early age sexual activity & multiple partners HPV Impacts Asian women Rare Preventable Abnormal cell growth
Pap test	Cervical cancer test done by doctor Tissue sample from cervix Periodic exam	After delivery of baby Needed after becoming sexually active Gynecological exam Test for cervical cancer Test for sexually transmitted disease Cells taken from cervix by doctor to evaluate for abnormalities Needed every 3 yrs

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