

Research article

## Korean women: breast cancer knowledge, attitudes and behaviors

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### Abstract

**Introduction:** Clustered within the nomenclature of Asian American are numerous subgroups, each with their own ethnic heritage, cultural, and linguistic characteristics. An understanding of the prevailing health knowledge, attitudes, and screening behaviors of these subgroups is essential for creating population-specific health promotion programs.

**Methods:** Korean American women (123) completed baseline surveys of breast cancer knowledge, attitudes, and screening behaviors as part of an Asian grocery store-based breast cancer education program evaluation. Follow-up telephone surveys, initiated two weeks later, were completed by 93 women.

**Results:** Low adherence to the American Cancer Society's breast cancer screening guidelines and insufficient breast cancer knowledge were reported. Participants' receptiveness to the grocery store-based breast cancer education program underscores the importance of finding ways to reach Korean women with breast cancer early detection information and repeated cues for screening. The data also suggest that the Asian grocery store-based cancer education program being tested may have been effective in motivating a proportion of the women to schedule a breast cancer screening between the baseline and follow-up surveys.

**Conclusion:** The program offers a viable strategy to reach Korean women that addresses the language, cultural, transportation, and time barriers they face in accessing breast cancer early detection information.

### Background

Breast cancer is the most common form of cancer in Asian American women, and their cancer screening rates are lower than any other ethnic group [1,2]. Incidence of breast cancer among Asian American women increases with the duration of their US residency, making breast cancer education even more important as U.S. duration increases [3]. With the assistance of key informants, the social patterns of Asian American women were evaluated

for places where health-related data might be collected and educational interventions offered. Asian grocery stores appeared to offer a valuable site for a community based health education program [4].

A recent study of 1,202 Asian American women assessed their baseline breast cancer knowledge, attitudes, and screening behaviors, as well as their receptivity to the *Asian Grocery Store-Based Breast Cancer Education*

*Program* they were offered [5]. While health-related information about Asian American women is important, health educators could be more effective if they had more specific information related to the subgroups within the Asian American cultural cluster [6–9].

The Korean population accounts for a relatively small portion (11%) of the Asian American community. As a result, its characteristics and health needs are often overlooked by health researchers, educators, and providers. However, the Korean community is also a growing community. From 1980 to 1990 it increased by 123% (357,393 to 799,000) [10–12]. This makes Korean women an important community to consider when trying to improve the overall health of the Asian community. To address this community optimally, health educators need specific information about Korean American's culture, acculturation, socioeconomic status, and health related knowledge, attitudes, and behaviors. This paper presents data pertaining to Korean American women's breast cancer knowledge, attitudes and behaviors.

## Methods

The Health Belief model was selected as the intervention's theoretical framework because it can be used to help explain, predict, and influence individual's health related behaviors [13]. It can also be used as the frame of reference for initiating health promotion dialogues with patients. The theory presumes that five conditions must usually be present for individuals to initiate a health related action. First, individuals must be aware that a health threat of considerable magnitude exists. Second, individuals must perceive that they are personally vulnerable to the health threat. Third, individuals must believe that taking a particular action could effectively reduce the chance of incurring the health threat. Fourth, individuals must believe that the benefit of the health promotion action outweighs the consequences of not taking the action. Finally, patients are more likely to take the health action if there is repeated cuing.

Asian grocery stores were recruited as educational sites throughout San Diego County in anticipation that they would be culturally acceptable community education sites. It was also anticipated that Asian grocery stores would attract shoppers who were diverse in age, socioeconomic status, acculturation, and language proficiency. Outreaches were held on weekends (62%), as well as week days. Displays of ethnically enriched materials were offered along with sun screen samples in recognition of the high value Asian women place on beautiful skin, and as a gentle segue to the discussion of cancer prevention and early detection.

Bilingual, bicultural Asian American university students were trained to work as community health educators at the Asian grocery stores where they provided breast cancer education to Asian women and gained experience that encouraged many of them to pursue health and research careers [14,15]. Students were recruited using campus newspapers, electronic message boards on campus buses, academic internships, and word-of-mouth. Student health educators were trained using the same National Cancer Institute (NCI) and American Cancer Society' (ACS) training materials on breast cancer that were disseminated at the grocery store outreach sites. They were trained by the senior author (Sadler) about the benefits of early breast cancer detection, how to conduct [breast-self exams], the recommended screening guidelines, and the most frequently asked questions. Weekly meetings were held with student community health educators to continue their training, monitor progress, provide feedback to fine tune the program, and promote students' consideration of careers in health and science.

The health educators, fluent in the preferred language of the participants, disseminated this same information to the women in either English or Korean. They taught them how to do a breast self-exam using simulated breast models and a variety of visual, hands on teaching aids. They also promoted access to the State's free and low cost screening services. The women who agreed to participate in the evaluation of the education program completed an IRB-approved consent document and a short baseline survey. The survey was self-administered with supervision and as needed assistance in the women's preferred language from the community health educators. A translation of the survey was also available in Korean. The survey included demographic questions and close-ended questions that assessed the acceptability of the intervention, identified barriers to education, and measured breast cancer screening practices and attitudes. The surveys were limited to a brief series of questions to encourage participation in the study and allow time for the educational program to be offered.

Follow-up telephone surveys, in both English and Korean, were initiated two weeks post intervention. These included both open-ended and close-ended questions focused on the women's willingness and ability to schedule a breast cancer screening. Community health educators made up to ten telephone attempts to contact the women for the follow up survey. When telephone contact failed or was not an option, follow-up surveys were mailed to those who had provided an address. Data from the baseline and follow up surveys were analyzed using frequency accounts, percentages, chi-square tests and

the American Cancer Society's breast cancer screening guidelines.

**Description of the Sample**

During the time educational sessions were held, an estimated 12,060 women entered the grocery stores during the data collection sessions, with 8,877 participating in individualized or small group discussions about breast cancer. Approximately 1,600 women were invited to take part in the study. Of the 1,202 Asian American women who completed IRB approved consent forms and baseline surveys, 123 were Korean. Their ages ranged from 23 to 86 years (mean = 41.49 s.d. = 11.48). When women failed to report their age (n = 13), the health educators estimated their age to facilitate evaluation of their adherence to screening guidelines by age group. These women were not included in the average age calculation, but were included in the assessment of women's adherence

to the American Cancer Society's recommended screening guidelines. Of these women, all were estimated to be over 50, and hence candidates for annual mammography and clinical breast exams. Of the women interviewed, 96.7% reported Korean as their native language (1 spoke Chinese and 3 spoke English).

**Results**

**Baseline Survey Results**

A breast self-exam within the past month was reported by 30.9% (38/123) of all participants. Of the 64 women aged 40 years and older, 48.4% (31) reported a clinical breast exam and 21.9% (14) reported having had a mammogram in the past 12 months. Of the 37 women 50 and older, 43.2% (16/37) reported a clinical breast exam and 27% (10/37) reported a mammogram in the past 12 months (Table 1.).

**Table 1: Adherence to Breast Cancer Screening Guidelines by Age (N = 123)**

Screening Behaviors	Age Groups			
	20-39 years Total N = 59 N (%)	40-49 years Total N = 27 N (%)	>=50 years Total N = 24 N (%)	Unspecified Age Total N = 13 N (%)
Monthly self breast exam	32.2% (19)	22.2% (6)	29.2% (7)	46.2% (6)
Annual Clinical breast exam	35.6% (21)	55.6% (15)	41.7% (10)	46.2% (6)
Annual Mammogram	16.9% (10)	14.8% (4)	29.2% (7)	23.1% (3)

\* American Cancer Society guidelines in effect at the time of the study were: 1.) Beginning at age 20, monthly breast self examination and clinical breast exam every three years is recommended. 2.) Beginning at age 40, clinical breast exam is recommended annually plus mammography every one or two years. 3.) Beginning at age 50, annual mammogram is recommended along with continuation of monthly breast self exams and annual clinical breast exams.

When asked if they had adequate breast cancer knowledge, 16.3% of the participants reported that their knowledge was adequate. The majority of women (89.4%) were interested in receiving more information to keep their families healthy. Most women (83.7%) felt their loved ones would be interested in receiving such information and an equal number of women were also willing to share the knowledge they gained with family and friends.

Of the 123 women, 82.9% (102) said they were willing to receive personal educational information, such as breast cancer information. The women indicated that they preferred to receive such information by mail (76.4% (94)),

telephone (34.1% (42)), and educational programs (35.8% (44)). The grocery store program was not given as an option. Most of the women (77.2%) were willing to be contacted again if there were further questions related to the current study, while 35.8% (44) said that they would be willing to participate in other research studies like the present one.

When women were asked about their most common barriers to participating in additional breast cancer education sessions, 55.3% (68) reported lack of time, 34.1% (42) reported language barriers, and 5.7% (7) did not believe that breast cancer education was important. In addition, 4.9% (6) of the women did not want to think

about breast cancer, 4.9% (6) reported lack of money, 1.6% (2) reported transportation as a barrier, and 0.8% (1) felt the topic was embarrassing to discuss.

#### **Follow-Up Survey Results**

Of the 123 Korean American women who completed the baseline survey, 76.4% (94) completed the follow up surveys. The non-participants either did not provide contact information (1), did not provide correct contact information (4), left the country for an extended period of time (2), or could not be reached after 10 telephone attempts and failed to return surveys that were mailed to them (22). Those who participated in the follow-up survey did not significantly differ from the non-participants in age.

Of the 94 women who completed the follow up, 50 women were at least 40 years of age and older. Of these 50 women, 14% (7) reported that they had set up a clinical breast exam in the interval between baseline and follow up. Of the 7 women who set up a screening in the interval, 28.6% (2) had not been in compliance with screening guidelines at baseline. Looking at this reported change from another perspective, of the total group of women (33) who had not been in screening compliance at baseline, 6.1% (2/33) had set up a screening in the interval.

Since the community of health educators felt that the women who did not give their ages were well beyond 50 years of age, these women are included in the analysis of women 50 and older. Of these 37 women, 13.5% (5) reported having set up a mammogram between baseline and follow up. Of the women that set up a screening in the interval, 60% (3) had not been in compliance with screening guidelines at baseline. Looking at this reported change another way, 27 women in this age group reported they were not in compliance with the mammography screening guideline when they completed their baseline survey. Of those 27 women, 11.1% (3) reported setting up a screening mammogram by the follow up survey.

#### **Discussion**

Our results confirm the low breast cancer screening rates previously reported among Korean women [1-3,10]. The lack of sufficient breast cancer knowledge reported by the study participants may have contributed to this low screening adherence. Women's willingness to learn, discuss, and share breast cancer information with their family and friends suggests that these low screening rates might be improved by focused educational intervention programs.

The follow up results demonstrated a slight improvement in screening adherence that might have been the result of the breast cancer information the women received. Since this was a demonstration project rather

than a randomized trial, it is not possible to determine if the intervention did in fact have a causal role in helping to facilitate the reported increased screening or if the increased screening rates were the results of chance alone. Further research is needed.

Based upon the results of previous studies, embarrassment was anticipated to be a frequently reported barrier to screening [2,3]. In fact, less than 1% of the women in this study reported it to be a barrier. Given that 96.7% of the participants reported Korean as their primary language and 34% reported language as a barrier to participating in cancer education programs, it is unlikely that this infrequent reporting of embarrassment is secondary to the sample having a high degree of acculturation.

This lack of reported embarrassment may help to explain the high degree of acceptability women demonstrated toward learning about this very personal health concern in a very public venue, from a culturally aligned, but veritable, stranger. Alternatively, the acceptability of the grocery store-based education program may also have been a consequence of the participants' view that the grocery store venue is within the exclusive purview of women's social milieu. Few men were present, and those who were present, were there to provide transportation and physical assistance to the women they accompanied. While they waited for the women, male health educators engaged them in discussions of the important role men can play in promoting adherence to breast cancer screening guidelines.

Consistent with previous studies, virtually all women preferred to be interviewed in Korean [2,3,10]. With 34% of the women reporting language as a barrier to breast cancer education, lack of language proficiency appears to be an important barrier to Korean women's access to health care. On the other hand, 64% of the women did not report language as a barrier to accessing breast cancer education, suggesting that there was sufficient bilingual proficiency within at least a proportion of the sample, to negotiate confidently the complex American health care environment. It is also possible that the participants' awareness of the availability of bilingual health educators and educational materials in Korean contributed to the lack of perceived language barrier.

The program's success in recruiting minority students to service learning opportunities and promoting their consideration of graduate training in health and science careers is a positive by-product of this educational program. The increased availability of health providers and scientists who are fluent in the Korean culture and language is recognized to be an important contributor to

improving the health and well being of the Korean community.

Time was the most frequently reported barrier to participation in cancer education programs, suggesting that part of this program's success at reaching the women was due to its ability to combine education with women's routine patterns of daily living and hence, ease of accessibility. Women were able to incorporate education into their daily routine and received educational booklets for later reading. They also received the phone number to schedule a free breast cancer screening through the State's Breast Cancer Early Detection Program. Eligible women were given appointments when they called. Women who were not economically challenged and at least 40 years of age, and hence not program-eligible, were directed to other appropriate, local screening services.

Since the program was offered at the participating grocery stores, women could return with additional questions or bring loved ones for training. Even on days when the education program was not being offered, women might still be reminded to schedule appointments by subliminal cuing associated with passing the usual location for the educational program.

The relatively low rate of Koreans who reported having had a clinical breast exam and/or mammogram could also be attributed to limited attention that has been given to the role of filial piety within the Korean family. In the Korean household, the eldest son and his wife care for the elders and make all important decisions for the family [16]. Breast cancer educational programs that provide information to these younger, guardians of family well being could work synergistically with educational programs focused on the women themselves.

Previous studies have documented the common misconceptions among Korean women related to breast cancer. The cause of breast cancer has been attributed to air pollution, moral wrong doing, hitting or bumping the breasts, and temperature change [3]. The educational program did not challenge these disbeliefs, but instead, offered information the women could use to alter their risk of late stage detection and its consequences. Following the Health Belief Model, the intervention strategy was to give women information that would foster a greater internal locus of control and encourage proactive screening behaviors.

Traditional medicine such as acupuncture and herbs were also identified as alternatives to breast cancer screening in previous studies [3]. Mistrust, or lack of a personal relationship with a physician could also dis-

courage an older woman from going to the doctor and levitate towards the comforts of traditional medicine. The education program and the breast cancer screening activities it promoted, incorporated strategies for facilitating Korean women's prompt access to health care providers and the breast cancer screening they could provide, without undermining their respect for traditional medicine.

### Limitations

Since the data collection tools were created specifically to assess the educational needs of this community and the acceptability of the Asian grocery store as a site to meet identified educational needs, the instruments have not previously been validated. The need to keep the survey brief, prevented inclusion of many questions that would have further enriched the findings. The data were drawn from a convenience sample within one geographic region. The very act of taking part in the study's educational program, the consenting process, and the extended data collection may have created a sample of women who are not representative of the population of Korean women. Therefore, these findings must be applied with caution. However, for the 123 Korean women who did participate, the data offers additional insights into their prevailing breast cancer knowledge, attitudes, and behaviors and demonstrates the importance of gaining a better understanding of the ethnic subgroups that are included and stereotyped within the nomenclature of Asian American.

### Conclusion

Given the Korean American women's low screening rates and their willingness to learn and share breast cancer information, the provision of culturally sensitive learning opportunities appears to be worthwhile. Programs that are easy for women to access and also recognize the role of the eldest son in family matters would appear to be both acceptable and effective methods of encouraging Korean women to adhere to recommended breast cancer screening guidelines. Given the demonstrated acceptability of the Asian Grocery-Store-Based Cancer Education Program, this program's format may also be applicable for promoting awareness of other health and social welfare issues.

### Competing Interests

None declared

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