

# H. MEASUREMENT OF THE KNOWLEDGE, ATTITUDES, AND BELIEFS OF ARAB-AMERICAN ADULTS TOWARD CANCER SCREENING AND EARLY DETECTION: DEVELOPMENT OF A SURVEY INSTRUMENT

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The purpose of this study was to examine knowledge, beliefs, attitudes, and behaviors of Arab-American adults toward cancer screening and its early detection by using a new measure designed to assess these factors. In the United States, breast cancer is the second-most common cancer among women; it accounts for one of every three cancer diagnoses and is the second leading cause of cancer-related deaths among women. Cervical cancer is the second-most common malignancy in the world, with more than 471,000 cases each year. Prostate cancer presents a health risk for men that may be controlled by early detection. In the West, prostate cancer is the most frequently diagnosed major cancer and the second leading cause of death among men.<sup>1</sup>

The American Cancer Society Guidelines<sup>2</sup> provide direction for early detection of cancer in asymptomatic men and women. All adults need health counseling and cancer screening check-ups on a regular basis, especially after 40 years of age. For women, a Papanicolaou smear, pelvic examination, endometrial tissue sample, breast self-examination, clinical breast examination, and mammography are all recommended annually after 40 years of age. A digital rectal examination is recommended for all men over the age of 40 and an annual digital prostate examination for men over 50 years. For both men and women 50 years and older, sigmoidoscopy and fecal occult blood testing are expected every two years. All of these screenings should be more frequent if questionable findings arise.

Few data are available for cancer screening activities among Arab Americans, a rapidly growing immigrant population of more than 400,000 in Mich-

igan.<sup>3-4</sup> They are descendants of the Arabs of Africa and Asia and share similar cultural identity, values, traditions, and the Arabic language.<sup>5</sup> This population is very young, and early teaching and directions for appropriate cancer screening and prevention activities can reduce future disease and disability.

## METHODS

### Design and Sample

A convenience sample of 150 self-identified Arab-American adults living in metropolitan Detroit was recruited for this descriptive/correlation study. Fifty percent of those who agreed to participate were asked to complete a second set of study measures two weeks later for test-retest reliability of the study measures. Inclusion criteria for participants self-identified as Arab Americans were ability to read/write in either English or Arabic, age 18 years or older, and cognitively aware.

The sample size was determined for a multiple regression analysis that tested a mid-range theory of cancer screening behavior. It included 30 study variables. Nunnally and Bernstein<sup>6</sup> recommend between 5 and 10 subjects for each key variable as the most ideal sample size. For this study a sample size of 150 was deemed adequate to examine the study's questions. Participants were recruited from two community sites, a mosque, and a café, and all completed approved informed consents.

### Measurements

Participants were asked to complete a demographic and cultural information scale and three other surveys. One was the Mood's Strength of Cultural Affili-

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ation scale. It has 24 items that assess aspects of affiliation within cultural groups and evaluate factors such as food, dress, and language use. It has been tested with three other ethnic groups (White Americans, African Americans, and Asian Indians) living in the United States. The second measure, Cancer Screening Knowledge, Attitudes, and Beliefs Scale (KABS), was a 33-item scale developed by the author. It has six subscales that measure perception of threat (4 items), perceived benefits (2 items), perceived barriers (4 items), triggers of cancer perception (15 items), cultural beliefs (7 items), and cancer screening action (3 items). This instrument was piloted for internal consistency and readability in a sample of 20 Arab-American adults; the Cronbach alpha was 0.9.

The third tool was the Champion's Health Belief Model Scales (CHBMS)<sup>7,8</sup> with tailored questions on female breast cancer or male prostate cancer beliefs for women or men, respectively. This is a well-established instrument with 32 items representing six subscales related to beliefs about susceptibility to breast/prostate cancer (5 items), seriousness of breast/prostate cancer (7 items), benefits of breast/prostate self-examination (BSE and PSE) (5 items), barriers to BSE/PSE (7 items), confidence in performing BSE/PSE (6 items), and general health motivation for BSE/PSE (2 items). The scale uses a 5-point Likert format with the coding strongly disagree (1), disagree (2), neutral (3), agree (4), strongly agree (5). Cronbach alphas for the original subscales ranged from 0.60 to 0.78. Test-retest correlations using Pearson  $r$ s ranged from 0.47 to 0.86 ( $P \leq .001$ ).

The first two study measures were translated into Arabic by the author and then translated back into English by a Middle Eastern doctoral student to compare the two English versions (the original and the translation). The person who did the English translation did not have access to the original scale. This procedure validated the quality of the Arabic translation. The last scale was translated into Arabic by Mikhail and Petro-Nustas.<sup>9</sup> Psychometric testing of the Arabic version was acceptable (alpha coefficients for the subscales ranged from .65 to .89). In this study participants choose which language versions they wanted; almost 70% elected Arabic. Both the Arabic and English versions of these measures showed good reliability and validity.

## RESULTS

Forty percent of the 150 Arab-American adult participants had incomes of \$20,000 or less; 38% were unemployed; and 32% reported not having health insurance. Barriers to using cancer screening services included: 1) not speaking English (20%); 2) lack of transportation (30%); and 3) lack of knowledge (30%) as to where and when to go to get cancer screening tests done. Personal risk appraisal had significant negative correlations with income and education ( $-.31$ , and  $-.2$  respectively): the higher the income and education, the lower the feelings of personal risk for cancer. Barriers had a significantly negative correlation with cancer screening behavior ( $-.21$ ): the more barriers, the fewer screening behaviors. Although

cultural values and beliefs and cancer-related knowledge did not correlate significantly with screening behavior, they were significant predictors of personal risk appraisal (.69, and .13, respectively). Self-efficacy (the belief that one can actively participate) had the strongest positive correlation with cancer screening behavior (.56). Cancer screening practices were evaluated according to the American Cancer Society's 2003 guidelines. Surprisingly, 44% of the sample had never had any testing for cancer, and only 22% had had all the required testing.

## CONCLUSION

Findings suggest a strong need for cancer awareness programs in the Arab-American community as this population ages.

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