Development of Cultural Belief Scales for Mammography Screening

Kathleen M. Russell, DNS, RN, Victoria L. Champion, DNS, RN, FAAN, and Susan M. Perkins, PhD

Purpose/Objectives: To develop instruments to measure culturally related variables that may influence mammography screening behaviors in African American women.

Design: Instrumentation methodology.

Setting: Community organizations and public housing in the Indianapolis, IN, area.

Sample: 111 African American women with a mean age of 60.2 years and 64 Caucasian women with a mean age of 60 years.

Methods: After item development, scales were administered. Data were analyzed by factor analysis, item analysis via internal consistency reliability using Cronbach’s alpha, and independent t tests and logistic regression analysis to test theoretical relationships.

Main Research Variables: Personal space preferences, health temporal orientation, and perceived personal control.

Findings: Space items were factored into interpersonal and physical scales. Temporal orientation items were loaded on one factor, creating a one-dimensional scale. Control items were factored into internal and external control scales. Cronbach’s alpha coefficients for the scales ranged from 0.76–0.88. Interpersonal space preference, health temporal orientation, and perceived internal control scales each were predictive of mammography screening adherence.

Conclusions: The three tested scales were reliable and valid. Scales, on average, did not differ between African American and Caucasian populations.

Implications for Nursing: These scales may be useful in future investigations aimed at increasing mammography screening in African American and Caucasian women.

Key Points . . .

➤ Cultural beliefs can influence mammography screening.
➤ Scales were developed to measure cultural constructs, including space, time, and control.
➤ These valid and reliable scales predicted screening adherence.
➤ The cultural constructs measured by the scales did not differ in the African American and Caucasian participants.

African American women have higher breast cancer mortality rates than Caucasians and other ethnic minority groups (American Cancer Society, 2002). Furthermore, only Caucasian women aged 40 or older have experienced the recent and significant decreases in breast cancer mortality (Marbella & Layde, 2001). Screening mammography is the best way to discover breast cancer early, thus reducing mortality (Kerlikowske, Grady, Rubin, Sandrock, & Ernster, 1995).

Culture is known to influence health-seeking behaviors and health outcomes (King & Williams, 1995) and is a major determinant of preventive health practices in the African American community (Bailey, 2000). In the context of breast cancer, research shows that cultural beliefs are related to behaviors in African Americans (Smith, Phillips, & Price, 2001). The inclusion of cultural belief constructs in health behavioral models, therefore, may add to the predictability of breast cancer screening behaviors in African American women (Ashing-Giwa, 1999). However, standardized measurement instruments for cultural beliefs specific to cancer screening have not been developed. The purpose of the current study was to develop an instrument to measure culturally related variables that may influence mammography screening behaviors in African American women.

Background

Airhihenbuwa (1992) and King and Williams (1995) criticized the use of health behavioral models that do not include cultural variables that may explain health behaviors in African Americans. In relation to breast cancer screening behav-