Do Women in the Community Recognize Hereditary and Sporadic Breast Cancer Risk Factors?

Maria C. Katapodi, RN, MSc, PhD, and Bradley E. Aouizerat, PhD

Purpose/Objectives: To describe knowledge of hereditary, familial, and sporadic breast cancer risk factors among women in the community and to identify characteristics associated with this knowledge.

Design: Descriptive, cross-sectional.

Setting: Community settings in the San Francisco Bay Area.

Sample: 184 women who had never been diagnosed with cancer, were 30–85 years old ($\bar{X} = 47 \pm 12$), and agreed to complete a questionnaire in English. Participants were from diverse racial and cultural backgrounds (i.e., 43% European descent, 27% African descent, 16% Asian descent, and 14% Hispanic descent). Many (49%) were college graduates, and 24% had a median annual family income of $30,000–$50,000.

Methods: Survey.

Main Research Variables: Knowledge of hereditary, familial, and sporadic breast cancer risk factors and characteristics associated with this knowledge.

Findings: Although most women recognized heredity as a risk factor, some did not understand the impact of paternal family history on risk. Some women did not recognize the relationship between breast and ovarian cancer, risk factors associated with the Gail model, and that aging increases risk. Education level was the most important characteristic associated with knowledge of risk factors.

Conclusions: Although age and family history are independent predictors of sporadic, hereditary, and familial breast cancer risk, women in the community could not distinguish between the three forms of the disease. Although the sample included a large number of educated women, their knowledge of breast cancer risk factors appeared incomplete.

Implications for Nursing: Advanced practice nurses should provide individualized risk assessment and education regarding breast cancer risk factors.

Key Points . . .

- ➤ Women's knowledge of breast cancer risk factors is incomplete, and some risk factors are overlooked.
- ➤ Women in the community do not seem to recognize the difference among hereditary, familial, and sporadic breast cancer.
- ➤ Advanced practice nurses should provide individualized counseling and education regarding hereditary, familial, and sporadic breast cancer.
- ➤ Reevaluation of the accuracy of breast cancer risk factor literature is necessary.

Breast cancer is the leading cancer diagnosed among women in the United States, and the American Cancer Society (2005) estimated that more than 210,000 women will be diagnosed with the disease in 2005. The disease currently is divided into three categories based on its underlying etiology. Hereditary breast cancer comprises 5%–10% of cases and is attributed to known genetic mutations (e.g., genetic lesion in breast cancer genes, *BRCA1*, *BRCA2*). Familial breast cancer comprises 20%–25% of cases and is associated with a positive family history, but no known genetic mutation can be identified. Sporadic breast cancer, for which no discernible heritability can be established, comprises approximately 70% of cases (American Cancer Society).

Research has identified factors that put women at risk for developing the disease. The most important overall risk factor for sporadic cases is age, and a majority of cases develops in women 50 years and older. Women of European descent appear to be at higher risk compared with other racial groups. Other identified risk factors include a previous breast cancer diagnosis, family history of breast or ovarian cancer, atypical hyperplasia or lobular carcinoma in situ, and genetic factors, which are more prevalent in women of Ashkenazi Jewish descent. Suggested risk factors include exposure to hormones (e.g., estrogen replacement, early menarche), late parity (i.e., after age 30), dense breast tissue, alcohol use, and postmenopausal obesity (American Cancer Society, 2005).

Some discrepancy exists about whether information aimed at raising awareness about breast cancer risk factors has been integrated successfully into women's perceptions. A lack of balance in the mass media's presentation of certain aspects of breast cancer may affect community perceptions (Gottlieb, 2001). In light of the rapid evolution in cancer genetics, tracking changes in the knowledge regarding breast cancer risk factors is important. As the area of breast cancer research continues to expand and educational materials are developed and made available to the lay public and the professional community, healthcare educators should examine how specific knowledge about breast cancer has been understood and incorporate their findings into future planning.

Given this information, the current study explored community knowledge about breast cancer risk factors. The specific objectives were to describe women's knowledge of hereditary,

Maria C. Katapodi, RN, MSc, PhD, is a nurse researcher and Bradley E. Aouizerat, PhD, is an assistant professor, both in the Department of Physiological Nursing at the University of California, San Francisco. *Funding for this study was provided by the Department of Defense Medical Research, Breast Cancer Research Program, Clinical Nurse Research Grant (Award No. DAMD17-03-1-0356). (Submitted June 2004. Accepted for publication August 24, 2004.)*

Digital Object Identifier: 10.1188/05.ONF.617-623