Comparison of Breast Cancer Risk Estimations, Risk Perception, and Screening Behaviors in Obese Rural Korean Women

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Perceived risk of a health issue involves a risk judgment about the possibility of experiencing that issue; therefore, accurate information about cancer risk can influence health behaviors for prevention and screening (Katapodi, Dodd, Lee, & Facione, 2009). A meta-analysis found that interventions tailored to promote mammography screening produced the strongest effects on health behaviors (Sohl & Moyer, 2007), particularly in women with the BRCA1 or BRCA2 gene or otherwise at high risk for breast cancer (Lerman et al., 2000; Rothemund, Paepke, & Flor, 2001). Breast cancer rates are increasing rapidly in Korea, with an annual average incidence rate of about 6.5% from 1999–2008 (National Cancer Information Center [NCIC], 2011) compared to a 1.5% decrease rate per year in the United States (American Cancer Society [ACS], 2011). As breast cancer is the second most prevalent cancer in Korean women after thyroid cancer, involving 15% of female cancers (NCIC, 2011), strategies to assess women’s risk are necessary for the adoption of proper health behaviors for prevention and early detection.

In Korea, the obesity rate was about 26% in adult women older than age 19 in 2007; the rate was higher in rural women (35%) compared to urban women (26%) (Ministry for Health, Welfare and Family Affairs, & Korea Centers for Disease Control and Prevention, 2008). Worldwide, obesity increases women’s risk of breast cancer, as well as cardiovascular diseases and type 2 diabetes (Selvan, Wilkinson, Chamberlain, & Bondy, 2004; Stephenson & Rose, 2003; Yoo, Noh, & Choi, 1995). In a 14-year prospective cohort study in Korea, obese women (body mass index [BMI] = 30 or higher) aged 50 years or older were at increased risk for developing breast cancer (hazard ratio [HR] = 1.38, 95% confidence interval [CI] [1, 1.9]) (Jee et al., 2008). A cohort study with postmenopausal...