Effects of Tailored Message Education About Breast Cancer Risk Appraisal for Obese Korean Women

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The prevalence of breast cancer among Korean women since 2001 has alarmed health professionals and prompted Korean national health organizations to provide active breast cancer prevention education and screening services. Unlike the decrease in breast cancer rates in the United States (American Cancer Society [ACS], 2011), incidence rates in Korea increased an average of 6% per year from 1999–2009, a rise from 24.5 per 100,000 people in 1999 to 43.8 per 100,000 people in 2009, based on data from the Korean Ministry of Health and Welfare (National Cancer Information Center [NCIC], 2012b).

The growth in breast cancer incidence rates has been attributed to several factors, including a more Westernized food pattern, lower birth rate, longer estrogen exposure, and an increasing proportion of women with high body mass indices (BMIs) (Paik, 2009). The obesity rate in Korean women has increased from 25% to 27% since 2000. About 64% of women are considered overweight or obese; in particular, women aged 60–69 years had the highest prevalence of obesity at 56% in 2009 (Ministry for Health, Welfare, and Family Affairs, & Korea Centers for Disease Control and Prevention [MHWFA & KCDCP], 2010), based on Korean Society for the Study of Obesity BMI definitions (Ou et al., 2002) of overweight as 23–24.9, mild obesity as 25–29.9, and severe obesity as 30 or higher. The change in obesity rates is attributed to a prevailing Westernized diet and fast food consumption, excessive intake of carbohydrates in the staple Korean diet, and a more sedentary work and living style (MHWFA & KCDCP, 2010).

Increased BMI and obesity rates are significantly associated with the risk of developing breast cancer in Korean studies (Jee et al., 2008; Song, Sung, & Ha, 2008). Obese people may suffer from restricted mobility that limits access to screening sites, or they may be less willing to undergo testing (Amy, Aalborg, Lyons, & Keranen, 2006). Consistent with findings in Western studies (Ferrante, Chen, Crabtree, & Wartenberg, 2007; Wee, McCarthy, Davis, & Phillips, 2000), one Korean study showed that, compared with normal-weight women, overweight and mildly obese women were less likely to have undergone mammography (odds ratio [OR] = 1.28, 95% confidence interval [CI] [1.09, 1.51] and OR = 1.21,