

Result of randomized control trial to increase breast health awareness among young females  
in Malaysia

ABSTRACT

**Background:** Breast cancer is the most common cancer and the second principal cause of cancer deaths in women worldwide as well as in Malaysia. Breast self-examination (BSE) has a role in raising breast cancer awareness among women and educational programs play an important role in breast cancer preventive behavior. The aim of this study is to develop, implement and evaluate the effectiveness of Breast Health Awareness program based on health belief model on knowledge of breast cancer and breast-selfexamination and BSE practice among female students in Malaysia. **Methods:** A single-blind randomized controlled trial was carried out among 370 female undergraduate students from January 2011 to April 2012 in two selected public universities in Malaysia. Participants were randomized to either the intervention group or the control group. The educational program was delivered to the intervention group. The outcome measures were assessed at baseline, 6, and 12 months after implementing the health educational program. Chi-square, independent samples t-test and two-way repeated measures ANOVA (GLM) were conducted in the course of the data analyses. **Results:** Mean scores of knowledge on breast cancer ( $p<0.003$ ), knowledge on breast self examination ( $p<0.001$ ), benefits of BSE ( $p<0.00$ ), barrier of BSE (0.01) and confidence of BSE practice ( $p<0.00$ ) in the intervention group had significant differences in comparison with those of the control group 6 and 12 months after the intervention. Also, among those who never practiced BSE at baseline, frequency of BSE practice increased 6 and 12 months after the intervention ( $p<0.05$ ). **Conclusion:** The Breast Health Awareness program based on health the belief model had a positive effect on knowledge of breast cancer and breast self-examination and practice of BSE among females in Malaysia. **Trial registration:** The ANZCTR clinical trial registry (ACTRN12616000831482), retrospectively registered on Jun 23, 2016 in ANZCTR.org.au.

**Keyword:** Breast cancer; Breast self-examination; Health education; Belief; Malaysia