

# A FEASIBILITY STUDY OF SMART-PHONE APPLICATION ON BREAST SELF-EXAMINATION IN KOREA

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Journal MTM 2:4S:19, 2013

DOI: 10.7309/jmtm.2.4S.16

www.journalmtm.com

## ABSTRACT

**BACKGROUND** Breast cancer patients who founded in early stage have a good prognosis. Females who practice breast self-examination (BSE) are usually diagnosed at an earlier stage than those who do not.

**AIMS** The purpose of this study was to develop a smart-phone application to encourage BSE, and to evaluate the effects of mobile intervention in terms of improving breast self-examination behavior.

**METHODS** A developed smart-phone application had several functions including a BSE date alarm, a reminder to encourage mother and daughter to practice BSE together, BSE record, and educational video clips. Females aged 19 and over were enrolled and two series of questionnaires were carried out (before and after using the application) between July and September 2012.

**RESULTS** Forty five subjects (age  $29.5 \pm 5.9$  years) were enrolled in the study. Of 45 participants, 28 (62.2%) had practiced BSE, and only one of these was carried out at the appropriate time, based on the results of the baseline survey. After using the application, the number of participants practicing BSE increased from 28 to 32 (62.2% to 71.1%;  $p = 0.503$ ). In subgroup analysis (age  $<30$  years), the number of participants using BSE increased from 8 to 18 (36.4% to 81.8%;  $p = 0.002$ ), and the number of those using it at the appropriate time improved from 1 to 15 (2.2% to 33.3%,  $p < 0.001$ ).

**CONCLUSIONS** In female younger than 30 years, the developed smart-phone application increased BSE practice. To confirm the long-term effect of the mobile application and overcome difference in smart phone usage, further studies must be carried out.