

The Development of a Cultural-Based Educational Program to Enhance Breast Self-Examination (BSE) Self-Efficacy

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Purpose: To develop the educational program which is appropriate with Islamic culture in order to enhance BSE self-efficacy of nursing students and thus promote BSE practice.

Method: This study is a development research study which is consisting of three phases including: 1) reviewing several existing BSE educational programs; 2) program design based on SCT and Islamic culture; and 3) program validation by three experts.

Result: Based on previous studies, the most appropriate theory to enhance self-efficacy was Social Cognitive Theory (SCT) because this theory provides several strategies to increase the self-efficacy. Further, the program that used Islamic culture was more appropriate to increase BSE practice among Muslim women. As a result, the newly developed program was developed used SCT and Islamic culture. This program was comprised of four sessions including: 1) exploring Islamic mandate on prevention and individual responsibility in health promotion, and culture-related beliefs toward BSE, 2) health education by conducting lecturing session and watching a video about BSE procedures, 3) BSE training activities including BSE demonstration and return demonstration, 4) follow-up by conducting a meeting.

Conclusion: The cultural-based educational program for enhancing BSE self-efficacy and promoting BSE is a program using multifaceted methods. It designed based on a review of the literature from previous studies and were supported by research findings on experimental studies in other population.

Keywords: Cultural, Educational program development, Breast self-examination, Self-efficacy.

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Background

Breast cancer, one of the main health problems, remains the most common type of cancer in women worldwide (American Cancer Society [ACS], 2009). According to the ACS (2007), about 1.3 million women will be diagnosed with breast cancer annually and about 465,000 will die from the disease. The lifetime probability of breast cancer development is about 4.8% in developed countries, and 1.8% in developing countries (ACS, 2007).

Breast cancer is the leading cause of death in young women where 5% to 7% of all cancers occurred in women between 15 and 29 years old. A rather lower proportion of only 2.7% of all breast carcinoma cases occurred in women at the age of 35 years old or younger, and 0.6% occurred in women younger than 30 years old (DiNubila et al., Weber-Mangal et al., as cited in Axelrod et al., 2008).

Breast cancer in the early stages can be detected by several methods such as mammography, clinical breast examination (CBE), and breast self-examination (BSE) (ACS, 2010). In developing country, BSE is a simple, inexpensive, non-invasive, and non-hazardous method. Women should be advised to perform BSE (Dahlui, Al Sadat, Ismail, & Bulgiba, 2011). The ACS (2010) recommends that all women should have information about the benefits and limitation of BSE, and BSE should begin when women are 20 years old.

BSE practice among Muslim women was lower than other groups of women. In the United States, immigrant Muslim women have lower rates of preventive care, such as breast examinations (Matin & LeBaron, 2004). The investigators hypothesized that lower preventive care rates might be related to religious and cultural customs that emphasize the importance of modesty and patriarchal marital traditions (Rajaram & Rashidi, 1999; Underwood, Shaikha & Bakr, 1999).

The qualitative studies have demonstrated that although health promotion and disease prevention are highlighted and encouraged by the *Holy Al Qur'an* and the *Prophet Mohammed*, some teachings may, however, become barriers to perform BSE among Muslim women, especially from the Islamic views related to female modesty and male control in marriage (Bottorff et al., 1998; Rajaram & Rashidi, 1999; Underwood, Shaikha, & Bark, 1999).

BSE education and adherence to regular BSE has become a gateway to the screening behavior of younger women, which sets the stage for the adherence to clinical breast examination and mammography screening later in life (Rosenberg, as cited in Karayurt, Ozmen, & Cetinkaya, 2008). There was a study which found that education administered by nurses could increase positive perception about BSE self-efficacy (Hacihanoglu & Gozum, 2008), and women who participated in the breast cancer educational program were more likely to perform BSE correctly (Luszczynska, 2004). High self-efficacy is positively correlates with BSE knowledge, BSE proficiency, and BSE practice (Luszczynska, 2004). Further, previous research has found that perceived barriers and perceived self-efficacy were the strongest predictors of BSE behavior (Canbulat & Uzun, 2008; Tavafian, Hasani, Aghamolaei, Zare, & Gregory, 2009). BSE training programs that advertise self-efficacy and focus on perceived barriers are recommended (Tavafian et al., 2009). Therefore, the development of a cultural-based educational program was needed for enhancing BSE self-efficacy.

Objective

This study aimed to develop the educational program which is appropriate with Islamic culture in order to enhance BSE self-efficacy and BSE performance.

Methods

This study is a development research study which is consisting of three phases including: 1) reviewing several existing BSE educational programs using the electronic databases including CINAHL, PubMed, ScienceDirect, and Ovid. The articles which were included in this review were published from 2000 to 2011. The author also used the universal case entry website like Google-web and Google scholars. The keywords that have been used were the effect of educational program for promoting BSE, breast cancer screening, breast self-examination, and program for promoting BSE; 2) designing program based on SCT and Islamic culture; and 3) program validation by three experts.

The data, information, and document that match with the keywords retrieved and downloaded. The author included the full text article only in the review. Then, the author read carefully the included articles and extracts the given information. The inclusion criteria of the retrieved articles focused on educational program for promoting BSE, which written in English; and using randomized controlled trial and quasi experimental research design.

The newly program developed based on current knowledge from literature review. Additionally, this program validated by three experts, two experts were lecturer of Faculty of Nursing, Prince of Songkla University, and one expert is a nurse who works in Cancer Center of Songklanagarind Hospital. All of these experts are expertise in breast cancer and breast self-examination.

Results and Discussions

There are several existing educational programs that promote breast cancer screening (Hacihanoglu & Gozum, 2008; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007; Lu, 2001; Luszczynska, 2004; Sangchan, Tiansawad, Yimyam, and Wonghongkul, 2008; Secginli & Nahcivan, 2010). Most of the studies promote BSE (Hacihanoglu & Gozum; Lu;

Luszczynska; Sangchan et al., 2008), but there are some studies promoting BSE combined with mammography and CBE (Hall et al., 2007; Secginli & Nahcivan). The result of the literature review explained as follow.

Theory based for program development

Based on the previous studies, there are two main theories that have been applied to develop the educational program including the Health Beliefs Model (HBM) and the Social Cognitive Theory (SCT). Most of previous studies used the HBM to develop the educational design (Hacihasanoglu & Gozum, 2008; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007; Secginli & Nahcivan, 2010). They used the theory as a guide to give health education about breast cancer and breast cancer screening which the information was consistent with the variables of the HBM. Furthermore, the study which used the SCT (Luszczynska, 2004) was intended to increase optimistic self-beliefs about a person's ability to initiate regular BSE (pre action self-efficacy) and beliefs about one's capability to deal with barriers (maintenance self-efficacy). Luszczynska used the sources of self-efficacy including mastery experiences by using a silicon model exercise and vicarious influence by inviting a woman who performs BSE regularly as a role model. Moreover, the author also used a gain-framed intervention (give positive messages when delivering the program) on enhancing self-efficacy. However, there was a study which combined the HBM, the SCT, and Islamic culture (Sangchan, Tiansawad, Yimyam, and Wonghongkul, 2008), and combined HBM, SCT, and the Theory Reasoned Action (TRA) in order to develop their program (Lu, 2001).

Methods and designs of the programs

Methods and designs used in those studies included teaching, watching a video, demonstration and return demonstration, and follow-up. Firstly, the designs of the program began with a teaching session. The teaching session was conducted approximately for 30 minutes (Hacihasanoglu & Gozum, 2008) to 35 minutes (Secginli & Nahcivan, 2010).

Secondly, watching a video which provided BSE instructions was arranged for a duration of 15 minutes (Secginli & Nahcivan, 2010), to 20 minutes (Hacihasanoglu & Gozum, 2008). Thirdly, a demonstration and return demonstration of BSE practice by using a breast model was conducted using small group training which consisted of five to eight women within 15 minutes (Secginli & Nahcivan), followed by a return demonstration from the participants (Hall, Hall, Pfriemer, Wimberley, & Jones, 2007; Lu, 2001; Luszczynska, 2004; Sangchan, Tiansawad, Yimyam, and Wonghongkul, 2008; Secginli & Nahcivan, 2010). Lastly, a follow-up by a telephone call (Lu, 2001), and a meeting were conducted (Secginli & Nahcivan, 2010). This activity was for evaluating the BSE practice of the participants.

The outcomes of the studies were measured at different periods of time, such as immediately after the program (Hacihasanoglu & Gozum, 2008; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007), at 3 months (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008; Lu, 2001), at 3 and 4 months after the program (Luszczynska, 2004) and at 3 and 6 months after the program (Secginli & Nahcivan, 2010). Since BSE practice must be performed on a monthly basis, long-term follow up was recommended in order to evaluate the sustainability of BSE practice (Sangchan et al., 2008). In conclusion, long-term follow up is needed in order to examine the sustainability of BSE practice. However, a short-time follow up was considered enough to increase the women's confidence in doing BSE.

The major findings of the programs

The major findings were significantly increased knowledge (Hacihasanoglu & Gozum, 2008; Hall et al., 2007; Secginli & Nahcivan, 2010), beliefs perceived risk of having breast cancer and perceived benefits of BSE (Hacihasanoglu & Gozum; Lu, 2001; Secginli & Nahcivan; Sangchan et al., 2008), BSE self-efficacy (Hacihasanoglu & Gozum; Luszczynska, 2004; Secginli & Nahcivan; Sangchan et al., 2008), and BSE practice (Lu; Luszczynska; Sangchan et al.; Secginli & Nahcivan); and significantly decreased perceived barriers of doing

BSE (Hacihasanoglu and Gozum; Lu; Sangchan et al.).

Strength and weaknesses of the programs

Secginli and Nahcivan (2010) states that HBM is the appropriate theory to develop the educational program for promoting BSE; however, the HBM does not consider the role of culture on health behaviors. Therefore, they did not develop the program which integrated cultural issues (as the barriers perceived by the women to perform BSE) in designing the program. As a result, this study found no significant changes in the intervention group for perceived barriers to BSE after the intervention. Furthermore, Luszczynska (2004) explained that the intervention based on the SCT and design to enhance self-efficacy provided a positive effect on the behavior change. This study found that most of the participants in the intervention group who completed only some component of BSE or who performed irregularly increased the number of performed BSE components and the frequency. However, the intervention did not result in a further increase of BSE among women who did regular self-examination. It showed that the intervention designed to increase pre-action and maintenance self-efficacy might affect the frequency of BSE.

Luszczynska (2004) states that although the loss-framed intervention (fear-relevant persuasive information) was found to have more influence on an increased frequency of performing BSE than the gain-framed intervention, this kind of intervention might lead to excessive BSE and emotional distress. In Luszczynska's study it was found that the gain-framed intervention on enhancing self-efficacy affected an increase of BSE frequency, but did not increase risk perception and did not provoke an excessive performance of BSE.

Based on previous studies, most of the educational programs can enhance self-efficacy (Hacihasanoglu & Gozum, 2008; Luszczynska, 2004; Sangchan, Tiansawad, Yimyam, and Wonghongkul, 2008; Secginli & Nahcivan, 2010). Further, most of the studies used multifaceted methods including teaching, watching a video, BSE instruction and follow-up

(Luszczynska; Sangchan et al., 2008; Secginli & Nahcivan), but just one study incorporated the Muslim culture in developing their program (Sangchan et al.).

Sangchan et al. (2008) developed a culturally sensitive educational program. It was developed using the following steps. Firstly, the assessment phase: they identified the situation at that time. In this phase, they observed and performed an informal conversation with the two primary health care providers for identifying BSE promotion campaigns and its operations. Then, the issues related to BSE practice among Thai Muslim women were explored through informal conversation with five village health volunteers. Moreover, the living pattern and BSE information and practice of 165 Thai Muslim women were examined by using the Demographic Background Sheet and BSE practice questionnaire. As a result, it showed that the issues related to Islamic teaching, and the background and living patterns of Thai Muslim women which might influence the BSE practice among Muslim women.

Secondly, the researchers developed the educational program for promoting BSE appropriate for the Thai Muslim culture. This study used a technical-collaborative approach to apply their program. The program consists of three components including: 1) health messengers by using Thai Muslim women who had knowledge and skill about BSE, and had the ability to manage small group activities; 2) BSE information appropriate with Islamic teaching and the living patterns of Thai Muslim women; and 3) BSE training activities conducted in a convenient and private place, and at an appropriate time. Lastly, the program evaluation which examined the BSE perception, BSE self-efficacy and BSE practice.

In summary, the educational program which used a multifaceted method, being culturally sensitive showed a significantly increased BSE self-efficacy. Further, the program which used Bandura's social cognitive theory and proposed to increase self-efficacy significantly increased the frequency of the women in practicing BSE because women with high self-efficacy were more likely to practice BSE regularly. Even HBM theory was also

appropriate to develop the educational program for promoting BSE; however, this theory did not specifically explain about self-efficacy, and did not provide strategies to enhance self-efficacy. Therefore, in the present study the researcher considered the role of culture on BSE practice, especially Islamic culture. As a result, a newly designed program of this present study was developed based on SCT and Islamic culture.

Cultural-based educational program

The newly program was designed based on the results of the literature review. This program was used social cognitive theory and Islamic culture. According to the SCT, behavioral change depends on several factors including environment, people and behavior (Bandura, 1997). This theory puts major emphasis on self-direction, self regulation, and perception of self-efficacy (Bandura, 1989). Self-efficacy is enhanced or influenced by four main sources. These are identified by Bandura (1997) as enactive mastery experiences, vicarious experiences, verbal persuasion, physiological and affective states.

In addition, the Islamic culture was integrated in designing the study's cultural-based BSE educational program. In daily life, Muslim women are required to cover their bodies from the attention of men. They have been familiar with this practice since they were young and this contributes to their shyness to touch their own body parts, particularly the breasts (Banning & Hafeez, 2009). This practice can be a hindering factor contributed to the Islamic mandate on prevention and individual responsibility in health promotion. According to Rajaram and Rashidi (1999), Muslims must try to maintain the following mandates: prevention and individual responsibility in health promotion, cleanliness, diet and eating behaviors, and physical exercise. The Islamic culture was integrated into the BSE educational program by exploring the students' perceptions of Islamic mandates and beliefs related to BSE practice. Specifically, their recognition that their bodies are a gift from *God*; this leads to their understanding that they must be responsible to prevent diseases, in this case, breast cancer, by

exploring and getting education about their own bodies.

Based on previous studies that have been reviewed, the program was comprised of four sessions including: 1) exploring Islamic mandate on prevention and individual responsibility in health promotion, and culture-related beliefs toward BSE, 2) health education by conducting lecturing session and watching a video about BSE procedures, 3) BSE training activities including BSE demonstration and return demonstration, 4) follow-up by conducting a meeting.

The first session, explores the participants' perceptions about the Islamic mandates on prevention and individual responsibility in health promotion and their beliefs related to BSE practice. The second session, health education consists of lecturing sessions and watching a video. In the lecturing sessions, the participants will receive information regarding breast cancer and BSE. The information provided in this program is linked with Islamic teaching. The appropriate educational materials for transmitting the information include: 1) a motivational conversation containing the appropriate BSE information, which is precise, concise, understandable and in Indonesian language; 2) a BSE booklet containing the main idea of BSE, knowledge about breast cancer, and illustrations of BSE procedures; 3) a model of breast with lumps that is similar to human reality, small size and portable. Further, the participants watch a 10-minutes English version video with text in Indonesian language which provides BSE instructions. The third session is the BSE training activities. It will be conducted in a convenient and private place, and at an appropriate time. Lastly, a follow-up of the BSE practice by conducting a meeting. This meeting is aimed at evaluating participants' competence in performing BSE by conducting a return demonstration with a breast model, evaluating the participants' feelings after performing BSE, identifying their barriers in practicing BSE, asking about their plan to perform BSE, and giving suggestions to perform BSE regularly.

Conclusion

The development of a cultural-based educational program for promoting breast self-examination among nursing students was an intervention using multifaceted methods. It had been designed based on a review of the literature from previous studies and were supported by research findings on experimental studies in other population. The method that had been used based on component and method in previous studies. Most of previous study used multifaceted method in order to running their program including teaching, watching a video, demonstration and return demonstration. However, there are few of the studies that used cultural as strategy in order to promote breast self-examination. The role of cultural is the important thing in daily life, especially Muslim women. The Islamic culture can influence the women beliefs, values, perceptions, and behavior. Therefore, by integrating Islamic culture in the program it can make the intervention is more appropriate for Muslim women.

Practice implications

The results of the development program provide useful information for the nursing practice in order to conduct the program for promoting BSE among Muslim women which consider the role of Islamic culture on BSE practice. In addition, the future research would be required to determine the effectiveness of the program on BSE self-efficacy and BSE practice among Muslim women, especially nursing students.

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