

Educational Program for Promoting Breast Self-Examination: A Literature Review

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ABSTRACT

Breast cancer was the most common type of cancer in women worldwide. It was the leading cause of death in young women. Therefore, detected breast cancer in the early stage were needed. Breast self-examination was one of methods can detect breast cancer. In addition, program that promote BSE was important to increase awareness of women to perform BSE. The study aimed to find or formulate the applicable, effective, and efficient educational program for promoting BSE. Methods of the study by using electronic databases, such as CINAHL, Pub Med, Science Direct, and Ovid. The articles which were included in this review were published from 1990 to 2010. The study also used the universal case entry website like goggle-web and goggle-scholars. The keywords that already used such as the effect of educational program for promoting BSE, breast cancer screening, breast self-examination, program for promoting BSE, breast cancer, factors influencing BSE, define of BSE, factor related to BSE practice. The results of the study were categorized into five main topic such as concept of BSE, factors related to BSE practice, educational program for promoting BSE, strengths and weakness of those program, and recommendation. Conclusion and recommendation, most of the program effectiveness to increase BSE practice and BSE self-efficacy among women, but many factors influence the program such as cultural, level of knowledge, and demographic data. Besides, most of the programs use the HBM and SCT to develop their program, because both of these theories have variables that can encourage women to perform BSE. But, both of the theories did not consider the important role of cultural on health behavior, which it can affect of the BSE practice and self-efficacy. In addition, for the further recommended program should consider the role of cultural and use multifaceted method to improve BSE practice.

Keywords: Breast cancer, educational program, cultural sensitivity.

INTRODUCTION

Breast cancer is a main health problem and remains the most common type of cancer in women worldwide (American Cancer Society [ACS], 2009; Ktatcheressian et al., 2006 as cited in Secginli & Nahcivan, 2010). According to ACS (2007), about 1.3 million women would be diagnosed with breast cancer annually and about 465,000 would die from the disease (ACS, 2010).

According to ACS (2010), breast cancer's incidence rate of women aged 20-24 years old are lower than women aged 75-79 years old, which are about 1.3 cases per 100,000 populations during 2002-2006. Breast cancer is the leading cause of death in young women where 5% to 7% of all cancers occur in women 15-29 years old. However, only 2.7% of all cases of

breast carcinoma occur in women at the age of 35 years old or younger, and 0.6% case occurred in women at the age younger than 30 years old (DiNubila, et al., 2006, Weber-Mangal, et al., 2003 as cited in Axelrod, Smith, Kornreich, Grinstead, Singh, Cangiarella, et al., 2008).

Breast cancer in the early stage can be detected with several methods such as mammography, clinical breast examination (CBE), and breast self-examination (BSE) (ACS, 2010). In developing country, BSE is being used as a simple, inexpensive, non-invasive, and non-hazardous method, which is not only acceptable, cost-effective and appropriate, but also encourages women to take an active responsibility in preventive care (Narimah, Rugayah, Tahir, & Maimunah, 1999 as cited in Chee, Rashidah, Shamsuddin, &

Intan, 2003). The ACS recommends that all women should have information about the benefits and limitation of BSE. Women should also be aware on how their breast are normally appeared and palpated and should give information to the health professional if there is any difference in their breast (Secginli & Nahcivan, 2006; ACS, 2006 as cited in Hacıhasanog˘lu & Go˘zu˘m, 2008). In addition, BSE instruction might increase breast cancer awareness that it can be early detection and reporting of symptoms (Anderson & Jakesz, 2008 as cited in Secginli & Nahcivan, 2010).

BSE education and adherence are a gateway to health promotion behavior of younger women, which is set the stage for adherence to clinical breast examination and mammography screening later in life (Karayurt, zmen, & etinkaya, 2008). Furthermore, early detection of breast cancer is very important for young women, because generally breast cancer is more aggressive and has lower survival rates (Larkin, 2001 as cited in Chee, Rashidah, Shamsuddin, & Intan, 2003).

Health education is an important role of nurse. Nurse can spread more information to a wide community of women and influences their BSE practice (Budden, 1998). Besides, teaching individuals to be able to perform self-care activities is the most important aspect of nursing care. Furthermore, individual's decision for action is influence by knowledge, attitudes, beliefs, and motivation. Moreover, BSE is a self-care practice and it is an activity can maintain women's life, health, and well-being (Sitzes, 1995). In addition, if BSE becomes a routine part of women's lifestyles, their lives may be saved by the early detection and treatment of breast cancer (Budden, 1998).

There was some study that had been conducted to evaluate the effectiveness of BSE practice to early detection of breast cancer. Ellman, Moss, Coleman, and Chamberlain (1993)

conducted the programs of education in BSE with specialist clinics for self-referral was introduced in two health districts around 1980. The results which were combined from the two centers showed no reduction in mortality from breast cancer over the following 10 years but the mortality was low in one of the center while in the other it was higher than in four geographically separate comparison centers in which there was similar careful monitoring of breast cancer incidence and mortality. Furthermore, another study identifies the effectiveness of three methods to teaching BSE, which involved 587 women who were followed for six years. During the follow-up period, eight women developed breast cancer. The findings in this study supported the need to address (1) women's presentation of symptoms once discovered, and (2) the health care system's should responded women who do present on the basis of findings through BSE (Alcoe & Gilbey, 1996).

Previous research had been shown that self-care education related to breast health can increase the awareness of breast cancer, practicing BSE, and seeking regular professional breast examination (Ludwick & Gaczkowski, 2001; O˘ztu˘rk, Engin, Ki, siog˘lu, & Yilmazer, 2000; Wood, 1996 as cited in Chan, Chow, Loh, Wong, Cheng, Fung, et al., 2007). In addition, the other studied found that education administered by nurses can increase positive perceptions about BSE self-efficacy (Hacıhasanog˘lu & Go˘zu˘m, 2008). The objective of this review is to gain better understanding about educational program for promoting BSE. The result of the review could help to find or formulate the applicable, effective, and efficient educational program for promoting BSE.

METHODS

To meet the objectives of this study, the author use electronic databases, such as CINAHL, Pub Med, Science

Direct, and Ovid. The articles which were included in this review were published from 1990 to 2010. The author also used the universal case entry website like goggle-web and goggle-scholars. The keywords that already used such as the effect of educational program for promoting BSE, breast cancer screening, breast self-examination, program for promoting BSE, breast cancer, factors influencing BSE, define of BSE, factor related to BSE practice.

The data, information, and document that match with the keywords will be retrieved and downloaded. In addition, the author will include the full text article only in the review. Then author will read carefully the included articles and extract the given information.

The inclusion criteria of the retrieved articles will be focused on educational program for promoting BSE, which were written in English, and using literature review, randomized controlled trial, quasi experiment method, or correlation study.

RESULTS AND DISCUSSIONS

The results of this study were based on several articles that attain from some databases. The study reviewed were categorized into five main topic such as concept of BSE, factors related to BSE practice, educational program for promoting BSE, strengths and weakness of those program, and recommendation.

Concept of BSE

Concept of BSE on this reviewed consist of definitions of BSE, steps of BSE, and factors related to BSE practices. Further, each aspect will be explained in the following paragraph.

Definitions of BSE

Many definitions related to breast self-examination. BSE is a systematic self examination of the breast by a woman for the purpose of detecting abnormalities (Shepherd & McNerye, 2007). It is a regular, repetitive monthly palpation to a rigorous set method performed by the

women at the same time each month (Thornton & Pillarisetti, 2008). BSE is a simple, inexpensive way of screening for breast abnormalities, especially in countries where women cannot gain access to modern technology (Shepherd & McNerye, 2007). It is a screening method that should be taught to women at an early age. In addition, it can be performed without assistance of health professionals and without special equipment (Hacihanoglu & Gozu, 2008).

Steps of BSE

According to Breast Cancer Organization (2009), there are five steps of performing BSE including: 1) look at the breast in a mirror with the shoulders straight and arm on hips, and look at the breast usual size, shape, color; 2) raise arms and look for the same changes at the breast; 3) While at the mirror, look for any sign of fluid coming out of one or both nipples (this could be a watery, milky, or yellow fluid or blood); 4) feel breasts while lying down, using right hand to feel left breast, then left hand to feel right breast. Use a firm, smooth touch with the first few finger pads of hand, keeping the fingers flat and together. Use a circular motion, about the size of a quarter. Cover the entire breast from top to bottom, side to side from collarbone to the top of abdomen, and from arm pit to cleavage. Follow a pattern to be sure that cover the whole breast. It can begin at the nipple, moving in larger and larger circles until reach the outer edge of the breast. It can also move fingers up and down vertically, in rows, as if you were mowing a lawn. This up-and-down approach seems to work best for most women. Be sure to feel all the tissue from the front to the back of breasts: for the skin and tissue just beneath, use light pressure; use medium pressure for tissue in the middle of breasts; use firm pressure for the deep tissue in the back. When reached the deep tissue, it should be able to feel down to ribcage; 5) feel breasts while standing or sitting. Many women find that the easiest

way to feel their breasts is when their skin is wet and slippery, so they like to do this step in the shower. Cover entire breast, using the same hand movements described in Step 4.

Factors related to BSE practices

There are several factors that can influence women in performing BSE such as lack of knowledge about how to perform BSE (Agars & McMurray, 1993; Williams et al., 1998 as cited in Hacıhasanog˘lu & Go˘zu˘m, 2008; Karayurt, zmen, & etinkaya, 2008), lack of time, fear of finding a lump (Agars & McMurray, 1993; Williams et al., 1998 as cited in Hacıhasanog˘lu & Go˘zu˘m, 2008), not expecting to get breast cancer and not having a close relative with breast cancer (Karayurt, zmen, & etinkaya, 2008). Furthermore, factors such as health beliefs and attitude to breast cancer ((Barr et al., 2001; Champion et al., 2003; Garza et al., 2005; Oliver et al., 2001; Kim & Menon, 2009; Nahcivan & Secginli; 2007; Secginli & Nahcivan, 2006 as cited in Secginli & Nahcivan, 2010; Canbulat & Uzun, 2008), breast cancer knowledge, access to hospital, social and economic stage, education level, health insurance coverage, family history of breast cancer, having regular physician and lack of physician recommendation have been related to BSE practice (Barr et al., 2001; Champion et al., 2003; Garza et al., 2005; Oliver et al., 2001; Kim & Menon, 2009; Nahcivan & Secginli; 2007; Secginli & Nahcivan, 2006 as cited in Secginli & Nahcivan, 2010).

Several studied found that older women are significant higher in practicing BSE than younger women (Chee, Rashidah, Shamsuddin, & intan, 2003; Mah & Bryant, 1992; Karayurt, zmen, & etinkaya, 2008). Besides, Women who had higher perceived benefit and self-efficacy, and lower perceived barrier were more likely to perform BSE (Secginli & Nahcivan, 2006; Canbulat & Uzun, 2008; Tavafian, Hasani, Aghamolaei, Zare, & Gregory, 2009). In addition, women who

had the higher susceptibility to breast cancer and having heard/read about breast cancer and BSE were more likely in performing BSE (Secginli & Nahcivan, 2006; Canbulat & Uzun, 2008)

Frequency of practicing BSE is associated with the performer's competency level, age, belief in the benefit of performing BSE, perceived social approval for practice, knowledge to perform BSE, and level of confidence in ability to perform it (Jacob, Penn, & Brown, 1989). In addition, in socioeconomically developing countries like Turkey, and especially developing regions like Erzincan, BSE training is an important and economical opportunity to educate women about breast health (Hacıhasanog˘lu & Go˘zu˘m, 2008).

Educational Program for Promoting BSE

There are several existing educational program for promoting BSE; the development of a culturally sensitive educational program to increase the perception, self-efficacy, and practice of Thai Moslem women regarding BSE (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008); Effect of a culturally sensitive education program on the breast cancer knowledge and beliefs of Hispanic women (Hall, Hall, Pfriemer, Wimberley, & Jones, 2007); Effectiveness of BSE nursing interventions for Taiwanese community target groups (Lu, 2001); the effect of training on the knowledge levels and beliefs regarding BSE on women attending a public education centre (Hacıhasanog˘lu & Go˘zu˘m, 2008); the effectiveness of a nurse-delivered breast health promotion program on breast screening behaviors in non-adherent Turkish women: a randomized controlled trial (Secginli & Nahcivan, 2010); change in BSE behavior: effects of intervention on enhancing self-efficacy (Luszczynska, 2004); using a community-based outreach program to improve breast health awareness among women in Hong Kong (Chan, Chow, Loh,

Wong, Cheng, Fung, et al., 2007). Furthermore, the studies are reviewed into four main areas such as theory based for program development, component of the programs, method and design of the programs, and outcome of the programs.

Theory based for program development

There are two main of theories that had been applied to develop the educational program for promoting BSE which are Health beliefs model (HBM) and Social Cognitive Theory (SCT). The HBM consist of perceived susceptibility, perceived benefits, perceived barriers and confidence. These variables were reported to be strength predictors of BSE (Champion & Scott, 1997; garza et al., 2005; Nahcivan & Secginli, 2007; Norman & Brain, 2005; Secginli & Nahcivan, 2006b as cited in Secginli & Nahcivan, 2010). Furthermore, most of the studies use the HBM to develop the educational design (Secginli & Nahcivan, 2010; Hacıhasanog˘lu & Go˘zu˘m, 2008; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007; Lu, 2001). Based on the HBM, BSE frequency has been increase if the educational program used teaching strategies addressing attitudinal variables (Tien, 1995; Su & Huang, 1996 as cited in Lu, 2001). Besides, if after the intervention, researcher did the follow up as reminder prompts such as telephone call, postcard reminders or calendar sticker have been shown effectively to eliminate the barrier (Mayer & Frederiksen, 1986; Worden et al., 1990; Morrison, 1996; Strickland et al., 1997 as cited in Lu, 2001). The barriers for performing BSE include forgetfulness, fear of finding a tumor and lack of time (Lauver & Angerame, 1988; Champion & Scott, 1993 as cited in Lu, 2001). Besides, self or peer reward have also significantly reinforce the practice of BSE (Hailey et al., 1992 as cited in Lu, 2001).

Most of the educational program develop the measurement based on the HBM (Secginli & Nahcivan, 2010;

Hacıhasanog˘lu & Go˘zu˘m, 2008; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007; Lu, 2001). Where, the champion's health beliefs model scale (CHBMS) instrument can measure BSE practice with high validity and reliability (Champion, 1993, 1999; Champion & Scott, 1997 as cited in Hacıhasanog˘lu & Go˘zu˘m, 2008; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007). Furthermore, the HBM had been used to develop the content of the educational program (Secginli & Nahcivan, 2010; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007). Secginli and Nahcivan (2010) mention about breast anatomy, incidence, mortality, risk factors for breast cancer development, breast changes, BSE, CBE, and mammography; the importance of early detection of breast cancer, and the treatment options; massages related to susceptibility to breast cancer, confidence for BSE, perceived benefits and barriers to BSE, and perceived benefits and barriers to mammography; and access to screening services.

Hall, Pfriemer, Wimberley, and Jones (2007) give information such as incidence, mortality, general risk factors, personal history with cancer, and lifestyle related to risk factors, screening recommendations, breast cancer facts, and screening examination. Besides, this study provides the material base on cultural sensitivity and appropriate linguistic. Moreover, study by Hacıhasanog˘lu & Go˘zu˘m (2008), they give information about breast cancer, risk factors, intervention to reduce the risk of breast cancer, and the value of early diagnosis and cancer screening. Besides, Chan, Chow, Loh, Wong, Cheng, Fung, et al. (2007) develops the content base on the appropriate cultural and easy to understands, which consist of risk factors, general knowledge on prevention of breast cancer, knowledge, skills and benefits of BSE, professional examination, and mammography screening. In addition, most of the content was based on HBM

theory accept study by Hacıhasanog˘lu & Go˘zu˘m (2008), they do not mentioned about variable of HBM theory such as perceived susceptibility, perceived benefits, perceived barriers and confidence which it can affect to BSE practice. Although, the HBM is the appropriate theory to develop the educational program for promoting BSE, but the HBM did not consider the role of culture on health behaviors, which culture is one of factors that might influence the BSE practice (Secginli & Nahcivan, 2010).

In several studies, HBM is combined with other theories such as SCT and theory of reasoned action (TRA). In study that has been conducted by Sangchan, Tiansawad, Yimyam, and Wonghongkul (2008), they combined three part of theory such as perceptions related to breast cancer and BSE consisted in HBM, self-efficacy that is consistent with the concept of SCT and Islamic culture. According to the HBM, a woman who perceives that she is responsive to breast cancer and that breast cancer is a serious disease pays more attention to practice breast self examination. Furthermore, the author use the both of theories to develop the educational design, the measurement and the content. The content of the educational program consist of a motivational conversation script containing the appropriate BSE information and in the southern dialect. Besides, it was linking with Islamic cultural because most of the participant were Moslem women. Furthermore, the BSE perception Scale which modified from CHBM scale and it is consist of all variables in the HBM theory. Besides, BSE Self-Efficacy Scale had been modified from Lewis and Sainitzer.

Study by Lu (2001) develops the program by using HBM, SCT and TRA. Firstly, the author develop the framework with enhance the explanatory power of the HBM, where the construct of self-efficacy, derived from Bandura SCT has been previously incorporated into the study of

BSE practice (Lauver, 1987; Rosenstock et al, 1988, Champion, 1989; Lu, 1995 as cited in Lu, 2001). Furthermore, the author gives explanation about The TRA theory, where social influence and social network are effect on BSE performance (Champion, 1989; Lierman et al., 1990; Liu, 1990; Strickland et al., 1997; Wagle et al., 1997 as cited in Lu, 2001). Meanwhile, the TRA emphasizes that the direct determinant of action is the result of the behavioral intention (Champion, 1989 & Lierman et al., 1990 as cited in Lu, 2001). In addition, the HBM and the TRA theories they use to the educational design, and the measurement.

Study by Luszczynska (2004) using SCT to develop the program, where self-efficacy and its relation to health behaviors had a very strong theoretical basis in Bandura's. Besides, individual with high optimistic self-beliefs regarding their capability to perform BSE are more likely to engage in regular self-examination (Alagna and Reddy, 1987; Chalmers and Luker, 1996; Hodgkins and Orbell, 1998 cited in Luszczynska, 2004). Furthermore, the author uses the theory to develop the educational design and the instrument. But, for the content the author just give information about the benefits of BSE practice for increase participants' outcome expectancies, and cancer related to information (mortality and morbidity). Meanwhile, the intervention was designed 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). In addition, self-efficacy was increased by mastery experiences (silicon model exercise) and by vicarious influence (observation of model woman performing).

Component of the programs

Most of the program consisted of three components such as health education, BSE instruction, and follow-up. Hacıhasanog˘lu and Go˘zu˘m (2008) applied the program just use the health

education program to promote their program. Moreover, some of the studies use three part of component such as health education, BSE instruction, and follow-up (Secginli & Nahcivan, 2010; Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008; Luszczyńska, 2004). Besides, study by Chan, Chow, Loh, Wong, Cheng, Fung, et al (2007) explained two part of component such as health education, and BSE instruction. Furthermore, Hall, Hall, Pfriemer, Wimberley, and Jones (2007) mention about the component of the program such as large-group instruction and played the Spanish version of selected sections; and followed the large-group instruction, consisted of small-group sessions led by a presenter who was assisted by an interpreter. In addition, Lu (2001) mentioned about two part of the program such as BSE instruction, and follow-up.

Method of the programs

There are several methods that used to manage the program such as teaching, watching, demonstration, and re demonstration. Some of the studies applied the health education with used teaching method by using flipchart and watching (Hacihasanog˘lu & Go˘zu˘m, 2008; Secginli & Nahcivan, 2010). Besides, study by Sangchan, Tiansawad, Yimyam, and Wonghongkul (2008) just use teaching method to health education for apply the program. Moreover, some of the studies just use watching methods to health education (Chan, Chow, Loh, Wong, Cheng, Fung, et al., 2007; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007; Luszczyńska, 2004).

Most of the studies use demonstration and re demonstration method for BSE instruction by using breast model (Hall, Hall, Pfriemer, Wimberley, & Jones, 2007; Secginli & Nahcivan, 2010; Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008; Luszczyńska, 2004). Besides, there are studies just used demonstration methods without re demonstration for each

participant (Chan, Chow, Loh, Wong, Cheng, Fung, et al., 2007; Lu, 2001). Furthermore, some of the studies completed the program with given a booklet (Secginli & Nahcivan, 2010; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007; Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008), a calendar (Secginli & Nahcivan, 2010), action card (Secginli & Nahcivan, 2010; Chan, Chow, Loh, Wong, Cheng, Fung, et al., 2007), a CD-ROM (Chan, Chow, Loh, Wong, Cheng, Fung, et al., 2007), pamphlet (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008), and Leaflet for each participant (Luszczyńska, 2004).

Design of the programs

Most of the studies have different design to manage the program. Firstly, the designs of the program begin with teaching session. Where, the teaching sessions has a different duration such as 30 minute (Hacihasanog˘lu & Go˘zu˘m, 2008), and 35 minute (Secginli & Nahcivan, 2010). Secondly, watched video, where each program have different duration for apply it such as 10 minute (Hacihasanog˘lu & Go˘zu˘m, 2008), 15 minute (Secginli & Nahcivan, 2010), 10 minute (Chan, Chow, Loh, Wong, Cheng, Fung, et al., 2007), and 30 minute (Hacihasanog˘lu & Go˘zu˘m, 2008). Besides, there was study which explained the duration of all components 40 minute (Hall, Hall, Pfriemer, Wimberley, & Jones, 2007). Thirdly, demonstration and re demonstration of BSE practice by using breast model. Demonstration by used a small groups of five to eight women and the duration was 15 minute (Secginli & Nahcivan, 2010), it was different with Chan, Chow, Loh, Wong, Cheng, Fung, et al. (2007), and the study just applied demonstration with duration 5-10 minute. Lastly, follow-up to measure the BSE practice applied. Where each program have different times and method such as 3 and 6 month by using questionnaire (Secginli & Nahcivan, 2010), 12 to 15 weeks after the intervention by using

questionnaire (Luszczynska, 2004), 3 and 6 month (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008), and 3 month after intervention by using telephone calls (Lu, 2001).

Study by Sangchan, Tiansawad, Yimyam, and Wonghongkul (2008), they design the program, where in the health education; the health messenger was from the community that can give the appropriate information. There are consist of 6 health messenger for six groups, and each group consists of 5 persons. Meanwhile, they give information that was linking with Islamic teaching related to health practice and living pattern of Thai Moslem women. Further, they did the BSE training activities in the private place, an appropriate time in the small group with using understandable language for local persons. In addition, the implementation should integrate motivational conversation and BSE skill training. Besides, based on the TRA, to identify important reference group by initial interviews is needed, where a focus group was conducted when beauticians have identify friends, family member, such as parents, husbands, sisters; colleagues and health professionals as their reference groups (ajzen & Fishbein, 1980; Lierman et al., 1990 as cited in Lu, 2001).

Outcome of the programs

The outcome of the educational program such as increasing BSE practice, BSE knowledge, BSE efficacy, perceived benefits of BSE, BSE accuracy, BSE frequency, BSE proficiency, decreased perceived susceptibility, and decreased perceived barriers. Most of the study examined the increasing perceived benefit and perceived competence; significantly decreased perceived susceptibility and perceived barriers (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008; Lu, 2001). Besides, Sangchan, Tiansawad, Yimyam, & Wonghongkul (2008) also examined about BSE practice, BSE efficacy, and BSE proficiency. Meanwhile, Lu (2001) found that both BSE frequency

and accuracy was significant increase among women, and health professional were considered to be the most important reference group for BSE intention.

Study by Hacıhasanog˘lua and Go˘zu˘mb (2008) showed the significant increase of BSE accuracy (between 79.1% and 96.7%). Moreover, the perception of self-efficacy, an important variable in the process of behavior change, is a necessary component of changing and maintaining the practice of BSE. Besides, an educational intervention increasing the women's knowledge and positive beliefs regarding BSE. Furthermore, Secginli and Nahcivan (2010) examined BSE frequency and proficiency, and breast health knowledge can increase after the program. Besides, the program was effective in increasing perceived susceptibility to breast cancer, perceived benefits of mammography and breast self-examination, and confidence of breast self-examination. But, no significant difference was found between the two groups for perceived barriers for mammography.

Chan, Chow, Loh, Wong, Cheng, Fung, et al. (2007) showed that the participant willingness to practice BSE regularly (93.3%) and to pass on the BSE knowledge to their relatives and friends (92%). Meanwhile, study by Luszczynska (2004) found that self-efficacy was significant predictor of intention, planning, and behavior change. In addition, study by Hall, Hall, Pfriemer, Wimberley, and Jones (2007) mentioned that by using multifaceted, cultural sensitivity and appropriate of the linguistically was very useful and benefit to increasing BSE knowledge and beliefs among women.

Most of the program was effectiveness, because mostly they use multifaceted, cultural sensitivity and appropriate linguistically (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008; Chan, Chow, Loh, Wong, Cheng, Fung, et al., 2007; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007). Besides, there is study which did not use the cultural

sensitive when they apply their program (Luszczynska, 2004; Lu, 2001; Hacıhasanog˘lua & Go˘zu˘mb, 2008; Secginli, & Nahcivan, 2010). Meanwhile, by using multifaceted such as the combination of BSE instruction and follow-up reminders can improves both BSE frequency and accuracy; BSE teaching and a return demonstration with a breast model effectively improved BSE accuracy (Lu, 2001). Besides, champion (1995) reported that opportunities for breast model practice under supervision increasing confidence in completing BSE steps. Moreover, an appropriate environment for a return demonstration with a breast model is necessary for the effectiveness of BSE education program. In addition, monthly telephone reminders can eliminate barriers to BSE performance (as cited in Lu, 2001).

Chan, Chow, Loh, Wong, Cheng, Fung, et al. (2007) examined that by “looking,” “feeling,” and “looking for change” in BSE at the health education CD, the health messages from the actresses and action card for reminders can increased the BSE practice then reduces the barriers. Besides, study Luszczynska (2004) examined that by using the SCT can improved self-efficacy, because self-efficacy became a stronger predictor of planning, and planning became a stronger predictor of BSE change. Further, this study confirms that the intervention designed to increase pre action and maintenance self-efficacy might affect the frequency of BSE.

Most of the study shows that providing multifaceted, cultural sensitive and linguistically appropriate on the breast cancer education programs for women can be accomplished successfully within the scope of nursing practice (Hall, Hall, Pfriemer, Wimberley, & Jones, 2007). Besides, Secginli and Nahcivan (2010) examined that perceived barriers for BSE practice was increased might be because the participants more aware that BSE is difficult to do correctly, it is time

consuming, the procedure is unpleasant and embarrassed. Furthermore, the cultural can be influence the BSE practice. Although, the HBM was appropriate way to develop the design, content and the measurement, but the theory did not consider the role of culture on health behavior.

The instrumentation of the programs

Most of the programs use the HBM to develop the instruments. Where all of the measurement CHBM scale have the higher internal consistency such as 0.73 to 0.88 (Secginli & Nahcivan, 2010), or 0.69 for perceived susceptibility, 0.78 for severity, 0.74 for benefit practice BSE, 0.78 barriers to practice BSE (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008), or 0.65 to 0.91 (Lu, 2001), and the breast cancer Screening beliefs scale (BCSBS) was developed by Champion & Scott, 1997 with internal consistency are 0.83 for susceptibility, 0.69 for benefit of BSE, 0.83 for barriers of BSE and 0.90 for confidence. Test-retest reliabilities for English version over an unspecified time interval ranged from 0.40-0.68 (Hall, Hall, Pfriemer, Wimberley, & Jones, 2007). Besides, for examined the self-efficacy, mostly the program use the Lewis and Sainitzer BSE self-efficacy Scale with the Cronbach’s alpha coefficient value was 0.94 (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008), and the self-examination scale with the Cronbach’s alphas coeficiency was 0.81 (time 1) and 0.90 (time 2) (Luszczynska, 2004).

The BSE practice was measured with the BSE practice questionnaire made up of four closed-ended multiple choice items of time and frequency of BSE practice, and the reliability of it using a percentage agreement was indicated at 100 (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008); the follow-up questionnaire (Secginli & Nahcivan, 2010); and to examine the BSE practice by asking the frequency each month (Lu, 2001). Further, to measured the skill of the

BSE, most of the program use BSE proficiency rating instrument (BSEPRI) was developed by Wood (1994) and the higher score is 100 (Secginli & Nahcivan), and a 15-items checklist based on recommendation from the ACS and the National Cancer Institute to measure the accuracy of BSE (Lu, 2001).

The knowledge of the breast cancer and BSE was measured with using the breast health knowledge (BHK) form with true-false or do not know response and use the Kuder-Richardson reliability value 0.79 (Secginli & Nahcivan, 2010), and the Breast cancer knowledge (BCK) test was developed by Stillman's (1977) with internal consistency of 0.81 (Hall, Hall, Pfriemer, Wimberley, & Jones, 2007). Besides, there was study which measures the intention to perform BSE with 5-point likert scale (Lu, 2001). In addition study by Chan, Chow, Loh, Wong, Cheng, Fung, et al. (2007) they use a self administered questionnaire to examine their program.

Strength and Weakness of the Program

There are some strengths and weaknesses of the program. The strength of the program mostly they use three of the component such as health education, the BSE instruction and follow-up (Secginli & Nahcivan, 2010; Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008; Luszczynska, 2004); use cultural sensitive and appropriate linguistically (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008; Chan, Chow, Loh, Wong, Cheng, Fung, et al., 2007; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007); using the HBM to develop the measurement with higher internal consistency such as 0.73 to 0.88 (Secginli & Nahcivan, 2010), or 0.69 for perceived susceptibility, 0.78 for severity, 0.74 for benefit practice BSE, 0.78 barriers to practice BSE (Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008), or 0.65 to 0.91 (Lu, 2001); and use SCT to develop the measurement with higher internal consistency such as 0.81

(time1) and 0.90 (time 2) (Luszczynska, 2004). Where it can be made the educational program to promoting BSE is more effectiveness.

The weakness of the program consist of the fact that the posttest was administered soon after the educational intervention without follow-up (Hacihasanog˘lua & Go˘zu˘mb, 2008; Hall, Hall, Pfriemer, Wimberley, & Jones, 2007; Chan, Chow, Loh, Wong, Cheng, Fung, et al., 2007); the short-term follow-up period (only 6 months after the intervention) to change behavior (Secginli & Nahcivan, 2010; Sangchan, Tiansawad, Yimyam, & Wonghongkul, 2008); the program does not consider the role of culture on health behaviors (Secginli & Nahcivan, 2010; Luszczynska, 2004; Hacihasanog˘lua & Go˘zu˘mb, 2008); and the program did not give information about breast cancer and BSE generally (Lu, 2001).

CONCLUSIONS

Most of the program effectiveness to increase BSE practice and BSE self-efficacy among women, but many factors influence the program such as cultural, level of knowledge, and demographic data. Besides, most of the programs use the HBM and SCT to develop their program, because both of these theories have variables that can encourage women to perform BSE. But, both of the theories did not consider the important role of cultural on health behavior, which it can affect of the BSE practice and self-efficacy.

The educational program use multifaceted strategic that consist of several components such as health teaching, watch video, BSE instruction, follow-up, and complete with booklet or leaflet or a card to remember BSE practice which it can improving BSE practice among women. In addition, for the further recommended program should consist of three part of component: health education, BSE instruction, and follow-up; use the HBM and SCT; use cultural sensitivity and

appropriate linguistically; time duration for teaching is 30-35 minute, if too long the participant will lose concentration; and should do a demonstration of BSE practice of each participant and make in small group 5-8 persons.

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