EARLY DETECTION OF BREAST CANCER BY BREAST SELF-EXAMINATION (BSE) IN ADULT WOMEN (A SYSTEMATIC REVIEW)

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ABSTRACT

Introduction: Breast cancer is a problem that occurs in adult women. The number of incidences in Indonesia is the second most common cancer of women after cervical cancer, in 2010 listed 45% of women suffered from abnormal breast lumps, both malignant and benign tumors Breast cancer can occur at any time and asymptomatic, thus it requires the appropriate detection methods to find out. **Methods:** The method used in this systematic review begins with PICO framework that is focused on breast self-examination for the detection of early breast cancer by searching journals through database Science direct, Ebscho, and Proquest. **Results:** 8 articles journals were selected and assessed, generally the journals review provide increased knowledge about BSE also Breast Self-Examination (BSE) provides benefits to detection early breast cancer. **Conclusion:** The article study reviews showed that almost all of which breast self examination (BSE) is able to give a positive effect in terms of both, knowledge and awareness of women about breast health. Breast cancer should be detected early to improve the prognosis for immediate action. One of the ways to detect breast cancer is by improving the knowledge and awareness of women to do breast self-examination as a tool for detecting breast cancer with a safe and easy method.

Keywords: Breast Self-Examination, Early Detection, Breast Cancer

INTRODUCTION

Breast cancer is a serious health problem as the second leading cause of death in women. According to the American Cancer Society, (2016) approximately the chance that a woman will die from breast cancer is about 1 in 37 (about 2.7%). Breast cancer incidence is likely to increase consistently in the developing countries in line with the adoption of unhealthy lifestyles such as smoking, physical activity, consume foods that contain lots of high-energy, changes in childbirth and breastfeeding and exogenous hormone intake (Ayed et al., 2015).

Breast cancer in Indonesia is the second most common cancer of women after cervical cancer, in 2010 listed 45% of women suffering from abnormal breast lumps, both malignant and benign tumors (Santoso, 2009). Breast cancer can happen to any woman at any time and asymptomatic, and thus it requires proper detection method to find out. Many studies mention a few checks to detect early breast cancer, mammography, ultrasound, biopsy without surgery, breast clinic examinations and Breast Self-Examination (American Cancer Society, 2016).

BSE is more widely used because it is simple, easy and can be done by herself or with a very low cost, non-invasive without the requirement of special tools and materials, an effective diagnostic method for breast cancer only takes five minutes to apply (Ayed et al., 2015). BSE is an act involving a woman using hand and eyesight systematically examine her breasts to detect unusual lumps shape, or changes on the skin, a visual examination is sitting or lying down (Corbex, Burton, & Sancho-Garnier, 2012).

Breast self-examination requires self-awareness and habits linked to cancer screening (Masso-Calderón et al., 2016). It is expected after obtaining knowledge about BSE (Breast Self-Examination) women can detect breast cancer early, so there is no further stage and get faster handling of the medical team at an early stage. The purpose of this systematic review is provide an overview of the

advantages of Breast Self-Examination (BSE) as an effective method to detect breast cancer early. The research question: How is the effectiveness of Breast Self-Examination (BSE) for the early detection breast cancer in adult women?

METHODS

Article searching

The method used in this systematic review begins with PICO framework. This type of research Randomized Controlled Trial (RCT), experimental design and descriptive study that examines the effectiveness of Breast Self-Examination (BSE) for the detection of early breast cancer incidence used as the study inclusion criteria in this research. Meanwhile the scientific articles which do not examine the effectiveness of Breast Self-Examination exclusion criteria included in the selection of topics, and then specify keywords to search the journal using English through several databases, among others Science direct, Ebscho, and Proquest. This search is limited to journals from January 2006 to October 2016. Keywords used were breast self-examination, early detection, breast cancer.

Data collection, quality assessment and biased articles

Principal investigator read the titles and abstracts as well as issue unsuitable research articles. The research articles then be scored by other researchers to determine the quality of the methodology and bias using the Quality Assessment Tool For Quantitative Study EPHPP (Effective Public Health Practice Project). There are three criteria for ratings or rating overall (global ratting) of the tool used is strong, moderate and weak. From the search results have found 24 journals and 8 journals that match the criteria.

RESULTS

8 articles journals were selected and assessed. Selected journal articles involving a total of 3614 participants with the smallest sample size of 153 and the largest sample size was 1598. Most of the articles using good experimental design pre-post test and cross sectional and one other articles using RCT design, first article using uncontrolled and one randomized trial article uses a descriptive study.

Four articles provide health education intervention program on knowledge of the breast, including BSE (Breast Self Examination) both knowledge and practice gained knowledge of respondents about breast cancer and BSE increased significantly. Breast health promotion program increases significantly the frequency of the practice of BSE in the intervention group compared to the control group by 26.8% and 9.7% the control group ($p < 0.0001$) (Secginli & Nahcivan, 2011). While the research conducted by Masso-Calderón et al (2016) showed an increase in knowledge about BSE at intervals of 7 days evaluation of the respondents were able to practice BSE (Breast Self Examination) on a regular basis. Health education can also be done through home visits. Plan home visits improve the practice of BSE among respondents significantly by 51.6% from 4.3% prior to treatment (Kolutek, Avci, & Sevig, 2016).

Training BSE through methods of lecture and video viewing for ± 50 minutes can improve respondents' knowledge about breast cancer, including risk factors, treatment and screening for 13.2% and 68.1% on the session pre-test and 79.1% and 96.7% on the session post-test (Hacihasanoğlu & Gözüm, 2008).

Promotion and health education not only improves knowledge and skills practice of BSE to the respondent, but this program also can detect breast abnormalities. As the research conducted (Loh & Chew, 2011) with experimental design pre-post test questionnaire pads breast cancer patients showed 80% of cancer patients previously detect the presence of lumps in the breast even though the respondents did not perform BSE technique correctly. Roth et al (2011) through the study of descriptive also conduct surveys using the NHIS (National Health Interview Survey) in patients with breast cancer reported that 43% of cancer survivors detect the presence of abnormal lumps in the breast

namely 25% with the technique of BSE and 18% were found by accident.

Through health education program also showed that respondents' knowledge increased by 90.7% from the previous 0% accompanied by increased awareness about cancer breast by 43% and 53% after the demonstration BSE, even from this study found 7 cases of breast abnormalities are detected after further investigation two of them are carcinomas and the other is fibroadenoma (Gupta et al, 2009). It is also supported by research of Dahlui, Ng, Al Sadat, Ismail, & Bulgiba (2011) by the method of questionnaire about the knowledge of breast cancer and BSE obtained 98.7% of respondents alert against breast cancer, 84% of them do BSE technique from 19% of respondents who do BSE found a lump in the breast, amounting to 87% continue with the examination of CBE after detected to ensure the condition further.

The quality of the articles and bias

The quality of research articles selected using assessment tools EPHPP. Five articles categorized strong means through assessments EPHPP do not get of weak value in the variable tools. Meanwhile, three other articles categorized by reviewing EPHPP moderate means there is a maximum of one weak value of the variable tools.

There is no research article reported on a study blinding technique. Respondents who drop out and refused the intervention were also reported in several study articles. Five articles reported that respondents who drop out of his research while three other articles are not mention if there were respondents drop out or not. Once of the articles even assessing the bias in the study

DISCUSSION

Generally all been reviewed journals provide results that Breast Self Examination (BSE) provide benefits to women as the detection of early breast cancer. From the results of these studies indicate that the BSE (Breast Self Examination) is still a little bit to do, the knowledge and the practice is relatively low. However, after the intervention of nearly all respondents increased skills and knowledge. This encourages respondents to be more alert and aware of the importance of breast health. In addition to improve the knowledge and practice of the respondents are expected to be screened to detect any abnormalities in the breast because breast cancer in adult women often occurred asymptomatic. The Frequencies of Breast Self examination (BSE) is related to awareness and perceived seriousness of breast cancer, benefits and health motivation for adult woman (Registe & Porterfield, 2012).

That awareness and behavior changes may be detected abnormalities of breast during BSE or at some other time, so that through health promotion and education about breast health and technique BSE detect a lump in the breast indirectly. This occurs due to increase the awareness of women about breast cancer so that encourages women to practice BSE technique. A well-managed education can increase the positive perception of BSE because it is easily practiced, does not need the special equipments, nevertheless it have to be taught how to do it (Hacihasanoğlu & Gözüm, 2008). Nevertheless, in some cases the self-examination (BSE) technique showed no significant effect in the screening. Several factors such as education level, marital status and the ethical issues become complicated factors (Loh & Chew, 2011). In a review conducted by Corbex, Burton, & Sancho-Garnier (2012) showed that the late detection of breast cancer still accrued in many cases, especially in the phase III and IV. This bias occurs because BSE technique needs the capability and the right techniques and influenced by several factors which breast cancer patients are afraid to know the real condition of their screening results (Simi, Yadollahie, & Habibzadeh, 2009).

Screening technique using mammography is believed to be more accurate and frequently used in healthcare facilities. However, the radiation risk, cost factor and it should be done in a health facility become special consideration for women to do breast self examination (BSE).

CONCLUSION AND RECOMMENDATION

Conclusion

At the conclusion of the article research review shows that almost all of breast self examination (BSE) is able to give a positive effect in terms of both knowledge and awareness for women about breast health. Breast cancer should be detected early to improve the prognosis for immediate action.

Recommendation

One way to detect breast cancer is to improve the knowledge and awareness of women to perform breast self-examination (BSE) as a tool for detecting breast cancer for a safe and easy method. This systematic review is needed further review especially with RCT design and uses many more articles to show a more accurate result.

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