

The Knowledge of Breast Cancer and the Practice of Breast Cancer Screening (Breast Self Examination) *A Systematic Review*

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Keywords: Breast Cancer Screening, Cancer Screening Knowledge, Practice Breast Self Examination.

Abstract : Breast cancer is the main dead cause because of woman cancer. Breast cancer screening, especially breast self examination (BSE), can detect breast anomaly, the sign and symptom of breast cancer. Detection in early stadium is able to decrease the mortality. Through this systematic review, researchers will assess the knowledge and practice of BSE on respondents. Search articles using PICOT in database; Ebsco, Science Direct, Elsevier, Sage Journals, Scopus, ProQuest, Pub Med, limited to the last 5 years; 2013 to 2018 caught 10 international journals and have been reviewed with systematic review of those. From ten reviewed journals, seven journals explain that the knowledge of breast cancer is quite low, but less than 50% do breast cancer screening (BSE) appropriately. However less than 50% do the breast cancer screening (BSE) appropriately. This systematic review, strongly, suggests that the giving of periodic health education is to increase the awareness for doing breast cancer screening.

1 BACKGROUND

Breast cancer is the leading cause of death among all cancer diseases experienced by women in Indonesia. Cancer is one of the health problems all over the world, one of the factors why breast cancer mortality rate increases is because it is detected in the severe stage (WHO, 2014). According to WHO (World Health Organization) number of cancer patients all over the world currently reaches 14 million cases, with 8.2 millions death each year (Pusat Data dan Informasi Kementerian Kesehatan RI, 2015). WHO also states there is a significant increase in breast cancer cases, which are 1.7 million new cases each year.

Cancer controlling effort can be conducted by preventing actions (KEMENKES, 2015). primary prevention is an action to minimize and eliminate risk factors, conduct a routine physical exercise, weight controlling, and healthy lifestyle (Segura, Fombella, Lorenzo, Martín, & Lopez, 2014), Secondary prevention : conducting an early detection, such as Screening mammography, Magnetic resonance imaging (MRI), clinical breast examination (CBE) and breast self-examination (BSE). Breast Cancer (BC) early detection gives an important role in reducing morbidity and mortality rate (Ewaid,

Shanjar, & Mahdi, 2018). Meanwhile, tertiary prevention are diagnostic and treatment action to reduce complication (KEMENKES, 2015).

BSE specifically aims to increase the possibility of finding changes in breast tissue, although BSE alone is not sufficient to detect early BC, this action can help women manage their health, recognize their breasts condition and conduct health preventive behavior (Erdem & Tokta, 2016). BSE has many advantages because it can be conducted at no cost, alone and anywhere (Reisi, Javadzade, & Sharifirad, 2013). Women whose diagnosis is late can be caused by lack of awareness and low concern for health (Hasan et al., 2015).

Although BSE is simple, easy and economical screening method, many women do not conduct BSE or do not apply BSE in appropriate way (Okolie, 2012). Qualitative research by H Taha, Al-Qutub, & Nystrom (2012) the fear of finding signs and symptoms in breast cancer such as breast lumps and fear of being diagnosed with breast cancer is a barrier for women to perform BSE or other screening methods.

A research suggests women in Baghdad have poor knowledge and practice about BC, 61.2% of respondents are knowledge, and 41.8% say they do not know BSE (Hasan et al., 2015). Other studies

claimed to have knowledge about health, not enough to improve solitary behavior (Özdemir, 2014).

Through this systematic review, researcher wants to know knowledge of breast cancer and BSE practice in women.

2 METHODS

The article search used PICOT framework (Population: Women, never experienced breast cancer, Exposure: Breast Self Examination (BSE) knowledge and practice Control: -, Outcome: breast cancer knowledge level and early detection, Time: 2013-2018). Based on keyword determination according to the topic contained in PECOT framework and completed with Boolean Logic method in database; Ebscho, Science Direct, Elsevier, Sage Journals, ProQuest, the publication was limited to the last 5 years, 2013 to 2018, and it was obtained 26 journals and selected 10 International Journals for the review.

3 RESULTS

3.1 Study Design

This systematic review reviews 10 selected journal, all journals are international journal. The used research design is: 6 journals using a cross-sectional study, 1 journal using RCT, 3 journals using quasy experiment.

3.2 Charateristic of Participant

From 10 reviewed Journals it found that the number of samples varied between 89-2363 respondents who have the criteria of women, never detected breast cancer before. The measuring instruments used in all

studies are questionnaire instruments related to sociodemographic, characteristics of respondents, knowledge of breast cancer, early detection of breast cancer and BSE practice.

3.3 Sensityfity and Specifity

In a cross sectional study Kim, Lee, Min, & Min, (2017) with 17 items of BSE knowledge, 16 behavioral items and 5 practice items show the correct answer result of BSE knowledge is only 29.2%, while the correct practice only conducted by 5.93% of respondents. BSE's knowledge level is positively correlated with BSE practice, so education on BSE to improve BSE knowledge can improve BSE practice.

The study of Sama et al., (2017) defines that 88.1% of respondents have heard about BC, but less than half of respondents who ever knew BC, ever heard about BSE, with the percentage of only 38.5%. Although the respondents have an awareness of breast cancer risk, the overall knowledge about BC and routine BSE execution is poor. It is required a campaign to increase knowledge and BC prevention strategy to help reduce BC.

The study conducted by Omoyeni, Oluwafeyikemi, Oladunni Irinoye, & Adenike (2014) states 51% of respondents have medium knowledge and only 25% who have the excellent knowledge about BC(Breast Cancer). Majority of respondents have a positive attitude about BSE, but only 10.7% whose practice BSE regularly.

The study conducted by Ewaid et al., (2018) state that 82% of respondents know about BSE, but only 24% from them whose practice BSE. In addition, 47% of respondents obtain BSE knowledge from the internet and television sources. The awareness of BC and BSE among respondents is poor, so it is required a further health education program on BSE and BC risk factors.

Table 1 : Journal characteristic.

Jurnal	Populasi	Intervensi	Comparison	Outcomes	Time
Determination of Breast Self-Examination Knowledge and Breast Self-Examination Practices among Women and Effects of Education on their Knowledge (Özdemir 2014)	89 female respondents at a course during April 2007 Aged 16-52 years	89 female respondents at a course during April 2007 Age 16-52 Analyzed with Wilcoxon test and Paired t test Measured: 1. Knowledge before and after education 2. Practice BSE before and after e ducation 3. Educational effects	Knowledge and practice of BSE before and after education	The value of breast cancer alert knowledge increased 1.42 mean, breast cancer risk increased 1.50 mean, BSE practice did not increase.	Data collection is done during April

Jurnal	Populasi	Intervensi	Comparison	Outcomes	Time
Relationship between Knowledge, Attitude and Practice of Breast-Self Examination among Middle and High School Girls (Kim <i>et al.</i> , 2017)	412 respondents , consisting of 137 middle school respondents , 725 high schools.	The cross-sectional study used a questionnaire. Analyzed using t-test and Spearman correlation coefficient	Knowledge BSE	The results show that BSE education for middle and upper girls is needed to increase the chances of early detection of breast cancer	Data collection was conducted during 7 to 23 December 2016.
Home visits to improve breast health knowledge and screening practices in a less privileged area in Jordan (Taha <i>et al.</i> , 2014)	2363 women as respondents . Aged 20-79 years.	Measurement of knowledge about breast screening of BSE and mammography before education of home visits by local community. Post test knowledge and practice of breast health Analysis using chi-square and Fisher's exact test.	BSE and mammography examination of respondents who received free mamografi vouchers and who did not get mammography	Average Knowledge Outcomes increased significantly (p <0.001) Pretest 11.4 Posttest 15.7 (maximum score 16). Increase of BSE practice visit and mammography on respondents who get vouchers, only 2 respondents who came mamografi without voucher.	The data was collected during January - September 2011. Follow up 6 months after first month visit.
Awareness of breast cancer and breast self-examination among female undergraduate students in a higher teachers training college in Cameroon (Sama <i>et al.</i> , 2017)	345 responden mahasiswi Higher Teachers Training College (HTTC) Bambili, University of Bamenda in the	Cross-sectional study to measure: 1. Socio-demographic characteristics 2. Knowledge of breast cancer 3. Breast self-examination		Less than half of respondents who had known about breast cancer and BSE performed BSE practices (38.5%) 38.7% think breast cancer can be	40/5000 Data collection is taken April 11, 2016

Jurnal	Populasi	Intervensi	Comparison	Outcomes	Time
.	Northwest Region of Cameroon..			changed by traditional treatment. Knowledge of breast cancer and BSE is sufficient, BSE practice is low	
Assessment of the Knowledge and Practice of Breast Self Examination among Female Cleaners in Obafemi Awolowo University Ile Ife, Nigeria (Omoyeni <i>et al.</i> , 2014)	Populasi 468 female cleaners in the Institution, sampel 30% (140 responden)	Cross-sectional study to measure: 1. Knowledge of breast cancer and BSE 2. Attitudes about breast cancer and BSE 3. How respondents practice BSE			This study was conducted for 48 hours.
Knowledge and practice of breast self-examination among sample of women in Shatra/Dhi-Qar/Iraq (Ewaid, Shanjar and Mahdi, 2018)	n: 200 respondents 45 teachers 122 students 33 workers Consecutive sampling technique	Using a closed questionnaire in Arabic questionnaires to collect data developed by researchers and based on literature review. The questionnaire contains questions about features, knowledge, and socio-demographic practices toward breast BC and BSE.		Pengetahuan responden dalam penelitian ini tentang BC rendah, Praktik BSE sangat rendah dan diperlukan banyak usaha untuk mengajarkan teknik BSE yang tepat.	January and March 2017
Knowledge, attitudes, and practice of breast self-examination among female health workers in Isfahan, Iran (Reisi, Javadzade and Sharifirad, 2013)	N = 119 (total female healthcare providers of Isfahan working in healthcare centers at the time of our study). cross-sectional descriptive study	cross-sectional descriptive study was respondents questioned 42 questionnaires		272/5000 Average knowledge - Symptoms of BC (71.57%) - Risk factors (77.15%) - BSE (87.64%) - Good knowledge doing BSE way 79,8% BSE Practice	

Jurnal	Populasi	Intervensi	Comparison	Outcomes	Time
				- 39.50% routine perform BSE - 9.2% do 7-11 times a year - 34.50% between 1-6 times a year - 12.6% did not do BSE	
Knowledge, Attitudes, and Behaviors about Breast Self-Examination and Mammography among Female Primary Healthcare Workers in Diyarbakır, Turkey (Erdem and Tokta, 2016)	n= 369 female primary healthcare workers (PHW), cross-sectional study	Responden mengisi kuesioner yang berisi sociodemographic characteristics, knowledge about BSE, and actual practice of BSE In the comparison of the subgroups of those multiple groups which are statistically significant, Mann-Whitney <i>U</i> was conducted and the Bonferroni revision was done. The Spearman rank correlation was employed between two scores. According to statistical analyses $P < 0.05$ is considered significant.		HW knowledge in BSE is good, 92.6% had done BSE, But only 30.1% do BSE routine every month after the menstrual period. No significant HW has an awareness of the advantages of doing routine BSE. In this study, HW that has good knowledge, has significant BSE practices.	15-30 Januari 2015

Result of the study conducted by Reisi et al., (2013) indicates majority of respondents already have a good knowledge of BC and BSE (79.8%), and (72.45%) have a positive attitude, but only (39.5%) of respondents whose practice BSE routinely. It is required a further study to determine early detection service usage factor in women.

The study Erdem & Tokta (2016) states that there is a significant relationship between respondents who have good BSE knowledge and conduct BSE practice ($P= 0.001$), but knowledge level of clinical BC is still poor. A BSE adequate knowledge is not reflected in BSE behavior and practice. The option to conduct

breast self-examination should be conducted on the respondent..

The study conducted Morse, Maegga, Joseph, & Miesfeldt (2014) defines (98.2%) of respondents know about BC, (30%) know about BC risk factors. In addition, (56%) are aware of the need for BSE practice, (40%) do not conduct BSE Practice, yet only (0.9%) of respondents conduct BSE regularly. This study states woman in Tanzania have lack awareness of breast examination.

The study conducted Hasan et al., (2015) states that (61.2%) respondents have poor knowledge, only (30.3%) whose conduct BSE practice, (40.8%) state they do not know the way of BSE Practice.

A research of Özdemir (2014) states majority of respondents (68.5%) know about BSE. The young respondents do not know how to practice BSE and cancer risk factors awareness. Respondents experience increased BC and BSE knowledge increasing after health education intervention.

The average Knowledge Outcome study of Hana Taha et al., (2014) increases significantly ($p < 0,001$) Pretest 11,4, Posttest 15,7 (maximum score 16). Increase of BSE practice visit and mammography on respondents who get vouchers, only 2 respondents who come in mammography without voucher.

4 DISCUSSION

BSE is recommended to be conducted by women since the age of 20, although there is no study stating that BSE directly reduces mortality (Segura et al., 2014), by conducting a routine BSE, women can know the condition of their normal breast and also experience and aware if there is a change in their breasts. It should also note that, changes in the breasts do not always indicate presence of breast cancer (ACS, 2015).

Respondents who are reluctant to perform early examination because they feel they have a healthy lifestyle, no family has breast cancer, feel busy enough to even forget (Daliana et al., 2014). In addition, the lack of knowledge about BC and BSE is significant with the lack of BSE practice performed (Hasan et al., 2015).

Good knowledge of BC and BSE, should be followed by a woman's awareness to care for her health and BC precautions (Morse et al., 2014)

All reviewed journals state the need for health education, to improve BC and BSE knowledge, to raise awareness of BSE practices across women, ranging from student, teacher, general public, to health worker.

5 CONCLUSIONS

The systematic outcomes of this review, described from 10 journals analyzed, 7 journals indicate the respondent's knowledge about breast cancer (symptoms, risk factors, prevention and treatment) and early detection especially BSE is quite low, followed by low BSE practice by respondents. The other 3 journals mentioned that respondents have good knowledge and experience knowledge

improvement after health education, but there is no improvement in BSE practice.

Routine health promotion needs to be done, through various media to increase knowledge and raise awareness for early detection of health problems.

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