The Role of Breast Cancer Survivors and Non-Survivors in Improving Breast Self-Examination (BSE) Behavior in Reproductive-Age Women

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Abstract:

Breast cancer is a cause of death, and the incidence rate increases by 5% every year. Breast cancer is a solid cancer. In Indonesia, breast cancer is the second most common cancer in women. This study aimed to analyze the role of breast cancer survivors and nonsurvivors to improve behavior about breast self-examination (BSE) in women of reproductive age in Palangka Raya City. The research design was a pretest posttest control group design, respondents were 78 women of childbearing age aged 20-30 years, who were randomly selected in Palangka Raya City. This study used a breast self-examination (BSE) skills assessment sheet questionnaire, modules and leaflets. Data were analyzed using the independent sample t-test. There is a significant difference in the increase in knowledge between counseling by survivors and non-survivors with p=0.000, increased attitude p=0.056, increased skills p=0.000. Survivor resource persons are better than nonsurvivor resource persons to improve knowledge, attitudes and skills about breast selfexamination (BSE) in women of childbearing age.

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INTRODUCTION

Cancer is one of the leading causes of death worldwide. 8.2 million deaths are caused by breast cancer. Kementerian Kesehatan RI (2015) explains that breast cancer is a cause of death, and the incidence rate increases by 5% every year. Breast cancer is a solid cancer. According to Wibawa & Manuaba (2010), cancer is a type of solid cancer. In Indonesia, breast cancer is the cancer with the second highest incidence in women.

Cancer cells take a long time to grow from a single cell to a mass large enough to be felt. According to Majalah Patologi Klinik Indonesia dan Laboratorium Medik, (2015) Breast carcinoma or Carcinoma Mammae (CM), it is a malignancy of epithelial cells that line the ducts or lobes of the breast. Initially, there is excessive cell tissue formation (hyperplasia) with atypical cell development, which then continues to become carcinoma in its original location and enters the supporting tissue (stroma). Carcinoma takes seven years to grow from a single cell to a mass large enough to be palpable (approximately 1 cm in diameter). At that size, approximately 25% of CM have experienced metastasis.

Neutrophil/Lymphocyte ratio (NLR) reflects the inflammatory status. Increased neutrophil count and/or decreased lymphocytes can suppress lymphokines that can activate killer cells, thereby increasing the likelihood of metastasis. The role of neutrophils in the development and metastasis of carcinoma cells occurs through the activity of interleukin-8 (IL-8) released by

carcinoma cells, which will stimulate neutrophil responses and help carcinoma cells enter the blood vessels to the metastasis area. (Majalah Patologi Klinik Indonesia dan Laboratorium Medik, 2015).

The government's efforts to overcome this problem by developing early detection and diagnosis procedures and their "cost effective" management. This method is used in countries with minimal health facilities and breast cancer awareness. Promotional and preventive control activities are expected to find breast cancer cases as early as possible. Women should be aware of any changes that occur in their breasts. Breast self-examination (BSE) is used to discover changes in the breasts, and the examination should be done monthly. This method is very effective in Indonesia because not all hospitals provide adequate examination facilities (Departemen Kesehatan RI, 2008). Early detection activities are carried out at the Health Center with referrals to District/City Hospitals and Provincial Hospitals. The main activities are advocacy socialization and training of trainers. Other activities include provider training in the district/city and cadre training at the health center. According to Kementerian Kesehatan RI (2015) In 2014, the early detection program had been running for 1,986. Activities from 2007 to 2014, namely screening of 904,099 people (2.45%) and breast tumor results for 2,368 people, meaning 2.6 per 1,000 people.

Early detection activities still need to be strengthened in areas that have developed them and expanded to other areas that have not developed them to achieve the targets in the Ministry of Health's Strategic Plan. This follows Kementerian Kesehatan RI (2015), the results of several early detection efforts for breast cancer, including: The coverage of early detection of breast cancer is still low, which is 2.45%. The early detection program for breast cancer has been running well to detect lumps in the breast. The early detection program using the Clinical Breast Examination (CBE) method is in accordance with the capabilities of health workers in the Region. This strategy aims to achieve the target of early detection coverage of 50% of women aged 30-50 years for 5 years.

Based on the 2014 SDGs, the percentage of women aged 30 to 50 years who were diagnosed with breast cancer early was 1.75% of the target of 50%. According to Kementerian Kesehatan RI, (2015) In 2025, the SDG's target is to reduce 25% of deaths caused by breast cancer.

Screening is an early detection effort to identify diseases or disorders that are not yet clinically clear by using tests and examinations. According to the statement Kementerian Kesehatan RI, (2015) this effort can be used quickly to distinguish people who appear healthy but actually suffer from a disorder. Breast cancer screening at the Health Center with early detection providers is carried out with Clinical Breast Examination; according to research by Olumatosin (2012), the provision of PHC (Primary Health Care) from health workers can significantly increase knowledge and practice by 7.5% as early detection of breast cancer at the Health Center level. In Nigeria, the delay in early detection of breast cancer is due to low awareness as a public health problem. An organized national screening program makes it more effective as early detection of breast cancer.

Several intervention efforts in the study of Lu et al. (2012) have been carried out in the early detection of breast cancer with various community-based education steps and small group discussions with health professionals. The results of the study were less effective in increasing cancer screening among Filipino Americans in Los Angeles. In the study of Lay Health Workers Outreach 1992-1996 effective steps with Print media campaigns supplemented with small community groups delivered by lay health workers.

Based on a visit to the Surabaya Oncology Hospital on May 22, 2017, the promotive and preventive steps taken to improve information on early detection of breast cancer are by forming a breast cancer community. The community consists of old and new survivors and the general public

with assistance from an Oncology Specialist. Several cities in East Java have collaborated and created the community with the result of additional information and knowledge about early detection of breast cancer.

According to research by Chollet-Hinton et al. (2016) on breast cancer in women. In the United States breast cancer is diagnosed in women at the age of <40 years. The results of this study in young women (<40 years) more proliferative disease, prognosis, and mortality are higher than the disease in older women (≥40 years).

The results of the study by Demoor-Goldschmidt et al. (2017) on survivors conducting breast screening programs in adolescents and young adults. Survival of childhood, adolescent, and young adult cancers has increased along with advances in treatment management and has reached more than 80% at age 5 years. The results showed that early MRI-based screening (starting at age 25) can reduce SBC mortality at age 75 from 16.65% without early screening to 15.38%. Cancer screening is to reduce cancer-specific mortality.

Early detection of breast cancer has been implemented in several countries and in Indonesia. According to the results of several studies on knowledge and practices of early detection of breast cancer, it is still not comprehensive in society. This is proven by the still high incidence of breast cancer, especially in the city of Yogyakarta. Based on preliminary study data at the Health Center on May 29, 2017. The results in 2016, the most cases of breast cancer were in the Kotagede I Health Center, as many as 20 people. In the Kotagede I Health Center Work Area, the most cases of breast cancer were in Prenggan Village, as many as 12 people. In previous research from Demoor-Goldschmidt et al. (2017), breast cancer survivors were the only respondents in the breast screening program.

Based on several interventions that have been carried out by previous researchers in several countries and governments. Early detection of breast cancer by carrying out promotive and preventive efforts. This shows several results and effective ways to carry out early detection in breast cancer cases. In previous studies, there has been no use of breast cancer survivors as sources in providing information about breast self-examination (BSE). Therefore, researchers want to modify promotive steps for early detection of breast cancer through "The role of breast cancer survivors and non-survivors to improve behavior about Breast Self-Examination (BSE) in Wus in Palangka Raya City".

METHOD

This type of research is quasi-experimental research with a pretest-post-test control design. The population in this study were all women of childbearing age, 20-30 years, and as many as 265 people. The sampling technique was simple random sampling, calculating the minimum sample using the Stanley formula. The knowledge questionnaire about breast self-examination (BSE) in counseling uses modules and leaflets and uses survivor and non-survivor sources. Data analysis in this study used the free t-test with a significance level of α : 0.05.

RESULT

Differences in increasing knowledge in health education using survivors and non-survivors regarding breast self-examination (BSE)

Knowledge of women of childbearing age about breast self-examination (BSE) was collected from the results of answering pre-test and post-test questionnaires. The results of the values

collected in this study were processed and analyzed using statistical methods. The results of the data processing are as follows.

Table 1. Differences in Increased Knowledge in Health Counseling Using Survivors and Non-Survivors about Breast Self-Examination (BSE) in Women of Childbearing Age in Yogyakarta

Respondent group	Knowledge		Improvement	n valua
	Pretest	Posttest	 Improvement 	p-value
Survivor	72.05	87.56	15.66	0.000 ^a
Non-survivor	86.92	74.10	12.82	

^aIndependent samples test, a=0,05

Based on Table 1, it is known that the increase in knowledge in counseling by survivors is higher, which is 15.51 compared to the increase in knowledge in counseling by non-survivors. Then, the pre-test and post-test data with the Kolmogorov-Smirnov test, the results are generally distributed with pre-test p = 0.745> 0.05 and post-test p = 1.000> 0.05; therefore, the data was analyzed using the independent samples test with sig.0.05, the results of the analysis in this study were p-value 0.000. The conclusion is that there is a significant difference in the increase in knowledge between counseling by survivors and non-survivors with $\rho = 0.000 < 0.05$.

Differences in improving attitudes towards health education using survivors and nonsurvivors regarding breast self-examination (BSE)

The attitudes of women of childbearing age about breast self-examination (BSE) were collected from the results of answering the pre-test and post-test questionnaires. The results of the values collected in this study were processed and analyzed using statistical methods. The results of the data processing are as follows.

Table 2. Differences in Increased Attitudes in Health Counseling Using Survivors and Non-Survivors about Breast Self-Examination (BSE) in Women of Childbearing Age in Yogyakarta

Respondent group	Attitude		Improvement	p-value
	Pretest	Posttest	 Improvement 	p-value
Survivor	84.62	93.56	12.86	0.056a
Non-survivor	80.00	92.82	16.92	

alndependent samples test, a=0,05

Based on Table 2, it is known that the increase in attitudes in counseling by non-survivors is higher, which is 16.92 compared to the increase in attitudes in counseling by survivors. Then, the pre-test and post-test data with the Kolmogorov-Smirnov test, the results of the data are normally distributed with pre-test p = 0.050 > 0.05 and post-test p = 1,000 > 0.05; therefore, the data was analyzed using the independent samples test with sig. 0.05. The results of the analysis in this study p-value 0.0560. The conclusion is that there is no significant difference in the increase in attitudes between counseling by survivors and non-survivors with $\rho = 0.056 > 0.05$.

Differences in skill improvement in health counseling using survivors and non-survivors about breast self-examination (BSE)

Skills of women of childbearing age about breast self-examination (BSE) collected from the results of implementing breast self-examination (BSE) according to the checklist in the pre-test and

post-test. The results of the values collected in this study were processed and analyzed using statistical methods. The results of the data processing are as follows.

Table 3. Differences in skill improvement in health counseling using survivors and non-survivors about breast self-examination (BSE) in women of childbearing age in Yogyakarta

Respondent group	Attitude		Improvement	n volue
	Pretest	Posttest	 Improvement 	p-value
Survivor	24.74	27.35	48.96	0.000 ^a
Non-survivor	73.68	73.34	45.98	

^aIndependent samples test, a=0,05

Based on Table 5.4 above, it is known that the increase in skills in counseling by survivors is higher, which is 48.94 compared to the increase in skills in counseling by non-survivors. Then, the pre-test and post-test data with the Kolmogorov-Smirnov test, the results of the data are normally distributed with pre-test p = 0.358> 0.05 and post-test p = 0.745> 0.05; therefore, the data was analyzed using the independent samples test with sig. 0.05. The results of the analysis in this study p-value 0.000. The conclusion is that there is a significant difference in the increase in skills between counseling by survivors and non-survivors with ρ = 0.000> 0.05.

DISCUSSION

Health education using survivor and non-survivor resource persons to increase knowledge about breast self-examination (BSE) in women of childbearing age

In this study, the knowledge questionnaire consisted of 20 questions. The data collection process was through pre-tests and post-tests. Data processing results in the pre-test mostly had wrong answers to questions no. 3, 11, and 19 from the survivor and non-survivor groups. In the results of post-test processing, the wrong answers were no. 3, 11, and 19. So for the knowledge questionnaire on the grid about the causes of breast cancer, the time of implementation of breast self-examination (BSE), and the implementation of breast self-examination (BSE) on questions no. 3, 11, and 19, there was no change in the correct answers in the pre-test and post-test.

In this study, the increase in knowledge in counseling by survivors was higher, namely 15.51, compared to the increase in counseling by non-survivors. According to Michael's research (2009), providing information through education and training will increase knowledge and then raise awareness. Finally, someone will practice according to their knowledge, even though it takes a long time. Based on Reizza (2013), the emphasis of the health counseling concept is more on efforts to change the behavior of targets to behave healthily, especially in the cognitive aspect (knowledge and understanding of targets), so that the knowledge of the counseling targets is under the objectives of this study.

Health education using survivor sources is better than non-survivors to increase knowledge about breast self-examination (BSE) in women of childbearing age. This is because survivor sources in conveying information to respondents are complete and more in-depth, supported by their own experiences of having breast cancer and having undergone surgical treatment and removal of the right breast with chemotherapy 10 times, and continuing chemotherapy until now. According to research by I.P & Hartini (2012), survivors are women who have fought to fight breast cancer and survived, who have the strength and spirit to survive with new enthusiasm in living their

next life. Survivors' understanding of breast cancer diagnosis and treatment will have a better impact in the long term to optimize health promotion.

In communication, credibility is very important in determining the success of a communication process. Health education using survivor sources has an element of credibility that can provide trust to the community. According to Rahmat (2009), credibility consists of expertise and trustworthiness. According to Effendy (2015), a communicator has credibility, which consists of good sense, good morals, and good character. According to Rahmat (2009), the way of speaking credibility states that people who speak in a conversational style tend to be seen as more trustworthy. So, the survivor sources in this study convey information about breast self-examination (BSE), which respondents can trust.

According to Rahmat (2009), people will be more persuasive when the communicator or person who delivers the communication message shows himself as a credible person or in other words, a communication source that has high credibility will be more effective in changing someone's opinion compared to a communication source with low credibility. Based on Yunus's research (2015), credibility is the perception of a person or group of people towards a source. Therefore, survivor sources are credible communicators who are believed to have the ability and direct experience of breast cancer compared to non-survivors.

In this study, the characteristics of survivors as sources in conveying information through health education meet the components of credible sources. According to Rahmat (2009), credibility comprises expertise and trust. Expertise is the impression formed by the recipient about the ability of the source of persuasive communication related to the topic being discussed. Communicators who are highly rated in expertise are considered intelligent, capable, knowledgeable, experienced, and trained. Trust is the communicant's impression of the communicator related to his character, such as honesty, sincerity, fairness, politeness, and behaving ethically or otherwise.

Based on Yunus' research (2015), the credibility component, namely expertise, depends on his experience, ability, and social status, so a source is said to be an expert if his knowledge is recognized and trusted about the subject matter. This is in accordance with the characteristics of the survivor source in this study as someone who has had direct experience with breast cancer so that he can provide in-depth information about the healing process and early detection of breast cancer.

In previous research, according to Oluwatosin (2012), the method of providing PHC (primary health care) information about breast cancer by health professionals is better than other sources. This research supports the results of previous research by proving that health education about breast self-examination (BSE) is effective using breast cancer survivor sources.

In the health education process using survivor sources, they have the same interests as respondents to interact to discuss early detection of breast cancer through breast self-examination (BSE) in depth. According to Everett M Rogers in Rahmat (2009) homophily is a condition where the communicator and the communicatee feel similar. People easily empathize and feel the feelings of others who are seen as the same as them. Communication will be more effective in homophily conditions. Thus, in health education using survivor sources in this study, there is homophily communication between the source and the respondents about breast self-examination (BSE), which is seen from the enthusiasm of the respondents to ask in depth about the journey of survivors when breast cancer occurs. In this study, there was a significant difference in increasing knowledge in health education using survivor sources with non-survivors about breast self-examination (BSE) examinations in women of childbearing age.

Health education using survivor and non-survivor resource persons to improve attitudes about breast self-examination (BSE) in women of childbearing age

In this study, the increase in attitudes towards counseling by non-survivors was higher, namely 16.92, compared to the increase in attitudes towards counseling by survivors. One of the factors that influences attitudes is the influence of other people who are considered important. Someone around us can influence our attitude towards health, especially if the person is very influential. Generally, a person tends to have an attitude that aligns with the person considered necessary.

The non-survivor resource person in this study was a health cadre who acted as a cadre coordinator in the Prenggan sub-district. Thus, the non-survivor resource person is one of the most influential people who can influence the increase in respondent attitudes. This is in accordance with Abang's research (2014), which states that role models influence a person's attitude towards an object. Individuals tend to have attitudes that are considered in line with the attitudes of people they consider important.

Health education with non-survivor sources as stimulus providers that can change attitudes. Non-survivor sources in this study can influence reactions to information received about breast self-examination (BSE). The existence of reinforcement and persuasive communication in the health education process can change attitudes. According to Reizza's research (2013), health education is a form of persuasion. Persuasion is an effort to change an individual's attitude by inserting new ideas, thoughts, opinions, and facts through communicative messages.

According to Reizza's research (2013), health education is a form of persuasion. Persuasion is an effort to change an individual's attitude by inserting new ideas, thoughts, opinions, and facts through communicative messages. The messages that are delivered are intentionally intended to cause contradictions and inconsistencies between the components of an individual's attitude or between their attitude and behavior to disrupt the stability of attitudes and open up opportunities for desired changes.

In this study, health education using non-survivor sources is better than survivors to improve attitudes about breast self-examination (BSE) in women of childbearing age. Non-survivor sources in this study used a health cadre from a person at the research site who had a position as a cadre coordinator who played an advocacy role. This is in accordance with Abang's research (2014), which states that role models influence a person's attitude towards an object. Individuals tend to have attitudes that are considered in line with the attitudes of people they consider important. In addition, to form a behavior, an appropriate attitude response is needed so that knowledge and behavior. Thus, non-survivor sources (health cadres) are the people who are considered role models who can provide examples of changes in health attitudes about breast self-examination (BSE) examinations.

Health education with non-survivor sources as stimulus providers that can change attitudes. Non-survivor sources in this study can influence reactions to information received about breast self-examination (BSE). According to Mar'at's theory (1982), The existence of reinforcement and persuasive communication in the health education process can change attitudes. According to Soekidjo (2010), attitude is a syndrome or collection of symptoms in responding to stimuli or objects that involves thoughts, feelings, and attention within oneself. Attitude is multidimensional, including cognitive.

According to Maulana (2009) the Health Belief Model (HBM) is a cognitive model used to predict health improvement behavior. HBM allows someone to take preventive action directly influenced by the results of two beliefs or health assessments (health beliefs), including the perceived threat of illness; if the perceived threat increases, then preventive behavior also

increases. The existence of advantages and disadvantages considers someone to decide to take preventive action or not and the existence of health information from outside. According to research by Jeihooni et al. (2017), HBM changes people's behavior when they understand that the disease is serious. Otherwise, they may not switch to healthy behavior.

Perception of severity has a positive relationship with healthy behavior. If the individual's perception of severity is high, then the individual will behave healthily. According to Demartoto (2016), the factors in the HBM are cognitive-based factors that can predict individual decisions to adopt healthy behavior and comply with health education interventions.

According to Afiati's research (2015), persuasive communication is carried out between the communicator and the communicant in providing information with a more effective personal approach to changing a person's attitude because it is humanistic. In health education activities using non-survivor sources in this study with survivor sources as communicators. Non-survivors can establish persuasive communication with respondents. The change in the increase in attitude values from the pre-test to the post-test proves this. The increase in attitude values in this study is a picture of positive attitude changes in respondents.

In previous research by Meilisha and Mangkunegara (2010), the more positive the attitude to do a breast self-examination (BSE), the higher the Intensity to do a breast self-examination (BSE). So, the higher the perception of behavioral control/PBC when doing a breast self-examination (BSE), the higher the intensity of doing a breast self-examination (BSE). This study supports previous research, which proves that health education using non-survivor sources as stimulus providers can increase the post-test value of attitudes about breast self-examination (BSE) in women of childbearing age.

Health education using survivor and non-survivor resource persons to improve skills regarding breast self-examination (BSE) in women of childbearing age

In this study, it was found that the increase in skills in counseling by survivors was higher, namely 48.94, compared to the increase in skills in counseling by non-survivors. According to Michael, (2009), Purwanto (2009) and Departemen Kesehatan RI (2008) Providing information through education and training will increase knowledge, which will then raise awareness and finally a person will practice according to the knowledge they have, even though it will take a long time.

Health education using survivors as sources is better than non-survivors to improve skills about breast self-examination (BSE) in women of childbearing age. This is because survivors who have undergone surgical treatment and removal of the right breast with chemotherapy have undergone 10 times and are continuing chemotherapy. In the education process, survivors are more skilled in demonstrating in detecting lumps. So when teaching how to examine breast self-examination (BSE) it is easier for respondents to understand. Based on research by I.P & Hartini (2012), survivors are women who have recovered from cancer and have the spirit to continue living. Survivors' perceptions that survivors' health and life expectancy vary based on age, experience, gender, and medical history.

Skills in health practice are activities to carry out actions related to health. According to Soekidjo (2010), skills are tendencies to act. This opinion is in accordance with research by Tarigan (2008) and Ghazali (2010), which states that a person's skills are when the person has the ability to act and perform actions easily and appropriately after learning. Thus, to improve the skills of respondents in carrying out breast self-examination (BSE) in this study through a health education process using survivor resource persons.

The survivor resource person in the health education process has credibility that can provide perceptions to the community and is believed to have the ability and direct experience about breast

cancer. Credibility is a set of communicator perceptions about the characteristics of the communicator consisting of the communicator's perception and the characteristics of the communicator's way of speaking in credibility states that people who speak in a conversational style tend to be seen as more trustworthy. Based on Yunus's research (2015), Credibility is the perception of a person or group of people towards a source. Therefore, credible survivor resource persons are believed to have the ability and direct experience. about breast cancer compared to health cadres.

Based on the conditions in the field, in the counseling process survivor resource persons explain the breast self-examination (BSE) examination by demonstrating it first directly in front of the respondents and inviting all respondents to try to do the breast self-examination (BSE) together and the survivor corrects the movements of the respondents who are not quite right so that two-way communication is built when teaching the breast self-examination (BSE) examination. Badan penyuluhan dan pengembangan SDM pusat pelatihan (2015) explains two-way communication is very effective for face-to-face communication because there is feedback, namely what the message recipient conveys to the message source, which is also used by the message source to indicate the effectiveness of the message previously conveyed according to its purpose. According to Rahmat (2009), feedback is a message sent back from the recipient to the source, informing the source of the recipient's reaction and providing a basis for the source to determine further behavior.

Based on research from Sadono (2009) the two-way communication process occurs with the sharing of information between communication participants, carried out to achieve mutual understanding of the meaning of information in the context of using information. This shows that health counseling with survivor sources uses effective two-way communication for direct counseling.

In previous research by Syafitri (2017), health education through demonstration methods on breast self-examination (BSE) practice skills affected breast self-examination (BSE) practice skills. This study supports previous research, which proves that health education using survivor sources can improve skills in breast self-examination (BSE) in women of childbearing age.

CONCLUSION

There is a difference between health education using survivor and non-survivor sources to improve knowledge about breast self-examination (BSE) in women of childbearing age. There is no difference between health education using survivor and non-survivor sources to improve attitudes about breast self-examination (BSE) in women of childbearing age. There is a difference between health education using survivor and non-survivor sources to improve skills in breast self-examination (BSE) in women of childbearing age.

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