

## EDUCATION AND EARLY DETECTION SIMULATION OF BREAST CANCER USING BREAST SELF-EXAMINATION TECHNIQUE FOR WOMEN OF CHILDBEARING AGE IN THE WORKING AREA OF SYAMTALIRA ARON HEALTH CENTER 2023

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**ABSTRACT** Breast Self-Examination (BSE) is an examination performed using your own eyes and hands to detect any changes in your breasts. This examination can be routinely done at home without the need for any special tools. BSE is the simplest method for detecting abnormalities in breast size, texture, and shape. It can also aid in the early detection of breast cancer, thereby reducing the risk of its severity. The objectives of this activity are to: a) Improve health among women of childbearing age and foster healthy behaviors and adherence to reproductive health in Syamtalira Aron village. b) Increase knowledge among women of childbearing age about breast cancer. c) Enhance the skills of women of childbearing age in performing breast self-examination (BSE). The identified issues are: lack of information about breast cancer, lack of information about early detection techniques for breast cancer. The method to address these issues involves: Conducting community service by providing education about breast cancer and simulating breast self-examination (BSE) for women of childbearing age in the working area of Syamtalira Aron Health Center, North Aceh Regency. The expected outcomes of this Community Service Program (PKM) are: a). Increased knowledge among women of childbearing age about breast cancer and their ability to detect breast cancer early using BSE. b) Achieving national publications with ISSN and e-ISSN, obtaining intellectual property rights (HAKI) for posters and leaflets on BSE, and publication in both print and electronic media. This program is expected to benefit the community, particularly the target audience, by reducing the incidence and mortality rates associated with breast cancer.

**KEYWORDS:** *Breast Cancer, Education, BSE Simulation.*

## 1. INTRODUCTION

Breast Self-Examination (BSE) is a procedure performed using one's own eyes and hands to detect any changes in the breasts. This examination can be routinely conducted at home without the need for any special tools. BSE is the simplest method for detecting abnormalities in breast size,

texture, and shape. It can also assist in the early detection of breast cancer, thereby reducing its severity.

Currently, global population growth is occurring, particularly in the field of health. However, health issues present a threat to developing countries, leading to uncontrolled health problems. One such issue is cancer. A common stigma is the belief in myths about cancer, such as the notion that nothing can be done about it. This causes fear among individuals who are diagnosed with cancer. In reality, cancer can be prevented, treated, and cured if its signs and symptoms are detected early (Galesha, 2022).

Cancer is now one of the leading causes of death worldwide. By 2030, it is estimated that there will be 26 million cancer cases, with 17 million of these being fatal (WHO, 2015). In Indonesia, cancer is a significant public health issue, with a prevalence of 136.2 per 100,000 people (Ministry of Health, 2019). One of the most common cancers, particularly among women, is breast cancer. The incidence rate of breast cancer among women is 42.1 per 100,000 people, with an average mortality rate of 17 per 100,000, followed by cervical cancer (Ministry of Health, 2015).

The incidence of breast cancer continues to rise, and it is currently the most common cancer in Indonesia and a leading cause of cancer-related deaths. According to Globocan (Global Burden of Cancer) data for 2020, there were 68,858 new cases of breast cancer (16.6% of a total of 396,914 new cancer cases in Indonesia). Additionally, the number of breast cancer deaths exceeded 22,000 cases (Tirtonegoro, 2022).

Breast cancer predominantly affects younger women or those of childbearing age, with some cases occurring as early as age 14. If not detected early, it can develop into malignant cells. Current trends show an increasing incidence of breast cancer symptoms in adolescents. In Indonesia, over 80% of cases are found at an advanced stage, where treatment becomes difficult. Therefore, understanding preventive measures, early diagnosis, curative and palliative treatments, and rehabilitation efforts is essential for optimal patient care.

Given the magnitude of the breast cancer problem and its impacts, public health interventions are necessary in the form of a national program for cancer management, as outlined in Ministry of Health Regulation No. 34 of 2015 on the management of breast and cervical cancer (Ministry of Health, Regulation No. 34 of 2015). One approach to managing breast cancer is early detection through Breast Self-Examination (BSE) and Clinical Breast Examination (CBE). BSE can be easily performed by women. It is an efficient and effective method for early breast cancer detection, alongside mammography. BSE aims to find lumps and other signs in the breast as early as possible so that immediate action can be taken (Hospitals, 2023).

Although the BSE technique is easy to perform, many women, especially teenagers, are unaware of how to do it and are often indifferent to abnormal symptoms in their breasts. This is partly due to a lack of information and motivation regarding breast cancer prevention and early detection. BSE is still relatively unfamiliar, and many teenagers feel uncomfortable doing it, leading to a low number of women who regularly perform BSE as recommended (Angrainy, 2017).

Breast cancer predominantly affects women, and often patients seek medical care only when the disease has reached an advanced stage, making treatment difficult. An important approach is BSE, which allows women to examine their own breasts. BSE fosters a woman's awareness of her own breast health and includes specific steps to detect early signs of breast cancer and identify changes in the breasts. BSE aims to determine the presence of breast cancer in women.

The reluctance of women to perform BSE or their lack of motivation may stem from a lack of confidence in their ability to detect lumps or significant changes in their breasts and fear of finding an abnormal lump. Early detection through BSE can help women receive timely therapy before the cancer advances to a later stage (Sativa, 2018).

Educational efforts about BSE for women in Syamtalira Aron village are crucial for preventing advanced breast cancer. Health education aims to influence and encourage individuals, families, groups, and communities to engage in healthy behaviors (Notoadmojo, 2017).

## **2. METHOD**

The target audience for this community service activity is women of childbearing age in Syamtalira Aron Village, North Aceh Regency, with a total of 20 participants.

### **1. Implementation of Community Service**

a. Methods: The community service will utilize educational and demonstration methods.

#### **b. Location and Timing:**

1. Location: The community service activities will be conducted in Dayah Meuria Village, Syamtalira Aron District, North Aceh Regency.
2. Timing: The community service program will run for 6 months, from June to December 2023. Activities will begin in October 2023, starting with obtaining permits from the head of the Syamtalira Aron Health Center on October 4, 2023. Initial consultations will be held at the Syamtalira Aron Health Center on October 5, 2023. The community service activities will take place from October 9 to 11, 2023, with a post-activity evaluation on October 17, 2023.

## 2. Activity Implementation:

### a. Process of Activities:

#### 1. Education Session:

The educational activities will occur over 2 days, from October 9 to 10, 2023, in Dayah Meuria Village. On the first day, the session will run for 3 hours from 09:00 to 12:00 WIB, and on the second day, it will last for 4 hours from 08:30 to 12:30 WIB. The first day will start with an opening ceremony attended by the entire community service team, students, village midwives, cadres, and the target audience.

The education session will be opened by the village midwife of Dayah Meuria, accompanied by a nurse and cadres from the posyandu (integrated health post). The participants are women of childbearing age, totaling 20 individuals from the Syamtalira Aron Health Center's service area.

On the first day, the education session will begin with a pre-test to assess knowledge and attitudes about the BSE technique. Knowledge and attitude measurements will be conducted using questionnaires designed for women of childbearing age, evaluated by the community service team, consisting of lecturers and students. The first part of the educational material, covering the concept of early breast cancer detection using the BSE technique, will be presented by Ns. Marlina, SST., S.Kep., M.Kes. This will include explanations on definitions, objectives, benefits, indications, contraindications, timing, and recommendations for performing BSE. The second part of the material will be presented by Ns. Yusnidaryani, SKM, S.Kep., M.Kes, focusing on the methods for performing BSE.

#### 2. Demonstration/Simulation:

On the second day, the community service will include a simulation/demonstration of the BSE technique using a breast model as a visual aid, assisted by students. This will be followed by a re-demonstration by the participants themselves. The educational activity is expected to be completed as planned over the 2 days. The attendance rate of the target audience was 100%. Throughout the activity, the women of childbearing age were very cooperative and actively participated in the education and simulation/demonstration of BSE. Their questions were varied and showed high curiosity, making the sessions more engaging and interesting.

After the demonstration, a post-test will be conducted. The women of childbearing age appeared enthusiastic about completing the post-test, having gained knowledge and skills about the BSE technique. Following the post-test, participants will receive leaflets and posters detailing the steps of performing BSE.

### 3. RESULT AND DISCUSSION

#### 3.1 Evaluation Results

The evaluation was conducted by comparing pre-test and post-test knowledge and attitudes of women of childbearing age regarding breast self-examination (BSE). There was a notable increase in knowledge and skills following the education and simulation/demonstration of BSE for breast cancer detection.

##### *1. Characteristics of the Target Audience:*

The target audience for this activity comprised 20 women of childbearing age residing in the working area of Syamtalira Aron Health Center. The characteristics of the target audience are presented in the table below.

Table 4.1 Distribution of Characteristics of Women with Stunted Toddlers in the Working Area of Syamtalira Aron Health Center, 2023

<b>Respondent Characteristics</b>	<b>Number</b>	<b>Percentage (%)</b>
<b>Age</b>		
20 Years	7	35
35 Years	9	45
40 Years	4	20
<b>Education</b>		
Secondary	13	65
Higher	7	35
<b>Occupation</b>		
Unemployed	15	75
Employed	5	25
<b>Marital Status</b>		
Married	17	85
Single	3	15
<b>Total</b>	<b>20</b>	<b>100</b>

Based on the table above, it can be seen that out of 20 respondents, there are 7 respondents aged 20 years (35%), 9 respondents aged 35 years (45%), and 4 respondents aged 40 years (20%). In terms of education, 13 respondents (65%) have a secondary education, while 7 respondents (35%) have higher education. Regarding employment, 15 respondents (75%) are unemployed, while 5 respondents (25%) are employed. Furthermore, 17 respondents (85%) are married, and 3 respondents (15%) are unmarried.

Table 4.2 Frequency Distribution of Knowledge in Pre-Test and Post-Test of Women of Childbearing Age on Self-Breast Examination (SADARI) in the Work Area of Syamtalira Aron Health Center in 2023.

Knowledge	Pre-Test (%)	Post-Test (%)	Knowledge	Pre-Test (%)
Good	7 (35%)	18 (90%)	Good	7 (35%)
Poor	13 (65%)	2 (10%)	Poor	13 (65%)
Total	20 (100%)	20 (100%)	Total	20 (100%)

Based on the table above, it shows that the knowledge of women of childbearing age about breast self-examination (SADARI) in the work area of Syamtalira Aron Health Center, after receiving education, falls into the good category for 18 people (90%) and into the poor category for 2 people (10%). Meanwhile, before receiving education, 7 people (35%) had good knowledge and 13 people (65%) had poor knowledge.

Table 4.3 Frequency Distribution of Skills of Women of Childbearing Age on Breast Self-Examination (SADARI) in the Work Area of Syamtalira Aron Health Center in 2023

Skills	Pre-Test (%)	Post-Test (%)	Skills	Pre-Test (%)
Not Skilled	20	100	3	15
Skilled	0	0	17	85
Total	20	100	20	100

Based on the table above, it shows that the skills of women of childbearing age regarding breast self-examination (SADARI), after simulations/demonstrations, fall into the skilled category for 17 people (85%) and into the unskilled category for 3 people (15%). Before the simulations/demonstrations were conducted on women of childbearing age regarding SADARI, all 20 participants were unskilled (100%) and none were skilled.

### 3.2 Discussion

Health education is the application of education in the health sector. Operationally, health education includes all activities to provide and enhance knowledge, attitudes, and practices for individuals, groups, or communities to maintain and improve their health. One of the health education programs available for women of childbearing age in the work area of the Syamtalira Aron Health Center, especially in Dayah Meuria Village, is knowledge about breast self-examination (SADARI) for early detection of breast cancer. Education on early detection of breast cancer through SADARI is highly important. Breast cancer is a concerning cause of death for

women of reproductive age, with a high incidence worldwide. Early management must include thorough cancer screening, cancer registration, and effective diagnostic and treatment strategies (Kashyap, et.al., 2022).

The knowledge of women of childbearing age about SADARI for early detection of breast cancer in the work area of the Syamtalira Aron Health Center after receiving education fell into the good category for 18 people (90%) and the poor category for 2 people (10%). Before education was given, 7 people (35%) had good knowledge, while 13 people (65%) had poor knowledge. During the event in Dayah Meuria village, Syamtalira Aron sub-district, 100% of the participants attended, reaching the target of 20 people. These participants, women of childbearing age, were very cooperative and active in following the education about breast self-examination (SADARI). The questions raised by women of childbearing age were varied, showing a high level of curiosity, which made the event more exciting and engaging.

The questions asked by women of childbearing age were answered very well by the community service team and the village midwife in Dayah Meuria village, Syamtalira Aron sub-district. The participants also shared their complaints about their breasts, both before and after marriage, and the handling they had done, which was often inadequate. The discussion, questions, answers, and sharing of experiences about health problems faced by the participants helped increase their knowledge and understanding of their health issues.

This community service event was well received by the head of the health center, the village head, the village midwife, and the health volunteers. The health education provided by the team of lecturers and students was highly engaging, using media such as PowerPoint, videos, and leaflets, making it easier for participants to understand the material. This, in turn, increased the knowledge of the community, especially women of childbearing age in Dayah Meuria village, one of the work areas of the Syamtalira Aron Health Center.

Another method that can be used to improve the knowledge and understanding of women of childbearing age is through simulations/demonstrations of SADARI. This simulation/demonstration was carried out on the second day of the community service event, attended by 20 women of childbearing age. Before the simulation/demonstration, all 20 participants (100%) were categorized as unskilled, with none in the skilled category. After the simulation/demonstration of SADARI, 17 participants (85%) were categorized as skilled, and 3 participants (15%) remained unskilled. This shows an increase in SADARI skills among women of childbearing age in Dayah Meuria village, in the work area of Syamtalira Aron. Skills are the ability of an individual to perform a task or activity, which can be acquired through experience, training, or habituation. Skills can be developed through

regular practice and are often connected to knowledge, creativity, and ideas in performing an action (Samodra, 2023).

The improvement in skills related to SADARI can also be achieved by providing training and materials, as done by the community service team from the Diploma III Nursing Program at Ende, Poltekkes Kemenkes Kupang. They implemented several solutions related to the empowerment of adolescent girls, showing that in the pre-test stage, the average knowledge score of the students was 48.18, while in the post-test stage, the average knowledge score increased to 71.82% (Bedho, Khrispinaowa, & Patmawati, 2023)

#### **4. CONCLUSION**

The knowledge of women of childbearing age regarding breast self-examination (SADARI) has increased, enabling early detection of breast cancer. There has been an improvement in the skills of women of childbearing age, making them proficient in demonstrating SADARI. The participants in the community service activities were highly cooperative and active during the education and simulation/demonstration of breast self-examination (SADARI), ensuring that the activities were carried out optimally.

#### *Suggestions*

1. For the Target Audience:

It is expected that women of childbearing age will apply the knowledge and skills they have acquired during the education and simulation/demonstration of SADARI. This will allow them to detect breast cancer early and prevent its development.

2. For the Participating Lecturers:

It is hoped that lecturers and students will continue to increase their enthusiasm in conducting community service activities, thereby providing benefits to the community through education and demonstration methods, helping prevent the onset of diseases.

3. For Poltekkes Kemenkes Aceh:

It is hoped that the educational institution will provide broader opportunities and support to lecturers and students to carry out community service, both morally and materially.



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