

Prevent Breast Cancer with Breast Self Examination (BSE)

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ABSTRACT

Breast cancer is a malignancy of the cells in the breast tissue, which can originate from the glandular components (ductal epithelium or lobules) such as fat tissue, blood vessels and the nerves of the breast tissue . This community service activity is efforts to prevent breast cancer with *Breast Self Examination* (BSE), this activity was carried out at SMA Muhammadiyah I Palembang City by nursing lecturers, along with nursing students with a target of 28 students of SMA Muhammadiyah I Palembang. The community service team provides health education interventions about breast cancer and demonstrations on how to do BSE to students. This prevention effort shows that the average student knowledge score before being given the intervention was 38, the average student knowledge score after being given the intervention was 68 with a mean difference before and after being given the intervention of 30, which means this activity can increase students' knowledge about cancer. breast and furthermore, it is hoped that it can reduce the incidence of breast cancer through early detection using BSE.

ARTICLE INFO

Article History:

Submitted/Received 26 Jan 2024

First Revised 27 Jan 2024

Accepted 28 Jan 2024

First Available online 31 Jan 2024

Publication Date 31 Jan 2024

Keyword:

Breast Self Examination

Breast Cancer

Cancer Detection

INTRODUCTION

Breast cancer is a global public health problem that is common in developed and developing countries and is one of the main causes of death in women (Biryte, 2020 : Hocaoylu et al., 2017) . Cancer is a disease characterized by abnormal/continuous and uncontrolled cell growth which can damage the surrounding tissue and can spread to places far from its origin which is called metastasis , malignant cancer cells can originate or grow from any type of cell in the body. human body (Arafah & Notobroto, 2018 ; Sihite et al., 2019) . Breast cancer is a malignancy of the cells in the breast tissue, which can originate from the glandular components (duct epithelium or lobules) such as fat tissue, blood vessels and nerves of the breast tissue. (Sihite et al., 2019) .

The American Cancer Society estimates that the number of new cancer cases and deaths in the United States in 2022 is estimated at 1,918,030 new cancer cases and 609,360 cancer deaths in the United States . The incidence of breast cancer in women from 2014 to 2018 continues to increase by 0.5% per year .

According to the World Health Organization (WHO), in Indonesia, with a population of 273,523,621, it is estimated that there were 396,914 cases of breast cancer with the number of deaths reaching 234,511, over 5 years the number reached 964,088 cases. The incidence of cancer in women in 2020 is estimated to reach 35%, breast cancer at 30.8%, cervical cancer at 17.2%, ovarian cancer at 7%, while colon cancer at 5.8% and thyroid cancer at 4.2%.

The initial phase of breast cancer is asymptomatic (without any symptoms and signs) , A lump or thickening in the breast is the most common sign and symptom, while advanced signs and symptoms of breast cancer include sunken skin, retraction or deviation of the nipple and pain, tenderness or bleeding, especially bleeding from the nipple. (Gautama, 2022) . Thick skin with prominent pores similar to orange peel and/or ulceration on the breasts are advanced signs of the disease. If there is nodal involvement, they may become hard, enlarged axillary lymph nodes and/or palpable supraclavicular nodes in the neck area . Extensive metastases are characterized by symptoms such as anorexia or weight loss, pain in the shoulders, waist, lower back or pelvis, indigestion. , dizziness, blurred vision and headaches , to further detect breast cancer by screening and breast self-examination (*Breast Self Examination* (BSE)) (Arafah & Notobroto, 2018) .

programs are effective in detecting conditions before cancer occurs, as well as detecting cancer at an early stage so that treatment can be carried out before the cancer develops into an advanced stage. Implementation of BSE from an early age, education about appropriate treatment to the community and increasing capabilities and accessibility for treatment are important (Deniz et al., 2018; Marfianti, 2021) .

Awareness of breast cancer is very important to increase public awareness to carry out breast self-examination (BSE) and clinical examinations to reduce the death rate due to breast cancer. Recognizing factors related to women's awareness of breast cancer can help identify possible risks early, as well as provide insight through health promotion to the community (Hurst et al., 2019) . The increasing incidence of breast cancer in developing countries is likely influenced by lifestyle changes , increasing urbanization and low awareness of breast cancer screening. (Solikhah et al., 2019) . Early detection of breast cancer will result in more effective treatment and increase survival rates (Hurst et al., 2019)

Breast Self-Examination (BSE) is a physical and visual examination to determine changes in the breasts which is carried out once a month by examining and evaluating any abnormalities in the breasts such as lumps which is carried out 5-7 days after menstruation and is highly recommended for menopausal women (Azhar et al., 2023 ; Deniz et al. , 2018) . The community can carry out breast cancer screening programs through *Breast Self-Examination* (BSE) or carried out by health cadres / health workers through clinical breast examination (SADARNIS) and knowledge of mammography screening as the spearhead of health services for the community (Hocaoglu et al., 2017 ; Marfianti, 2021) .

Mammography ranks first among the imaging methods used for breast cancer screening. Breast ultrasonography (USG), breast magnetic resonance imaging (MRI), tomosynthesis, and molecular imaging are often used as helpful methods in mammography. Additionally, important screening steps include clinical

breast examination (CBE) and *Breast Self Examination* (BSE) (Hocaoglu et al., 2017)

prevention focuses on detecting early stage tumors which are usually small. BSE is an early detection method for finding early stage breast cancer which will be more effective if done as early as possible (Subanada & Denpasar, 2014) . BSE is carried out every time after menstruation, namely the 7th to 10th day starting from the first day of menstruation, because at this time the hormonal influence of estrogen and progesterone is very low and the breast gland tissue does not swell at that time so it is easier to feel tumors or abnormalities in the breast. (Arafah & Notobroto, 2018) .

METHOD

This community service was carried out at SMA Muhammadiyah I Palembang City by nursing lecturers, along with nursing students with a target of 28 SMA Muhammadiyah I Palembang students. The community service team provides health education interventions about BSE and demonstrations on how to do BSE to students. Assessment of students' knowledge of BSE material was carried out before and after the health education intervention and BSE demonstration. Data analysis uses descriptive analysis. This community service was carried out on November 18 2023 at SMA Muhammadiyah I Palembang.



FIGURE 1. Flowchart of Stage or Procedures for implementing activities

RESULTS

The following are the results of measuring students' knowledge before and after being given Health Education and BSE demonstrations which are explained in table 1 below:

TABLE 1. Difference in Mean Knowledge of Students Before and After Health Education and BSE Demonstration

| Variable | Average | Mean Difference Before and After Intervention |
|-------------------------------------|---------|-----------------------------------------------|
| Knowledge Score Before Intervention | 38 | 30 |
| Knowledge Scores After Intervention | 68 | |

Based on Table 1, the average student knowledge score before being given the intervention was 38, the average student knowledge score after being given the intervention was 68 with a mean difference before and after being given the intervention of 30

DISCUSSION

Breast Self-Examination is one of the independent breast examinations that can be useful for reducing the occurrence of breast cancer, BSE can increase knowledge about the presence of breast cancer. The aim of this community service is to help prevent breast cancer through early detection, meaning that research participants know about breast cancer and how to prevent it by doing BSE and can carry out BSE independently to find out changes in breast shape and whether there are lumps in the breast. This activity was carried out by nursing lecturers, nursing students and 28 Muhammadiyah 1 High School students.

The results of this activity showed that there was an increase in students' knowledge about breast cancer and how to screen for breast cancer using BSE after providing health education interventions and BSE demonstrations with a difference in scores before and after the intervention of 30. The results of this health

education proved to be effective in increasing knowledge about prevention of breast cancer with the application of BSE. This health education provides evidence of the significant influence of increasing knowledge about breast cancer prevention with BSE among students at SMA Muhammadiyah 1 Palembang. In line with the results of research conducted (Azhar et al., 2023 ; Deniz et al., 2018) which states that BSE can increase knowledge about breast cancer.

This community service activity not only provides health education interventions , but also BSE demonstrations. Based on the results of community service activities for students regarding breast cancer prevention through educational interventions and BSE demonstrations, it has been proven to be able to increase knowledge about breast cancer prevention. This community service is a form of concern and empathy for nursing lecturers and students towards increasing knowledge about efforts to prevent breast cancer.

CONCLUSIONS AND RECOMMENDATIONS

Community service activities through the provision of Health Education and BSE demonstrations have been carried out which have been statistically proven to increase students' knowledge about breast cancer and how to do BSE. Support from all elements of leadership, nursing lecturers, education staff and DIII nursing study program students, Faculty of Health Sciences IKesT Muhammadiyah Palembang in providing Health Education has proven to be able to increase students' knowledge about breast cancer and how to detect it with a difference in the average knowledge score before and after the intervention of 30. It is recommended that this Health Education can continue to be carried out to prevent and detect breast cancer early.

ACKNOWLEDGMENTS

We would like to express our thanks to the Leadership of IKesT Muhammadiyah Palembang, Lecturers, Education Personnel, Students of the DIII Nursing Study Program, Faculty of Health Sciences, and LP2MI IKesT Muhammadiyah Palembang who have provided financial assistance, material and psychological support for the success of this community service activity.

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APPENDIX



FIGURE 2. Delivery of material about Breast Cancer



FIGURE 3. Delivery of material regarding the incidence of breast cancer in the world and Indonesia