



HEALTH EDUCATION ABOUT BREAST SELF-EXAMINATION (BSE) FOR WOMEN OF REPRODUCTIVE AGE

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Abstract

The incidence of breast cancer in Indonesia is 66,271 cases (16.2%). Early detection of breast cancer through breast self-examination (BSE) shows that the practice is still very low in Indonesia (53.7%), particularly among women of reproductive age, due to a lack of knowledge about how to perform BSE. This study aims to assess health education on BSE for women of reproductive age at Bentiring Health Center area in Bengkulu City in 2024. The type of research used is a pre-experimental design with a one-group pre-test post-test approach. The population for this study consists of women of reproductive age in the Bentiring Health Center area. The sample includes 54 respondents selected using purposive sampling techniques. The data were analyzed using univariate analysis and bivariate analysis with the Wilcoxon Signed Rank Test. The results of this study show that there was a difference in the average knowledge scores, with a score of 31.91 before and 82.96 after receiving health education through leaflet media. The p-value of $0.000 < 0.05$ indicates that the leaflet had an impact on the knowledge of women of reproductive age about breast self-examination (BSE). It is recommended that in the future, the Health Center should conduct regular educational activities about BSE for women of reproductive age as part of efforts for early breast cancer detection.

Keywords : BSE, Knowledge, Leaflet Media

INTRODUCTION

Breast cancer is one of the most commonly occurring cancers worldwide. According to data from the Global Cancer Observatory in 2020, breast cancer ranks first among cancers affecting women, with an incidence of 2,296,840 cases (23.8%). The global mortality rate for breast cancer is the highest, with 666,103 deaths (15.4%) (World Health Organization, 2022). In Indonesia, based on the data from Global Cancer Observatory, the incidence of breast cancer among women in 2020 was reported as 68,858 cases (16.6%) out of a total of 396,914 new cancer cases across all types. This resulted in over 22,000 deaths (Globocan, 2020). More recent data from the Global Burden of Cancer 2022 indicates that the incidence of breast cancer in Indonesia has reached 66,271 cases (16.2%), with a mortality rate of 22,598 deaths (9.3%) (Globocan, 2023).

According to data from the Bengkulu Provincial Health Office, 42 women in Bengkulu Province were suspected of having breast cancer in 2023. Additionally, 141 cases of breast lumps/tumors were identified (Bengkulu Provincial Health Office, 2023). Data from the Bengkulu City Health Office shows that, in 2023, 13 health centers reported cases of tumors/lumps in women, with the highest incidence of breast lumps occurring in the following health centers: Bentiring Health Center 11 cases (2.56%), Jembatan Kecil Health Center 4 cases (1.50%), and Lingkar Timur Health Center 3 cases, 1.17%) (Bengkulu City Health Office, 2023).

Early detection of breast cancer through breast self-examination (BSE) is recommended to be performed once a month, ideally on the 10th day after menstruation. BSE involves a 3D approach: visual inspection, palpation, and compression. The benefits of early detection include earlier intervention, prevention of disease progression, avoidance of chemotherapy, and reduced risk of fatal outcomes (Indonesian Ministry of Health, 2022).

Breast Self-Examination (BSE) is a simple, effective method that women can perform independently to detect lumps and other signs of breast abnormalities at an early stage. It is hoped that BSE can reduce mortality rates by 25-30%. However, the practice of BSE among the population in Indonesia remains very low, at 53.7%, particularly among women of reproductive age. This is largely due to a lack of knowledge about how to perform BSE (Indonesian Ministry of Health, 2022).

Knowledge is acquired through the examination pertaining to an object using the five senses, such as touch, taste, smell, hearing, and sight. Information used to enhance knowledge can be delivered through various media. One effective medium for increasing knowledge is the leaflet. Research conducted by Fauziah et al. (2017) indicates that there is an improvement in knowledge about breast self-examination (BSE) with the use of BSE leaflets.

Educational initiatives play a pivotal role in enhancing knowledge and encouraging regular BSE practices. Among various tools, leaflets have proven to be effective in delivering health information in an accessible format. However, while this study demonstrates the success of leaflet-based education in increasing BSE knowledge scores, it is also essential to explore other complementary media. Digital tools such as social media platforms, videos, and interactive applications can extend the reach and engagement of educational campaigns. Combining traditional methods like leaflets with these modern approaches can create a multifaceted strategy, addressing diverse learning preferences and increasing the overall impact of breast cancer awareness programs.

This study aims to evaluate the effectiveness of health education using leaflets in improving BSE knowledge among women of reproductive age. By focusing on this critical demographic and considering the potential for integrating traditional and digital media, this research contributes to the

broader goal of reducing breast cancer incidence and mortality through early detection and timely intervention.

MATERIALS AND METHODS

The study utilized a pre-experimental design with a one-group pre-test post-test approach to evaluate the effectiveness of health education using leaflets in improving knowledge about breast self-examination (BSE). The population for this study comprised women of reproductive age in the Bentiring Health Center area of Bengkulu City. The sample consisted of 54 respondents, selected through purposive sampling. The sample size of 54 was determined based on feasibility within the study area and availability of participants who met the inclusion criteria. The purposive sampling method ensured that participants were representative of the target demographic.

Data were collected using a structured questionnaire designed to assess knowledge of BSE. The process included Pre-Test, Intervention and Post-Test. The questionnaire used for data collection was validated by a panel of experts in public health and oncology to ensure content accuracy and relevance. Reliability was tested through a pilot study involving 10 participants, yielding a Cronbach's alpha score of 0.82, indicating good internal consistency. The data were analyzed using both univariate and bivariate techniques. The Wilcoxon Signed Rank Test was chosen due to the non-parametric nature of the data and the paired design of the study. Statistical analysis was conducted using SPSS p-value of <0.05 was considered statistically significant.

RESULTS AND DISCUSSION

This analysis is conducted to determine the average knowledge score of women of reproductive age regarding breast self-examination (BSE) before

Table 1 : Average Knowledge Scores of Women of Reproductive Age Regarding Breast Self-Examination (BSE) Before and After Intervention Using Leaflets.

| Variable | Mean | SD | Min | Max |
|------------------|-------|-------|-----|-----|
| Knowledge | | | | |
| Before | 31,91 | 5,271 | 20 | 40 |
| After | 82,96 | 8,974 | 60 | 100 |

Based on Table 4.1, the average knowledge score before receiving the leaflet intervention was 31.91, With 20 as minimum score and 40 as a maximum score. Post-intervention, the average score increase to 82.96, with 60 as a minimum score and 100 as maximum.

The bivariate analysis aims to assess the impact of the leaflet for knowledge among women in the reproductive age regarding breast self-examination (BSE) in the Bentiring Health Center area, Bengkulu City. Prior to conducting the bivariate analysis, the researcher performed a normality test.

Table 2 : Effect of the Leaflet on the Knowledge of Women of Reproductive Age Regarding Breast Self-Examination (BSE) at Bentiring Health Center Area, Bengkulu City.

| Variable | | Rank | Mean Rank | P-Value |
|--|----------------|-----------------|-----------|---------|
| Knowledge | | N | | |
| After Intervention- Before Intervention | Negative Ranks | 0 ^a | 0,00 | 0.000 |
| | Positive Ranks | 54 ^b | 27,50 | |
| | Ties | 0 ^c | | |
| | Total | 54 | | |

Based on Table 2, the results of the Wilcoxon test indicate that there was no decrease in knowledge scores after the intervention. The p-value of $0.000 < 0.05$ signifies a significant effect of the leaflet on the knowledge of women of reproductive age regarding breast self-examination (BSE) in the Bentiring Health Center area, Bengkulu City.

DISCUSSION

The outcome of the education through leaflets, as shown in Table 1, indicate that the educational activity on breast self-examination (BSE) for early breast cancer detection has led to a significant improvement in health knowledge among women of reproductive age. Respondents were guided to identify potential breast cancer risks using the six steps of breast self-examination. The leaflet-based educational activity provided additional information on breast self-examination (BSE), including its definition, purpose, timing, and procedural steps. The findings of this study are in line with Riandari et al. (2023), which showed an increase in average knowledge scores from 8.7 to 14.1 following the intervention. Similarly, the study by Fitri & Iryanti (2021) demonstrated that education using leaflets significantly improved knowledge, with average scores rising from 56.46 to 83.54.

Based on the statistical analysis using the Wilcoxon Signed Rank Test, a p-value of $0.000 < 0.05$ indicates a significant effect of health education through leaflets on the knowledge of women of reproductive age regarding breast self-examination (BSE). This study aligns with the research by Amellia & Juhariani (2022), which found that leaflets are more effective in increasing women' knowledge about BSE. Additionally, this study is consistent with the findings of Riandari et al. (2023), which demonstrated that health education positively impacts women's knowledge about the procedure for breast self-examination.

This study is also consistent with the research by Maulana (2019), which describes leaflets as a form of media consisting of a sheet of paper with images and text on both sides, folded to a compact size for easy portability. This medium presents key information directly and explains how to perform actions in a concise and clear manner. With the provided education, women of reproductive age can view, listen to, and ask questions about BSE information directly. Education that includes understandable and comprehensible information allows women to remember and increase their knowledge about BSE. Additionally, the use of leaflets with simple and engaging language aids women in better understanding and recalling the information provided, thereby enhancing their knowledge of BSE.

Furthermore, research by Lestari et al. (2023) emphasizes the importance of combining visual and interactive tools in educational interventions to sustain long-term knowledge retention. Their study found that integrating digital media, such as mobile applications, with traditional leaflets resulted in a 30% higher engagement rate and improved practical application of health practices among women. This suggests that while leaflets are highly effective, incorporating additional methods can enhance learning outcomes. In the context of BSE, integrating traditional print media with modern technological approaches could further reinforce the understanding and regular practice of breast self-examination, particularly among younger, tech-savvy populations.

Through this intervention, women of reproductive age gained valuable insights into the importance of early detection of breast cancer and learned practical steps for conducting BSE. The findings underscore the importance of integrating leaflet-based education into public health campaigns to promote awareness and improve health outcomes in the community.

CONCLUSION

1. The average score before receiving education through leaflets was 31.91, and after the intervention, the average score increased to 82.96. This indicates a significant improvement in knowledge among women of reproductive age following the leaflet-based education.
2. There is an impact of educational outreach through leaflets on the level of knowledge among women of childbearing age regarding self-breast examinations, with a p-value of $0.000 < 0.05$.

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