

EFFECT OF DEMONSTRATION-BASED HEALTH EDUCATION ON BREAST SELF-EXAMINATION ABILITY

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ABSTRACT

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examination (BSE)

Background: Breast self-examination is a practice where women examine their breasts consistently and in an organized manner to recognize any lumps as an early warning sign. The aim of this research is to determine the effect of health education methods on the ability to apply BSE to adolescent girls at Senior High School 2 Tuban. Method: This type of research is pre-experimental using a One Group Pretest Posttest plan with a population of 38 young women selected using simple random sampling, obtaining a sample of 33 young women. The instrument used is an observation sheet. Data analysis used the Wilcoxon Signed Rank Test. Result: Based on the results of research using the Wilcoxon test results using SPSS 26 for Windows software, it was obtained that p value = 0.001, it can be concluded that there is an influence of improving health education methods on the ability to apply BSE to young women. Conclusion: Health education using demonstration methods has been proven effective in improving adolescent girls' ability to perform breast self-examination.

1. INTRODUCTION

SADARI is an effort or method of breast examination that is carried out regularly and systematically by every woman as an early detection measure to find lumps at an early stage¹. Regular self-breast examinations will have a positive impact on early detection of lumps, while the negative impact of irregular breast self-examination is that it can cause delays in treatment if abnormalities in the breast form a lump, most of which are not dangerous. If there are excessive cells in a certain part of the

body, a lump or tumor will form². These tumors can be benign or malignant, which is what we call cancer. Breast cancer is a malignant tumor (cancer) that originates from breast cells. To understand breast cancer, it is very important to understand some of the basics of the normal structure or parts of the breast. However, some soft lumps in the breast can increase a woman's risk of developing breast cancer³.

According to data from the World Health Organization (WHO), every year the number of cancer patients worldwide increases by 6.25

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million people. In the next 10 years, it is estimated that 9 million people will die each year from cancer. Two-thirds of cancer patients worldwide are in developing countries⁴. In 2018, data from the Global Burden of Cancer Study (Globocan) stated that breast cancer is the cancer with the highest percentage of new cases worldwide, at 42.1%. The mortality rate is 17.0% (World Health Organization, 2019). Breast cancer is the most common disease suffered by women, with a prevalence of 11.7%⁵.

In Indonesia, it is estimated that there are 100 new cancer cases per 100,000 people each year, according to the results of the Household Health Survey (SKRT) conducted by the Indonesian Ministry of Health⁶. Cancer-related deaths are increasing year by year. From the results of breast cancer early detection data, there were 18,150 cases of lumps found and 3,040 suspected cases of breast cancer (Kemenkes RI., 2021). Meanwhile, the death toll has reached more than 22,000 cases. In East Java, based on the explanation of the Head of the East Java Health Office, Dr. Herlin Ferliana, the 2018 Basic Health Research stated that the prevalence of cancer in East Java is 2.2 per 1,000 population. When converted to the population of East Java, the number of cancer patients is 86,000. At Dr. Soetomo General Hospital, 60% of cancer patients come from outside East Java and 40% from within the province, with breast cancer being the most prevalent.

Breast cancer can be detected early through Breast Self-Examination (BSE) so that cases of cancer can be found earlier and treatment can begin immediately. BSE should be performed after each menstrual period, on the seventh to tenth day counted from the first day of menstruation. During this period, progesterone and estrogen hormone levels are decreasing, so the mammary glands are not swollen, making it easier to feel any lumps, tumors, or abnormalities in the breast⁷.

Breast cancer and uterine cancer are the most common cancers causing death in women in Indonesia, requiring adequate intervention through primary, secondary, and tertiary prevention. Primary prevention is intended to eliminate and minimize exposure to the causes and risk factors of cancer. In addition to risk factors, there are protective factors that reduce a person's chances of developing cancer⁸. This preventive approach offers the greatest opportunity and is very cost-effective in controlling cancer, but it takes a long time. Secondary prevention involves early detection and immediate treatment. There are two components of early detection: screening and education about early diagnosis. One program to raise public awareness about the symptoms and signs of cancer is public education⁹.

In the implementation of SADARI, many women do not know how to perform SADARI correctly. The ignorance and inability of most women is caused by a lack of individual knowledge and the uneven distribution of health promotion programs run by the government to provide education on early breast cancer prevention. This is especially true for adolescents who are in the transition period from childhood to adulthood, namely those aged 17-19 years who are experiencing breast growth and development, after menstruation, and the formation of puberty hormones. Adolescents may experience an increase in breast cancer risk factors¹⁰.

Teenagers often do not realize that a new stage has begun at this age, even though every teenager will experience changes, both physically and psychologically. The hormones estrogen and progesterone influence physical changes. One effect of estrogen activity during the reproductive period in adolescent girls can be fibroadenoma mammae, or benign breast tumors.

2. METODE

This study used a pre-experimental design with a one-group pre-post test design. The research respondents were female students in grade XI at SMA Negeri 4 Tuban who met the inclusion criteria, with a sample size of 33 respondents using simple random sampling. The research was conducted at SMA Negeri 4 Tuban at a predetermined time. The instruments used were the Counseling Program (SAP) as a guideline for health education intervention using the demonstration method, and a questionnaire modified from previous research to measure the ability to perform SADARI. This questionnaire assessed the respondents' level of knowledge with the categories of Good ($\geq 75\%$), Fair (56–74%), and Poor ($\leq 55\%$), then analyzed using the Wilcoxon Signed Rank Test non-parametric test with the help of the SPSS program at a significance level of 0.05.

3. RESULTS AND DISCUSSION

Table 1. Distribution of Respondents

Characteristics	N	%
Ever/Never Received Information		
Ever	0	0
Never	33	100
Before performing SADARI		
Good	0	0
Fair	0	0
Less	33	100
It's difficult to do SADARI		
Good	25	75,8
Fair	8	24,2
Less	0	0

Based on Table 1, it can be seen that of the 33 (100%) respondents, all 33 (100%) respondents had never received accurate information about how to perform SADARI correctly. The percentage of respondents who were able to perform SADARI before the demonstration-based health education was 33 respondents (100%) in the poor category.

After the training, the majority of respondents (75.8% or 25 respondents) were in the good category, while a small number (24.2% or 8 respondents) were in the poor category.

Table 2. Distribution of Ability to Perform Breast Self-Examination Before and After Health Education Using the Demonstration Method

Health Education Demonstration Method	Ability to Perform Breast Self-Examination			Total
	Good	Fair	Less	
Pre Test	0 (0%)	0 (0%)	33 (100%)	33 (100%)
Post Test	25 (75,8%)	8 (24,2%)	0 (0%)	33 (100%)

Uji Wilcoxon p value = 0,001 < 0,05

Based on Table 2, it shows that before being given health education using the demonstration method, all 33 respondents (100%) were in the category of being unable to perform SADARI. After the intervention, most of the respondents, 25 people (75.8%), were able to perform SADARI.

The Ability of Adolescent Girls to Perform Breast Self-Examination Before Receiving Health Education Through Demonstration Methods

Based on the results of the study, it was found that all 33 respondents had never received information about breast self-examination (BSE). BSE should generally be practiced by all women who have reached adolescence as a form of prevention and early detection of breast cancer that can be done independently without the help of health workers. This SADARI behavior is also influenced by a person's ability to properly perform the correct steps in conducting SADARI. The ability to perform breast self-examination is important in helping to detect early lumps or other changes in the breast that could be early signs of breast cancer. Breast self-examination is an effort to detect breast cancer early. One of

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the reasons for a person's inability to perform breast self-examination is a lack of knowledge about the correct way to perform a breast self-examination¹¹.

A person's abilities are influenced by several factors, namely education, age, interests, occupation, experience, culture, and information¹². Lack of knowledge or education about breast self-examination can hinder a person's ability to perform it. The lack of information sources about SADARI can be one of the factors contributing to the lack of ability to perform SADARI independently⁵.

Based on the researchers' assumptions, the lack of ability to perform SADARI occurs due to adolescent girls' lack of knowledge about breast self-examination. Adolescents may not know how to perform SADARI correctly. Written or verbal instructions alone are often insufficient, as this skill requires direct demonstration so that adolescents can learn the technique properly. Health education using demonstration methods will have a significant impact on adolescents' knowledge, which will improve their ability to perform SADARI independently as a form of understanding that has been acquired.

Identification of Adolescent Girls' Ability to Perform Breast Self-Examination After Health Education Using the Demonstration Method

The ability to perform breast self-examination among adolescent girls improved after receiving health education through demonstration.

Health education using demonstration methods has been proven effective in improving adolescent girls' ability to perform breast self-examination. This is because demonstration methods are effective methods. Demonstration methods involve active learning, where participants not only hear or read instructions but also see and practice directly. This helps

adolescents understand the correct steps in performing breast self-examination and remember them better. Through direct demonstrations, adolescents can gain clarity about the correct techniques. Demonstrations provide an opportunity to explain and address misconceptions that adolescents may have¹³. By looking at the actual procedure, teenagers can distinguish between facts and myths surrounding SADARI and breast cancer. Through interactive health education, teenagers become more aware of health risks and the importance of early detection¹⁴.

In Albert Bandura's social learning theory, which explains how humans learn through observation, imitation, and modeling¹⁵. Through demonstration, adolescents can see a direct example of how to perform SADARI and then imitate it, which leads to more effective learning. Health education using demonstration methods is effective in improving adolescent girls' ability to perform SADARI⁸.

Based on existing research and theory, the ability to perform SADARI improves with the provision of health education using demonstration methods, which is one effective approach in health education, especially for improving a person's ability to perform SADARI (breast self-examination).

The Effect of Health Education Using the Demonstration Method on the Ability to Perform Breast Self-Examination

The effect of health education using the demonstration method on the ability to perform breast self-examination among female adolescents at SMA Negeri 4 Tuban according to the Wilcoxon test using SPSS version 26 for Windows yielded the following results: Signed Ranks Asymp.Sig. (2-tailed) = 0.001, where p value = $0.001 < 0.05$, so H_1 is accepted. This proves that there is an effect of demonstration

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method health education on the ability to perform SADARI among female adolescents at SMA Negeri 4 Tuban.

This study is consistent with Albert Bandura's social learning theory, which states that individuals learn by observing the behavior of others and the results of that behavior¹⁶. Learning occurs through observation, imitation, and modeling. An individual's ability to successfully perform SADARI independently is based on sufficient knowledge acquired through health education using demonstration methods, which effectively help provide young women with an easy-to-understand understanding of how to perform breast self-examination properly¹⁷.

The results of this study are also consistent with research conducted by Pangestuti et al (2021) which states that there is a significant relationship between adolescent girls' ability to perform SADARI before and after¹⁸. The results of this study are also supported by research Sayed et al (2024) with research results indicating that there was a significant difference in the ability to perform SADARI practices before and after receiving health education through demonstration methods¹⁹.

The results show that the abilities of female adolescents at SMA Negeri 4 Tuban improved after receiving health education. This occurred because of differences in individuals' abilities to understand the health education provided. After receiving health education, a person's ability to apply the knowledge and skills they have learned can be influenced by several factors, such as whether or not they have received information about SADARI prior to this health education. The information obtained previously will become basic knowledge that will provide an initial overview of what will be obtained in this health education. The knowledge obtained previously

can make respondents quicker in grasping the instructions given and can relate the theory that has been obtained previously to the practices shown in the health education provided, thereby increasing their ability to perform SADARI correctly.

Based on the results of the research and theory above, the researcher assumes that the ability to perform SADARI in adolescent girls will increase after being given health education using the demonstration method. The problem of adolescent girls' lack of ability in practicing SADARI can be minimized by providing comprehensive health education using the demonstration method. Good demonstration-based health education will also have a positive influence on adolescent girls' understanding of how to perform SADARI independently. If SADARI education is provided comprehensively by health workers in the area, then it is likely that adolescent girls in schools will have good skills in performing SADARI as a form of early prevention of breast cancer independently.

4. CONCLUSION

Based on the results of the study, before health education using the demonstration method, all female adolescents at SMA Negeri 4 Tuban were in the less capable category. After the intervention, their abilities improved to mostly good and the rest were adequate. This improvement occurred because the demonstration method was easier to understand, provided direct experience, and improved practical skills in performing SADARI.

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