

The Relationship Between Young Women's Knowledge About Breast Cancer and Self-Breast Examination (Sadari) at SMA Negeri 1 Panyabungan Selatan Class

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ABSTRACT

The objective of this study is to explore the association between young women's knowledge of breast cancer and their engagement in breast self-examination (BSE) practices at SMA Negeri 1 Panyabungan Selatan, located in the Panyabungan Selatan District of Mandailing Natal Regency in 2022. Employing a cross-sectional design, the research involved 150 female students from class X. Data collection utilized a questionnaire covering topics related to breast cancer awareness and BSE habits. The findings indicated a significant positive correlation ($p < 0.05$) between the knowledge level of adolescent girls regarding breast cancer and their regular practice of BSE. It was observed that those with a better understanding of breast cancer tended to perform BSE more frequently. These results underscore the pivotal role of health education in enhancing breast cancer awareness among adolescent girls and promoting the importance of regular BSE as a preventive measure. The implications of this study can inform the development of targeted intervention programs aimed at enhancing breast cancer awareness and health behaviors among adolescent girls in educational institutions and local communities.



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INTRODUCTION

Adolescence is a period of growth and development characterized by very rapid changes physically, psychologically and cognitively. In the physical aspect, there is a process of sexual maturation and growth in body posture which makes teenagers start to pay attention to their physical appearance. The beginning of growth and biological development of teenagers is marked by the start of puberty. There are changes in sexual maturation ratings (SMR) in adolescents, where in female adolescents there are changes in breast size enlargement, maturation of reproductive organs and growth of pubic hair (Fikawati, 2021).

Breast cancer is one of the cancers that has a fairly high mortality rate and is the type of malignancy that most often attacks women. The prevalence rate tends to increase from year to year, especially in developing countries, where it often has fatal consequences due to delays in treatment so it is often found in the final stages. Breast cancer (carcinoma mammae) is a malignant tumor that grows in the mammary glands, fatty tissue and connective tissue of the breast (Masnita, 2019).

According to WHO, the prevalence of breast cancer is 80,653,000 cases, where this cancer is mostly suffered by women, 58,256,000 cases occur in developing countries and cause 22,692,000 deaths from breast cancer. The incidence of this disease is estimated to be increasing throughout the world and WHO estimates that by 2030 the incidence of cancer will reach 26 million people and 17 million of them will die from breast cancer (World Health Organization, 2020).

According to the Indonesian Ministry of Health, 2022 shows that the most common cancer cases in Indonesia in 2020 were breast cancer, namely 58,256 cases or 16.7% of the total 348,809 cases up to 2021

, totaling 2,827,177. women aged 30-50 years or 6.83% of the target have undergone early detection of breast cancer using the SADANIS method (Indonesian Health Profile, 2021).

809 cases with 130 deaths, and in 2013 there was another increase of 819 cases with 217 deaths, in 2014 there was another increase of 1290 cases with 227 deaths, and in 2015 there was another increase of 1114 cases with 241 deaths. (Infodatin, 2015).

Research on non-communicable diseases (NCD) 2018 stated that the behavior of young women in early detection of breast cancer is still low. It was recorded that 53.7% of young women had never done BSE, while 46.3% had done BSE, and 95.6% of young women had never done BSE. 4.4% had never done BSE. (RI Ministry of Health, 2019).

Data report from the International Agency for Research on Cancer (IARC) in 2012, breast cancer is the type of cancer with the highest percentage of new cases, namely 43.3%. Meanwhile, breast cancer is also the second highest cause of death after lung cancer, namely 12.9% (Ministry of Health of the Republic of Indonesia, 2015).

Based on the recapitulation of early detection activities for cervical and breast cancer by province carried out from 2007 to 2016 in Indonesia, there were 4,030 women suffering from breast tumors and 611 women suspected of breast cancer. In West Sumatra Province, 127 women or 15% were found to have breast tumors and 18 women or 2.94% were suspected of breast cancer (Directorate General of P2P, Indonesian Ministry of Health, 2017).

Breast cancer is the number 1 cause of death in women. In the last five years there were 7.8 million women who were diagnosed with breast cancer and in 2020 around 685,000 women died from this disease, attitudes and behavior of women of reproductive age regarding breast cancer in Sipolu-Polu sub-district, Panyabungan sub-district, Mandailing Natal district. The population in this study was the people of Sipolu - Polu Village. Sampling was carried out using a non-probability method with consecutive sampling technique (Lubis, AisyahAminy, 2021).

Based on data from RSUD dr. M. Yunus Bengkulu, breast cancer patients in 2015 numbered 387 cases, and increased in 2016 to 460 cases, and in 2017 breast cancer sufferers decreased to 433 cases, and the number of FAM (Mammary Fibroadenoma) sufferers in 2015 was 278 cases, there was a decrease in 2016, namely 243 cases, and in 2017 the number of FAM (Mammary Fibroadenoma) sufferers decreased again, namely 195 cases. Although there is a decrease in the incidence of breast cancer and FAM (Mammary Fibroadenoma) every year, if early detection is not carried out it can increase the risk of breast cancer.

Currently, many breast cancer sufferers have been found at a young age, with quite a few fourteen year old girls suffering from tumors in their breasts, where the tumors that occur can cause breast cancer if not detected early. Even though not all of them are malignant, this shows that there is a trend of increasing breast cancer symptoms in teenagers (Lily, 2020).

The high prevalence of breast cancer needs to be taken into account with preventive measures and early detection that have been carried out by health service providers. Cancer cases that are discovered early and receive prompt and appropriate treatment will provide healing and a longer life expectancy. Therefore, it is necessary to carry out preventive efforts to increase public awareness in recognizing the symptoms and risks of cancer so that they can determine appropriate preventive and early detection steps (Health Data and Information Window Bulletin, 2015).

One preventive measure that can be taken is to avoid exposure to various risk factors and implement healthy living behavior. Based on research from the World Cancer Research Fund (WCRF) and the American Institute of Cancer Research (AICR) in 2017, preventive efforts that can be made to reduce the risk of breast cancer are by carrying out healthy living behavior which includes consuming healthy food, regular exercise, getting enough rest, not smoke, and do not consume alcohol.

Apart from healthy living behavior, the simplest and cheapest way is to carry out early detection through breast self-examination (BSE). BSE helps check the condition of the breasts for lumps or other changes that could be a sign of a tumor or breast cancer that requires medical attention (Irianto, 2015). The importance of doing BSE has become a government program in efforts to overcome the incidence of breast cancer. This is stated in the Regulation of the Minister of Health of the Republic of Indonesia number 34 of 2015 concerning "Treatment of Breast Cancer and Uterine Cancer" (Ministry of Health of the Republic of Indonesia, 2015).

METHODS

Research design

This type of research is descriptive correlation because this research is to determine whether there is a relationship between two variables. The method used is a cross sectional approach, namely collecting data only once (Notoatmodjo, 20). This research was conducted to determine the knowledge of young women about breast cancer by examining BSE.

Research variable

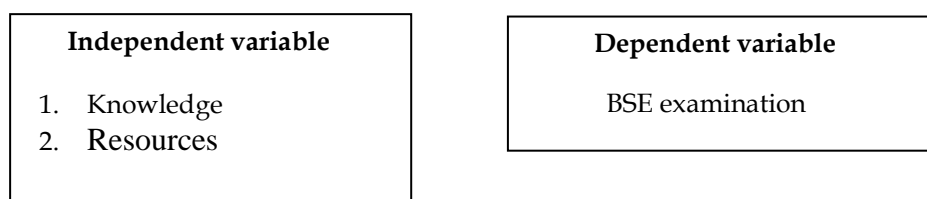


Figure 1.Research variable

Operational definition

So that variables can be measured using instruments or measuring tools, the variables must be given operational boundaries or definitions. Operational definitions are needed so that variable measurement or data collection (variables) are consistent between one data source (respondent) and another (Notoatmodjo, 2012).

Variable	Operational definition	Measuring instrument	How to measure	Measuring results
Independent variable				
Knowledge	Everything known by young women about cancer breasts and wayanswerquestion) Do BE AWARE. Consists of 20 question. question)	Questionnaire questionnaire with correct 56-75% (12-15	Fill in if answer 0: less Ordin al correct <55% value if (≤11 1: yes 1: enough if 0 : no Answer 2: fine if Answer true 76-100% (≥16 question)	
Resources	Information obtained by young female students media 2.Print media 3.Health workers	Questionnaire Ordinal		1.Mass

Population

Population is a large number of subjects with certain characteristics (Sastroasmoro, 2019). The population used in this research was 43 class X teenage girls.

Sample

A sample is a part of a population that is selected and is considered to represent the population. The sampling technique used total sampling, the number of samples obtained was 43 young women. To determine the number of samples in each class, the total sampling method was used. The respondent criteria were:

1. Class X teenage girls at SMAN 1 Panyabungan
2. Already menstruating
3. Willing to be a respondent

Location and time of research

Research sites

The location of this research was carried out at SMA NEGERI 1 Panyabungan Selatan, Panyabungan Selatan District, Mandailing Natal Regency, regarding the relationship between young women's knowledge about breast cancer and breast self-examination (BSE) for the reason that the location or distance to the location is close and easy to reach by vehicles and young women so that learn more about BSE.

Research time

The research was conducted in December 2022 – January 2023

Research Instrument

Data collection in this research used measuring instruments in the form of questionnaires. A questionnaire is a list of questions that have been prepared well and carefully to which the respondent just has to provide answers. The questionnaire in this research consists of a number of questions used to obtain data from respondents. The questionnaire sheet includes knowledge about breast cancer and BSE, and BSE examination.

The knowledge questionnaire is categorized as good and poor with a total of 20 statement items, consisting of positive statements on questions number 1,13,16,17,18,20), and negative statements on question numbers (2,4,5,8,12,14 ,15,19), so that the following criteria are obtained:

1. Knowledge is good if the respondent can answer 76-100% correctly of the total question answers
2. Knowledge is sufficient if the respondent can answer 56-75% of the total question answers correctly
3. Knowledge is lacking if the respondent can answer <55% of the total question answers.

Data Collection, Processing and Analysis Techniques

Data collection technique

1. Secondary Data
Secondary data is data obtained by researchers from existing sources. Secondary data collection was obtained from TU SMAN1 Panyabungan data in the form of the number of classes and the number of class X students at SMAN 1 Panyabungan Selatan.
2. Primary data
Primary data is data obtained directly from data sources. Data collection was carried out using the method of filling out questionnaires by respondents which was carried out directly by the researcher on the research sample.

Data processing

Processing of the data that has been collected is carried out using a computer, through several stages, including:

1. Editing
This stage is carried out to check whether the data that has been collected is complete or not, then check whether the answers are complete, clear and consistent.
2. Coding (data encoding)
Is the activity of changing data from letter form to number form data. This makes analysis easier and also speeds up data entry.
3. Data entry (data entry)
The stage of entering data into the computer according to existing variables. Next, the data obtained will be analyzed according to the type and use of the data.
4. Cleaning
At this stage, checking and cleaning activities are carried out, if any errors are found during data entry, so that they can be corrected and assessed.

Univariate Analysis

Univariate analysis aims to determine the frequency distribution of each variable studied using percentages (Notoatmodjo, 2010). In this research, univariate analysis will produce frequency distributions and percentages of variables, both independent variables and dependent variables. The formula used to calculate percentages (Arikunto, 2009).

Information :

x : percentage result

f : achievement results/ number of correct answers

n : maximum achievement results/total number of questions

b. Bivariate Analysis

Bivariate analysis is used to determine whether there is a relationship between the independent variable (knowledge) and the dependent variable (BSE behavior). This analysis uses computerization which is tested using the chi-square test with a confidence level of 95% with $\alpha = 0.05\%$

The test criteria for bivariate analysis using a 95% confidence level are:

1. If H_a is accepted, it means that there is a relationship between the knowledge and attitudes of young women about breast cancer and BSE behavior.
2. If H_a is rejected, it means that there is no relationship between the knowledge and attitudes of young women about breast cancer and BSE behavior.

RESULTS AND DISCUSSION

Breast cancer

Breast cancer is a frightening disease for women. Breast cancer is a disease that arises due to abnormal growth in breast tissue cells (Indonesian Ministry of Health, 2015).

Breast cancer is a condition where cells have lost their normal control and mechanisms resulting in abnormal, rapid and uncontrolled growth that occurs in breast tissue (Mulyani SN, 2013)

Breast cancer is a malignant tumor that originates from the breast glands. Including the milk gland ducts and supporting tissue which grow infiltratively, are destructive, and can metastasize (Suryana, 2008).

Causes of Breast Cancer

The exact cause of breast cancer is not yet known, according to Mulyani SN, (2013) there are several factors that cause it, including:

1. Age factor
The older a woman is, the higher her risk of suffering from breast cancer. Age 50-60 years is the age most at risk of developing breast cancer.
2. Genetic factors
If a family member has breast cancer, the risk of developing breast cancer is twice that of other women who do not have a family history of cancer.
3. Use of the hormone estrogen
The use of estrogen hormone therapy has a significant increased risk of developing breast cancer.
4. Unhealthy lifestyle
Rarely exercising or not moving enough, unhealthy and irregular eating patterns, smoking and consuming alcohol will increase the risk of breast cancer.
5. Passive smoker
According to experts from the California Environmental Protection Agency, passive smoking is closely related to the risk of developing breast cancer.
6. Cosmetic use
Cosmetic ingredients that contain the hormone estrogen are at risk of increasing the risk of breast cancer.
7. Use of birth control pills
Using birth control pills for a long time can increase a woman's risk of breast cancer because

cells that are sensitive to hormonal stimulation undergo benign degeneration or become malignant and this risk will decrease if the use of birth control pills is stopped.

Breast Cancer Risk Factors

Breast cancer risk factors are directly or indirectly related to unused estrogen remaining in the body or estrogen that is not balanced with progesterone.

According to Mulyani SN (2013), risk factors for breast cancer are:

1. Age
The risk of breast cancer increases with age. Every ten years, the risk of cancer doubles. The peak incidence of breast cancer occurs at the age of more than 60 years.
2. Age of menarche
Based on research, early menarche can increase the risk of breast cancer. This is because the sooner a woman experiences puberty, the longer her breast tissue will be exposed to dangerous elements that cause cancer such as chemicals, estrogen or radiation.
3. Family history of breast cancer
A family history of breast cancer is a risk factor for breast cancer. The risk can double if more than one nuclear family member has breast cancer, and the younger the affected family member, the more likely it is that the disease will be hereditary.
4. Previous history of benign breast tumors
Some benign breast tumors can mutate to become malignant.
5. Obesity after menopause
Experiencing obesity after menopause has a 1.5 times greater risk of developing breast cancer

Clinical Symptoms of Breast Cancer

According to the American Cancer Association, a woman's chance of getting breast cancer is one in eight or 12%. There are several symptoms of breast cancer (Mulyani SN, 2013):

1. A lump was found in the breast
According to the American Cancer Association, a significant early symptom that women often experience is an unusual lump found in the breast. The lump is usually characterized by pain when touched or pressed.
2. Changes in the breasts
Changes in breast size, shape and nipples. The initial symptoms are characterized by the surface of the breast becoming red, then the skin slowly shrinks like orange peel.
3. Nipple discharge
The nipple produces fluid like blood, but also sometimes yellow or greenish in the form of pus.

Stages and Grades of Breast Cancer

The stage in cancer is to describe the condition of the cancer, namely its location, how far it has spread, and the extent of its influence on other body organs. By knowing the stage, this is one way that helps doctors determine what treatment is suitable for the patient. One way to describe the stage of cancer is the TNM system. This system is recommended by the International Union Against Cancer (UICC) from WHO. The TNM system uses three criteria to determine the stage of cancer, namely (Mulyani SN, 2013):

1. (T, Tumor), the tumor itself. How big is the tumor and where is it located?
2. (N, Node), lymph nodes around the tumor. Has the tumor spread to nearby lymph nodes?
3. (M, Metastasis), it is possible that the tumor has spread to other organs.

Secondary Prevention

This prevention is carried out for individuals who are at risk of developing breast cancer. Every woman who is normal and has a normal menstrual cycle, they are a population at risk of breast cancer. This prevention is carried out by carrying out early detection in the form of screening through mammography which is claimed to have 90% accuracy but continuous exposure to mammography in healthy women is not good because it is a risk factor for breast cancer, so mammography is taken into consideration.

Tertiary Prevention

This prevention is usually directed at individuals who have tested positive for breast cancer. Proper treatment of breast cancer sufferers according to their stage with the aim of reducing disability and extending the sufferer's life expectancy. Tertiary prevention to improve the quality of life of sufferers and prevent disease complications and continue treatment.

CONCLUSION

This research shows that there is a significant relationship between young women's knowledge about breast cancer and the practice of breast self-examination (BSE) at SMA Negeri 1 Panyabungan Selatan, Panyabungan Selatan District, Mandailing Natal Regency, in 2022. The results of data analysis from 150 class X female students show that young women who have better knowledge about breast cancer tend to have a higher tendency to do BSE regularly. These findings underscore the important role of knowledge in influencing the health behavior of adolescent girls regarding the prevention and early detection of breast cancer. Health education that focuses on increasing knowledge about breast cancer among young women can be an effective strategy in increasing their awareness of the importance of carrying out regular breast self-examinations. The implications of these findings also indicate the need to develop more intensive health education programs in schools and communities to increase adolescent girls' knowledge about breast cancer and encourage the practice of regular breast self-examination as part of efforts to prevent and early detect breast cancer at the population level.

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