



Factors Associated with Breast Self-Examination Behavior (BSE) in Young Women

Nurhaya S Patui*¹, Anggi Arum Yudianta¹, Bertin Ayu Wandira², Ulfa Aulia³

¹ Department of Biostatistics, Family Planning and Population, Tadulako University, Indonesia

² Department of Health Policy and Administration, Tadulako University, Indonesia

³ Faculty of Public Health, State University of Gorontalo, Indonesia

*Corresponding author, contact: nurhayapatui.ugm@gmail.com

Abstract

Breast cancer is the second largest death in women. One of the preventions of breast cancer by early detection is Breast Self-Examination (BSE). It aims at finding out abnormal lumps in the breast. There were 20 cases of breast cancer in Palu in 2017, 10 of them died, then increased in 2018 to 25 cases, and 14 died. Based on preliminary research at Senior High School of SMA 7 Negeri Palu, in 2021, there was 1 case of breast cancer. This research aimed to determine the correlation between knowledge, attitudes, information exposure, parental support, and Breast Self-Examination (BSE) behavior. This was quantitative research with a cross-sectional approach. The samples were taken through the Slovin method with the Proportional Stratified Random Sampling technique. The total population was 396 students, and the total samples were 80 students. The majority of respondents are 17 years old, namely 52.5% with good behavior, namely 52.5%, knowledge including lack, namely 55%, attitude including negative, namely 60%, and information exposure including high, namely 56.2%, and parental support including lack, namely 51.2%. The results show that there was no correlation between information exposure and BSE behavior ($p = 0.128$), while knowledge ($p = 0.022$), attitudes ($p = 0.001$), and parental support ($p = 0.003$) showed a correlation with BSE behavior. It is expected that the school will cooperate with the health sector by providing material on reproductive health and prevention of non-communicable diseases, and the students are also more proactive in seeking information related to BSE.

Keywords: Breast Self-Examination (BSE), Parental Support, Knowledge, Attitudes

Key Messages:

- The study recommends that the school work with the health sector to provide materials on reproductive health and the prevention of non-communicable diseases.
- Additionally, students should be encouraged to be more proactive in seeking information related to BSE. With increased knowledge, positive attitudes, and support from parents, students can develop the behavior of conducting regular BSE, which can lead to early detection and better outcomes in the case of breast cancer.

Access this article online



Quick Response Code

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Received: 10 April 2023
Accepted: 16 April 2023

DOI:

<https://doi.org/10.56303/jhnresearch.v2i1.117>



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1. Introduction

Breast cancer (Carcinoma mammae) is a condition in which cells have lost control of their normal mechanisms, resulting in abnormal, rapid and uncontrolled growth in breast tissue. At first, breast cancer attacked women over 30 years old, but now the age of people living with breast cancer has shifted to women who are young or teenagers (1). Cancer incidence is increasing yearly and occurs almost all over the world. Breast cancer is the second largest disease in the world. Data on people with breast cancer worldwide reaches 14 million cases, with a death rate of 8.2 million each year. Global Cancer Observatory data states that there are 18.1 million new cases, with the death rate increasing to 9.6 million yearly. From these data, it can be concluded that breast cancer is a disease that has a relatively high percentage of deaths, especially in women (2).

The prevalence of breast cancer in women in Iran is 25 in 100,000 cases and has doubled in the last 10 years. Breast Self-Examination is an inexpensive and non-invasive method that does not waste time. Studies have shown that low rates of Breast Self-Examination (BSE) among Iranian women with low education are associated with a lack of information about Breast Self-Examination (BSE). The level of women's participation is influenced by various factors such as social factors, education, cultural barriers, lack of awareness, mental disorders, and fear of breast cancer diagnosis (3). The United States, India and China collectively account for almost a third of the global breast cancer burden. In 2016, there were approximately 232,000 cases of breast cancer reported in the United States and India, while 145,000 new cases were diagnosed in India. The comparison between the incidence and death rates of the United States, China and India in 2016 increased compared to 2014. The incidence and mortality rates in the United States and China were 4,000 deaths, and in India, there were 17,000 deaths (4).

Global Cancer Observatory data for 2018 shows that the incidence of cancer in Indonesia (136.2/100,000 population) ranks 8th in Southeast Asia, while Asia ranks 23rd. The highest incidence rate for women is breast cancer, which is 42.1/100,000 population with an average death rate of 17/100,000 population followed by cervical cancer of 23.4/100,000 population with an average death rate of 13.9/100,000 population (2). According to the 2018 Basic Health Research (Riskesdas), the incidence of tumours/cancer in Indonesia increased from 1.4/1,000 residents in 2013 to 1.79/1,000 in 2018. The highest cancer prevalence is in the DI Yogyakarta province, with 4 .86/1,000 population, followed by West Sumatra 2.47/1,000 population and Gorontalo 2.44/1,000 population (2).

Based on data from the Central Sulawesi Health Service (2019) (5), the percentage of breast tumours/lumps in women in Central Sulawesi Province is 0.18%. The highest percentage of tumours/breast lumps was in Poso Regency at 3.43%, and there were no cases in Banggai Islands, Banggai, Donggala, Toli-Toli, Buol and Sigi Regencies. The lack of achievement is caused by socio-cultural factors that exist in society. The embarrassment of examining intimate parts is a major obstacle in the field. In the city of Palu in 2017, there were 20 cases of breast cancer, 10 of them died, then increased in 2018 to 25 cases, and 14 of them died.

People living with Breast cancer currently mostly attack young women. There is a tendency for breast cancer to be experienced by women aged 15-20 years; this means it is very important to start providing health education about Breast Self-Examination (BSE), which is carried out 7-10 days after menstruation every month. Doing Breast Self-Examination (BSE) will reduce the death rate from breast cancer by up to 20%. Unfortunately, women who do BSE are still low by 25% -30%. So it is essential for young women to find out information about breast cancer so it can be detected early (6). Breast cancer prevention is done through early detection using Breast Self-Examination (BSE), which aims to find breast cancer early. BSE is performed on the seventh to tenth day after menstruation. This is done because, at that time, there was a decrease in the hormones estrogen and progesterone so that the breast glands did not swell and made it easier to do palpation to find abnormalities in the breast (7).

Based on research conducted by Ginting L (2019) (8) shows that there is a relationship between knowledge and breast self-examination (BSE) in the early detection of breast cancer. It is recommended that female students of the health academy of STIKes Murni Teguh increase their knowledge about breast self-examination (BSE) and routinely carry out breast self-examination according to the time and steps of the examination. Health academy of STIKes Murni Teguh provides counselling and information to students to regularly perform BSE. This study aims to determine the factors associated with Breast Self-Examination (BSE) behaviour in young women at the senior high school of SMA Negeri 7 Palu City in 2021.

2. Methods

The type of research used in this research is quantitative with a survey method and uses a cross sectional approach. This research was conducted at SMA Negeri 7 Palu City, Central Sulawesi Province in November 2021. The population in this study were all girls in grades XI and XII who attended SMA Negeri 7 Palu, namely 396 girls. The number of samples in this study was calculated using the formula while the sample fee in this study used the Slovin formula with a total sample of 80 people. The number of stratified sample members was carried out by means of proportional stratified random sampling, namely using a proportional allocation formula. The criteria for sampling were as follows: Inclusion Criteria (Adolescents who have experienced menstruation, Young women who were present during the study, Willing to be respondents, Attending SMA Negeri 7 Palu). Exclusion criteria (Youth who are not willing to be respondents, Young women who are sick, Young women who have had breast tumors).

Primary data, namely data obtained by researchers directly from respondents through filling out questionnaires which were distributed by researchers to respondents in the form of data about knowledge, attitudes and data on family support. Behavior of Breast Self-Examination (BSE). Respondents stated that they carried out breast self-examination once a month in accordance with the procedure for performing BSE. Behavior was measured by statements of ever and never and followed by statements of steps to perform BSE which totaled 6 statement items. If the statement is answered Yes then it is given a score = 1, if the statement is answered no then it is given a score = 0 (9). Knowledge is everything that the respondent knows about BSE, namely the meaning of BSE, the purpose and benefits of BSE, the target and timing of BSE, and guidelines for implementing BSE. The knowledge variable uses the Guttman scale, which consists of 10 statements with two categories namely "True" is given a score of one (1) and "False" is given a score of zero (0) (10). Attitudes are positive and negative responses regarding BSE, namely the respondent's belief or trust in BSE. Measurement of attitude variables using the Guttman scale. Fill out a questionnaire consisting of 10 statements with two categories, namely "Correct" is given a score of one (1) and "False" is given a score (0) (10). Respondents' exposure to information about BSE through the internet, mass media, health workers, family, friends, and others. The objective criteria for the exposure variable are exposure (if the respondent has received information about BSE) and not exposed (if the respondent has never received information about BSE) (9). Parental support is support or motivation, both information and so on, provided by the respondent's parents to perform BSE. The parental support variable uses the Guttman scale, which consists of six questions with two categories, namely "Yes" which is given a score of one (1) and "No" which is given a score of zero (0).

This bivariate analysis was performed to prove the hypothesis by testing the difference in proportions using the Chi Square statistical test with a significance level of $p < 0.05$.

3. Results

Table 1 Characteristics of Respondents and Research Variables

Variable	n	%
Age (y.o)		
16	22	27.5
17	42	52.5
18	15	18.8
19	1	1.2
Behaviour		
Poor	38	47.5
Good	42	52.5
Knowledge		
Lack	44	55
Sufficient	36	45
Attitude		
Negative	48	60
Positive	32	40
Information Exposure		

Variable	n	%
None	35	43.8
Yes	45	56.2
Parental Support		
Lack	41	51.2
Sufficient	39	48.8

Table 1 shows that the majority of respondents are 17 years old, namely 52.5% with good behavior, namely 52.5%, knowledge including lack, namely 55%, attitude including negative, namely 60%, and information exposure including high, namely 56.2%, and parental support including lack, namely 51.2%.

Table 2 Relationship Variable Knowledge, Attitude, and Information Exposure in Behavior

Variable	Behaviour				Total		<i>p-value</i>	<i>OR</i>
	Poor		Good		N	%		
	n	%	n	%				
Knowledge								
Lack	26	59.1	18	40.9	44	100	0.022	2.889
Sufficient	12	33.3	24	66.7	36	100		
Attitude								
Negative	30	62.5	18	37.5	48	100	0.001	5.000
Positive	8	25	24	75	32	100		
Information exposure								
None	20	57.1	15	42.9	35	100	0.128	2.000
Yes	18	40	27	60	45	100		
Parental Support								
Lack	26	63.4	15	36.6	41	100	0.003	3.900
Sufficient	12	30.8	27	69.2	39	100		
Total	38	47.5	42	52.5	80			

Based on Table 2, the results show that there was a relationship between knowledge and BSE behaviour in young women at a senior high school in SMA Negeri 7 Palu City. There was a relationship between attitudes and BSE behaviour in young women at this school. However, there was no relationship between information exposure and BSE behaviour in young female students. Also, there was a relationship between parental support and BSE behaviour in female students of this senior high school.

4. Discussion

Relationship Between Knowledge and BSE Behaviour

Knowledge about health includes what a person knows about ways to maintain health. Adopting behaviour based on knowledge, awareness, and a positive attitude towards the stimulus will form new behaviours that can last a long time (11). This research is in line with Parmin (2018), which states that there is a relationship between knowledge and the implementation of BSE at the senior high school of SMAN BERNAS, Pangkalan Kerinci (12). This is different from the research of Siregar (13), who found no relationship between knowledge and BSE (Breast Self-Examination) behaviour.

The level of knowledge influences behaviour because knowledge is a psychological domain and a predisposing factor that becomes an individual's consideration in facilitating and underlying certain behaviours. Actions that are based on the knowledge one has will last longer than actions that are not based on knowledge. If a person knows the importance of early detection of an abnormal lump in the breast, a positive response will arise towards BSE behaviour. However, if the knowledge is lacking, it will not cause a good response to BSE behaviour. The same thing happens with women; their good knowledge of breast cancer and BSE causes them to practice BSE as a form of secondary prevention.

Relationship Between Attitude and BSE Behavior

Attitude is a readiness or willingness to take action, not the implementation of certain motives. Someone

who has a good attitude will be able to take action to do BSE to find out early if there are abnormalities in their breasts (14). This research is in line with research Sarinah et al (2020)(15) that there is a relationship between attitudes and BSE behaviour in female students of the Faculty of Public Health, the University of Hasanuddin, Makassar in 2018, thus female students who have a positive attitude towards BSE have the behaviour of having performed BSE. However, this is different from research conducted by Widyaningsih (2019) (16), which shows no relationship between attitudes and behaviour of adolescents about BSE. A person's attitude can be different; if it is liked, people will approach, find out and join in; otherwise, if it is disliked, people will avoid it and stay away. It is the same with BSE; if someone has a negative attitude, that person will be disinterested and indifferent to doing it (17).

The Relationship Between Information Exposure and BSE Behavior

Based on the results of the study, it was found that there was no relationship between information exposure and BSE behaviour in young women at the senior high school of SMA Negeri 7, Palu City. This is in line with the results of research conducted by Apriliyana et al (2017) (18), which shows no significant relationship between exposure to information media and BSE practices in young women at senior high school of SMA Negeri 3 Semarang. Effective sources of health information are significant in increasing knowledge and positive attitudes to prevent the spread of disease. Information can come from anywhere, from health workers, family, friends or through the mass media. Exposure to information that is heard, seen or read will increase knowledge and influence decision-making actions. Therefore, it is necessary to continuously disseminate information related to BSE through various means, such as social media, so that the information obtained can be accessed, seen and heard from anywhere (19).

Based on the results of this study shows that there is no significant relationship between information exposure and BSE behaviour. This can be caused by incomplete information, which affects the new knowledge that is also incomplete and causes a negative response to BSE behaviour. Inaccurate information about BSE and breast cancer that comes from various other sources of information also influences a person's negative perception of BSE itself. One reason for the difference in information obtained by the researcher for each respondent is because of class differences resulting from the difference in the level of knowledge possessed by each respondent. This research is in line with Sari NK (2017) (20) that there is no relationship between information exposure and BSE behaviour of public health students at the Muhammadiyah University of Surakarta.

The Relationship Between Parental Support and BSE Behaviour

Family support is a factor of BSE behaviour because respondents consider family to be role models or role models so that everything the family gives can be in the form of information and messages and other things that tend to be accepted by respondents. If the family provides information about BSE to the respondent and emphasizes that the respondent performs BSE, then the respondent will follow the advice because, for children, parents are the main role models for them (21). This research is in line with Apriliyana et al (2017) (18); the better the parental support, the better the practice of breast self-examination (BSE) or the less parental support, the less practice of BSE will also be.

Family support is a reinforcement of the formation of one's behaviour, where every support and interaction produce a reciprocal relationship that influences each individual's behaviour patterns. Parents provide direction to socially approved behaviour patterns in educating their children (18). In line with research Widyaningsih EB (2019) (16), there is a relationship between parental support and adolescent behaviour regarding BSE. This follows the theory that parental support is encouraged to participate in counselling because their encouragement, enthusiasm, and emotional support play a role in the success of a goal to practice health.

Students who get less parental support to carry out BSE because some of their parents do not provide information about BSE, and some students whose parents provide information about BSE but do not remind and encourage them to do BSE. So, parental support in their child's decision-making is quite influential if it is routinely controlled because the good habits of a child will fade if the people around do not always remind him.

5. Conclusion

There is a relationship between knowledge, attitudes and parental support with BSE behaviour. Besides, it is

expected that the senior high school of SMA Negeri 7 Palu City and the health department will work together by providing material on reproductive health and preventing non-communicable diseases as early as possible. It is particularly on breast cancer prevention with Breast Self-Examination (BSE) either through learning or health promotion methods and media such as films about health and health seminars, as well as youth PIK organizational managers who are more proactive in providing information about existing health problems.

Funding: -

Acknowledgments: -

Conflicts of Interest: The authors declare no conflict of interest

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