

ARTICLE INFORMATION

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Factors associated with breast self-examination behavior in adolescent girls

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Abstract

Background: Breast cancer is the most common type of cancer among women worldwide, including in Indonesia. The Ministry of Health of the Republic of Indonesia states that one of the institutions that can be made for early prevention of breast cancer is breast self-examination, commonly known as SADARI (an acronym in Indonesian). According to the 2019 Non-Communicable Disease Risk Factor Survey (PTM 2019), the practice of BSE among the public is still level low. As many as 53.7% have never performed BSE, while 46.3% have done it at least once. However, the practice of BSE among female adolescents remains relatively low.

Purpose: to determine the factors associated with breast self-examination behavior among female adolescents.

Method: This research uses a correlational analytic analysis with a cross-selective approach. The sample consisted of 89 students selected using simple random sampling. Data were collected using questionnaires measuring knowledge, attitude, family support, and BSE behavior. Data analysis was carried out using the chi-square test.

Results: The results showed that the majority of respondents had good BSE behavior (30.3%), good knowledge (51.7%), positive attitudes (53.9%), and good family support (46.1%). There was a significant relationship between knowledge and BSE behavior ($p=0.000$), attitude and BSE behavior ($p=0.000$), and family support and BSE behavior ($p=0.030$) ($p<0.05$).

Conclusion: It can be concluded that knowledge, attitude, and family support are associated with BSE behavior among female students.

Keywords: Attitude; Adolescent Girls; BSE; Family Support; Knowledge.

INTRODUCTION

Breast cancer is one of the most prevalent non-communicable diseases affecting women worldwide, including in Indonesia. According to 2020 data from the Global Cancer Observatory (GLOBOCAN), breast cancer accounted for approximately 16.6% of all new cancer cases in Indonesia, with a total of 68,858 cases (Ministry of Health of the Republic of Indonesia, 2023). This places breast cancer among the cancers with the highest incidence in Indonesia. This high incidence presents a significant challenge to public health, particularly in promotive and preventive efforts. One of the most important steps highly recommended by the Indonesian Ministry of

Public Health for early detection of breast cancer is breast self-examination (BSE) (Carolina, Indriani & Ismah, 2024). This examination is highly recommended to be performed routinely every month, especially by women starting from adolescence after their first menstruation. BSE is considered an effective, simple, and inexpensive way to independently detect changes or abnormalities in the breasts. However, despite its significant benefits, awareness and behavior of the Indonesian public, especially young women, in performing BSE remains low.

Breast cancer is the most common cancer and a

leading cause of death worldwide. Breast self-examination (BSE) is a cost-effective tool for self-assessment and the potential for early detection of breast cancer in resource-limited settings (Ishtiak, Ahmed, Gaffar, Khan, & Yasmeen, 2022). Globally, breast cancer (BC) is the most frequently detected neoplasm in women. Breast self-examination (BSE) is an effective screening technique that allows women to learn about their breast composition and aids in the early identification of potential breast abnormalities (Oglat, AbuKhalil, Hasan, Isawi, Oqlat, Mhanna, & Akhdar, 2024).

BSE estimates that screening is more effective, reducing mortality by around 25-30%. BSE should be performed starting at age 20 and above, with female students reaching this age group. Female students pursuing health education generally have acquired knowledge about BSE, which tends to develop positive attitudes that are reflected in their behavior. This knowledge is crucial in shaping a person's behavior (Mawikere, Sihotang, & Koamesah, 2021). Breast self-examination can begin as early as puberty. This is essential to detect abnormalities and lumps in the breasts as early as possible, allowing for faster and more appropriate treatment (Setyawan & Rahmawati, 2019). Breast self-examination is more effective in young and reproductive-age women aged 15-49, as women in this age group are at risk of breast cancer. However, women's awareness of the practice of breast self-examination remains very low, at only around 25%-30%. This low awareness is due to a lack of information and education about the importance of performing breast self-examination (Sari, Sayuti, Ridwan, Rekiaddin, & Anisa, 2020).

According to the 2019 Basic Health Research on Non-Communicable Diseases, 56% of women in Indonesia have never performed BSE (Kalsum, Gusmawati, Fitri, & Sitanggang, 2024). Previous research also shows that the level of BSE implementation among adolescents is still relatively low, partly due to a lack of knowledge, negative attitudes towards early detection, and a lack of family support. Based on Lawrence Green's theory of health behavior, there are three main factors that influence behavior (Setyowati, Nurrahmania, Ummah, Prasasti, Aditya, Rahmi, & Ulhaq, 2024). Predisposing factors (knowledge and attitudes),

enabling factors (availability of facilities, access to information), and supporting factors (family and health professional support). In breast self-examination (BSE), knowledge is the primary resource for young women to recognize the importance of early detection. Without adequate knowledge, young women tend to be unaware of the risks and importance of performing breast self-examination. A positive attitude toward early detection is also needed to encourage and motivate them to perform BSE regularly (Adimuntja, Nurdin, & Ahmad, 2022). Furthermore, family support, especially from parents, plays a crucial role in shaping and strengthening healthy behaviors in young women.

RESEARCH METHOD

This research is a quantitative analytical study using a cross-selection approach. This approach was used to determine the relationship between independent variables (knowledge, attitudes, and family support) and the dependent variable (BSE behavior) at the same observation point. The cross-selection design was chosen because it is efficient in terms of time and cost, and is suitable for identifying relationships between variables in a homogeneous population, such as female adolescents in a school environment. This research was conducted at SMA Nelgelri 1 Sidomulyo, located in South Lampung Regency.

The population in this study were all female teenagers who attended SMA N 1 Sidomulyo, with a total of 760 people. The sample size was 89 people obtained based on calculations using the Slovin formula. The sampling technique used was simple random sampling, meaning that each member of the population had an equal chance of becoming a respondent. Data were collected using a questionnaire that had been tested for validity and reliability. The questionnaire consisted of 10 questions about knowledge, 9 Likert scale statements for attitudes, 5 questions about family support (yes/no answers), and 8 questions related to BSE behavior. By using univariate analysis to describe the frequency distribution of each variable and bivariate analysis is used for the chi-square test to find out the relationship between independent variables and BSE behavior.

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RESEARCH RESULTS

Table Distribution Frequency of Respondents (N=89)

Variable	Results	P-value	OR
Behavior (n/%)			
Good	27/30.0		
Poor	62/67.0		
Knowledge (n/%)			
Good	46/48.3	0.001	14.5
Poor	43/51.7		
Attitude (n/%)			
Negative	48/54.0	0.001	6.092
Positive	41/46.0		
Family Support (n/%)			
Yes	43/48.3	0.001	18.1
No	46/46.1		

Based on table the results obtained were 89 respondents, the majority of whom fell into the category of good youth behavior, namely 27 respondents (30.3%), while 62 respondents (69.7%) showed bad behavior. the majority of whom were in the category of good youth knowledge, namely 46 respondents (48.3%), while those with poor knowledge were 43 (51.7%), majority of whom fell into the category of positive youth attitudes, namely 48 respondents (53.9%), while 41 respondents (46.1%) had negative attitudes and majority of whom were in the category of family support, which was 43 respondents (46.1%), while those who did not support the group were 46 respondents (48.3%).

The results of the p-value analysis were 0.001 (<0.05) which showed that there was a significant relationship between the level of knowledge and BSE behavior with an odds ratio (OR) of 14.5 which showed that respondents with good knowledge had a 14.5 times greater chance of having good BSE behavior compared to young women with poor knowledge. The results of the p-value analysis were 0.001 (<0.05) which showed that there was a significant relationship between the level of knowledge and BSE behavior. With a large odds ratio (OR) value of 6.092 which showed that young women who had a positive attitude towards BSE had a 6.092 times greater chance of having good BSE behavior, compared to young women who had a negative attitude. The results of the p-value analysis

are 0.001 (<0.05) which shows that there is a significant relationship between the level of knowledge and BSE behavior with an odds ratio (OR) of 18.1 which shows that teenagers who get support from their families have an 18.1 times greater chance of having good BSE behavior compared to teenagers who do not get support.

DISCUSSION

Based on the results of the univariate analysis, it was found that of the 89 female respondents, 46 (48.3%) had good knowledge, while 43 (51.7%) had inadequate knowledge of breast self-examination (BSE). This means that more than half of the respondents did not have adequate knowledge about the importance of BSE, including its benefits, the appropriate timing, and the steps involved.

Based on bivariate analysis using Chi-square test, a significance value ($p = 0.001$) was obtained, which means there is a significant relationship between knowledge and BSE behavior in female adolescents. The data shows that of the respondents who have poor knowledge, as many as 40 people (93.0%) have bad behavior, and only 3 people (7.0%) have good behavior. Conversely, of the 46 respondents who have good knowledge, as many as 24 people (52.2%) show good behavior, while 22 people (47.8%) still have bad behavior. This means that respondents with good knowledge are

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more likely to perform BSE routinely and correctly than those with less knowledge. Knowledge is one of the main factors influencing a person's behavior. Knowledge shapes awareness, and awareness of the importance of an action will encourage individuals to do it voluntarily.

Green's theory states that knowledge is a predisposing factor that determines a person's likelihood of adopting health behaviors. If an individual knows what, why, and how a behavior is performed (such as BSE), then they are more likely to make the right decisions regarding their health. The results of this study are in line with several previous studies, stating that knowledge plays an important role in the formation of BSE behavior in young women. The higher the knowledge, the better the behavior (Carolina et al., 2024). Other research found that high school students with good knowledge were more likely to perform BSE correctly and regularly. The study found that the high rate of bad behavior among respondents with low knowledge (93%) indicates that knowledge is the main foundation in encouraging BSE behavior (Trisina, Sadvika, Laksmi, & Adiputra, 2020). However, the study also noted that even though some respondents had good knowledge, almost half (47.8%) still did not perform good behavior. This indicates that knowledge alone is not enough; Other factors such as attitude, self-confidence, family support, and educational methods are also very influential. Several factors may cause bad behavior even though knowledge is good, such as embarrassment or taboo in discussing breast health, fear of discovering abnormalities, lack of encouragement from the surrounding environment. Pelnelliti suggests that BSE education should be carried out in a practical and applicable manner, not only in the form of lectures or printed materials, but also using videos, practical simulations, and intellectual discussions. With this approach, the knowledge possessed by young people will be easier.

Based on the results of the univariate analysis, of the 89 respondents, 50 (56.2%) had a positive attitude toward breast self-examination (BSE), and 39 (43.8%) had a negative attitude. This indicates that although more than half of the respondents had a supportive attitude toward BSE, a large number of young women still exhibited negative attitudes, such as fear, embarrassment, or a lack of confidence in

performing BSE.

Based on the results of the Chi-square statistical test, a p-value of 0.000 was obtained, indicating a significant relationship between attitudes and BSE behavior among female adolescents. Based on data from 41 respondents with negative attitudes, 38 (92.7%) demonstrated unfavorable behavior. Conversely, of the 48 respondents with positive attitudes, 24 (50.0%) demonstrated favorable BSE behavior. These results indicate that adolescents with positive attitudes toward BSE are more likely to perform it routinely and correctly than those with negative attitudes. According to other study attitude is a readiness or tendency to act. Attitude consists of three components, namely Cognitive knowledge and understanding of an object, Effective feelings towards the object (pleasure, fear, doubt), and Conative tendencies to act towards the object. People who have a positive attitude towards certain behaviors, such as BSE, will tend to take the initiative to carry out routine checks. Conversely, negative attitudes such as shame, fear, or feeling that it is not necessary will be the main inhibitors. Attitudes are also influenced by personal experiences, the influence of parents or teachers, and cultural values that develop in the environment (Hayati, Azwar, Sari, Wahyuni, Prastika, & Noviyanti, 2024). This research is in line with the results of previous research, such stating that a positive attitude towards BSE is significantly related to good examination behavior in young women as (Trisina, Sadvika, Laksmi, & Adiputra, 2020). Young people's attitudes towards BSE are a key factor in the success of promoting early detection of breast cancer (Carolina et al., 2024).

Researchers found that the high rate of negative behavior (92.7%) among negative respondents indicates that attitude is the main internal barrier. Many young people know about breast self-examination but do not perform it for emotional reasons such as embarrassment, fear of the results, or feeling that breast self-examination is not important at a young age. Even some young people with good knowledge still do not perform breast self-examination due to a lack of self-confidence, such as discomfort with their own bodies, or a culture that considers discussing breasts taboo. Researchers believe that changing attitudes requires emotional and psychological engagement, not just education. This can be

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achieved through positive campaigns involving role models, videos or real-life stories from breast cancer survivors, and small group discussions to foster awareness. With this strategy, it is hoped that young people will not only be aware (knowledge) but also feel prepared and motivated (attitude) to maintain their health through self-examination, such as breast self-examination (BSE).

Based on the results of the univariate analysis, of the 89 respondents, 43 (46.1%) reported receiving supportive family support. Meanwhile, 46 (48.3%) reported receiving no family support. This means that the majority of respondents did not receive support from their families. This indicates limitations in the role of families as sources of information and motivation for BSE practices.

The Chi-square test yielded a p-value of 0.001, indicating a significant relationship between family support and BSE behavior in female adolescents at Sidomulyo High School. The data showed that of the 43 respondents who did not receive family support, 36 (83.7%) had poor BSE practices. Of the 46 respondents who received family support, 24 (52.2%) demonstrated good BSE practices. These findings indicate that adolescents who received family support were more likely to have good BSE practices than those who did not receive support.

According to Lawrence Grell's theory, social support is included in the reinforcing factors, namely strengthening factors that come from the environment around the individual, especially the family. This support can take the form of emotional support: attention, understanding, and moral reinforcement, informational support: providing advice or information about BSE, instrumental support: assistance in the form of facilities or reminders. Families, especially parents, play an important role in shaping children's values and habits, including in terms of awareness of maintaining reproductive health. A mother's dedication to maintaining breast health can also encourage daughters to emulate this behavior (Sari, Saputri, & Lubis, 2022).

The results of this study align with several previous studies, including which showed that adolescents supported by their families had greater self-confidence in performing breast self-examination (Carolina et al., 2024). Other research which stated that family support significantly

influenced adolescents' decisions to implement early breast cancer screening (Trisina et al., 2020). Open and supportive family environment positively influences the development of healthy lifestyle behaviors in adolescents (Soviadi & Hastono 2023)

The study observed that the high rate of poor behavior among respondents who lacked family support (83.7%), indicating that families play a crucial role in shaping and encouraging BSE behavior. This condition can be caused by: Lack of communication within the family regarding reproductive health, the perceived taboo of discussing certain body parts, including breasts, and parents who do not understand the importance of BSE education for adolescents. Pelnelliti assessed that health promotion intelligence is not enough to only target teenagers, but must also involve families, especially mothers as role models, in order to create a support system that encourages the practice of BSE from an early age.

CONCLUSION

Thus, it can be concluded that knowledge, attitude, and family support are factors associated with breast self-examination (BSE) behavior in young women. These three factors contribute to shaping awareness and preventive actions regarding breast cancer from a young age.

SUGGESTION

Health topics such as BSE should be included in supplementary curriculum or extracurricular activities such as PMR. Families, especially parents, also play a crucial role in supporting young girls in practicing BSE. This support can take the form of information, motivation, and supervision to help children become accustomed to performing self-examinations. Good attention and communication within the family will influence children's mindsets and health habits, including breast health. Health workers are also expected to be more proactive in providing BSE education to the public, especially to youth in schools. Through health promotion programs or youth health post activities, health workers can provide practical examples and accurate information about proper breast examination techniques.

For further research, it is recommended to conduct research with a wider area coverage or with a more sophisticated approach, such as a qualitative model, to further explore other factors that influence

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BSE behavior. The addition of other variables, such as risk perception, digital information access, or peer influence, may also provide a more comprehensive picture.

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