



The Relationship between Family Support and Breast Self-Examination (BSE) in Breast Tumor Patients

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ABSTRACT

Introduction. In the management of both benign and malignant breast tumors, early detection via breast self-examination (BSE) is essential. It is thought that family support is crucial in promoting BSE behavior. Finding out how family support and breast self-examination (BSE) in patients with breast tumors relate to one another is the goal of this study. **Methods.** Cross-sectional is a study used in this study with an analytic observational method. The research sample was taken using a total sampling technique, which included all breast tumor patients who met the inclusion criteria at the surgical clinic of Muhammadiyah Hospital Palembang, totaling 32 respondents. **Results.** It was found that the majority of respondents suffered from malignant breast tumors (breast cancer), with 23 individuals (28.13%). Meanwhile, 9 other individuals had benign breast tumors (71.87%). Most of the respondents received family support categorized as adequate or insufficient, with their Breast Self-Examination (BSE) behavior also categorized as adequate or insufficient. The analysis revealed a p-value of 0.000 and an odds ratio (OR) of 27.00. **Conclusion.** It can be concluded that there is a significant relationship between breast tumor patients' behavior and family support, with those who received family support having a 27-fold higher likelihood of engaging in breast self-examination than those who did not.

1. Introduction

Breast tumor is a condition that occurs due to the abnormal growth of cells in the glands, connective tissue, or milk ducts of the breast. Breast tumors can be either benign or malignant (cancerous). The growth of benign breast tumors generally occurs slowly, and there is even a possibility that they may stop growing or shrink on their own. Benign breast tumors grow in a localized manner and do not invade surrounding tissues or spread to other parts of the body. However, benign tumors that continue to grow may cause pain or other complications if they press on surrounding structures such as nerves, tissues, or blood vessels. On the other hand, malignant breast tumors (cancer) are more aggressive. Their growth is very rapid, and they can invade and destroy surrounding tissues. Additionally, cancer can spread to other organs distant from the breast and form new cancers.¹

The number of women experiencing benign breast tumors in Indonesia continues to increase. According

to data from the Indonesian Ministry of Health in Ahsani & Machmud (2019); Parida (2023), between the years 2007 and 2013, there were 644,951 cases (1.75%) of benign breast tumors with detectable signs and symptoms.^{2,3} In 2015, the number of benign breast tumor cases increased by 1.8 per 100,000 women, and in 2016, it became 3.3 per 100,000 women. A drastic increase occurred in 2017, with 21.3 per 100,000 women. Meanwhile, in 2018, there were 16,956 cases of benign breast tumors. Similarly, the number of women experiencing breast cancer has also risen. According to Globocan data (2020), in 2020, breast cancer cases in Indonesia ranked first with 65,858 cases, or 16.6% of the total 396,914 new cases.⁴

Women with a history of breast tumors have the possibility of experiencing a recurrence. For example, in the case of benign breast tumors such as papillomas, the risk of recurrence can reach up to 23%. In the case of phyllodes tumors, local recurrence can occur, whether benign or malignant, and it

generally appears within a period of 2 years after therapy. The risk of developing carcinoma is associated with ductal hyperplasia and atypical changes.⁵

In Indonesia, breast cancer is the most common type of cancer and is one of the leading causes of cancer-related deaths. This is because nearly 70% of new cancer cases are detected at advanced stages due to delayed diagnosis and management.⁶ Therefore, the American College of Obstetricians and Gynecologists (ACOG) and the American Medical Association recommend breast self-examination (BSE) as a simple and effective method for early detection of abnormalities in the breast. BSE is a non-invasive examination technique that does not require any cost, as it can be performed by the woman herself.⁷

In the study by Azhar (2023), the prevalence of Breast Self-Examination (BSE) behavior in Indonesia is still relatively low (less than 50%), especially outside of Java.⁸ BSE behavior can be influenced by various factors, such as predisposition factors like age and knowledge, reinforcing factors like family support, and enabling factors like exposure to information. The motivation to perform BSE as a health action in an individual will be stronger if it is accompanied by support and motivation from the family.⁹ The lack of family support affects women's enthusiasm to perform Breast Self-Examination (BSE) and their perception of its importance. This can lead to low BSE behavior and delays in the examination or treatment of breast abnormalities.^{10,11} Therefore, the family plays a crucial role in the process of care planning, treatment, discharge, and follow-up care for patients at home.¹² The purpose of this study is to determine the relationship between family support and Breast Self-Examination (BSE) in breast tumor patients.

2. Methods

Cross-sectional is a study used in this study with an analytic observational method to assess family support for Breast Self-Examination (BSE) behavior in women at the surgical outpatient clinic of Muhammadiyah Hospital Palembang. Data on family support and BSE behavior in this study were obtained directly from the respondents through the completion of a questionnaire consisting of two categories: good and adequate/insufficient, using a

Likert scale that has undergone validity and reliability testing. Meanwhile, secondary data on breast tumors were obtained from medical records. This study has received ethical clearance with No. 081/EC/KBHKI/FK-UMP/XI/2024.

The population in this study consists of breast tumor patients at the surgical outpatient clinic of Muhammadiyah Hospital Palembang who meet the inclusion criteria. The sampling technique used was total sampling, with a total of 32 respondents. The inclusion criteria include women who are currently or have previously experienced breast tumors, are willing to participate as study respondents, can communicate well, have family members who are women aged 18 years and older, and neither the patients nor their family members are medical professionals. The exclusion criteria include women who did not complete the entire questionnaire.

Family support data in this study were obtained directly from the respondents through the completion of a questionnaire that had undergone validity and reliability testing, while secondary data on breast tumors were obtained from medical records. Data analysis in this study used the Fisher Exact test to determine the relationship between family support and Breast Self-Examination (BSE) in breast tumor patients.

3. Results

Based on Table 1, it was found that the most common type of breast tumor is malignant tumor (cancer), which occurred in 23 individuals (71.87%).

In table 2, it is shown that respondents who received good family support mostly also had good Breast Self-Examination (BSE) behavior, with a total of 9 individuals. Respondents who received family support categorized as adequate or insufficient mostly also exhibited adequate or insufficient BSE behavior, with a total of 18 individuals.

The analysis using the Chi-square test revealed one cell with an expected count of less than 5 (25%), so an alternative test, the Fisher Exact test, was performed. The p-value obtained was 0.000 ($p < 0.05$), which indicates a significant relationship between family support and BSE behavior in breast tumor patients. The Odds Ratio (OR) was 27.00, which means that patients who received family support were 27 times more likely to perform BSE compared to those who did not receive family support.

Table 1. Frequency distribution of respondent characteristics

Characteristics	n (32)	Percentage (%)
Type of tumor		
Benign	9	28,13
Malignant (cancer)	23	71,87

Table 2. The Relationship between family support and Breast Self-Examination (BSE) behavior

Family Support	BSE Behaviour				Total		P-value	OR
	Enough and Less		Good		N	%		
	N	%	N	%				
Enough and Less	18	90,0%	3	25%	21	65,6%	0,000	27,000
Good	2	10,0%	9	75%	11	34,4%		
Total	20	62,5%	12	37,5	32	100%		

4. Discussion

4.1 Respondent characteristics

In this study, it was found that breast cancer is the most common condition experienced by the respondents, with 23 cases (71.87%). According to the Indonesian Ministry of Health (2024), breast cancer is the most commonly diagnosed type of cancer in Indonesia and is one of the leading causes of cancer-related deaths. This is because nearly 70% of new cancer cases are detected at advanced stages due to delayed diagnosis and management.⁶ Research by Suarfi et al. (2019) found that the most common type of breast cancer at the Anatomical Pathology Laboratory of M. Djamil Hospital as many as 63.8% was invasive ductal carcinoma.¹³ This is consistent with the research by Siregar (2018), which showed that out of 60 breast cancer patients who were biopsied, 31 patients (51.66%) had a histopathology of invasive ductal carcinoma.¹⁴

4.2 The relationship between family support and Breast Self-Examination (BSE) behavior

This study shows that respondents who received good family support mostly had good Breast Self-Examination (BSE) behavior (9 individuals), while those who received family support categorized as adequate or insufficient mostly exhibited adequate or insufficient BSE behavior (18 individuals). These findings are in line with the research by Ardana, Hidayatillah, and Pamungkas (2023), which found a relationship between family support and early detection behavior through BSE.¹⁵ A similar finding was also reported in the study by Sundari, Utami, and Ariestanti (2022) on women of reproductive age, which showed a relationship between family support and BSE behavior.¹⁶ According to Friedman in Despitasari (2017), family support includes informational, evaluative, instrumental, and emotional support, which plays a key role in shaping individual behavior.¹² The lack of family support is associated with the low implementation of BSE, as the family influences how health knowledge and behaviors are accepted.¹⁷

Women with a history of breast tumors are at risk of recurrence, such as in benign tumors like papillomas, with a recurrence risk of up to 23%, or phyllodes tumors, which can recur within 2 years after therapy, whether benign or malignant. The risk of carcinoma is associated with ductal hyperplasia and atypical changes.⁵ The study by Eveline, Purwanto, and Lestari (2017) recorded a recurrence

rate of 30% in breast cancer patients after surgery.¹⁸ Therefore, early detection through BSE is very important, especially for women with a history of breast tumors. Family support plays a crucial role in ensuring that women regularly perform BSE, so that recurrences can be detected earlier and appropriate treatment can be provided promptly.

According to Ramin et al. (2021), among 12,986 breast cancer patients who were monitored over an average of 8 years, the occurrence of contralateral breast cancer (CBC) was found, with a risk twice as high as that of the general population (SIR = 2.21).¹⁹ The study by Kim et al. (2023) also recorded 418 out of 16,251 breast cancer patients in Korea who experienced CBC.²⁰ This finding emphasizes the importance of continuous breast health monitoring for breast cancer survivors. Breast Self-Examination (BSE), as a simple method that can be routinely performed at home, plays a crucial role in detecting early changes that may indicate the presence of CBC.⁷

This study shows a significant relationship between family support and BSE behavior in breast tumor patients, with a p-value of 0.000 ($p < 0.05$) and an Odds Ratio (OR) of 27.00, which means that patients who receive family were more likely to perform BSE compared to patients who did not receive family support (OR=27.00; 95% CI=3.8-191.7; $p = 0.000$). These findings align with the study by Siregar (2022), which also found a significant relationship between family support and BSE behavior, where individuals who received family support were 6.37 times more likely to perform BSE.²¹

The family plays an important role in shaping individual behavior, including in the process of learning and developing behavior. Each family function involves the role of its members, which influences the effectiveness of family functions as well as the formation of the character and behavior of its members.²² The family also influences the formation of self-concept, where families with strong and stable self-concepts can create an environment that supports affection, attention, and appreciation for breast tumor patients.¹² Furthermore, family support, such as emotional support and appreciation, provides significant psychological support, helping patients develop positive expectations for the future and reducing psychological issues such as anxiety, stress, and depression.²³

In this study, it was found that although there

were respondents with good family support, some of them exhibited adequate or insufficient BSE behavior. Conversely, some respondents with adequate or insufficient family support showed good BSE behavior. This suggests that other factors beyond family support may influence BSE behavior. In line with Lawrence Green's theory, as cited by Masso-Calderón et al. (2018), factors that influence BSE behavior include predisposition factors (knowledge, attitude, cultural values, and individual characteristics), enabling factors (availability of healthcare facilities and resources), and reinforcing factors (influence of community leaders, religion, and healthcare professionals).²⁴

According to Sari, Handayani & Harini (2022), predisposing factors are the dominant factors influencing BSE behavior as an early detection method for breast cancer. These factors include: (1) Knowledge, which greatly influences BSE behavior because of the understanding of breast tumors and the healing process; (2) Attitude, where a positive attitude encourages early detection actions; (3) Cultural values, which influence individual decisions and actions; (4) Perception, which impacts the understanding of the severity of the disease; and (5) Individual characteristics, such as the recommended age range of 15-65 years for performing BSE.²⁵ The main factor influencing BSE behavior in this study was knowledge, which is influenced by education level and understanding of breast tumors and BSE.²⁶

5. Conclusion

In this study, the majority of breast tumor cases found were malignant tumors (cancer), with a total of 23 cases (71.87%). This study also shows a significant relationship between breast tumor patients' behavior and family support, with those who received family support being more likely to perform BSE compared to patients who did not receive family support (OR=27.00; 95% CI=3.8-191.7; p= 0.000).

In efforts to improve early detection behavior for breast tumors, it is hoped that the active role of the community in providing support to their family members regarding BSE behavior, as an important step in the early detection of breast tumors, will be emphasized. Family involvement is crucial in encouraging regular BSE behavior, which can contribute to a reduction in the incidence of breast cancer detected at advanced stages.

6. Author Contribution

All authors equally contribute to the study from the conceptual framework, data acquisition, data analysis, and reporting the study result through publication.

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