



Analysis Of Factors Related to Conscious Breast Self-Examination (BSE) Behavior in Women Of Childbearing Age (WCA)

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ABSTRACT

A survey of WUS aged 20-45 years in the Harapan Baru area of Bekasi City which was conducted randomly found 4 out of 10 WCA did not know the early detection of breast cancer and did not do BSE as a form of early detection of breast cancer. The purpose of this study is to analyze factors related to BSE behavior in WCA in the Harapan Baru area of Bekasi City in 2022. This research is a cross-sectional quantitative analytic type of research. The research sample amounted to 100 respondents with data collection using a questionnaire sheet. Data analysis through univariate and bivariate analysis using Chi-Square test. The results showed that BSE behavior in WCA 34.00% had knowledge of 32.00% with a higher education background of 62.00%, and obtained 43.00% of information sources, but there was still anxiety 58.00% despite the support of health workers 46.00%. There is a relationship between knowledge and BSE behavior (p -value 0.021), there is a relationship between education and BSE behavior (p -value 0.027), there is a relationship between information sources and BSE behavior (p -value 0.022), there is a relationship between anxiety and BSE behavior (p -value 0.014), there is a relationship between the support of health workers with BSE behavior (p -value 0.034).

Keywords: breast cancer, BSE behavior, women of childbearing age

Article history :

Received: 3 June 2022

Received in revised form: 11 August 2022

Accepted: 28 September 2022

Available online: 1 December 2022



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INTRODUCTION

Breast cancer is one type of cancer that is very feared by women. New cases of breast cancer continue to increase year by year. Breast cancer cases rank as the second leading cause of death from cancer. According to *The Global Cancer Observatory 2020* data, breast cancer in Indonesia is among the most common cancers found in women with a proportion of 30.8% of the total other cancer cases, namely 65,858 new cases. Even among countries in Southeast Asia, breast cancer cases and deaths from it are among the highest, the rate of new cases of breast cancer is 16.6% of cases and the death rate from breast cancer reaches 9.6%.¹

Due to the high incidence of breast cancer, not a few breast cancer sufferers lead to death. Therefore, it is important to carry out early detection of breast cancer for WUS. Early detection is the most important step to suppress breast cancer cases. Early detection of breast cancer can use several ways, namely clinical breast examination (SADANIS) by a doctor, mammography, biopsy without surgery and the easiest is breast self-examination (SADARI)².

Breast cancer control is prioritized on preventive measures and early detection through SADANIS and SADARI methods. The SADARI method is still considered the easiest, safe and simple way. Through SADARI, more early-stage breast cancer can be detected. However, due to fear and anxiety in facing reality, SADARI has not been effective, where there are still few women who do SADARI (around 15-30%) and 55% of women's understanding of SADARI technically has not been mastered².

Human behavior will relate to 3 factors, namely: predisposing factors, enablers, reinforcers. *Predisposing factors* are knowledge, attitudes, beliefs, education, social, economic level, and so on. *Enabling factors* are related to the availability of health facilities and infrastructure. *Reinforcing factors* include the attitudes and behaviors of public figures, religious leaders, and health workers. Based on these theories, it can be seen that knowledge, education, sources of information, anxiety, and support of health workers have an important role in the formation of a person's behavior, including SADARI behavior in WUS³.

Education has a relationship with behavior change, resulting in many changes in one's knowledge, especially in the field of health. The higher the level of education facilitates the absorption of information about health so that the higher the awareness of a person in behaving in a healthy life. A person's behavior can be influenced by education such as lifestyle and motivation in order to play a role in health development. The higher a person's education, the easier it will be to receive information so that the more health knowledge he has, especially about breast cancer and SADARI behavior⁴

The source of information is the presence of information related to the actions that a person will take. A WUS will carry out SADARI if they get an explanation of the purpose, benefits, and how to do

the SADARI. Sources of information are sourced from health promotion activities aimed at predisposing factors in the form of providing health information (messages) and health counseling. Health promotion can be done using mass media such as TV, radio, newspapers, print media and even social media ⁵ Anxiety is a psychological condition of a person who is full of fear and worry about something that is not certain to happen ⁶ .

A preliminary survey of WUS in the Harapan Baru area of Bekasi City with an age range of 20-45 years which was carried out randomly obtained results of 4 out of 10 WUS not knowing the early detection of breast cancer and did not conduct SADARI as a form of early detection of breast cancer.

The purpose of this study is to analyze factors related to SADARI behavior on WUS in the New Hope area of Bekasi City in 2022.

METHOD

This research is a quantitative research of *cross-sectional analytic* type where independent variables and dependent variables are studied simultaneously ⁷. The design of this study aims to find factors related to SADARI behavior in WUS. The study sample was 100 WUS aged 20-45 years who lived in the Harapan Baru area of Bekasi City.

The data collected/used in this study is primary data obtained by providing questionnaires to 100 WUS in the Harapan Baru area of Bekasi City. All subjects of the study as a sample of respondents have agreed and signed *inform consent*. Data analysis techniques use univariate and bivariate analysis through *the Chi-Square* test.

RESULT

Table 1
Frequency Distribution of Respondent Profiles

Characteristic	n	%
Age		
20-25 years	9	9,00
26-30 years	16	16,00
31-35 years	26	26,00
36-40 years	36	36,00
41-45 years	13	13,00
Marital Status		
Unmarried	25	25,00
Marry	70	70,00
Widow (Divorced)	5	5,00
Work		
PNS/TNI/Polri	11	11,0
Employee	61	61,0
Entrepreneurial	19	19,0
Miscellaneous	9	9,0

Table 1 shows the results of the univariate analysis of respondents' characteristics obtained by the majority of respondents were WUS aged between 31-35 years (36.00%) with marital status married not widowed (70.00%) working as private employees (61.00%). The characteristics of minority respondents were WUS aged 20-25 years (9.00%) with widowed or divorced marital status (5.00%) and having miscellaneous jobs (9.00%).

Table 2
Frequency Distribution of Research Variables

Variable	n = 100	Percentage
Aware Behavior		
Not Doing	34	34,00
Do	66	66,00
Knowledge		
Less	32	32,00
Good	68	68,00
Education		
Low	38	38,00
Tall	62	62,00
Sources of Information		
Not Getting	43	43,00
Get	57	57,00
Anxiety		
None	42	42,00
Exist	58	58,00
Health Workers Support		
Less	47	47,00
Good	53	53,00

Table 2 shows the results of a univariate analysis of factors related to SADARI behavior on WUS showing that the majority of respondents doing SADARI (66.00%) have good knowledge (68.00%) with a background in higher education level (62.00%). Based on the source of information obtained, the majority of respondents received information (57.00%), but respondents still had anxiety (58.00%) about breast cancer despite the support of good health workers (53.00%) from the Harapan Baru Area of Bekasi City in providing counseling and training SADARI

Table 3
The Relationship of Knowledge to Conscious Behavior

Knowledge	Aware Behavior				Total	X ² (p-value)	OR (95% CI)
	Q. Perform		Do				
	n	%	n	%	n	%	
Less	16	16,00	16	16,00	32	32,00	5,69
Good	18	18,00	50	50,00	68	68,00	(0,021)
Total	34	34,00	66	66,00	100	100,00	(1,155-6,682)

Table 3 shows the results of a bivariate analysis of knowledge with SADARI behavior obtained WUS behavior in conducting SADARI the majority in WUS who have good knowledge-doing behavior is 50 respondents (50.00%), behavior does not perform as many as 18 respondents (18.00%). WUS who had knowledge of under-behavior performed were 16 respondents (16.00%), non-performing behavior as many as 16 respondents (16.00%) This finding indicates WUS with good knowledge tends to have good behavior in doing SADARI.

The *Chi-Square* test yields $X^2 = 5.368$ with $p\text{-value} = 0.021 < 0.05$, so it can be concluded that hypothesis 1 (H1) states that there is a relationship of knowledge with AWARE behavior in WUS is accepted (proven). Furthermore, the Risk Estimate test results obtained an *Odds Ratio* (OR) value = 2.778, meaning that WUS who have less (low) knowledge about breast cancer and SADARI are likely to have a chance of behaving not doing SADARI 2,778 times greater than WUS who have good knowledge.

Table 4
The Relationship of Education to Conscious Behavior

Education	Aware Behavior				Total n	X ² (p-value)	OR (95% CI)
	Q. Perform		Do				
	N	%	N	%	%		
Low	18	18,00	20	20,00	38	4,881	2,588
Tall	16	16,00	46	46,00	62	(0,027)	(1,102-6,077)
Total	34	34,00	66	66,00	100	100,00	

Table 4 shows the results of a bivariate analysis of education with SADARI behavior obtained WUS behavior in conducting SADARI the majority in WUS who have higher education-the behavior of doing is 46 respondents (46.00%), the behavior of not doing as many as 16 respondents (16.00%). Education low-behavioral conduct was 20 respondents (20.00%), for non-performing behaviors 18 respondents (18.00%) These findings indicate WUS with higher education levels tend to have good behavior in doing SADARI.

The *Chi-Square* test yielded $X^2 = 4.881$ with $p\text{-value} = 0.027 < 0.05$, so that it can be concluded that hypothesis 2 (H2) states that there is a relationship between education and CONSCIOUS behavior in WUS is accepted (proven). Furthermore, the results of the *Risk Estimate* test obtained an *Odds Ratio* (OR) value = 2.588, meaning that WUS who have a low level of formal education are likely to have a chance of behaving not to do SADARI 2,588 times greater when compared to WUS with a high level of formal education.

Table 5
Relationship of Information Sources to SADARI Behavior

Sources of Information	Aware Behavior						X ² (p-value)	OR (95% CI)
	Q. Perform		Do		Total			
	N	%	N	%	n	%		
Q. Getting	20	20,00	23	23,00	43	43,00	5,263	2,671
Get	14	14,00	43	43,00	57	57,00	(0,022)	(1,141-6,250)
Total	34	34,00	66	66,00	100	100,00		

Table 5 shows the results of a bivariate analysis of information sources with SADARI behavior obtained WUS behavior in conducting SADARI the majority of WUS got information-doing behaviors were 43 respondents (43.00%), non-performing behaviors as many as 14 respondents (14.00%). WUS uninformed-behavior performed was 23 respondents (23.00%), behavior did not perform as many as 20 respondents (20.00%) These findings indicate WUS who were informed about early detection of breast cancer tended to have good behavior in doing SADARI.

The *Chi-Square* test yields $X^2 = 5.263$ with $p\text{-value} = 0.022 < 0.05$, so it can be concluded that hypothesis 3 (H3) states that there is a relationship of the source of information with the behavior of SADARI on WUS is accepted (proven). Furthermore, the Risk Estimate test results obtained an *Odds Ratio* (OR) value = 2.671, meaning that WUS that did not receive a source of information about breast cancer and SADARI was likely to have a 2,671 times greater chance of behaving without SADARI than WUS who received information.

Table 6
The Relationship of Anxiety to Conscious Behavior

Anxiety	Aware Behavior						X ² (p-value)	OR (95% CI)
	Q. Perform		Do		Total			
	N	%	N	%	n	%		
None	20	20,00	22	22,00	42	42,00	5,985	2,857
Exist	14	14,00	44	44,00	58	58,00	(0,014)	(1,217-6,708)
Total	34	34,00	66	66,00	100	100,00		

Table 6 shows the results of a bivariate analysis of WUS anxiety with SADARI behavior obtained WUS behavior in conducting SADARI the majority on WUS there is a sense of anxiety-behavior doing is 44 respondents (44.00%), for behavior not doing 14 respondents (14.00%). WUS no anxiety-behavior doing was 22 respondents (22.00%), behavior not doing as many as 20 respondents (20.00%) These findings indicate WUS that there is a sense of anxiety about breast cancer is likely to have good behavior in doing SADARI.

The *Chi-Square* test yielded $X^2 = 5.985$ with $p\text{-value} = 0.014 < 0.05$, so it can be concluded that hypothesis 4 (H4) states that there is a relationship between anxiety and

conscious behavior in WUS is accepted (proven). Furthermore, the Risk Estimate test results obtained an *Odds Ratio* (OR) value = 2,857, meaning that WUS who do not have anxiety about breast cancer are likely to have a chance of behaving without SADARI 2,857 times greater when compared to WUS where there is a sense of anxiety.

Table 7
The Relationship between Health Worker Support and SADARI Behavior

Health Worker Support	Q. Perform		Aware Behavior		Total		X ² (p-value)	OR (95% CI)
	N	%	Do N	%	n	%		
Less	21	21,00	26	26,00	47	47,00	4,508	2,485
Good	13	13,00	40	40,00	53	53,00	(0,034)	(1,062-5,814)
Total	34	34,00	66	66,00	1000	100,00		

Table 7 shows the results of a bivariate analysis of the support of health workers with SADARI behavior obtained WUS behavior in conducting SADARI the majority on WUS with the support of good-behavioral health workers doing was 40 respondents (40.00%), behavior did not perform as many as 13 respondents (13.00%). WUS with the support of health workers lacking behavior doing was 26 respondents (26.00%), behavior not doing as many as 21 respondents (21.00%) These findings indicate WUS with the support of good health workers is likely to have good behavior in doing SADARI.

The *Chi-Square* test yielded $X^2 = 4.508$ with $p\text{-value} = 0.034 < 0.05$, so it can be concluded that hypothesis 5 (H5) states that there is a relationship between health worker support and SADARI behavior in WUS is accepted (proven). Furthermore, the results of the *Risk Estimate* test obtained an *Odds Ratio* (OR) value = 2.485, meaning that WUS lacks the support of health workers, it is likely to have a chance of behaving not to do SADARI 2,485 times greater than WUS with the support of good health workers.

DISCUSSION

The better WUS knowledge about breast cancer and SADARI, the better WUS's behavior will be in doing SADARI. WUS who lack knowledge about breast cancer and SADARI are 2,778 times more at risk of not doing SADARI than WUS with a good level of knowledge (OR = 2,778). These results support research ¹ and ⁵ successfully proving a significant relationship of knowledge with SADARI behavior.

WUS behavior is influenced by the level of knowledge because knowledge is the domain of psychology and is a predisposing factor that is a personal consideration of WUS in facilitating and underlying the occurrence of certain behaviors (SADARI). WUS actions that are based on knowledge will last longer than actions that are not based on knowledge. If WUS has good knowledge about the

importance of early detection of breast cancer, there will be a positive response to SADARI behavior. But on the contrary, if the WUS knowledge is low, it will not cause a positive response to SADARI's behavior.

The higher the level of formal education of WUS, the better the behavior of WUS in conducting SADARI. WUS with a low formal education background is 2,588 times more at risk of not doing SADARI when compared to WUS which has a higher level of education (OR = 2,588). These results support research ⁴ successfully proving empirically there is a meaningful relationship between WUS education and SADARI behavior.

Education is one of the predisposing factors that influence WUS behavior. Education can influence/ support WUS knowledge, low levels of education are always related to limited information and knowledge. The higher the WUS education, the higher WUS's understanding of the information obtained and the higher the knowledge, thus determining WUS's behavior. The higher education level makes it easier for WUS to receive and understand various information about breast cancer and SADARI, so as to increase WUS knowledge, finally this good knowledge forms the disposition and behavior of WUS doing SADARI. Thus, WUS who has a higher level of education is better at receiving information and conducting SADARI when compared to low-educated WUS.

The more information you get about breast cancer and SADARI, the better WUS will behave in doing SADARI. WUS who did not get information about breast cancer and SADARI was 2,671 times more at risk of not doing SADARI than WUS getting information (OR = 2,671). These results support research ¹¹ and (Khairunnissa, *et al.* , 2017) found evidence of a significant association between the source of information and the behavior of SADARI. Most SADARI behaviors have their source of information from health workers.

Effective sources of health information about breast cancer and SADARI are important in increasing the knowledge and positive attitude of WUS to prevent the spread of breast cancer. This information comes from various sources, both health workers, family, friends, and through the mass media. Exposure to the information heard, seen, and read can increase WUS's knowledge of breast cancer and SADARI, thus influencing WUS's decision-making actions to conduct SADARI. If the information about breast cancer and SADARI obtained by WUS is incomplete, this will affect WUS knowledge and can eventually cause a negative response (perception) to SADARI behavior itself.

The heavier the level of anxiety that WUS feels towards breast cancer, the better WUS's behavior will behave in doing SADARI. WUS who do not have anxiety about breast cancer are 2,857 times more at risk of not doing SADARI compared to WUS who have a sense of anxiety (OR = 2,857). These results

support research⁹ finding evidence of anxiety levels statistically associated with SADARI practices or behaviors. The level of anxiety is a risk factor for WUS behavior to do SADARI.

WUS anxiety about the risk of breast cancer is an unpleasant emotional reaction, characterized by a deep and sustained feeling of fear or worry that is not certain to occur. The appearance of anxiety about breast cancer can affect the psychological condition of WUS in doing SADARI, for fear of physical changes that occur, diagnosed breast cancer after doing SADARI. When WUS feels severe anxiety about cancer, it can affect his psychological condition to do SADARI in order to obtain certainty about what is worried or worried. Conversely, if WUS has no anxiety, then WUS behavior tends to ignore the risk of breast cancer, so it is reluctant to do SADARI.

The better the support of health workers for the early detection of breast cancer through SADARI, the better the behavior of WUS in conducting SADARI. WUS that lacks the support of health workers is 2,485 times more at risk of not doing SADARI when compared to WUS getting support well (OR = 2,485). These results support studies¹¹ and⁴ finding evidence of a significant association of health worker support with SADARI behavior in WUS. Most WUS who have the support of good health workers tend to have good behavior in doing SADARI.

Health workers are a source of role models for health behaviors, where the attitudes and behaviors of health workers are the driving factors for healthy behavior in society. The social support factor for health workers is a strengthening factor, namely the support of health workers as the main factor that shapes WUS behavior. The support provided by health workers can give rise to the confidence of WUS in making decisions. Health workers provide information, motivation, and good and correct practices to raise awareness of WUS doing SADARI properly and routinely as breast cancer prevention. Therefore, health workers must provide information and counseling so that WUS has motivations related to health behaviors, especially SADARI behaviors. WUS that has good support from health workers tends to do good SADARI behavior as well, on the contrary, WUS which lacks support from health workers is less motivated to do SADARI.

CONCLUSION

There is a significant relationship of knowledge, education, sources of information, anxiety, support of health workers with behavior. The most dominant factor is anxiety. It is necessary to improve health services and promotion as an effort to increase WUS knowledge about breast cancer and SADARI.

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