Breast Self-Examination (Bse) Knowledge In Bantul: A Cross-Sectional Study

Dewi Maghfirotul Akhadiyah[1], Yuni Kusmiyati[2], Nanik Setiyawati[3]

[1,2,3]Departement of Midwifery Poltekkes Kemenkes Yogyakarta

Jl. Mangkuyudan MJ III/304, Yogyakarta, 555143

Author's Email: dewiakhadiyah17@gmail.com, yuni_kusmiyati@yahoo.co.id, nanikyogya@gmail.com

ABSTRACT

According to bantul district offices the rate of breast cancer in Bantul Regency has increased from year to year, in Bambanglipuro in 2022 there were 145 cases of breast cancer and there were 208 cases in 2023. Breast cancer can be detected early by means of Breast Self Examination (BSE). The purpose of this study was to determine the level of knowledge about BSE. This study uses a descriptive method with a cross sectional design that describes the level of knowledge about BSE. This research was conducted in April 2024 with 80 respondents. The research instrument used a questionnaire with a total of 26 questions that had been declared valid. The results of this study showed that almost half of the respondents got information from social media (43.75%). Most respondents infrequently do BSE (58.7%). Almost all respondents did not have family members who had a history of cancer (92.5%). Most of the respondents' first menarche age was $\geq$ 12 years (75%). Almost all respondents had a sufficient level of knowledge (78.8%). Chi-Square test results p-value >0.05 which states there is no significant relationship. The conclusion of this study is that almost all respondents have a sufficient level of knowledge about BSE.

Keywords: Breast Cancer, BSE, Level of Knowledge, Teenager

INTRODUCTION

Cancer is the second leading cause of death in the world, causing 9.6 million deaths every year, which is almost equal to the population of Jakarta. It is estimated that 70% of cancer deaths occur in developing countries, including Indonesia.[1] Based on data from Globocan 2020, new cases of cancer in Indonesia were 396,314 cases with 234,511 deaths. The cancer incidence rate in Indonesia (136.2/100,000 population) ranks 8ᵗʰ in Southeast Asia, while in Asia, the cancer incidence rate ranks 23ʳᵈ.[2]

WHO noted that in Indonesia, every year there are around 19,730 women who die, due to breast cancer. Breast cancer also occupies 21.4% of all causes of death in women. Research states that the highest prevalence of breast cancer is in Yogyakarta province with 4.86 cases in 1000 population, followed by West Sumatra province 2.47, and Gorontalo as much as 2.44. The number of mortality rates caused by this cancer reaches an average of 17 people per 100 thousand population.[3] Based on the Yogyakarta Health Office in 2021, the highest number of breast cancer in Bantul Regency was 1424 cases, then Kulon Progo Regency was 1023 cases, Yogyakarta City was 457 cases, Gunung Kidul Regency was 34 cases and Sleman Regency was 1 case.[4]

The results of the preliminary study at the Bantul Regency Office found that the highest breast tumor/cancer cases in 2022 were in Bambanglipuro with 208 cases, followed by Banguntapan 1 with 175 cases and Srandakan with 174 cases. In 2021, Bambanglipuro sub-district also had the highest number of breast tumor/cancer cases with 145 cases. The youngest age indicated by breast tumor/cancer cases in Bambanglipuro Subdistrict is in the age range of 15-19 years with 1 case. Based on interviews with Counseling Guidance teachers and 5 students, it was found that there was no exposure to information or counseling on Breast Self Examination (BSE) from the school or primary health care.

Primary care transformation is the first pillar in Indonesia's health transformation, in its implementation there is a main focus that can be translated into 4 things, one of which is

secondary prevention, namely by screening the 14 diseases that cause the highest mortality at each target age, screening, stunting, & increasing ANC for maternal and infant health.[6] Breast cancer is included in the 14 diseases that cause the highest mortality in Indonesia so that this research is expected to be able to help improve the quality of health services and help the community to detect breast cancer early so that mortality or morbidity caused by breast cancer can be minimized. Based on the background of the problem, the author is interested in the title "Breast Self-Examination (BSE) Knowledge in Bantul: A Cross-Sectional Study".

MATERIAL AND METHOD

This type of research uses descriptive research methods. The design used in this research is cross sectional. This study describes the description of the level of knowledge about Breast Self Examination (BSE) in Bantul. This research was conducted in April 2024 with 80 respondents. The inclusion criteria in this study were female students who came and were willing at the time of the study. The type of data used in this study is primary data. This study uses a guttman scale. The instrument in this study used a questionnaire adopted from Pratiwi (2023) which had been tested for validity and reliability, the study used the Pearson Product-moment correlation test with the results of the value of r > 0.361.[7] The analysis used in this study is using univariate and bivariate analysis. To see the relationship, the Chi-Square test is used, it is said that there is a relationship if the p value is <0.05 and if the p value is> 0.05, it is said that there is no significant relationship.

RESULTS AND DISCUSSION

Characteristics Of Respondents

Table 1. Frequency Distribution of Respondent Characteristics

Variable	Frequency	Percentage (%)
Information Source		
Electronic Media	4	5,0
Social Media	35	43,8
Print Media	6	7,5
Health Workers	22	27,5
Non-Health Workers	13	16,3
Total	80	100
Experience		
Frequently	8	10,0
Infrequently	47	58,8
Never	25	31,3
Total	80	100
Family History of Cancer		
Available	6	7,5
None	74	92,5
Total	80	100
Age of First Menarche		
<12 years	20	25,0
>12 years	60	75,0
Total	80	100

Table 1 shows that almost half of the respondents (43.8%) obtained sources of information about Breast Self Examination (BSE) through social media. This result is consistent with Lula's research (2018) which showed that 64 respondents (28.2%) obtained information about BSE through social media[7] Based on the respondents' experience in performing BSE, the results showed that most respondents (58.8%) rarely performed BSE. This result is different from Wardhani's research (2017) which shows that 21 respondents (40.38%) rarely do BSE and 31 respondents (59.62%) often do BSE.[8] Almost all respondents'

family members did not have a history of cancer (92.5%). This study is in accordance with research from Juwita (2018) which shows 122 respondents (91%) do not have a family history of cancer and 12 respondents (9%) have a history of family members suffering from cancer.[9] Most of the respondents at the age of first menarche were $\geq$ 12 years old as many as (75%). This study is in accordance with the research of Siregar (2022) which shows the age of first menstruation $\geq$ 12 years as many as 97 respondents (65%) and the age of first menstruation < 12 years as many as 53 respondents (35%).[10]

Univariate Analysis

Table 2. Frequency Distribution of Respondents Based on Knowledge

Level of Knowledge	Frequency	Percentage (%)
Good	17	21,3
Enough	63	78,8
Total	80	100

Table 2 shows that almost all respondents had a moderate level of knowledge, namely (78.8%). The results of this study differ from Tae's research (2020) which showed that most of the respondents, namely 31 people (53.4%) had a good level of knowledge.[11]

Percentage of Correct Answers to the Questions about BSE

Table 3. Frequency Distribution of Respondents Based on
Correct Answers about BSE

No	Breast Self Examination (BSE) Knowledge Questions Based on Correct Answers Question	n	%
1	BSE is the first step to detecting breast cancer	80	100
2	BSE does not detect breast cancer early enough.	74	93
3	BSE is a simple way to find tumors that can reduce the incidence of breast cancer	78	98
4	Abnormal lumps in the breast can be found through breast self-examination.	78	98
5	The purpose of BSE is to recognize one's own breasts	78	98
6	BSE is a breast self-examination that is done to see the shape of the breast	69	86
7	BSE is important for women	79	99
8	Breast lumps can only be identified by laboratory examination.	66	83
9	BSE is done to find out breast abnormalities and reduce the mortality rate of women due to breast cancer	74	93
10	BSE aims to find lumps as early as possible in the breast	79	99
11	Doing BSE takes a long time	10	13
12	The best time to do BSE is 7-10 days after menstruation	78	98
13	BSE should be done regularly	76	95
14	BSE is best done once every 3 months and cannot be done while bathing	55	69
15	After marriage is the best time to do BSE	68	85
16	BSE does not need to be done as early as possible or during adolescence	76	95
17	BSE is done 1 week after menstruation	74	93
18	Women with irregular menstruation do not need to do BSE	75	94
19	Observe carefully any changes in the left breast only.	64	80
20	Observing the breast is done to see the beauty of the breasts	74	93
21	Breast self-examination can be done by standing in front of a mirror and observing changes that occur in the breast	78	98
22	Seeing changes in breast skin is not one of the steps to perform	21	26
23	Breast observation is not necessary when performing BSE	60	75
24	Pressing the nipple for normal or abnormal discharge is one of the normal or abnormal discharge is one of the BSE.	79	99
25	When performing BSE, it is necessary to pay attention to the shape of the breast	78	98

Breast Self Examination (BSE) Knowledge Questions Based on Correct Answers			
No	**Question**	**n**	**%**
26	Gently touching the breast to feel for any abnormal lumps in the breast is a step to performing BSE	80	100

Table 3 shows that the smallest percentage of correct answers is in question number 11, only 10 respondents answered correctly (13%), number 22 only 21 respondents answered correctly (26%) and number 14 only 55 respondents answered correctly (69%). The cause of the lack of knowledge about the time and method of implementation can be because respondents do not get accurate information, and only know only at a glance but to practice it is still confused, in this case environmental factors influence the implementation of BSE. A person's knowledge is obtained from exposure to BSE information, a woman wants to do BSE if she gets an explanation of the purpose, benefits and how to do BSE. A woman's attitude will determine how health behavior is. One of the factors in the formation of attitudes is due to personal experience and the respondent's belief that breast cancer prevention can be done with BSE.[10] Factors that influence knowledge include education level, age occupation, experience, environment, information.[11]

Bivariate Analysis

Table 4. Relationship Test Results Knowledge, Experience, Family History of Cancer and Age at Menarche to BSE

Variabel	Level Knowledge						p-value
	Good		Enough		Total		
	n	%	n	%	n	%	
Information Source							
Electronic Media	0	0	4	5,0	4	100	0,428
Social Media	9	25,7	26	74,3	35	100	
Print Media	3	50,0	3	50,0	6	100	
Health Workers	2	9,1	20	90,9	22	100	
Non-Health Workers	3	23,1	10	76,9	13	100	
Total	17	21,3	63	78,8	80	100	
Experience							
Frequently	2	25,0	6	75,0	8	100	0,188
Infrequently	10	21,3	37	78,7	47	100	
Never	5	20,0	20	80,0	25	100	
Total	17	21,3	63	78,8	80	100	
Family History of Cancer							
Available	3	50,0	3	50,0	6	100	0,203
None	14	18,9	60	81,1	74	100	
Total	17	21,3	63	78,8	80	100	
Age of First Menarche							
< 12 years	7	35,0	13	65,0	20	100	0,149
$\geq$ 12 years	10	16,7	50	79,4	60	100	
Total	17	21,3	63	78,8	80	100	

Table 4 shows that respondents who have sufficient knowledge mostly get information about BSE through social media (74.3%) and there are no respondents who have good knowledge who get information about BSE from electronic media. In this study, a p-value of 0.428 was obtained, indicating that there was no significant relationship. This result is different from research according to Hadiyah's research (2020) which states that there is a relationship between the source of information and the level of knowledge about BSE with a coefficient

value of 0.477.[13] Information can be obtained from formal and non-formal education. Sources of information can be in the form of print and electronic media, such as television, radio, computers, newspapers, books and magazines. Someone who has easy access to information will gain knowledge faster. The advancement of technology can affect people's knowledge about new innovations that can have an influence resulting in changes or increases in knowledge.[14]

Almost all respondents who have sufficient knowledge infrequently do BSE as much as (78.7%). However, there were very few respondents who had good knowledge and frequently performed BSE, namely (25%) while respondents who had good knowledge and never performed BSE were (20%). In this study, the p-value was 0.188, which means that there was no significant relationship between experience and knowledge level. However, according to Siagian's research (2024), there is a relationship between knowledge and experience in performing BSE with a significance value of 0.02 ($p < 0.05$).[15] The lack of Indonesian women, especially teenagers in doing BSE is also motivated by the fact that many Indonesian teenagers are not yet sensitive to their own breast care, they are more sensitive to acne that appears on the face than the symptoms of breast cancer, and also motivated by the lack of information and willingness to explore accurate information about breast cancer prevention.[16] According to Lawrence Green's theory, the factors that influence specific behavior are predisposing factors, enabling factors and reinforcing factors.[17] In this study, respondents rarely performed BSE due to lack of support and fear of the results obtained when examining BSE and the lack of information at school or reliable sources of information. Some of the factors that cause women not to routinely or not to do breast cancer early detection checks are laziness, fear, thinking that they are not at risk, embarrassment, not knowing how to take the steps, feeling no need after menapouse, forgetting and considering it a taboo. [18]

Almost all respondents who have sufficient knowledge and in their families do not have a history of cancer, namely as many as (81.1%) while half of the respondents who have good knowledge in their families have a history of cancer as many as (50.0%). In this study, it was found that there was no relationship between BSE knowledge and families who had a history of breast cancer, this result was the same as the research of Duriyyah (2023) with a coefficient value of 0.144 ($p < 0.05$). [19] Women with a family history of breast cancer are more at risk of developing breast cancer than women with no family history of breast cancer. [20] Family members, especially parents, influence the source of knowledge, beliefs, attitudes, and life values for children. Parents have the power to guide the development of children towards BSE behavior.[21] In this case, the influence of the experience of families who have had breast cancer affects the knowledge of respondents so that respondents can change their behavior to do BSE.

Almost all respondents whose age of first menarche ≥12 years have sufficient knowledge as much as (79.4%). While there were a small number of respondents who had good knowledge of the age of first menarche < 12 years as many as (35.0%). From this study it was found that there was no relationship between breast cancer and menarche age, this result is different from Riana's research (2020) which states that there is a relationship between breast cancer and the history of the first age of menarche <12 years with a value of p=0.005. [22]

CONCLUSION

From the results of the research conducted, the authors concluded that almost all respondents had sufficient knowledge about breast self-examination (BSE). Almost all respondents who have sufficient knowledge about BSE get their source of information from social media. Almost all respondents who have sufficient knowledge rarely do BSE checks. Almost all respondents who have sufficient knowledge in their family do not have a history of cancer. Almost all respondents who have sufficient knowledge, the first age of menarche is ≥ 12 years old. There is no relationship between knowledge with sources of information, experience, family history of cancer, and age of menarche. suggestions from this study for female students are to deepen their knowledge BSE

and be able to practice it. for future researchers, it is hoped that they can use props during the research.

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REFERENCE

1. Kemenkes. Kanker. Published 2023. https://ayosehat.kemkes.go.id/topik-penyakit/neoplasma/kanker

2. Kouwenaar W. On cancer incidence in Indonesia. *Acta Unio Int Contra Cancrum*. 2020;7(1 Spec. No.):61-71.

3. Situmorang HE. Pelatihan Deteksi Dini Kanker Payudara Dengan Metode "SADARI" (Periksa Payudara Sendiri) Pada Siswi-Siswi SMA Teruna Bakti Di Jayapura Papua. *J Kreat Pengabdi Kpd Masy*. 2022;5(8.5.2017):2003-2005. www.aging-us.com

4. Dinkes DIY. Dinas Kesehatan D.I Yogyakarta tahun 2021. *Dinas Kesehat Drh Istimewa Yogyakarta tahun 2021*. Published online 2021:76. http://www.dinkes.jogjaprov.go.id/download/download/27.

5. Ditjen P2P. 6 Pilar Transformasi Kesehatan. 07 Desember 2023. Published 2023. https://p2p.kemkes.go.id/6-pilar-transformasi-kesehatan/

6. Pratiwi ED. *Gambaran Tingkat Pengetahuan Dan Ketepatan Cara Tentang Pemeriksaan Payudara Sendiri (SADARI) Pada Siswi Di SMKN 1 Sewon*. Poltekkes Kemenkes Yogyakarta; 2023.

7. Lula F, Wahjudi P, Prasetyowati I. Determinan Praktik Sadari Pada Mahasiswi Fakultas Non Kesehatan di Universitas Jember. *J Kesehat*. 2018;6(2):68-75.

8. Wardhani AD, Saraswati LD, Adi MS, Peminatan M, Kesehatan E, Semarang FKMU. Gambaran Pengetahuan Remaja Putri Tentang Sadari Dan Praktik Pemeriksaan Payudara Sendiri. *J Kesehat Masy*. 2017;5(1):180-185.

9. Juwita L, Prabasari NA. Pengetahuan Pemeriksaan Payudara Sendiri (SADARI) Terhadap Sikap dan Perilaku Pada Remaja Putri. *Adi Husada Nurs J*. 2018;4(2):11-17.

10. Sundari E, Utami S, Ariestanti Y. Factors that contribute to the conscious behavior of women of childbearing age in the Independent Practice of Midwife Endang Sundari Bekasi in 2022. *J Ilm Bidan*. 2022;6(3):27-37. doi:10.61720/jib.v6i3.328

11. Tae MM, Melina F. Hubungan Tingkat Pengetahuan Tentang SADARI dengan Kepatuhan Melakukan SADARI Pada Mahasiswa DIII Kebidanan di Stikes Yogyakarta. *J Kesehat Samodra Ilmu*. 2020;11(2):154-165. doi:10.55426/jksi.v11i2.118

12. Ekawati D. Efektivitas Penyuluhan Tentang Perubahan Fisik Pada Masa Pubertas Terhadap Peningkatan Pengetahuan Siswa Di SDN No.29 Cini Ayo Jenoponto. *J Inov Penelit*. 2021;2(7):2050-2064. doi:10.2307/40076689

13. Hadiyah N, Dewi R, Sutrisni S. Hubungan Sumber Informasi terhadap Pengetahuan SADARI pada Remaja Putri. *J Mhs Kesehat*. 2020;2:53. doi:10.30737/jumakes.v2i1.1236

14. Badri PR. Analisis Faktor-Faktor Yang Mempengaruhi Pengetahuan Masyarakat Tentang Faktor Risiko Hiperurisemia. *Syifa' Med J Kedokt dan Kesehat*. 2020;10(2). doi:10.32502/sm.v10i2.2236

15. Siagian HAH, Wardani W, Riska Z, Marwiyah I, Febrian Surbakti A, Agustina Harahap R. Hubungan Tingkat Pengetahuan Terhadap Perilaku SADARI Sebagai Deteksi Dini Kanker Payudara Pada Mahasiswi Prodi Ilmu Komputer Angkatan 2021 Universitas X. *J Ilmu Kedokt dan Kesehat*. 2024;11(4):720-728. doi:10.33024/jikk.v11i4.13557

16. Noer RM, Purba NH, Suryadartiwi W. Deteksi Dini Pencegahan Kanker Payudara. *JJM (Jurnal Masy Mandiri)*. 2021;5(2):642-650.

17. Notoatmodjo. *Metode Penelitian Kesehatan*. Rineka Cipta; 2018.

18. Indah Fitriwati C, Meinarisa M. Faktor-Faktor yang Berhubungan dengan Praktik SADARI Pada Remaja Putri di Kabupaten Bungo. *J Ilm Ners Indones*. 2022;3(2):76-85.

doi:10.22437/jini.v3i2.21386

19. Durriyyah AD, Gayatri RW, Tama TD, Wardani HE. Hubungan Pengetahuan, Sikap dan Riwayat Kanker Payudara Keluarga terhadap Perilaku SADARI Pada Wanita Usia 20-29 Tahun di Puskesmas Kendalsari. *Sport Sci Heal*. 2023;5(1):35-44. doi:10.17977/um062v5i12023p35-44

20. Prasetyowati P, Katharina K. Faktor-Faktor yang Berhubungan dengan Kejadian Kanker Payudara di RSUD Dr. H. Abdul Moeloek Provinsi Lampung. In: ; 2017. https://api.semanticscholar.org/CorpusID:149230724

21. Siregar R. Faktor-Faktor Yang Mempengaruhi Perilaku Pemeriksaan Payudara Sendiri (SADARI) Pada Remaja Putri Kelas X. *Indones J Heal Sci*. 2022;6(1):35-42. doi:10.24269/ijhs.v6i1.4355

22. Ariana S, Budijitno S, Damas S. Riwayat Usia Pertama Menarche ≤12 Tahun Berhubungan dengan Kejadian Kanker Payudara pada Wanita Usia Subur. *Care J Ilm Ilmu Kesehat*. 2020;8:168. doi:10.33366/jc.v8i2.1230