Journal of Netrokona Medical College
Frequency: Bi-Annual
Volume-1 | Issue-1 | Jul-Dec 2024
https://nmcj.org/jnmc
eISSN: 2664-738X
ORIGINAL ARTICLE

Breast Self-Examination (BSE): Knowledge & Practice Among Rural and Urban Women in Selected Area in Kishoreganj

Abul Bashar*[1], Muhammad Saiful Hasan[2], Mostofa Zahid Kamal[3]

[1] *Department of Community Medicine, Netrokona Medical College, Netrokona*
[2] *Principal, Netrokona Medical College, Netrokona*
[3] *Department of General Surgery, Netrokona Medical College, Netrokona*

ABSTRACT: ***Background:*** Breast cancer is the most common and deadly cancer among women worldwide, with rising incidence rates in both developed and developing nations, including Bangladesh, where late diagnosis is prevalent. Breast Self-Examination (BSE) is a simple, affordable, and accessible method for early detection, especially in resource-limited settings. Global initiatives like WHO's breast cancer framework and national strategies emphasize early detection through BSE to reduce mortality and improve survival rates. ***Materials & Methods:*** A descriptive cross-sectional study was conducted with a purposively selected sample of 189 from Mithamoiin, Kishoreganj, Bangladesh. Data was collected by the researcher using a face-to-face interview with a standard Breast Self-Examination scale of 22 items in two dimensions of BSE Knowledge and Practice. Data were analyzed using descriptive statistics (frequency, percentages, mean, SD). ***Results:*** The mean age was 27.78 years, most of them were Muslim (87.30%), 29.63% had no formal education. Majority (83.06%) of the participants were married and (74.07%) were housewife and their mean monthly family income was 22142.86 BDT. In this study, among all participants majority of the participants had poor level of knowledge (95.8%) and only 2.1% of participants had a good level of BSE practice. ***Conclusion:*** The study found that most women had poor knowledge about Breast Self-Examination (BSE), including its procedure, importance, and timing, with very few practicing it regularly. There is an urgent need to enhance knowledge and practice of BSE to promote early detection and prevention of breast cancer.

Keywords: Breast Self-Examination, Knowledge, Practice, Bangladesh.

***Correspondence:**
Dr. Abul Bashar

How to cite this article:
Bashar A, Hasan MS, Kamal MZ; Breast Self-Examination (BSE): Knowledge & Practice Among Rural and Urban Women in Selected Area in Kishoreganj. J Netr. Med Coll. 2024;1(1): 17-22.

Article history:
Received: August 04, 2024
Accepted: November 17, 2024
Published: December 31, 2024

Peer Review Process:
The Journal abides by a double-blind peer review process such that the journal does not disclose the identity of the reviewer(s) to the author(s) and does not disclose the identity of the author(s) to the reviewer(s).

INTRODUCTION

Breast cancer is a serious, life-threatening public health issue. The disease's incidence has steadily increased in both developed and developing countries.[1] It is the most common type of cancer among females, and the risk increases with age.[2] In 2020, it was anticipated that the global cancer rate had climbed to 19.3 million new cases and 10 million fatalities.[3] In terms of incidence, the three most common cancer kinds are lung, colorectal, and female breast cancer. They rank in the top five (first, second, and fifth, respectively) in terms of mortality. These three cancer forms account for one-third of all cancer incidence and mortality globally[4]. Breast cancer is more common in women than other cancers worldwide. Furthermore, breast cancer is the most frequently diagnosed cancer in women (24.2%), and it is the most common in 154 of the 185 countries. Breast cancer remains the greatest cause of cancer mortality in females (15%)[4]. The incidence of breast cancer in Bangladesh is unclear because there is no national cancer registry. However, the Global Cancer Observatory anticipated a 5-year breast cancer frequency of 38.35 per 100,000 people, and 8.3% of the 156,775 new cancer cases in 2020 were caused by breast cancer.[5] The World Health Organization (WHO) has created a worldwide breast cancer initiative framework, with the goal of saving approximately three million lives by 2040.

This framework focuses on health promotion to ensure early detection, quick diagnosis, and adequate care of breast cancer cases[6]. Secondary prevention is the most effective way to reduce breast cancer mortality. Breast Self-Examination (BSE), Clinical Breast Examination (CBE), and mammography are essential, widely available, and recommended procedures for detecting breast cancer in its early stages[7]. Several randomized studies have established the efficacy of breast cancer screening with mammography [8]. However, it is expensive and demands significant financial and human resources. As a result, routine mammography screening is impractical and generally unavailable in developing nations. BSE is a simple, affordable, and safe examination procedure that does not require any invasive intervention or apparatus, respects

women's privacy, and can be performed comfortably at home.[7]

Breast cancer patients in Bangladesh and other underdeveloped nations are typically diagnosed late and at an advanced stage, resulting in a dismal outcome. Breast cancer mortality in the Western world is reducing due to early discovery through screening and better management.[9, 10] Breast cancer screening tests serve an important contribution in lowering breast cancer-related mortality.[11] According to a recent study, breast cancer is becoming more common in younger age groups in Bangladesh than in Western countries, and the disease is more aggressive during the reproductive period, indicating the need for changes in early cancer detection modalities as well as adjustments to preventive and therapeutic efforts.[12]

Breast cancer is a dreaded disease not only because it can be fatal, but also because it can alter a woman's sense of self, sexuality, and femininity. Furthermore, breast cancer is a taboo subject that is rarely discussed, and its documentation in the rural population is often overlooked [6]. The American Cancer Society also suggests that women perform breast self-examination (BSE) to become familiar with how their breasts generally feel and report any breast abnormalities to their health care professionals as soon as possible [13]. The 'National Cancer Control Strategy and Plan of Action 2009-15' in Bangladesh promotes clinical breast examination (CBE) and BSE as early detection methods for breast cancer to reduce disease stage and enhance survival [14]. Furthermore, the Breast Health Global Initiative (BHGI) recommendation for low- and middle-income countries recommends BSE as the first step toward preventing breast cancer [15].

However, according to my knowledge assessment published in Bangladesh, women's awareness and practice of BSE screening procedures are inadequate. Self-practice is impossible if one's knowledge is weak. As a result, the goal of this study is to determine the understanding and practice of BSE as a breast cancer screening approach for early detection.

MATERIALS AND METHODS

A cross-sectional study was conducted from November to December 2024 among rural women from selected Upazila (Mithamoiin) in Kisahoreganj District, Dhaka, Bangladesh. Total 189 rural women (20 – 45 year) were participant in this study. Both the study place and participants were selected purposively. The predesigned, pretested semi structured questionnaire were used as tool for data collection through face-to-face interview, it took 15-20 minutes. Informed consent was obtained prior to the interview from study participants. Privacy and confidentiality of the participants were maintained. The participation of the women was voluntary, and participants could refuse and withdraw from the study at any time without any penalty. Women who were diagnosed cancer patient, and pregnant women were excluded. Breast self-examination was measured by 3 parts questionnaires. (1) Socio-demographic Characteristics Questionnaire, (2) BSE Knowledge Scale, and (3) BSE Practice Scale.

Socio-demographic Characteristics Questionnaire

Based on a review of the literature, the researcher created the Socio-demographic Questionnaire (SCQ), which had seven items, including one about disease-related characteristics: age, religion, marital status, education, occupation, monthly income, and family history of breast cancer.

BSE Knowledge Scale

There are a total of 15 items of question to assess the knowledge of participants about breast self – examination. For positive Knowledge, items score '2' was used for correct answer (true response), '1' for don't know and '0' for incorrect that means (false responses) was applied. The negative question was reversed. The item number was one (1). Bloom's classification was used to assess the level of knowledge; a score below 60% indicated poor knowledge, while a score between 60 and 100 percent indicated positive knowledge, which was further divided into the following categories: 60 to 86 percent indicated satisfactory knowledge, and 86% to 100 percent indicated good knowledge.

BSE Practice Scale

There are a total of 7 questions to explore the practice of participants of breast self-examination. Practice similar ordinals (never/seldom/neutral/frequently/always) was applied. For practice an item score of 0, 1, 2, 3, 4, was given for never, seldom, neutral, frequently, and always respectively. The level of practice was score out of 28. A score of 15-28 indicates good practice while a score of 0-14 indicates poor practice. Data analysis was done by using a scientific calculator after entering in a master sheet. Quantitative variable was analyzed by mean while qualitative variable was summarized by percentage.

RESULTS

Socio-Demographic Characteristics and Disease Related Characteristics of Participants

A total of 189 participants were recruited for this study. The mean age of the participants was 27.78 years (SD= 7.2) with the range of 15 - 45 years of age. Most of them were Muslim (87.30%) by their religion. Only 10.05% of participants had higher secondary school education and 29.63% of them had no formal education. The majority (83.06%) of the participants were married. Most of participants (74.07%) were housewife and their mean monthly family income was 22142.86 BDT. Among all participants only 5.82% had a history of breast cancer in their family (Table 1).

Table 1: The Distribution of Socio-Demographic Characteristics and Disease Related Characteristics of the Participants (n=189)

Variable	Category	Frequency	Percentage
Age	15 – 24	67	35.45%
	25 – 34	89	47.09%
	35 – 45	33	17.46%
Religion	Muslim	165	87.30%
	Hindu	24	12.70%
Marital status	Married	157	83.06%
	Unmarried	23	12.17%
	Widowed	9	4.76%
Education	Illiterate	56	29.63%
	Primary	73	38.63%
	SSC	41	21.71%
	HSC	19	10.05%
Occupation	Housewife	140	74.07%
	Private job	25	13.21%
	Govt. job	7	3.70%
	Student	17	8.99%
Income	< 20000 BDT	98	51.85%
	20001 to 40000 BDT	69	36.51%
	40001 to 60000 BDT	20	10.58%
	>60000 BDT	02	1.06%
Family History Breast cancer	Yes	11	5.82%
	No	178	94.18%
Total		**189**	**100.0%**

Breast Self-Examination Knowledge of Participants

Table 2 showed the findings that among all participants, most of them 174 (92%) did not know about the duration of BSE and only 8 (4.1%) were aware of the exact time of BSE procedure. More than 90% women did not know about the position, techniques and methods of BSE (item no. 3 to 11). On the other hand, only 55 (29.1%) participants reported that during BSE they need to press on the nipple to check any unusual discharge from the breast. Majority of the women 173 (91.3%) reported that they 'need to observe any unusual change in the shape and size of the breast'. Although most of the participants 161 (85.5%) were aware about 'the retraction of the nipple is a warning sign that should be observed' but only 88 (46.5%) of the women knew about the statement of "lump is the early sign for cancer".

Table 2: Breast Self-Examination Knowledge of Participants (n=189)

Items	True Response	
	n	%
BSE should be done every 2 months	15	8%
BSE must be done between days 7 until 10 after menses	8	4.1%
BSE should be done in front of the mirror	9	4.7%
Undress until the waist when doing the BSE	7	3.5%
Hands should be raised up alternately above the head when doing the BSE in front of the mirror	2	1.2%
BSE should be done from the front view only	18	9.3%
BSE can be done in a supine position	18	9.3%
Palpate in the right breast while left-sided lying when doing the BSE	4	2.3%
Use finger pulps to examine any lumps of the skin	7	3.5%
BSE can be done using vertical strip and circular technique	8	4.1%
Need to press on the nipple to check for any unusual discharge	55	29.1%
BSE includes the arm-pit examination to check for any lump	65	34.3%
Need to observe any unusual change in the shape and size of the breast	173	91.3%
Retraction of the nipple is a warning sign that should be observed	161	85.5%
Lump is the early sign for cancer	88	46.5%

Breast Self-Examination Practice of Participants

Table 3 showed the findings that among all of the participants only 11 (6.4%) were practiced BSE once in a month, among them only 3 (1.7%) were practiced always BSE in a month. The majority 182 (95.9%) of the participants never learnt the correct method of BSE and 174 (91.9%) never discussed the importance of BSE with friends. Most 187 (98.8%) of the women never got advice

from parents, partner to do BSE. But among them only 3 (1.7%) of participants were indicated that they had been taught BSE by health staff. About 110 (58.2%) of the women never went to public health care directly, if notice any breast abnormality.

Table 3: Breast Self-Examination Practice of Participants (n=189)

Item	Never n (%)	Seldom n (%)	Neutral n (%)	Frequently n (%)	Always n (%)
Do BSE once a month	148 (78.5)	29 (15.1)	0	9(4.7)	3 (1.7)
Learning the correct method of BSE	182 (95.9)	3 (1.7)	0	1 (0.6)	3 (1.7)
Parents or partners advise me to do BSE	187 (98.8)	2 (1.2)	0	0	0
Advise friends to do BSE	182 (95.9)	0	0	4 (2.3)	3 (1.7)
Discuss the importance of BSE with friends	174 (91.9)	3 (1.7)	0	9 (4.7)	3 (1.7)
Have been taught BSE by health staff	184 (97.1)	2 (1.2)	0	3(1.7)	0
If notice any breast abnormality, directly go to public health care	2 (14)	84 (44.2)	1 (0.6)	43 (22.7)	35 (18.6)

Level of Breast Self-Examination Knowledge and Practice of Participants

The result showed that among all participantsmajority of the participants had poor level of knowledge (95.8%) and only 2.1% of participants had good level of BSE practice (Table 4).

Table 4: Level of Breast Self-Examination Knowledge and Practice of Participants (n=189)

Variable	Level	Score	n	%
Knowledge	Poor	<60%	181	95.8%
	Satisfactory	60-85%	8	4.2%
	Good	86 -100%	0	0.0%
Practice	Poor	<14	185	97.9%
	Good	14 – 28	4	2.1%
Total			189	100.0%

DISCUSSION

The present study involved women with the mean age was 27.78 years as it was reproductive age group, thus can motivate them for practicing BSE regularly to identify any abnormality in their breast as early as possible. Almost similar observation was revealed in study conducted in Bangladesh and Nepal but more in India.[16-18] Current study showed most of the participants were Muslims, married and more than three quarters of participants were at least primary education which was close to a study reported by Khatun, (2023) in Bangladesh.[16] Disease related characteristics in the present study very few participants only had history of breast cancer in their family which is consistent to another studies of Bangladeshi.[16, 19]

The finding of this study indicates that most of the reproductive age group women had poor knowledge of BSE. Only 4.2% had satisfactory knowledge of BSE. A similar study conducted in Bangladesh showed about the same proportion of women had good knowledge.[16] In this study most of the population had poor knowledge about BSE which is similar to Pakistani, Indian and Malaysian women 80.7%, 61.6% and 69.11% respectively.[20-22] In India slightly more than half 58.42% of the subjects had average knowledge and awareness and 17.62% had poor knowledge and awareness regarding BSE.[23] And another study in 87(35%) were aware about Breast Self-Examination (BSE).[24] The reason of lower mean score of knowledge in present study because of educational background of the participants, who had no any medical science background and very few participants had tertiary level of education. Poor knowledge was also found to be related to the methods, position, techniques of BSE and the exact time to perform it in current study. Similar observations were also found in Malaysian women, and also had poor knowledge on a breast lump is the early sign for breast cancer and method of early detection.[21] The reason for the difference in knowledge in different studies from different countries might be due to the difference in the study setting and sociocultural factors across the world.

The practice of BSE reflects the practical application of the knowledge of BSE. According to the current study among all of the participants very few participants (2.1%) were practiced BSE. This finding indicated that awareness and health education programs can improve the poor practice to regular practice towards BSE.

Poor practice of participants may be due to some reasons. Firstly, participants never learnt the correct method and importance of BSE. Secondly, parents, partners or friends did not give any advice to do BSE. Finally, students who were never taught BSE by health staff which are also supported by different studies in different countries.[20, 21, 25] Studies from various countries showed somehow differences in the practice of BSE. The reason for this might be due to the difference in knowledge of study participants and the difference between study areas.

CONCLUSION

The study concludes that most of the women had poor knowledge. Also, very few women demonstrated poor practice. Majority of the women did not know about the BSE procedure, importance and exact time to do BSE. Though most of the women were agreed that 'all women should do BSE' but near about two third of women were felt uncomfortable to do BSE once in a month. Very few women practiced BSE regularly due to lack of BSE knowledge towards the BSE. There is an immediate need to increase the knowledge and practice of breast self-examination to prevent and detect breast cancer in its early stage.

Funding: No funding sources.
Conflict of Interests: None declared.

REFERENCES

1. Andegiorgish AK, Kidane EA, Gebrezgi MT. Knowledge, attitude, and practice of breast Cancer among nurses in hospitals in Asmara, Eritrea. BMC Nurs. 2018;17(1):1–7.
2. Francies FZ, Hull R, Khanyile R, Dlamini Z. Breast cancer in low-middle income countries: Abnormality in splicing and lack of targeted treatment options. American Journal of Cancer Research. 2020;10(5):1568–1591. http://www.ncbi.nlm.nih.gov/pubmed/32509398
3. International Agency for Research on Cancer. GLOBOCAN 2020: New Global Cancer Data. 2021. Retrieved from: https://www.uicc.org/news/ globocan-2020-new-global-cancer-data.
4. World Health Organization. Latest global cancer data: Cancer burden rises to 18.1 million new cases and 9.6 million cancer deaths in 2018. International Agency for Research on Cancer. World Health Organization. 2018. Retrieved from: http://gco. iarc.fr/.
5. Ishtiak ASM, Ahmed N, Gaffar F, Khan MAS, Yasmeen F. Knowledge, practice and associated factors of breast self-examination among female university students of Bangladesh: Knowledge, practice and associated factors of breast self-examination. Heliyon. 2022;8(11):e11780. https://doi.org/10.1016/j.heliyon.2022.e11780
6. Hanson V, Adejumo O, Van Wyk B. Knowledge and practice of breast self-examination among rural women in South-West Nigeria: Implications for development of women empowerment programme. Afr J Nurs Midwifery. 2017;19(1):144–56.
7. Nair DCKV, Gopinath DV. Knowledge attitude and practice of breast self examination among female medical students in a medical college. Surg Updat Int J Surg Orthop. 2016;2(4):67–70.
8. Plesnicar A, Golicnik M, Fazarinc FK, Kralj B, Kovac V, Plesnicar BK. Attitudes of midwifery students towards teaching breast self-examination. Radiol Oncol. 2010; 44(1): 52-56.
9. Hawsauer AK, Keegan TH, Chang ET, Glaser SL, Howe H, Clerke CA. Recent trends in breast cancer incidence in US white women by county-level urban/rural and poverty status. Biomed Cent Med. 2009; 7:31.
10. Alatise OI, Lawal OO, Olasode OO, Adesunkanmi AR. Breast fine needle aspiration cytology in a Nigerian tertiary hospital. East Cent Arf J Surg. 2007; 12:126-132.
11. Dundar PE, Ozmen D, Ozturk B, Haspolat G, Akyildiz F, Coban S et al. The knowledge and attitudes of breast selfexamination and mammography in a group of women in a rural area in Western Turkey. BMC Cancer. 2006; 6:43.
12. Nessa A, Hussain T, Alam SM, Faruk I, Jahan I. Age distribution pattern of female breast cancer patients in Bangladesh- developing early and presenting late. IntSurg J. 2018;5(2):379-382.
13. Sarker R, Islam MS, Moonajilin S, Rahman M, Gesesew HA, Ward PR. Knowledge of breast cancer and breast self-examination practices and its barriers among university female students in Bangladesh: Findings from a cross-sectional study. PLoS One. 2022;17(66):1–12. http://dx.doi.org/10.1371/journal.pone
14. Hussain SA, Sullivan R. Cancer control in Bangladesh. Japanese journal of clinical oncology. 2013; 43 (12):1159–69. https://doi.org/10.1093/jjco/hyt140 PMID: 24163419
15. Yip CH, Anderson BO. The Breast Health Global Initiative: clinical practice guidelines for management of breast cancer in low-and middle-income countries. Expert review of anticancer therapy. 2007; 7 (8):1095–104. https://doi.org/10.1586/14737140.7.8.1095 PMID: 18028018
16. Begum BM, Khatun F, Mallick DR. Knowledge, Attitude, and Practice of Breast Self-Examination among Women in Bangladesh. IOSR Journal of Nursing and Health Science (IOSR-JNHS) e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 8, Issue 5 Ser. V. (Sep-Oct .2019), PP 69-79 www.iosrjournals.org
17. K MB, Kaphle HP. Breast self-examination: Knowledge, practice and associated factors among 20 to 49 years aged women in Butwal sub-metropolitan, Rupandehi, Nepal. PLoS ONE. 2023 Jun 2;18(6): e0286676. Available from: https://doi.org/10.1371/journal.pone.0286676
18. Veena K. S., Rupavani K, Rekha R. The knowledge and attitude of breast self examination and mammography among rural women. International Journal of Reproduction Contraception Obstetrics and

Gynecology. 2015 Jan 1;1511–6. Available from: https://doi.org/10.18203/2320-1770.ijrcog20150738
19. Hussain SA, Sullivan R. Cancer control in Bangladesh. Japanese journal of clinical oncology. 2013 Oct 25;43(12):1159-69.
20. Batool T, Sarwar H, Afzal M, Gilani SA. Knowledge, Attitude and Practices of Women towards Breast Self-Examination in Rural Area of Lahore, Pakistan. Annals of Punjab Medical College. 2018 Jun 12;12(2):158-61.
21. Rosmawati NH. Knowledge, attitudes and practice of breast self-examination among women in a suburban area in Terengganu, Malaysia. Asian Pac J Cancer Prev. 2010 Jan 1;11(6):1503-8.
22. Yerpude PN, Jogdand KS. Knowledge and practice of breast self-examination (BSE) among females in a rural area of South India. Natl J Community Med. 2013 Jun;4(2):329-.
23. Choudhary M, Mohanasundari SK, Ara M. Breast self-examination: knowledge, awareness, and practices among females of reproductive age group. International Journal of Research in Medical Sciences. 2024 31;12(6):1999–2003.
24. Bansode A. A cross sectional study on awareness of breast self-Examination and its practice in women of rural area in South India. MedPulse International Journal of Community Medicine. 2020 Jan 1;17(2):04–7. Available from: https://doi.org/10.26611/10111721
25. Doshi D, Reddy BS, Kulkarni S, Karunakar P. Breast self-examination: Knowledge, attitude, and practice among female dental students in Hyderabad city, India. Indian journal of palliative care. 2012 Jan;18(1):68.