

Study of awareness of breast self-examination among adult women attending tertiary care hospital

U. Umamaheswara Reddy

Associate Professor of Radiation Oncology, Kurnool Medical College, Kurnool

Mail id: umasonry2001@yahoo.co.in

Abstract

Background: Breast self-examination is a procedure by which the breasts and accessory anatomic structures are observed and palpated to detect changes or abnormalities that may indicate the presence of malignancy. It is inexpensive, simple and does not require any specialized equipment or regular visits to the hospital, thus proving its usefulness in underdeveloped countries too, which lack resources. The current study was conducted to assess the awareness regarding breast self-examination (BSE) among adult women attending OPD of radiotherapy

Methods: This cross-sectional study was conducted from December 2023 to January 2024 in women attending government general hospital, Kurnool. A total of 300 women aged 30 years or above who gave written informed consent participated in the study. A semi structured questionnaire was administered by interview method. Descriptive statistics was used for analysis

Results: This study revealed that the awareness regarding breast cancer among adult women aged 30 years and above was 8%. Majority of the study participants had poor knowledge regarding BSE. With regard to practice of BSE, only 8% of the study participants practiced BSE.

Conclusions: Breast self-examination is one of the most appropriate, convenient and cost-effective method that can be done by every woman for early detection of breast cancer and all women after the age of 18 years should be trained to do BSE correctly and regularly by healthcare workers and doctors.

Keywords: Breast self-examination, Adult women, Tertiary hospital, awareness

1. INTRODUCTION

Breast cancer is the second most common cancer worldwide and is the most common cause of cancer among women both in developed and also in developing countries. It is commonly associated with high levels of morbidity and mortality in India due to late presentation. Breast cancer is the most common cause of death due to cancer among women.¹ Breast cancer reduces the life expectancy of the population at risk specially those between 31-50 years. Breast self examination can help in early detection of the disease. Studies have shown that most patients with breast cancer in developing countries present late for the first time at 2nd and 3rd stages. The reasons for late detection of breast cancer includes low awareness, presence of stigma, fear about pain during screening and fear about the disease, gender inequity, lack of screening test and infrastructure, low literacy, and low income levels.^{2,3}

Early breast cancer (EBC) constitutes only 30% of the breast cancer cases seen at regional cancer centres in India, whereas it constitutes 60-70% of cases in the developed world.⁴ According to Global Cancer statistics, Globocan, in 2020, there were 2,261,419 incident cases of breast cancer worldwide which accounts to 11.7% of all cancers among women, the

highest in the world.⁵ India reports around 100,000 new cases annually according to the Indian Council of Medical Research (ICMR). About 30,000 women die from breast cancer in India annually.⁶

Breast self-examination is a procedure by which the breasts and accessory anatomic structures are observed and palpated to detect changes or abnormalities that may indicate the presence of malignancy.⁷ If cancer is detected in stage 1 the chances of survival is 80%, while it is 20% when diagnosed in stage 3.⁸ Breast self-examination (BSE) has been seen to empower women, taking responsibility for their own health. The teaching of breast self-examination (BSE) can help women to know the structure and composition of their normal breasts thereby enhancing their sensitivity to any abnormality at the earliest.⁹

It is inexpensive, simple and does not require any specialized equipment or regular visits to the hospital, thus proving its usefulness in underdeveloped countries too, which lack resources. In addition, performing BSE on a regular basis makes women accustomed to the normal appearance and feel of their breasts and they are able to notice any changes in their breast as soon as they present.¹⁰

The current study was conducted to assess the awareness regarding breast self-examination (BSE) among adult women attending OPD of radiotherapy

2. METHODS

Study design, area, and duration

This cross-sectional study was conducted in adult women attending government general hospital, Kurnool. The study data were conducted from December 2023 to January 2024 and all women aged 30 years and above, who have given written informed consent to participate in this study were included. Women who were nonpermanent residents (residing for less than 6 months in the study area) were excluded. Sample size is all the women attending the OPD of radiotherapy during study period.

Data collection

After taking written informed consent from the participants semi-structured questionnaire will be administered. Sociodemographic factors: age, religion, socioeconomic status (B G Prasad Classification 2015), education and marital status. Questions regarding the knowledge of the BSE were asked.

Statistical analysis

Data were entered and analysed in SPSS Statistics for Windows, version 16.0 (SPSS Inc., Chicago, Ill., USA) after data cleaning. Continuous data were expressed in terms of mean and standard deviation. Categorical variables were expressed in proportions.

3. RESULTS

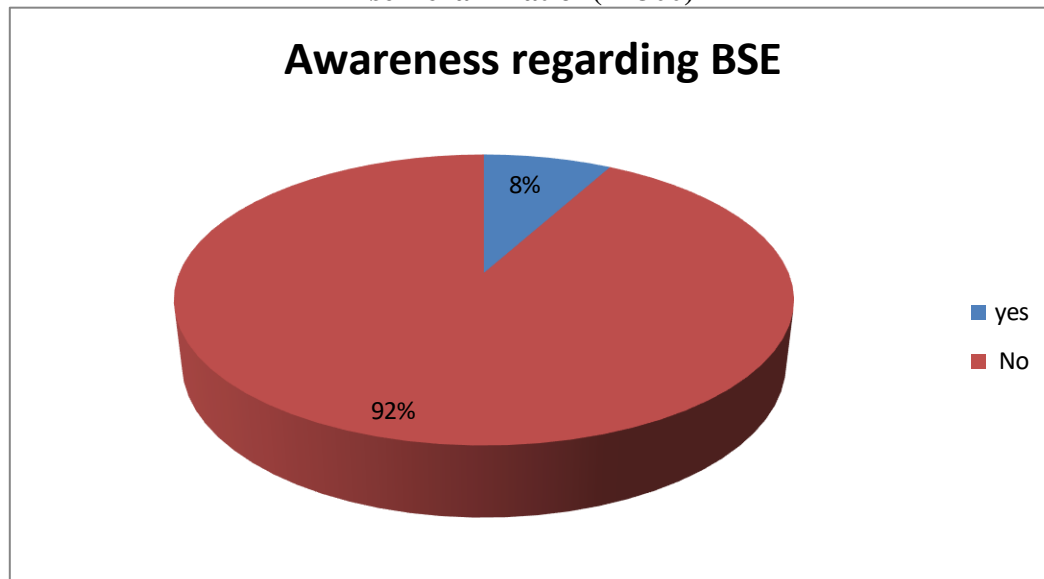
It was observed that among 600 study participants, maximum number of study participants 102 (34.2%) belonged to the age group of 30-39 years, followed by 67 (22.2%) in the age group of 40-49, 54 (18.0%) belonged to the age group of 50-59 years, 77 (24.6%) in the age group of ≥ 60 years. The mean age of the study participants was 49.95 years. Majority 594 (99%) of the study population were married and the mean age at marriage was 18.20 years. Table 1 shows that with regard to religion, majority of the study participants were Hindus (89%) by religion. Majority of the study population belonged to Class IV (39%) socioeconomic status according to revised modified B G Prasad classification and majority were illiterates with 70.6%. Figure 1 shows that the only 8% of study population were aware of breast self examination.

Table 2 compares the knowledge between participants who had and had not heard of breast self-examination (BSE). Most of the women (92%, n=276) had not heard of BSE, while only 24 (8%) study participants had heard. All the 24 (8%) study participants who had heard of BSE acknowledged that BSE is an important tool for the early detection of breast cancer. Only 22 (7.3%) study participants responded correctly that the appropriate age to initiate BSE was ≥ 19 years. In this study, all the 24 (4%) study participants who had heard of BSE knew that the accurate method of BSE is to examine the armpits and palpate with the opposite hand using the palm and a minimum of three fingers. Overall, 24 (8%) study participants had a substantial amount of knowledge, while 276 (92%) study participants were unaware.

Table 3 shows that among the participants who had heard of BSE, their main source of information was through health workers. There were only 24 (8%) participants in our study who had performed breast self-examination and continued to do so. While assessing the practice of BSE, majority (87.5%) of the participants preferred to do BSE, while 3 (12.5%) participants, although they practiced BSE, preferred a female doctor/ female nurse over BSE to examine their breasts. In our study we found that all the 24 participants who had heard of BSE, knew the correct technique of BSE, but only 19 (79.1%) practiced BSE at least once monthly.

Table 1: Socio-demographic details of the study participants

Characteristic	Women	Percentage (%)
Age group		
30-39 years	102	34.2%
40-49 years	67	22.2%
50-59 years	54	18%
≥ 60 years	77	24.6%
Religion		
Hindu	268	89%
Muslim	20	7%
Christian	12	4%
Education		
ILLiterate	212	70.6%
Literate	88	29.4%
Socio-economic status		
CLASS I (Upper)	10	3.3%
CLASS II (Upper middle)	37	12.3%
CLASS III (Middle)	104	34.6%
CLASS IV (Lower middle)	117	39%
CLASS V (Lower)	32	10.6%
Marital status		
Married	297	99%
Unmarried/widowed/divorced	3	1%

Figure 1: Distribution of study participants according to awareness regarding breast self-examination(n=300)**Table 2: Knowledge of breast self-examination(n=300)**

Heard of breast self-examination	Yes (n=24)	No (n=276)
Is BSE important in the early detection of breast cancer		
Important	24(8%)	
Not important		276(92%)
Don't know		
The correct age to initiate BSE		
<19 years	2(0.6%)	
≥19 years	22(7.3%)	
Don't know		276(92%)
The appropriate time to perform BSE		
A week before menstruation		
A week after menstruation	24(8%)	
During menstruation		
Don't know		276(92%)
The breast self- examination should be done during this period because breast		
Becomes soft and least lumpy	2(0.6%)	
Will be freely movable	0	
All of above	22(7.3%)	
Don't know		276(92%)
The appropriate place to perform BSE		
While lying on the bed	3(1%)	
In front of the mirror	21(7%)	
While having a bath		
All of above		
Don't know		276(92%)
The correct method of BSE		
Usage of the opposite hand for palpation of breasts		

Palpate with palm and minimum of three fingers		
Examine the armpit while performing BSE		
All of the above	24(8%)	276(92%)
Don't know		
Do you think BSE can help in early identification of breast cancer	24(8%)	276(92%)
Yes		
No		
Don't Know		

Table 3: Practice of breast self-examination (n=24)

Have you ever performed BSE before	Yes	Percentage
If yes, then from where did you learn it		
Friends and family		
Doctors/health workers	24	100
Internet/TV		
How do you prefer your breast examination to be done	3	12.5
By a nurse/female doctor	21	87.5
By yourself		
How frequently have you performed it		
At least once monthly at end of menstrual period	19	79.1
Occasionally (less than 12 times in a year)	5	
I undress until the waist when doing BSE	20	83.3
I do BSE while lying down	3	12.5
I place a towel or pillow under shoulder before examining breast on the side while lying down	3	12.5
I look at the breasts in mirror with hands on thighs	21	87.5
I look at the breasts in mirror with arms raised over the head	21	87.5
I use fingers to examine any lumps or thickening of the skin of the breasts	24	100
I observe any unusual change in the shape and size of the breast (looking for swelling, dimpling of skin or changes in nipples)	24	100
I press on the nipple to check for any unusual discharge	24	100
I do armpit examination as well to check for any lump	21	87.5
I use the right hand to examine the left breast and left hand to examine the right breast	24	100

4. DISCUSSION

In this study, it was found that only 8% of the study participants had awareness regarding breast selfexamination. Kommula et al. in a study done among women in South India, found that only 16.5% were aware of breast self-examination.¹¹

In present study majority were illiterates with 70.6%. inYerpuda et al, among rural women in south India, only 30.89% of the women were aware of breast self-examination and the level of awareness was highest among those aged 51-60 years. Awareness of breast selfexamination was found to be significantly associated with educational attainment.¹²

In the study by Komal SS et al Among the 24 participants who were aware of BSE, 18 (50.0%) had studied up to 12th standard, 4 (16.67%) had studied upto 10th standard, followed by 2 (18.33%) participants who were graduates.¹³

Among the 24 (8%) participants who were aware of BSE, all were aware that BSE is a method for early detection of breast cancer and all had participated in a program on breast self-examination by health personnel, while in a study by Rao et al., among rural women in South India, 6/342 (11%) had received some form of training from a local NGO and the rest had sourced their knowledge from either the television or the print media.¹⁴ Comparing with another study by Joyce et al., in which out of the 152 respondents who heard about breast self-examination, majority (55.9%) obtained the information from the health worker.¹⁵ Similar study by Gogolla et al among rural women where the awareness regarding BSE was only 5%.¹⁶

Study done by Amoran et al among rural women in Nigeria where only 5.3% of the participants perform BSE regularly (monthly) as recommended, while in a study by Rao et al among rural women in South India, among the participants (16%) who had some knowledge regarding BSE, none of them practiced.^{14,17}

The findings in this study shows that among the 24 participants who practiced BSE, only 19 (79.1%) did BSE once a month, while 7 (29.17%) reported as having done once a year. A similar study by Joyce et al., showed that out of the 89 participants who practiced BSE, only 16.9% of the study participants reported that they do BSE monthly.¹⁵

Though our study showed that that among the 24 (4%) participants who practiced BSE, majority of the participants (87.5%) preferred to carry out BSE themselves, but contrasting results were seen in a study conducted in Iran by Gholamrezza et al, which showed that almost all of the women (96.7%) preferred to have a female doctor do their breast examination.¹⁸

Limitations

Current study was institution based study so results cannot be generalized.

5. CONCLUSION

The study found that the overall awareness of Breast selfexamination among the study participants was low at 4%. Those who were aware of Breast self-examination had participated in a program on breast self-examination by health personnel and knew the correct technique of BSE. Need to conduct more awareness programs to educate women on the importance of breast self-examination and focus on identifying the barriers to BSE.

6. REFERENCES

1. GLOBOCAN 2012. International Agency for Research on Cancer. World Health Organization. PRESS RELEASE No. 223; 12 December, 2013. Available from: [https://www.iarc.fr/en/media centre/pr/2013/pdfs/pr223_E.pdf](https://www.iarc.fr/en/media%20centre/pr/2013/pdfs/pr223_E.pdf). [Last accessed on 2016 Aug 10].
2. Taplin SH, Ichikawa L, Yood MU, Manos MM, Geiger AM, Weinmann S, et al. Reason for late stage breast cancer: Absence of screening or detection, or breakdown in follow up? J Natl Cancer Inst 2004; 96:1518-27.

3. Agarwal G, Ramakant P. Breast cancer care in India: The current scenario and the challenges for the future. *Breast Care (Basel)* 2008; 3:21-7.
4. Pakseresht S, Ingle GK, Garg S, Sarafraz N. Stage at Diagnosis and Delay in Seeking Medical Care Among Women with Breast Cancer, Delhi, India. *Iran Red Crescent Med J.* 2014;16(12):e14490.
5. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, et al. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer Clin.* 2021;71:209-49.
6. Reddy N, Ninan T, Tabar L, Bevers T. The Results of a Breast Screening Camp at a District Level in Rural India. *Asian Pacific J Cancer Prev.* 2012;13(12):6067-72.
7. Sankaranarayanan, R. Early Detection of Cancer In Primary Care In Less-Developed Countries. *Cancer Control*; 2013. Available from: http://cancercontrol.info/wp-content/uploads/2014/08/cc2013_66-72-Sankaranarayanan-incl-T-page_2012.pdf. Accessed on 05 October 2022.
8. Yadav P, Jaroli DP. Breast Cancer: Awareness and Risk Factors in College- going Younger Age Group Women in Rajasthan. *Asian Pacific J Cancer Prev.* 2010;11:319-22.
9. World Health Organisation [Homepage on Internet]; 2014. Available from:<http://www.who.int/cancer/detection/breastcancer/en/index2.html>. Accessed on 28 January 2023.
10. Karayurt O, Ozmen D, Cetinkaya AC. Awareness of breast cancer risk factors and practice of breast selfexamination among high school students in Turkey. *BMC Public Health.* 2008;8:359
11. Kommula ALSD, Borra, Kommula VM. Awareness and practice of breast self-examination among women in south India. *Int J CurrMicrobiol App Sci.* 2014;3(1):391-4.
12. Yerpuda 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;4(2):329-32
13. Komal SS, Venkatakrishna S. Perceptions and practice of breast self-examination among adult women residing in rural South Karnataka. *Int J Community Med Public Health* 2023;10:1822-30
14. Rao RSP, Suma N, Nair NS, Kamath VG. Acceptability and Effectiveness of a Breast Health Awareness ProgrammeFor Rural Women In India. *Indian J Med Sci.* 2005;59(9):396-402.
15. Joyce C, Ssenyongaa LVN, Iramiotb JS. Breast selfexamination among female clients in a tertiary hospital in Eastern Uganda. *International Journal of Africa Nursing Sciences.* 2020;2
16. Gogolla BR, Kumari SM, Priyanka S. Impact of health education on preventive practices of breast cancer among women from the rural field practice area of a medical college in Hyderabad, Telangana State. *MRIMS J Health Sci.* 2023;11:29–33.
17. Amoran OE, Toyobo OO. Predictors of breast selfexamination as cancer prevention practice among women of reproductive age-group in a rural town in Nigeria. *Niger Med J.* 2015;56:185-9.
18. Reisi M, Javadzade SH, Sharifirad G. Knowledge, attitudes, and practice of breast self-examination among female health workers in Isfahan, Iran. *J Edu Health Promot.* 2013;2:46–50

