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Original Research Article

Knowledge, attitude and practice of women towards self breast examination in the rural field practice area of IGGMC, Nagpur, Maharashtra

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ABSTRACT

Background: Breast cancer is the most common cancer among females. In India, breast cancer is the top most cancer with about 13.6% new cases diagnosed in 2020. Current knowledge of the aetiology of breast cancer offers little prospect of primary prevention. So secondary prevention like breast screening, which include self breast examination have to be done. The present study was designed to determine the knowledge, attitude and practice regarding BSE among women aged 18 years and above.
Methods: A cross sectional study was conducted on 241 females above 18 years of age in rural health care training centre affiliated to IGGMC, Nagpur. All consecutive participants were interviewed in person using a predesigned and pre-tested proforma. SPSS Version 20 was used to analyse the data collected.
Results: It was seen that the mean age of participants was 29.98±7.382 years The majority of participants were belonged to the Hindu religion (63.9%) and nuclear family (82.57%). Majority of participants (68.05%) were having poor knowledge about BSE, most of the participants were having good attitude (51.45%), majority of participants (53.11%) were having poor practice to BSE.
Conclusions: BSE is one of the most effective preventive health behaviour for the early detection of breast cancer. In this study, it is evident that knowledge about BSE is low. This indicate that there is a need for Health education about breast cancer and BSE among the rural population of India to improve the KAP about BSE for early detection and better survival.

Keywords: Attitude, Breast self examination, Knowledge, Practice, Rural women

INTRODUCTION

Breast cancer is the most common cancer among females. It is the leading cause of global cancer incidence in 2020, with an estimated 2.3 million new cases, representing 11.7 percent of all cancer cases. It is the fifth leading cause of cancer mortality worldwide.[1] In India, presently breast cancer (BC) accounts for 13.5% (178,361) of all cancer cases and 10.6% (90408) of all deaths in India with a cumulative risk of 2.81.[2] India has observed a significant rise in young age BC incidence, with BC diagnosis exceeding that of cervical cancer to become the most prevalent cancer among women in the country.[3] Breast cancer occurs in a visible organ and can be detected and treated at an early stage.[4] The 5-year survival rate is 85% if detected early and is 56% if detected late.[5] Common BC screening modalities suggested to decrease morbidity and mortality include mammography, clinical-breast examinations (CBE), and breast self-examinations (BSE).[6] Most breast tumours diagnosed in the initial stages are self-discovered.[7] In a study conducted by Kumarasamy et al among rural women in

Trichy, Tamil Nadu, most of the women (89%) were aware of breast cancer while only 26% of the women were aware of BSE. Only 18% have ever checked their breasts and only 5% practiced BSE regularly. Awareness of BSE was found to be significantly associated with age and educational status.[8] Regardless of its simplicity, BSE practices in India range from 0 to 52%.[9,10] Therefore, the present study was conducted to assess the BSE practices and its knowledge and attitude among rural women from Nagpur District, Maharashtra.

METHODS

Study design and setting

A cross-sectional study was conducted among 241 females over one month from 11 March 2024 to 10 April 2024 in rural health care training centre affiliated to Indira Gandhi Government Medical College, Nagpur.

Study population

The study population consisted of females above 18 years of age who were residing in the rural field practice area of IGGMC, Nagpur. Those who gave consent for participation were included in the study until the sample size was achieved, and those who were not willing to participate were excluded. Nonprobability convenient sampling method was used to select the participants.

Questionnaire development and data collection

Data was collected by the self-structured questionnaire in English which was developed after thorough examination of the literature. The content of the questionnaire was verified by the expert team. It was translated into Hindi (the regional language) by the investigator. The study questionnaire was divided into four sections: socio-demographic details, knowledge regarding BSE (5 questions), attitude regarding BSE (7 questions) and practice regarding BSE (3 questions, first question with two sub questions). Data were collected from each participant through the questionnaire by conducting a face-to-face interview. Privacy and confidentiality were maintained during the interview session.

Correct knowledge responses were given 1 point and added together, following which percentage was calculated. Knowledge scores were then categorized as "excellent" (≥90%), "good" (70-89%), "satisfactory/moderate" (50-69%), "poor" (≤49%). Correct practice responses were given 1 point and added together, following which percentage was calculated. Practice scores were then categorized as "excellent" (≥90%), "good" (50-89%), "poor" (≤49%). For attitudes, negative scoring involved responses on a scale of 0-4, with 0 being "*strongly agree*" and 4 "*strongly disagree*." Positive scoring involved responses on a scale of 4-0, with 4 being "*strongly agree*" and 0 being "*strongly disagree*." mean score of >16.54 indicates good attitude, mean score of ≤16.54 indicates bad attitude.

Sample size estimation

As per the study conducted by Selvam et al, the prevalence of breast self examination performed (p) as 19.63%, with 95% confident interval (Z=1.96) and absolute error as 6%, the estimated minimum sample size was 169 using the formula $n = Z^2pq / d^2$ and the sample size taken was 241.[11]

Data analysis

After checking for completeness, clarity, and accuracy of collected data in Excel, it was exported to Statistical Package for Social Sciences (SPSS) version 20 for analysis. The characteristics of the study participants were analysed using descriptive statistics and expressed in terms of frequency and percentages (qualitative variables).

RESULTS

Table 1 shows the socio-demographic profile of study participants. It was found that the mean and standard deviation of age was 29.98±7.382 years (minimum = 19 years, maximum = 45 years), and most of the participants belonged to age group of 26-35. The majority of the participants belonged to the Hindu religion (63.9%). The majority of the participants belonged to the nuclear family (82.57%). The most of the participants belonged to home maker (28.63%). The most of the participants educated upto graduate (39.41%). The most of the participants belonged to class III (49.79). Socio economic status was assessed by using BG Prasad scale.

Table 2 shows knowledge about BSE in that only 31.553% have heard of BSE, 31.8 % knows that BSE can be done at home on your own, 31.53% knows that BSE can help diagnose abnormal growth in breast, only 7.4 % knows that BSE requires a mirror, only 8.29 % knows that, it is necessary to do every month.

Table 3 shows that attitude towards the BSE, 35.1% responded '*neutral*' to "BSE is waste of time and has no purpose", 42.6 % responded '*disagree*' to "I feel awkward while performing a BSE", 51.2 % responded '*agree*' to "I am afraid and anxious that I may detect an abnormality when performing the BSE", 51.7 % responded '*agree*' to "I think all women should be empowered and educated about BSE", 73.6% responded '*agree'* to "I do not have enough information about BSE to perform it properly", 59.1% responded '*neutral'* to*"* I cannot correctly identify abnormalities with the BSE, only doctors can identify it", 33.5% responded "*disagree"* to "I don't think all the women should do BSE. You should do it only if you have symptoms".

Table 1: Distribution of study participants as per the socio demographic profile (n=241).

Variables	Categories	N (%)
Age (years)	18-25	88 (36.51)
	26-35	97 (40.24)
	>36	56 (23.23)
Education	Illiterate	17 (7.0)
	Primary school	16 (6.6)
	Middle school	59 (24.48)
	High school	49 (20.33)
	Diploma	5 (2.07)
	Graduate	95 (39.41)
Socio economic status	Class IV	15 (6.2)
	Class III	120 (49.79)
	Class II	103 (42.79)
	Class I	3 (1.24)
Occupation	Professional	68 (28.21)
	Semi professional	75(31.1)
	Skilled worker	8 (3.31)
	Semi skilled worker	6 (2.48) 9 (3.73)
	Unskilled worker	6 (2.48)
	Unemployed / student home maker	69 (28.63)
Type of family	Three generation	18 (7.4)
	Joint	24 (9.9)
	Nuclear	199 (82.57)
Religion	Hindu	154 (63.9)
	Muslim	44 (18.25)
	Buddhist	43 (17.84)

Table 2: Distribution of study participants as per their knowledge about BSE (n=241).

Knowledge about self breast examination		N	Percent
Have you heard of BSE?	Yes	76	31.53
	No	165	68.46
BSE can be done at home on your own?	Yes	76	31.8
	No	11	4.5
	Don't know	154	63.6
BSE can help diagnose abnormal growth in breast (including cancerous growths)	Yes	76	31.53
	No	4	1.6
	Don't know	161	66.8
Whether BSE requires a mirror?	Yes	18	7.4
	No	12	4.97
	Don't know	211	87.55
Necessary to do every month	Yes	20	8.29
	No	1	0.4
	Don't know	220	91.28

Table 4 shows practice towards BSE, only 31.5% have performed BSE, among this 23.2% have performed once a year, only 31.12% responded that they will advise and educate the friends about the BSE and its importance, majority of participants (68.6%) will contact medical professional if they find any abnormal changes during BSE.

Figure 1 shows knowledge about BSE majority of participants (68.05%) were having poor knowledge about BSE, 23.65% were having satisfactory knowledge and 3.73 % were having excellent knowledge.

Table 3: Attitude towards self breast examination.

Attitude	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	N	%	N	%	N	%	N	%	n	%
BSE is waste of time and has no purpose	0	0	48	19.8	84	35.1	84	34.7	25	10.3
I feel shy/ awkward while performing a BSE	0	0	56	23.1	71	29.8	103	42.6	11	4.5
I am afraid and anxious that i may detect an abnormality while performing the BSE	11	4.5	123	51.2	70	28.9	37	15.3	0	0
I think all women should be empowered and educated about BSE	34	14.0	124	51.7	56	23.1	27	11.2	0	0
I do not have enough information about BSE to perform it properly	17	7.0	177	73.6	46	19.0	1	0.4	0	0
I cannot correctly identify abnormalities with the BSE, only doctors can identify it	28	11.6	67	27.7	144	59.1	4	1.7	0	0
I don't think all women should do BSE. You should do it only if you have symptoms	11	4.5	68	28.5	72	29.8	81	33.5	9	3.7

Table 4: Practice of self breast examination.

Practice		N	%
Have you ever performed a BSE ?	Yes	76	31.5
	No	165	68.5
If you perform the BSE (yes), how frequent do you do it?	Once in 6 months	20	8.29
	Once a year	56	23.2
I have not performed a BSE (no) because	I do not think it is important	105	43.5
	Do not know how to do it	40	16.5
	I do not have symptoms	20	8.29
I advise and educate my friends about the BSE and its importance	Yes	75	31.12
	No	166	68.8
If i find any abnormal changes during BSE, i will…	Pray to god	0	0
	Do nothing	30	12.4
	Inform family member	45	18.6
	Contact medical professional	165	68.6

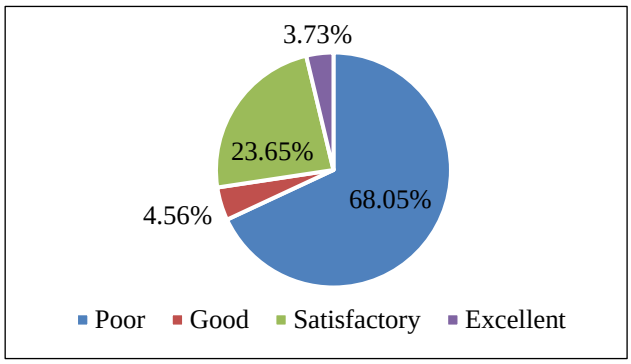

Figure 1: Knowledge about BSE.

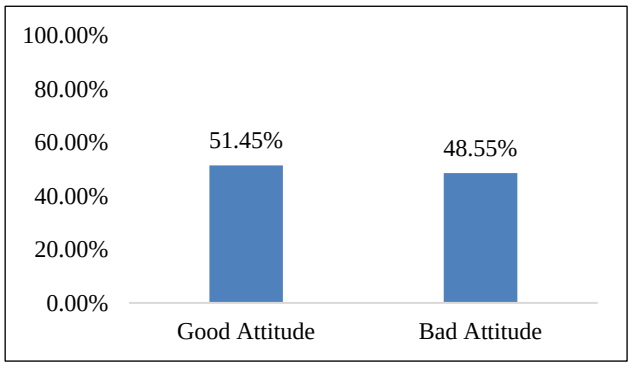

Figure 2: Attitude towards BSE.

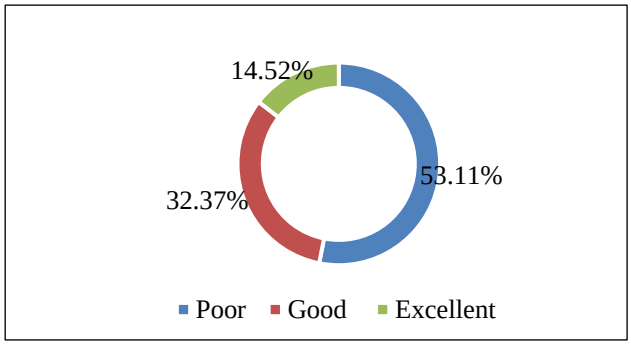

Figure 3: Practice about BSE.

Figure 2 shows attitude towards BSE most of the participants were having good attitude 51.45% and 48.55% were having bad attitude towards BSE.

Figure 3 shows practice about BSE, majority of participants (53.11%) were having poor practice to BSE, 32.37 % were having good practice and 14.52% were having excellent practice.

DISCUSSION

As more and more breast cancer cases are being reported, it is important to assess the knowledge, attitude and practice of BSE in the community.[13] There are several methods by which the early onset of breast cancer can be detected including breast self examination. Although there are some controversies regarding the techniques used in performing BSE, the method is still considered as relevant, and is therefore recommended in developing countries where access to diagnostic and curative facilities may be a problem.[19,20] In our study, the mean±standard deviation of age was 29.98±7.382 years, similar to the findings of Selvam et al (mean=29.20 years).[11] In our study the majority (63.9%) were Hindu, similar to the findings of Khan et al (66.0%).[12] In the present study, the most (49.79%) were SEC III, similar to the findings of Ishaaque et al (38.3 %).[13] In our study, the most (39.41%) were graduate, similar to the findings of Selvam et al (32.33%).[11] In the present study, 31.53% of participants have heard of BSE, this is in line with Selvam et al and Kumarasamy et al.[11,14] Because this study was conducted in rural field practice area, it might be possible that they had less interaction with medical personnel. In our study about 8.29% of participants knows to do BSE every month, which is similar to study done in Trichy and is less when compared to studies in Lagos, Ethiopia and Cameroon.[14,16-18] In our study 31.5% of participants performed BSE, this is in line with Selvam et al and Ishaaque et al and this is more when compared to the rural women in Trichy and market women in Abakaliki.[11,13-15] Most of the females were afraid about finding an abnormality themselves this

indicates the need for camps, interventions and medical professionals to educate the rural population regarding the BSE. In our study as per the scores obtained, 23.65% had satisfactory knowledge and 4.56% had good knowledge on BSE which is more when compared to rural women in Trichy and female health science students in Ethiopia.[14,17] In our study majority of the participants (51.45%) were having good attitude towards BSE. In the present study, majority of participants (53.11%) were having poor practice to BSE. Regardless of low BSE practices, most women reported that they would contact a medical professional if they detected abnormalities, this is similar to the study of Selvam et al.[11]

Limitations of this cross-sectional study was that the findings are only from rural area; therefore the findings cannot be generalized to urban area. Another limitation is we have used nonprobability sampling method for selection of participants therefore selection bias may occur.

CONCLUSION

BSE is one of the most effective preventive health behaviour for the early detection of breast cancer. In this study, it is evident that knowledge about BSE is low and practice towards BSE is poor but attitude towards BSE is good. This indicates the need for health education of BC and BSE among the rural population of India to improve the KAP about BSE for early detection and better survival.

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REFERENCES

1. Park K. Park's textbook of preventive and social medicine. 25th ed. Banarsidas Bhanot publishers; 2021:434-435.
2. Mehrotra R, Yadav K. Breast cancer in India: Present scenario and the challenges ahead. World J Clin Oncol. 2022;13(3):209-18.
3. Malvia S, Bagadi SA, Dubey US, Saxena S. Epidemiology of breast cancer in Indian women. Asia Pac J Clin Oncol. 2017;13(4):289-95.
4. Taşçı A, Usta YY. Comparison of knowledge and practices of breast self examination (BSE): a pilot study in Turkey. APJCP. 2010;11(5):1417-20.
5. Hallal JC. The relationship of health beliefs, health locus of control, and self concept to the practice of breast self-examination in adult women. Nurs Res. 1982;31(3):137-42.
6. Humphrey LL, Helfand M, Chan BKS, Woolf SH. Breast cancer screening: A summary of the evidence for the U.S. Preventive services task force. Ann Intern Med. 2002; 137(5_Part_1):347-60.
7. Smith EM, Francis AM, Polissar L. The effect of breast self-exam practices and physician examinations on extent of disease at diagnosis. Prev Med. 1980;9(3):409-17.
8. Balasubramaniam G, Gaidhani RH, Khan A, Saoba S, Mahantshetty U, Maheshwari A. Survival rate of cervical cancer from a study conducted in India. Indian J Med Sci. 2021;73(2):203-11.
9. Gupta SK. Impact of a health education intervention program regarding breast self examination by women in a Semi-Urban Area of Madhya Pradesh, India. Asian Pac J Cancer Prev. 2009;10(6):1113-7.
10. Yadav P, Jaroli DP. Breast cancer: Awareness and risk factors in college-going younger age group women in Rajasthan. Asian Pac J Cancer Prev 2010;11(2):319-22.
11. Selvam M, Sundaram S. Breast self-examination practices among young rural women and its associated knowledge and attitudes in Tirunelveli District, Tamil Nadu. J Cancer Res Therap. 2023:1-9.
12. Khan A, Akhtar M, Vanan A, Singhavi H, Heroor A. Knowledge, attitude & practice towards breast cancer and breast self-examination Among Indian Women: A Prospective Observation Study. Int Surg Case Rep. 2021;2(3):1-5.
13. Ishaaque S, Gopalamenon N. Knowledge attitude practice on breast self-examination in a rural area in North Kerala. Int J Commu Medi Publ Heal. 2019;6(5):2069.
14. Kumarasamy H, Veerakumar AM, Subhathra S, Suga Y, Murugaraj R. Determinants of awareness and practice of breast self examination among rural women in Trichy, Tamil Nadu. J Mid-Life Health 2017;8(2):84-8.
15. Obaji NC, Elom HA, Agwu UM, Nwigwe CG, Ezeonu PO, Umeora OU. Awareness and practice of breast self. examination among market women in Abakaliki, south East Nigeria. Ann Med Health Sci Res. 2013;3(1):7-12.
16. Irurhe NK, Olowoyeye OA, Arogundade RA, Bassey RB, Onajole AT. Knowledge, attitude and practice of breast self examination among female medical students of the University of Lagos. Internet J Heal. 2009;12(1):1-8.
17. Segni MT, Tadesse DM, Amdemichael R, Demissie HF. Breast self-examination: knowledge, attitude, and practice among female health science students at Adama Science and Technology University,

Ethiopia. Gynecol Obstet (Sunnyvale). 2016;6(368):1-6.
18. Atanga Bi, Suh M, Atashili J, Asoh Fuh E, Ayamba Eta V. Breast Self-Examination and breast cancer awareness in women in developing countries: a survey of women in Buea, Cameroon. BMC Research Notes. 2012;5(1):627.
19. Chioma C, Asuzu S. Knowledge, attitude and practice of self-breast examination the female students of the University of Ibadan, Nigeria. Pakistan J Social Sci. 2007;4(Suppl 3):400-2.
20. Arzu T, Aklime D. Assessing the efficacy of a peer education model in teaching breast self-examination to university students. As Paci Cancer Prevent. 2007;8(4):481-4.

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