Research article

Assessment of knowledge, attitude, and practice regarding breast cancer among the women in rural Karnataka, South India

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ABSTRACT

Introduction and Aim: Breast cancer is one of the major causes of mortality next to cervical cancer among women in India. Annually 2,00,000 new cases of breast cancer are detected in India. Comparatively 60% of them are detected in an early stage. The present study was undertaken to explore the level of knowledge, attitude, and practice regarding breast cancer among women.

Materials and Methods: Three hundred and sixty women were selected through cluster sampling for the study. A pre-designed, pre-tested, and validated questionnaire comprising mixed types of structured and semi-structured questions was used to collect the information from women through one-to-one interviews.

Results: The majority of the selected women were between 36- 55 (64.4%) years of age and the majority (64.7%) of them were employed of whom 39.7% of them were beedi rollers. Regarding knowledge of the symptoms of breast cancer, 60.6% did not know about the symptoms, and 68.3% did not know the detection methods. Most (85.3%) of the women were unaware of the practice of Breast Self- Examination.

Conclusion: The results of the current study indicate a low level of knowledge of breast cancer. The study findings suggest that the awareness programs on breast cancer and its detection methods may help women to improve their level of understanding, be more responsive towards the early identification of the symptoms of breast cancer and seek timely medical help.

Keywords: Breast cancer knowledge; breast cancer screening; breast clinical examination; mammogram; self-examination.

INTRODUCTION

Breast Cancer is a major disease commonly affecting women around the whole world (1,2). According to the Indian Council of Medical Research (ICMR), 2.25 million cancer cases with over one lakh incidence getting registered annually in India and cancer rates increase very speedy with the high rate of mortality. Early diagnosis and on-time treatment are necessary public health concerns (3,4). Breast cancer is a type of malignant tumour that starts in the cells of the breast and commonly occurs in women. This abnormal cell could destroy healthy tissue and then, spread beyond its usual boundaries. Non-communicable diseases (NCD) including breast cancer considered not prevented, which is a noticeable common false perception of the community but it is a preventable cause of morbidity, disability, and mortality (5).

Every year, two lakh new breast cancer cases are detected in India. Factors like an adaptation to the Western lifestyle, rising incidences of late pregnancies, rising smoking and alcohol consumption in females, etc. are attributed to increasing the risk of breast cancer in much younger Indian women. Though advanced-stage diseases can be treated efficiently with the help of advanced treatment options, outcomes may not be as good as we would achieve while treating early stages of breast cancer. Early-stage breast cancers are always treated with curative intent as they offer the best chance of cure (6). An annual check-up for breast cancer is a very favourable way to control disease and decrease mortality (7).

Women should be educated to know how to identify breast cancer at an early level to seek medical care if any abnormalities are found in the breast. Women must be trained to develop a positive attitude towards screening for breast cancer. It is very significant to make women aware of the early level identification of breast cancer through universal identification means: Breast self-examination, Clinical breast examination, and Mammography (8).

Breast Self-Examination (BSE) is the simplest, highly economical, and time-tested method to find abnormal changes in the breast. It takes not more than 5 minutes to perform it and it can be repeated at least once a month. Doing breast self-examination after 5 days of the menses is better so that changes in the breast related to menses are not misunderstood to be cancerous (9). It is declared that 90% of the time breast cancer can be identified by the person herself at an initial stage (10). Women can find any differences found in breasts personally (11). One of the adequate ways to identify the differences in the breast is mammography but due

to its cost poor countries cannot afford it. Thus, women above 20 and above are mentioned to do breast self-examination on a regular monthly basis because it is simple to do, economizing, and very secure and doesn't need any instrument or items.

Very few studies have been done to evaluate the knowledge and practice of breast cancer screening methods among women in Karnataka. Therefore, this study was conducted to explore the level of knowledge, attitude, and practices of breast cancer among women in a rural district of southern Karnataka.

MATERIALS AND METHODS

Study design

A cluster sampling technique was used to determine 360 women from various Self-Help Groups (SHGs) functioning in the Bantwal taluk of Dakshina Kannada District in Karnataka. The study tool used was a pre-designed, pre-tested, and validated questionnaire comprising mixed types of structured and semi-structured questions.

There are mainly four categories in the study tool: The first category has questions on demographic details like education, employment, marital status, occupation, and category of family, etc.

The second category included questions like knowledge of breast cancer, symptoms of BC, identification methods of Breast Cancer, Breast Self-Examination, clinical breast examination, and mammography (Each question had multiple choice answers with one correct answer and 4 wrong answers. Correct answers are coded as the right answers). The knowledge level of women is categorized into three: High (>75%), Average (75%-50%), and Low (< 50%).

The third part has seven statements on attitudes. The attitude regarding BC is assessed using 5 points Likert scale: strongly agree, agree, neutral, disagree, and strongly disagree. The strongly agree and agree answers to the statement are coded as "positive statements", the strongly disagree and disagree are coded as "negative statements" and neutral as neutral.

The fourth part included six questions regarding the knowledge of the participants on the self-test practice of the breast, how many times they do breast self-test, reasons for not doing it, visiting the doctor when observing any abnormalities, tests undergone (put the right mark for a suitable answer) and the reason for undergoing the tests.

Before conducting the study, ethical permission was taken from the university. Informed consent was taken before collecting details from women through one-to-one interviews.

Sample size

The sample size was considered as 360 based upon the estimation of the past study with a prevalence of P=71.8% at a 95% level of confidence and a 5% margin of error (12).

Statistical analysis

Social Science Statistical Package version 27 was used to analyze the data. Continuous data were calculated as mean, standard deviation, frequency, and percentage (P value <0.05 was considered statistically significant).

RESULTS

Among the total 360, the majority were between the age group of 36- 55 (64.4%) and the majority (64.7%) of them were employed of whom 39.7% of them were beedi rollers. 89.4% of them were married and 86.7% belonged to the below-poverty line category (Table 1).

Among the total 360 women, 52.5 % of them were not aware that breast cancer is a curable disease. Only 11.9% of them knew that self-testing of the breast is the easiest and cheapest method to detect breast cancer and only 8.6% knew about the test available for confirming the growth of breast cancer. Out of 360, 14.7% were aware and 66.6 % had no knowledge about Clinical Breast Examination and only 8.3% had knowledge of mammography (Table 2).

Findings show 24.7 % of women had a negative attitude towards the prevention of breast cancer. 53.3 % of the participants indicated that they prefer a lady doctor for breast examination. 25.6% of the participants had a neutral attitude towards the statement that identifying BC at an early stage has no effect on the treatment. 44.4 % of the participants opined that periodic clinical examination by doctors is not needed if there are no changes in the breast. 60.5% of the participants agreed that if they were aware of the use of breast examination, they could have done breast self-examination by now. 40.3% of the participants had a negative attitude towards the statement if I do the test by myself, I cannot detect abnormalities in my breast (Table 3).

91.9% of the participants were not practicing breast self-examination while 89.2 % of the participants did not undergo any tests (Table 4).

Table 1: Demographic features (n=360)

Variables	Frequencies (%)
Age category	
26-35	62 (17.2)
36-45	**120 (33.3)**
46-55	**112 (31.1)**
>56	66 (18.3)

Educational category	
No formal Education	66(18.3)
Primary	**160(44.4)**
High school	86(23.9)
PUC & above	47(13.1)
Any other	3(.3)
Employment status	
Employed	233(64.7)
Unemployed	127(35.3)
Type of employment	
Agriculture	8(2.2)
Beedi roller	**143(39.7)**
Day Labour	30(5.3)
Govt Sector	35(9.7)
Self-Employed	17(5)
Marital status	
Divorced/Separated	2(.6)
Married	**322(89.4)**
Single	2(.6)
Widow	**34(9.4)**
Category of Family:	8(2.2)
Anthyodaya	
APL	40(11.1)
BPL	**312(86.7)**

APL = Above Poverty Line, BPL = Below Poverty Line, NA = Not Applicable.

Table 2: Knowledge of breast cancer (n=360)

Variables	**Right answer**	**Wrong answer**
Knowledge of breast cancer		
Breast cancer is a curable disease.	171(47.5)	189(52.5)
Breast cancer is the most common cancer	87(24.2)	273(75.8)
The occurrence more common in those with a genetic history	34(9.4)	326(90.6)
Knowledge of symptoms of BC		
Abnormal changes in breast	121(33.6)	239(66.4)
Nipple discharge in breast cancer	30(8.3)	330(91.7)
Knowledge of identifying BC		
The easiest and cheapest method to detect breast cancer	43(11.9)	317(88.1)
Test available for early detection	32 (8.9)	328(91.1)
Frequency of mammograms for women after the age of 50	106(29.4)	254(70.6)
Test available for confirming the growth of breast cancer	31(8.6)	329(91.4)
Knowledge of Breast Self-Examination		
Examination of the breast by self is a useful tool for the early identification of BC	77 (21.4)	283(78.6)
The part of the hand used to palpate the breast during BSEs.	28(7.8)	332(92.2)
BSE should be done by	24(6.7)	336(93.3)
Knowledge of Clinical Breast Examination		
CBE is a useful method for identifying BC	168(46.7)	192(53.3)
CBE should be done by	123(34.2)	237(65.8)
Frequency of CBE	28(7.8)	332(92.2)
Knowledge of mammography		
Mammography is a useful tool for the early detection of breast cancer	37(10.3)	323(89.7)

BSE= Breast Self -Examination, CBE= Clinical Breast Examination

Table 3: Attitude of the participants towards breast cancer (n=360)

Sl. No.	**Attitude statements**	**Positive**	**Neutral**	**Negative**
1	Breast cancer can be prevented.	47.8	17.5	24.7
2	Women prefer female doctors for breast examinations.	28.3	18.4	53.3
3	There is no reason needed to examine my breast.	28.6	23.9	47.5
4	Identifying BC at the initial stage has no effect on the treatment.	50	25.6	24.4

5	Periodic clinical examination by the doctors is not needed If there are no changes in the breast.	33.6	21.9	44.4
6	If I was aware of the use of breast examination, I would have done my self-testing of my breast by now.	60.5	21.4	18.1
7	If I do the test by myself, I cannot detect abnormalities in my breast.	36.4	23.3	40.3

Table 4: Knowledge of the participants on the practice of breast self-exam (n=360)

Sl No	Factors	Categories	Frequencies (%)
1	Practising BSE*	No	331(91.9)
		Yes	29(8.1)
2	Frequency of practice of BSE	Weekly	4(1.1)
		Monthly	6(1.7)
		Occasionally	6(1.7)
		Rarely	13(3.6)
		Not applicable	331(91.9)
3	Reason for not practicing BSE	Not needed	88(24.4)
		Busy	14(3.9)
		Fear of disease	89(24.7)
		Feeling shy	6(1.7)
		No Knowledge	87(24.2)
		Not interested	76(21.1
4	Visiting the doctor when observed any abnormalities	Yes	57(15.8)
		No	125(34.7)
		No opinion	178(49.4)
5	Tests, you have undergone (put the right mark for a suitable answer)	BSE	29(8)
		CBE	4(1.1)
		Mammography	6(1.7)
		No Test	321(89.2)
6	The reason for undergoing the tests	Found abnormality	7(1.9)
		Knowledge from awareness programs	4(1.1)
		Medical camp/ doctor reference	18(5)
		NA	331(91.9)

BSE- Breast self-examination.

Table 5: Level of knowledge (n=360)

Level of Knowledge	Level	Frequency (%)
Poor	<11	300 (83.3)
Moderate	12 – 21	45 (12.5)
High	>22	15 (4.2)

Out of 360 participants, 83.3% of the participants reported a poor level of knowledge, and 4.2% reported high knowledge about breast cancer. The participants with more than 75% of the score (75% of 29=22) are identified to have high knowledge, 50 %- 75% are identified as having moderate knowledge, and less than 50% are identified as having a low level of knowledge on breast cancer (Table 5).

DISCUSSION

Cancer of the breast is one leading cancer in the world. Easy identification of the problem will play a crucial role in prevention and seeking early medical advice (13). At present, there are three methods of early identification i.e. self-testing of the breast, clinical examination by the doctor, and mammography. In this study, 83.3% of the participants indicated poor knowledge and 4.2% had high knowledge. This finding is significant as compared to a similar study where knowledge regarding breast cancer was reported to be 54.4% (14,15).

The study indicated that knowledge of the symptoms of breast cancer among the participants was low which is in conformity with similar studies conducted elsewhere (16). In our study knowledge of identification methods was reported to be very inadequate, the same result was reported in a similar study among women in Indonesia (17). It was reported that the knowledge of self-testing of the breast was found very low in this study. This finding was varied from the study done in Rajasthan among Indian college-going students indicated that 28% examined their breasts rarely or never (18).

The present study result showed that the knowledge level of breast cancer, early detection methods, diagnosis, knowledge about clinical breast examination (CBE), and mammography was poor. This result is varied from three previous related studies. The study by Jalambo and colleagues showed good knowledge about mammography and CBE among women visiting PHC. Another study conducted in Gaza to assess the knowledge and practice of BSE among nurses working at primary healthcare centers also reported good knowledge about breast cancer, early detection methods, CBE, and mammography (19,20). In this study out of 360 participants, 47.5 % of the participants expressed a favourable attitude towards self-examination of the breast. This favourable (75%) attitude towards BSE was also observed in a similar study (21).

In this study, out of 360 participants, 60.5 % felt that they did not bother to do self-testing of the breast as there was no prior knowledge. Similar findings are seen in Adamu (21) where 92.5% of them think BSE is necessary and a further 97.5% would like to know about it.

CONCLUSION

Knowledge of breast cancer plays an important role in early identification and management. The present study conducted in a rural district of southern Karnataka shows that women had very low levels of knowledge regarding cancer of the breast, its symptoms, early identification, and self-examination skills. The findings of this study highlight the need to organize more concentrated educational programs for rural women.

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CONFLICT OF INTEREST

The authors have no competing interests to declare that are relevant to the content of this article.

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