Section: Community Medicine

Research

A CROSS SECTIONAL STUDY ON KNOWLEDGE OF BREAST SELF-EXAMINATION AMONG RURAL WOMEN OF CHITTOOR DISTRICT, ANDHRA PRADESH, INDIA

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Abstract

Background: Both developing and developed nations have serious public health concerns with breast cancer. Due to late detection, a lack of knowledge about screening procedures, and a lack of screening programmes, breast cancer mortality is high in India. The Objectives of the study were to assess the knowledge of breast self-examination and to determine association between socio demographic factors and breast self-examination among rural women in rural field practice area of SVIMS-Sri Padmavathi Medical College for Women, Tirupati. **Materials and Methods:** A community based cross sectional study was carried out in a rural area of Tirupati. Systematic random sampling method was used to select the study subjects. A pretested, semi structured questionnaire was used to collect the data. Chi-square test was used for data analysis. **Result:** A total of 210 women were included in the study. Mean age of the study participants was 41.88 + 12.66 years. Majority (86.7%) of the women in this study have not heard about self-breast examination. Among women who heard about self-breast examination, majority (85.7%) responded as BSE is a useful tool for early detection of breast cancer and 71.4% have been taught about Breast Self-Examination. The knowledge of self-breast examination is low and was significantly associated with women who had family history of breast cancer, family history of other cancers and educational status. **Conclusion:** Due to the poor awareness of breast self-examination among women in rural Tirupati, there is a need to raise this awareness through health education programmes that integrate with primary healthcare facilities for appropriate care, treatment, and referral.

INTRODUCTION

Breast self-examination is the most economical and potential screening procedure which had provided significant results. Breast Self-examination is a common screening method which is done by the patient herself as an effort to detect the presence of breast cancer in its earliest stages by physically examining both the breasts for the possibility of any lumps, distortions or swelling. Self-examination of the breast was very much helpful in low-resource countries where access to mammography is limited. Between the 1980s and 2020, age-standardized breast cancer mortality decreased by 40% in high-income nations. Countries that have been successful in lowering breast cancer mortality have been able to achieve a 2-4% reduction in annual breast cancer mortality. Between 2020 and 2040, 2.5 million breast cancer deaths could be averted if there is a global 2.5% annual mortality decrease. Breast cancer affected 2.3 million women worldwide, and the illness claimed 6,85,000 lives. Breast cancer, which had been discovered in 7.8 million women over the preceding five years, was the most prevalent cancer in the world at the end of 2020.Breast cancer causes more disability-adjusted life years (DALYs) for women globally than any other malignancy. All across the world, women of all ages get breast cancer after puberty, but the incidence rises with age.[1]

A regular breast cancer screening is a necessary as early detection is a major factor in treating cancer. Cancers diagnosed at an earlier stage have a better prognosis and are easier to treat. Reducing the likelihood of dying from breast cancer requires regular screening. There is proof that an early detection strategy can "downstage" (increase the proportion of breast cancers found at an early stage)

breast cancer to stages more amenable to curative treatment.[2] Early identification facilitates therapy prior to metastases and is linked to a good prognosis. According to research, breast cancer screening lowers death risk by 20%.[3] Despite being a quick, easy and free procedure, BSE is rarely used and varies from country to country; in India, it ranged from 0% to 52%.[4,5] Based on Population Based Cancer Registries (PBCRs) epidemiology of breast cancer in India shows rising trends for incidence and death, primarily as a result of fast urbanisation, industrialisation, population expansion and ageing society.[6] In India, cities like Delhi, Kolkata, Thiruvananthapuram, Bangalore, and Mumbai as well as north-eastern states like Mizoram and Barshi in rural areas have the highest rates of breast cancer.[6,7] The three Indian states with the highest Disability Adjusted Life Years (DALY) rates for breast cancer are Kerala, Punjab and Tamil Nadu.[8] In Indian oncology studies women's lower survival in breast cancer is because of late presentatation.[9]

According to data, women who get treatment early have a higher chance of surviving. Women should be informed of the condition, its symptoms and easy preventative measures to enable early detection.[10] The World Health Organization (WHO) and the International Agency for Research on Cancer (IARC) have recommended breast cancer programmes should concentrate on promoting Beast Cancer Awareness(BCA) and opportunistic clinical breast examinations at primary health care facilities in order to facilitate early diagnosis along with formal BSE.[11] Majority of women in rural settings in low income countries appear to have low BCA.[12-15] Previous studies from low-income countries suggest and BSE are hindered by some religious beliefs,[16] lack of knowledge about BSE and lack of generaleducation.[17] With this context the current study was carried out to assess the knowledge of breast self-examination and to determine association between socio-demographic factors and breast self-examination among rural women in rural field practice area of SVIMS-Sri Padmavathi Medical College for Women, Tirupati, in order to carry out the proper interventions for the promotion of the practise of BSE.

MATERIALS AND METHODS

Study Setting

This study was conducted in rural field practice area of SVIMS-Sri Padmavathi Medical College for Women, Tirupati. The field practice area includes rural field practice area which comes under Rural Health Training Centre, Mangalam, Tirupati, Chittoor District, Andhra Pradesh. Mangalam comprises of approximately 29,953 adult population which consists of 15,576 females in 13,162 households. It covers 5 sub-centres i.e Mangalam-1, Mangalam-2, Settipalli, BTR colony and TUDA quarters.

Study Subjects: Women in the age group 20 to 60 years

Study Period: 3 months from June 2022 to August 2022

Study Design: Community based cross sectional study

Sample Size: Considering 57.9% subjects were aware of at least one screening method for breast cancer, in a study conducted by Saha S et al. (2021) in Vellore (18), by using formula $N = Z^2pq/L^2$ with acceptable error 7% at 95% confidence interval, sample size in the present study was calculated.

The estimated sample size was 191. Taking non response as 10%, sample size was found to be 210 for this study.

Sampling Strategy

Systematic random sampling method was used to select the study subjects. Three sub-centres in rural area were selected randomly using random number table method. Households in each selected village were selected by systematic random sampling method. All the women aged 20 to 60 years in the selected households were included in the study.

Ethical Clearance

Before starting the study, ethical clearance was obtained from Institutional Ethics committee (IEC), Sri Venkateswara Institute of Medical Sciences (SVIMS), Tirupati.

Inclusion Criteria

Women aged 20 to 60 years and who had given consent were included in the study.

Exclusion Criteria

Women diagnosed with breast cancer and who did not given consent to participate in the study were excluded from the study.

Data Collection

A pretested, semi structured questionnaire was used to collect the data. A pilot study was conducted using study questionnaire and tested for appropriateness and the actual study was started after making necessary corrections and advises in it. Informed written consent was taken from the study subjects after explaining the purpose and objectives of the study in their own language and confidentiality was assured. Questionnaire was divided into two sections i) socio-demographic characteristics of the participants ii) knowledge about breast self-examination.

Statistical Analysis

Collected data was entered in Microsoft Office Excel 2010 and analysis was done using IBM SPSS software 26.0 Version. Categorical data was represented in the form of percentages and proportions. Continuous variables were represented in the form of mean and standard deviation. Chi-square test was applied to test the difference in knowledge of breast self-examination with socio-demographic characteristics. P value less than 0.05 was considered as statistically significant.

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RESULTS

The present study was conducted in the field practice area of Rural Health Training Centre (RHTC) of the Department of Community Medicine, SVIMS-Sri Padmavathi Medical College for Women, Tirupati, Chittoor district, Andhra Pradesh. A total of 210 females were included in the study. Mean age of the study participants was 41.88 + 12.66 years. Majority of women were not heard about self-breast examination (86.7%). Among women who heard about self-breast examination85.7% responded BSE is a useful tool for early detection of breast cancer and 71.4% have been taught about Breast Self-Examination. [Table 1]

The knowledge of breast self-examination was significantly associated with literacy status (p<0.0001). The knowledge of breast cancer was not associated with age, marital status, religion, socio-economic status and type of family. [Table 2] The knowledge of breast self-examination was significantly associated with women who had family history of breast cancer (<0.0001) and family history of other cancers (<0.0001). [Table 3]

Table 1: Knowledge regarding Breast Self-Examination among study population

Knowledge	Response	
	Yes/Correct(%)	No/Incorrect(%)
Did you hear of Breast Self-Examination?	28/210 (13.3)	182/210(86.7)
Do you think BSE is a useful tool for early detection of breast cancer?	24/28 (85.7)	4/28 (14.3)
Have been taught about Breast Self-Examination?	20/28 (71.4)	8/28 (28.6)
Age at which BSE should be started?	4/28 (14.3)	24/28 (85.7)
Time for Breast Self-Examination?	7/28 (25.0)	21/28 (75.0)
What is the best time to do Breast Self-Examination?	4/28 (14.3)	24/28 (85.7)
BSE should be done by whom?	10/28 (35.7)	18/28 (64.3)
BSE is done by?	13/28 (46.4)	15/28 (53.6)

Table 2: Association between socio demographic characteristics and knowledge of breast self-examination among women

Variable	Category	Knowledge		χ^2	p-value
		Yes (%)	No (%)		
Age group (in years)	20 -30	8 (17.8)	37(82.2)	1.577	0.665
	31- 40	8(13.6)	51(82.4)		
	41- 50	6(14.0)	37(86.0)		
	51-60	6(9.5)	57(90.5)		
Religion	Hindu	24 (12.4)	170 (87.6)	2.177	0.337
	Christian	2(22.2)	7 (77.8)		
	Muslim	2(28.6)	5 (71.4)		
Marital status	Married	27 (13.3)	176(86.7)	0.933	0.627
	Unmarried	0 (0.0)	3(100)		
	Widowed	1 (25)	3(75)		
Education	Illiterate	3 (5.4)	53 (94.6)	39.213	<0.0001*
	Primary	2(5.7)	33(94.3)		
	Secondary	9(13.2)	59(86.8)		
	Intermediate	1(3.8)	25(96.2)		
	Degree	13(52.0)	12(48.0)		
Type of family	Nuclear	25(14.3)	150 (85.7)	1.111	0.574
	Joint	3(9.7)	28(90.3)		
	Three generation	0 (0.0)	4(100)		
Socio-economic status	Upper class	2 (14.3)	12 (85.7)	4.174	0.383
	Upper Middle Class	15 (17.9)	69 (82.1)		
	Middle Class	6 (7.6)	73(92.4)		
	Lower Middle Class	4 (17.4)	19 (82.6)		
	Lower class	1 (10.0)	9 (90.0)		

(*p-value < 0.05, Significant)

Table 3: Association between family history of cancer and knowledge of breast self examination among women

Variable	Knowledge		χ^2	p-value	OR(95%C.I)
	Yes (%)	No (%)			
Family history of breast cancer	5 (71.4)	2 (28.6)	21.150	<0.0001*	19.565 (3.588,106.702)
	23(11.3)	180 (88.7)			
Family history of other cancers	4 (66.7)	2 (33.3)	15.204	<0.0001*	15.000 (2.607,86.319)
	24 (11.8)	180 (88.2)			

(*p-value < 0.05, Significant)

DISCUSSION

This study assessed the knowledge and screening practices of breast cancer among women in rural area of Tirupati. In our study 86.7% of the study population had never heard about self breast examination. Veena KS et al,[19] in their study found that, 80% of the women never heard of BSE which

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is similar to the present study. Jaswanth S et al,[20] reported only 14% of the study subjects were aware of BSE as screening method which is similar to the present study. Low awareness levels of BSE was found in studies conducted by Sideeq et al,[21] Somdatta et al,[22] Yerpude et al,[23] Paunikar AP et al.[24] These may be due to low BSE awareness or women not prioritising their health. Kumarasamy H et al,[25] showed that only 26% of the women were aware of BSE. A study conducted by Punia A et al,[26] found that about 1.3% of the women were aware of BSE. Bansode A et al,[27] reported that 35% of the women were aware about Breast Self-Examination (BSE)in their study. Rao S et al,[28] found that no one heard about BSE. In the present study there is significant association between education and awareness about breast self-examination and most of the studies.[20,21,23-25,29] Shown significant association between education and awareness about breast self-examination which is similar to the present study. WHO places a strong emphasis on raising public awareness of breast cancer and encouraging early detection for women visiting primary health centres or hospitals for various reasons by providing clinical breast examination. As incidence and mortality rates for breast cancer were rising, it is crucial to know the causes of the stigma and knowledge gaps that exist in the general public.

CONCLUSION

Lack of understanding among the general people affects breast cancer prevention and early diagnosis. There is necessity to educate the public about breast cancer through educational programmes in the media. By raising awareness of breast cancer, BSE and mammography usage can be increased. Coordinated health promotion intervention programme on risk factors, prevention, screening, and management for breast cancer is required. Healthcare workers should receive training on risk factors of breast cancer so they can share this knowledge with women groups and the information needs to be communicated in a way that the general public finds appealing.

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