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Original Research

Assessment of Knowledge on Breast Cancer among Antenatal Mothers

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ABSTRACT:
Introduction: The objectives of the study was to assess the level of knowledge on breast cancer and breast self-examination among working women and to find out whether the age, education, occupation and BSE awareness has influence on the level of knowledge on breast cancer and BSE. **Materials and Methods:** socio- demographic characteristics like age, education, occupation, income etc., (2) general knowledge like the type and curability and early detection of breast cancer, (3) risk factors like age, breastfeeding, age at first childbirth, early menarche, late menopause, nulliparity, use of OCP pills, estrogen replacement therapy and physical activity, (4) symptoms like painless lump, nipple discharge, bleeding, retraction of nipple, asymmetric swollen breast and armpit lump, (5) treatment of breast cancer like surgery, chemotherapy and radiotherapy and (6). **Results:** In this study, majority (71.1%) of women were above 40 years of age. Most of the women were married (85.1%) and Hindu (85.9%) by religion. 51.4% of women were in the teaching cadre and 55.5% were with family income of less than Rs. 60,000. Knowledge had increased with women who had already heard of breast self-examination and it is statistically significant ($p<0.01$). There was no association found with the age and overall knowledge on breast cancer and breast self-examination ($p=0.11$). **Conclusion:** Active steps and necessary interventions should be taken to increase awareness such as breast cancer awareness campaigns through various levels of health workers. Some of these women could also be trained to act as peer educators for the students and other women in order to reduce the breast cancer morbidity and mortality.
Keywords: Breast cancer, Mortality, awareness

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INTRODUCTION

Breast cancer is the second leading cause for death worldwide and fifth most common cancer in India. According to the population based tumour registry cell of the Indian medical research in New Delhi, breast cancer constitutes about 12% of all cancers detected in Delhi and about 24% of all cancer in women. Breast cancer is the most common invasive cancer in females worldwide. It accounts for 16% of all female cancers and 22.9% of invasive cancers in women. 18.2% of all cancer deaths worldwide, including both males and females are from breast cancer. Breast cancer is a nonexistent entity for a majority of population until their closed ones are affected. Screening is the alien word for most people. Hence, naturally, this results in most people presenting only when the disease becomes symptomatic, and on an average, most "symptomatic" cancers are stage 2b and beyond. Breast cancer patients do not tend to survive for a longer time if the cancer is detected at a late stage because the tumor size at the time of diagnosis has a significant impact on survival rate even with effective treatment.[1] Frequent breast self-examination (BSE) has been shown to have favorable clinical outcome among breast cancer patients.[2] 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.[3,4] One potentially important strategy in

reducing breast cancer mortality is the use of screening methods such as BSE, clinical breast examination, and mammography for early detection.[5] Early detection helps in the treatment before metastasis and associated with excellent prognosis. Breast cancer screening was found to reduce the risk of mortality by 20%.[6] Despite the presence of various screening methods, majority of breast cancer cases are detected by women themselves, stressing the importance of BSE.

Antenatal mothers who will be exposed to direct education on breast cancer and breast self-examination have the capacity to teach the breast self-examination to others in ways that are satisfying to them. The nurse might be the best source to health to such antenatal mothers. This chain reaction is promising and there may be a group of women who are equipped for early detection of breast cancer and who are capable of influencing and training other women about self-examination. This type of education by the nurse can spread health messages much faster in the community.

Breast cancer is a major public health issue and most commonly diagnosed for women worldwide. Breast cancer accounts for 22.9% of all cancer in women. It is estimated nearly 1.7 million new cases of cancer occurred worldwide in 2012. This represents about 12% of new cancer cases and 25% of all cancers in women. Breast cancer is hormone related, and the factors that modify the risk of this cancer when diagnosed premenopausal and when diagnosed postmenopausal are not the same.

The best way to save female lives is to increase their awareness of the potential harms of breast cancer, to raise their level of awareness about early warning signs, risk factors, and early detection procedures for this disease.[6] BSE also encourages women to take an active responsibility in preventive health. In addition, it helps to overcome the fear, stigma, and taboos. However, correct and thorough BSE technique has to be ensured and prompt and adequate medical need should be available when needed. There were only few studies done among the educated women. The awareness among educated working women can spread through easily when compared to other population.

The objectives of the study was to assess the level of knowledge on breast cancer and breast self-examination among working women and to find out whether the age, education, occupation and BSE awareness has influence on the level of knowledge on breast cancer and BSE.

METHODS

This is a part of an interventional study (breast cancer and BSE awareness programme is planned later) conducted for 3 months from January 2018 to March 2018 among the working women in Department of Medical oncology in National Institute of Medical Sciences & Research, Jaipur. Graduated teaching and non-teaching staff from the university were included in this study. The required sample size was 135. According to the sample size, four faculties including teaching and non-teaching staff were selected by cluster sampling. They were faculty of dentistry, faculty of agriculture, faculty of computer science and faulty of distance education. Prior permission was obtained from the concerned authorities of all faculties. Institutional Ethical approval was obtained.

The questionnaire consisted of six parts: (1) socio-demographic characteristics like age, education, occupation, income etc., (2) general knowledge like the type and curability and early detection of breast cancer, (3) risk factors like age, breastfeeding, age at first childbirth, early menarche, late menopause, nulliparity, use of OCP pills, estrogen replacement therapy and physical activity, (4) symptoms like painless lump, nipple discharge, bleeding, retraction of nipple, asymmetric swollen breast and armpit lump, (5) treatment of breast cancer like surgery, chemotherapy and radiotherapy and (6) knowledge on breast self-examination like the age at which BSE should begin, frequency and proper time of BSE and improvement of breast cancer survival. The answers were in the form of multiple choices and yes/no. Each correct response on questions for knowledge was given a score of 1 and incorrect response was given a score of 0. The total score was calculated by adding all the scores. Maximum attainable score was 28 and minimum attainable score was 0. The total score was divided into three categories. The scores were categorized into inadequate (<50%), moderately adequate (50% to 75%) and adequate knowledge (>75%).

Descriptive and inferential statistics were used to analyse the collected data. Both descriptive and inferential statistics were used to analyse the data collected.

RESULTS

A total of 135 women participated in the study and provided information for assessment of awareness related to various aspects of breast cancer and breast self- examination.

In this study, majority (71.1%) of women were above 40 years of age. Most of the women were married (85.1%) and Hindu (85.9%) by religion. 51.4% of women were in the teaching cadre and 55.5% were with family income of less than Rs. 60,000 (Table 1).

Table 1: Distribution of demographic characteristics

Variable	Category	Number	%
Age (years)	≤40	39	28.8
	>40	96	71.1
Religion	Hindu	116	85.9
	Others	19	14.0
Marital status	Married	115	85.1
	Others	20	14.8
Educational status	MDS/PhD	31	22.9
	MSC Agri/PhD	23	17.0
	MSC CSC/ PhD	21	15.5
	MA/BSC/BA	60	44.4
Occupation	Prof/associate	24	17.7
	Assistant/lecturer/tutor	47	34.8
	SO/ASO	23	17.3
	Data supdt/ record clerk	29	21.4
	Helper/OA	12	8.8
Income	<60000	75	55.5
	>60000	60	44.4

About one-third of women did not give exclusive breastfeeding. Most (89.6.5%) of the women had no Positive family history of breast cancer. Nearly 98% of women had no positive personal or previous history of breast cancer. Around 96% of women had no intake of oral contraceptive pills (Table 2).

Table 2: Risk factor related characteristics

Variable	Category	Number	%
Duration of breastfeeding (months)	<6	50	37.3
	>6	85	62.9
Family history of breast cancer	Yes	14	10.3
	No	121	89.6
Personal history of breast cancer	Yes	7	5.1
	No	128	94.8
Previous history of breast cancer	Yes	7	5.1
	No	128	94.8
Use of OCPs	Yes	9	6.6
	No	126	93.3

Regarding the general knowledge and treatment of breast cancer, majority (76.7%) had inadequate knowledge. Majority (64.3%) had inadequate knowledge on risk factors of breast cancer and only 13% and 4% had adequate knowledge on symptoms of breast cancer and breast self-examination (Table 3).

Table 3: Distribution of knowledge score on breast cancer and BSE

Knowledge	Inadequate knowledge (%)	Moderately adequate knowledge (%)	Adequate knowledge (%)
General knowledge and treatment of breast cancer	76.7	16.2	9.9
Risk factors of breast cancer	64.3	31.8	4
Symptoms of breast cancer	55	35	13
Breast self-examination	83.4	15.8	4.1

Depicts the association between overall knowledge on breast cancer and breast self-examination and socio-demographic variables. Overall knowledge was found to increase with education. Women with MDS/BDS have more knowledge followed by MSc/PhD (Agri) and MSc/PhD (CSC) when compared to MA/BA/BSc and it is statistically significant ($p<0.01$) compared to non-teaching staffs, teaching staffs have more knowledge and it is statistically significant ($p<0.01$). Knowledge had increased with women who had already heard of breast self-examination and it is statistically significant ($p<0.01$). There was no association found with the age and overall knowledge on breast cancer and breast self-examination ($p=0.11$). (Table 4)

Table 4: Association between socio-demographic characteristics and overall knowledge on breast cancer and BSE

Overall knowledge	Number	Mean	Standard deviation	Statistical value	
				F value	P value
Age (years)				3.48	0.12
<40	39	13.31	8.42		
>40	96	11.20	7.01		
Education				66.62	<0.01
MSc Agri/PhD	23	13.98	4.61		
MSc CSC/PhD	21	15	3.89		
MA/BA/BSc	60	6.59	5.28		
MDS/BDS	31	18.71	4.19		
Occupation				166.61	<0.01
Teaching	71	16.49	5.21		
Non-teaching	52	6.62	5.29		
Heard of BSE				88.10	<0.01
Yes	85	14.90	6.24		
No	50	6.14	5.21		

DISCUSSION

Similar study conducted by AR Isara and CI Ojedokun [2011] on knowledge of breast cancer and practice of breast self-examination among female senior secondary school students in Abuja, Nigeria. Two hundred and eighty seven students participated in the study. Their mean age was 16.5 Â±1.4 years. A greater proportion of respondents 163 (56.8%) had poor knowledge of breast cancer while 217 (75.6%) had poor knowledge of breast self-examination. Only 114 (39.7%) of the respondents knew that being a female was a risk factor for breast cancer and the least known risk factor were obesity and aging. The major source of information for breast cancer and BSE among the respondents was the mass media. Only 29 (10.1%) of respondents had practiced breast self-examination. Knowledge of breast self-examination was significantly associated with practice. This study revealed that female secondary school students have poor knowledge of breast cancer. A good proportion of them knew that breast self-examination could be used as a screening method for breast cancer but only few had practiced breast self-examination. Only few studies could correctly identify the known contributory factors for breast cancer. Only one-third (30.6%) of our respondents were aware of most of the risk factors like inadequate breastfeeding, nulliparity, early menarche, late menopause and long term usage of oral contraceptive pills. Whereas only 4% of them were aware of all the risk factors. Proportion of women who had correct knowledge on signs of breast cancer was less when compared to other studies done by Bener et al and Parsa et al.[7,8] This could be due to the differences in culture, health beliefs, education status, and health services and policies.

Our study proved that women with higher level of education had better knowledge regarding breast cancer and BSE than women with low education status. This was concordant with the reports presented by other studies done by Yerpude et al and Yavari et al.[9,10] In our study, it was observed that women belong to high SES had better knowledge about breast cancer, and it's in agreement with the study done by Khokher et al.[11] It's evident from different studies done on breast cancer awareness that there has been positive association between breast cancer and BSE awareness and educational status, including the present study.[11-14] However, we must also note that the awareness about cancer being curable if detected early is in conjunction with the fact that simultaneously nearly half of the women think breast cancer to be incurable. This is probably due to the fact that very few women had seen other women cured of breast cancer and survive the disease. Hence, improving knowledge regarding the breast cancer and importance of BSE would help sustaining the practice.

CONCLUSION

Active steps and necessary interventions should be taken to increase awareness such as breast cancer awareness campaigns through various levels of health workers. Some of these women could also be trained to act as peer educators for the students and other women in order to reduce the breast cancer morbidity and mortality. However, breast cancer education will not be effective if directed only towards antenatal mothers. Therefore, individuals from adolescent to adult age group must be able to recognise the signs and symptoms of breast cancer to facilitate identification and transport of the patient to the hospital. Future studies are needed which focus on community surveys including both rural and urban populations. Efforts should be made to educate the public about breast cancer so that people can make more rational and beneficial health care decisions.

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