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Original Research Article

Level of knowledge regarding breast cancer and breast self-examination among working women in Tamil Nadu

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ABSTRACT

Background: Breast cancer is the second most common cancer among women in worldwide. One potentially important strategy in reducing breast cancer mortality is the use of screening methods such as breast self-examination (BSE), clinical breast examination, and mammography for early detection. This Study was conducted to assess knowledge and awareness regarding breast cancer and BSE among working women.
Methods: A part of the interventional study was carried out among a total sample of 124 working women in Annamalai University. A pretested self-administered questionnaire was used to obtain information about the knowledge of breast cancer and BSE. The collected information was entered in Microsoft excel sheet and analysed using SPSS. One way ANOVA test has been applied to find out whether level of knowledge differs by age, education, occupation and BSE awareness.
Results: Majority (67%) of women had inadequate knowledge on breast cancer and BSE. The education, occupation and breast self-awareness has influence on the knowledge level.
Conclusions: The level of awareness on breast cancer and BSE among educated working women was low. Active steps and necessary interventions should be taken to increase awareness through health education program.

Keywords: Knowledge, Breast self-examination, Working women, Breast cancer

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. Breast cancer was the fifth most important cause of mortality due to cancer and is the most common cause of death due to cancer among women.[1] Breast cancer is a non-existent entity for a majority of population until their closed ones are affected. Screening is an 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 tumour size at the time of diagnosis has a significant impact on survival rate even with effective treatment.[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]

One potentially important strategy in reducing breast cancer mortality is the use of screening methods such as breast self-examination (BSE), clinical breast examination, and mammography for early detection. Although BSE is not proven as an effective breast cancer

screening method, BSE can be used to as a measure to improve self‑care among women. It is shown to increase the awareness regarding breast abnormalities and risk factors for breast cancer. Low awareness regarding breast cancer is one of the factors which reduce the effective use of screening tests.[4]

BSE is considered to be a simple, inexpensive, quick, non-invasive, non-hazardous intervention. This could be a useful measure for early identification of breast cancer in resource, poor countries where accessibility to better screening methods is less. The sensitivity of the test was found to be 78%.[5]

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 in Tamil Nadu. 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 February 2019 to April 2019 among the working women in Annamalai university, Chidambaram. Graduated teaching and non-teaching staff from the university were included in this study. Non graduated staff was excluded from the study. Total number of university female staffs after meeting the exclusion criteria was 1093.

In the study done by Anitha Rajendrababu et al showed that 23% of women had moderately adequate knowledge. Keeping this as prior information and relative precision as 10% and desire confidence interval as 95% and design effect as 2, the required sample size was 121. 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. Women staffs who were willing to participate included in the study. Study was conducted during free hours of college. After obtaining informed written consent, a pretested self-administered questionnaire was used to obtain information about the knowledge of breast cancer and breast self-examination. The average time took to complete the questionnaire by the participants was 20 minutes.

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%).

The collected information was entered in Microsoft excel sheet and analyzed using SPSS. One way ANOVA test has been applied to find out whether level of knowledge differs by age, education, occupation and BSE awareness.

RESULTS

A total of 124 women participated in the study and provided information for assessment of awareness related to various aspects of breast cancer and breast self-examination.

Socio-demographic related characteristics

In this study, majority (73.4%) of women were above 40 years of age. Most of the women were married (88.7%) and Hindu (89.5%) by religion. 52.5% of women were in the teaching cadre and 56.5% were with family income of less than Rs. 60,000 (Table 1).

Risk factor related characteristics

About one-third of women did not give exclusive breastfeeding. Most (93.5%) of the women had no Positive family history of breast cancer. Nearly 99% of women had no positive personal or previous history of breast cancer. Around 97% of women had no intake of oral contraceptive pills (Table 2).

Table 1: Distribution of demographic characteristics.

Variable	Category	Number	%
Age (years)	≤40	33	26.6
	>40	91	73.4
Religion	Hindu	111	89.5
	Others	13	10.5
Marital status	Married	110	88.7
	Others	14	11.3
Educational status	MDS/PhD	26	21
	MSC Agri/PhD	21	16.9
	MSC CSC/ PhD	19	15.3
	MA/BSC/BA	58	46.8
Occupation	Prof/associate	21	17
	Assistant/lecturer/tutor	44	35.5
	SO/ASO	21	17
	Data supdt/ record clerk	27	21.7
	Helper/OA	11	8.8
Income	<60000	70	56.5
	>60000	54	43.5

Table 2: Risk factor related characteristics.

Variable	Category	Number	%
Duration of breastfeeding (months)	<6	42	35
	>6	78	65
Family history of breast cancer	Yes	8	6.5
	No	116	93.5
Personal history of breast cancer	Yes	2	1.6
	No	122	98.4
Previous history of breast cancer	Yes	2	1.6
	No	122	98.4
Use of OCPs	Yes	4	3.3
	No	120	96.7

Heard of BSE

Majority (64.5%) of women had heard about breast self-examination through mass media, relatives, friends and doctors (Figure 1).

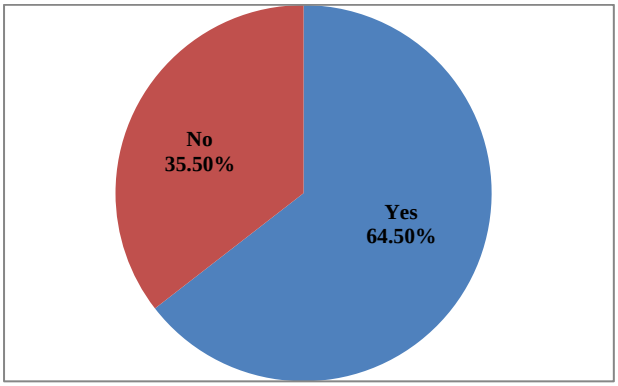

Figure 1: Distribution of awareness on BSE.

Knowledge score on breast cancer and breast self-examination

Regarding the general knowledge and treatment of breast cancer, majority (75.8%) had inadequate knowledge. Majority (65.4%) had inadequate knowledge on risk factors of breast cancer and only 12% and 3% had adequate knowledge on symptoms of breast cancer and breast self-examination (Table 3). Overall, about 6% of women had adequate knowledge on breast cancer and breast self-examination (Figure 2).

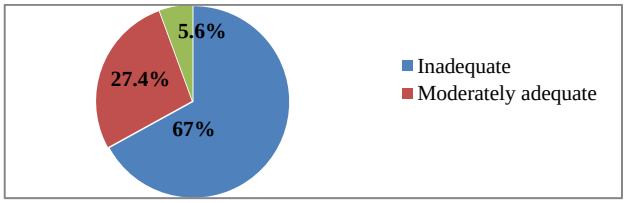

Figure 2: Distribution of overall knowledge on breast cancer and BSE.

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	75.8	15.3	8.9
Risk factors of breast cancer	65.4	30.6	4
Symptoms of breast cancer	54	34	12
Breast self-examination	82.2	14.5	3.3

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)					
<40	33	12.36	7.49	2.51	0.11
>40	91	10.27	6.07		
Education					
MSc Agri/PhD	21	13.90	3.63	65.70	<0.01
MSc CSC/PhD	19	14	3.80		
MA/BA/BSc	58	5.56	4.25		
MDS/BDS	26	17.76	4.11		
Occupation					
Teaching	65	15.52	4.25	165.64	<0.01
Non-teaching	59	5.66	4.27		
Heard of BSE					
Yes	80	13.93	5.32	87.12	<0.01
No	44	5.18	4.33		

Association between socio-demographic characteristics and knowledge on breast cancer and breast self-examination

Table 4 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 ($p=0.11$).

DISCUSSION

In this study the level of knowledge on breast cancer and breast self-examination among educated working women in Annamalai University was evaluated. It was found that the majority (67%) of the women had inadequate knowledge regarding the general knowledge, risk factors, symptoms and treatment of breast cancer and breast self-examination. The current findings are in support with a previous study done by Ahmad et al, that women had poor knowledge regarding complex risk factors of breast.[7]

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.[8,9] This could be due to the differences in culture, health beliefs, education status, and health services and policies.

Nearly 65% of our respondents were aware of BSE. This proportion was contrary to the results reported by other studies done by Nafissi et al and Yerpude et al.[10,11]

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.[11,12] 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.[13]

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.[13-16]

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.

Limitations

It was confined to selected departments in the university. So the results may not be generalised to other departments or universities.

CONCLUSION

This study showed that level of awareness on breast cancer and breast self-examination among educated working women were low. 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.

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