Research article

Awareness regarding breast cancer among urban women in South India

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ABSTRACT

Introduction and Aim: Breast cancer is associated with increased morbidity and mortality and recent trends have shown increased incidence among younger women. There is, therefore, an imminent need to raise the level of awareness among the women in the entire population. The present study was carried out to evaluate the level of awareness among urban women in South India.

Methodology: This hospital based cross sectional study was carried out among 1000 adult women who visited the outpatient clinics of our tertiary care hospital for various illness. The level of awareness regarding breast cancer was elicited based on the risk factors of breast cancer, symptoms, and role of family history. Awareness regarding the tools for early detection, management and preventive measures was also elicited.

Results: The study observed that 78.9% of the participants who were illiterates had no awareness of the symptoms, while 57.9% of the participants with high school level education were unaware of the symptoms. Regarding the role of genetics in breast cancer occurrence, 47% of the illiterate participants reported that breast cancer is not hereditary. It was observed that lack of awareness regarding the early detection was prevalent among 81%, 87% and 93% of the participants who were illiterate, primary, and middle school level educated respectively.

Conclusion: The present study has also elucidated the lack of adequate knowledge on important facts regarding the breast cancer is alarming and this needs to be addressed with due focus on providing health education by health care providers at various levels of health system.

Keywords: Awareness; breast cancer; breast self-examination; literacy.

INTRODUCTION

Globally, breast cancer is associated with increased morbidity and mortality among women. Breast cancer is the leading cause of death among women aged >35 years and over 70% of these deaths occur in the developing countries. The incidence of breast cancer in India has risen by 50% in the last few decades with an annual rise of 2.56%. Moreover, the disease has been increasingly present among younger women affecting about 52% of the total breast cancer incidence (1). There are wide regional variations in the breast cancer incidence in India with increased rates in metropolitan cities compared to their rural and semi-urban counterparts. This has been attributed to lifestyle factors and level of education.

Since breast cancer remains asymptomatic for long durations, it is often detected at advanced stages, thereby resulting in challenges in the management. There is a need for early detection of breast cancer and breast self-examination (BSE) has been regarded as the simplest and cost-effective tool (2). However, in developing countries like India, there is a widespread lack of awareness regarding breast cancer and tools for early detection and this level of awareness also varies hugely within the country. In a study done by Prusty *et al.*, about 51% of the women in Mumbai lacked awareness regarding breast cancer (3). Another study

done by Somdatta *et al.*, lack of awareness of breast cancer among urban women was as high as 44% (4). Further, studies have also documented a significant correlation between the educational status and awareness (5).

In India, the public health infrastructure had rolled out a national programme for prevention and control of cancers, diabetes, cardiovascular disease, and stroke under the National Health Mission, targeting early detection of various non-communicable diseases (NCDs) through organized screening. Although this programme covers all the NCDs, there is a generalized lack of structured programme to assess the knowledge level regarding cancers, especially breast cancers. There is a need for assessing the existing knowledge gaps and factors that influence this lack of awareness, in order to plan strategies for early detection. The present study was carried out to estimate the level of knowledge on breast cancer among urban women in Chennai.

METHODOLOGY

Study setting and participants

The present study was carried out as a hospital based cross sectional study in the Department of General Surgery of our tertiary teaching institution for a period of one year between January 2014 to January 2015. All the women aged over 18 years who visited the

outpatient departments of General Surgery and Gynecology for various ailments, either as patients or as accompanying persons were taken up for the study. A total of 1000 women participated in the study.

Ethical approval and informed consent

Approval was obtained from the Institutional Ethics Committee prior to the commencement of the study. Each participant was explained in detail about the study and informed consent was obtained prior to data collection.

Data collection and analysis

Data regarding the educational status and other demographic particulars were obtained through a structured, validated questionnaire. The questionnaire was prepared in English and the regional language (Tamil). The level of awareness regarding breast cancer was elicited based on the risk factors of breast cancer, symptoms, and role of family history. Awareness regarding the tools for early detection, management and preventive measures was also elicited. Health education regarding breast self-examination (BSE), technique and advantages was provided in the form of pamphlets in their familiar language (English/Tamil) to all women after the questionnaire was filled and submitted. Data was entered and analyzed using Microsoft Excel Spreadsheet 2010. The prevalence of breast cancer awareness and knowledge regarding early detection of breast carcinoma were expressed as percentages.

RESULTS

The mean age of the study participants was 30 ± 10 years with illiteracy rate of 9.4% (Fig. 1). Overall, 934(81.1%) of the women had adequate knowledge regarding breast cancer. Based on the educational status, the awareness levels were 91% among illiterates, 92% among primary level educated, 99% among middle school educated and 100% among those educated beyond middle school (Table 1).

Table 2: Knowledge regarding symptoms of breast cancer

S. No.	Education status	Symptoms (%)				
		Lump	Pain in the breast	Nipple discharge	Asymptomatic	Not aware
1	Illiterate	17.3	3.8	0	0(0)	78.9
2	Primary	13.4	7.6	2	0(0)	77
3	Middle school	36.3	7.2	4.7	0	51.8
4	High school	36.1	8.3	0.5	0.2	54.9
5	Graduate	41.6	16.6	6.2	0.6	35

On eliciting the level of knowledge regarding the role of genetics in breast cancer occurrence, 47% of the illiterate participants reported that breast cancer is not hereditary while 53% of the primary level educated participants reported that breast cancer is hereditary.

Table 3: Knowledge regarding the role of genetics in breast cancer

number of participants

Fig.1: Educational status of the study participants

Table 1: Level of awareness among the study participants

S. No.	Education status	Awareness (%)	
		Present	Absent
1	Illiterate	91	9
2	Primary	92	8
3	Middle school	99	1
4	High school	100	0
5	Graduate	100	0

The assessment of knowledge regarding symptoms of breast cancer revealed that 78.9% of the participants who were illiterates were not aware of the symptoms, while 54.9% of the participants with high school level education were unaware of the symptoms. Among graduates, 41.6% of the participants reported lump as a major symptom of breast cancer (Table 2).

Further, 60% and 55% of those educated up to middle school and high school reported that breast cancer is not hereditary. About 63% of the graduates were aware that breast cancer can be hereditarily transmitted (Table 3).

S. No.	Education status	Role of genetics (%)		
		Present	Absent	Unaware
1	Illiterate	19	47	34
2	Primary	53	47	0
3	Middle school	40	60	0
4	High school	45	55	0
5	Graduate	63	8	29

The awareness regarding tools for early detection of breast cancer was assessed in comparison with educational status. It was observed that lack of awareness regarding the early detection was prevalent among 81%, 87% and 93% of the participants who

were illiterate, primary, and middle school level educated respectively. Only 3% of the participants in middle school and graduate level educated reported breast self-examination as a tool for early detection of breast cancer (Table 4).

Table 4: Awareness regarding early detection tools for breast cancer

S. No.	Education status	Early detection tools (%)			
		Self - examination	Routine checkup	Breast feeding	Not aware
1	Illiterate	1.6	9.7	7.7	81
2	Primary	2	7	4	87
3	Middle school	3	3	1	93
4	High school	2	6	90	2
5	Graduate	3	12	76	9

DISCUSSION

Primary and secondary prevention in the form of imparting knowledge regarding the disease and early detection have been considered as the most effective techniques in preventing the morbidity and mortality of non-communicable diseases, especially cancers (6). Breast cancer, being highly rampant among younger women in their reproductive years, has to be effectively combated by raising the level of awareness among the women (7). The present study evaluated the role of literacy in determining the level of awareness among urban women. Overall, the level of awareness was considerably high in the study population (81.1%) and this could be attributed to the fact that the study was carried out in an urban setting. It was observed that the level of awareness proportionately increased with the level of education, from 91% among illiterates to 100% among graduates. However, irrespective of the literacy level, the participants significantly lacked knowledge regarding the symptoms of breast cancer with about 41.6% awareness among graduate women.

In a study done by Somadatta *et al.*, 51% of the women were aware of the clinical signs and symptoms, like the present study (4). In another study done by Singh *et al.*, the awareness regarding the symptoms was present among 71.4%, which was higher than the present study findings (8). This difference could be attributed to the regional differences in the population subset. Graduate women were particularly aware of the role of genetics in cancer risk (63%) compared to illiterates (19%). Similar findings were observed in a study done by Singh *et al.*, where the knowledge regarding genetic role of breast cancers was present among 80.9%. With regards to the knowledge regarding breast self-examination (BSE), only a

meagre 3% of the study participants were aware of the scope and technique of BSE. In a study done by Somadatta *et al.*, 11% of the women were aware of BSE. Higher estimates were observed in the study done by Singh *et al.*, Similarly, a study one by Nirojini *et al.*, also reported higher prevalence of knowledge regarding BSE (9).

Overall, the present study findings are consistent with the review published by Gupta *et al.*, which highlights the overall low level of knowledge regarding the breast cancer symptomatology and prevention across the country (10). This lacuna in the knowledge clearly indicates the gap in the health education provided by the health care workers. Although the National Programme for NCD prevention and control aims towards early detection of the disease, adequate focus on imparting the knowledge on symptoms and tools for early detection has been lacking (11).

CONCLUSION

The present study has highlighted the overall level of awareness regarding breast cancer, specifically highlighting the existing gaps in the knowledge pertaining to clinical symptoms and importance of breast self-examination. The present study has also elucidated the role of literacy on the level of awareness. Although the present study was carried out in an urban setting of a large metropolitan city, the lack of adequate knowledge on important facts regarding the breast cancer is alarming and this needs to be addressed with due focus on providing health education by health care providers at various levels of health system. The national program provides ample scope for preventive activities and forging public private partnerships and use of appropriate educational tool will go a long way in achieving the desired outcome among the general population.

CONFLICT OF INTEREST

Authors declare that there is no conflict of interest

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