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Original Research Article

A cross-sectional study on knowledge about breast cancer among women aged 20-30 years

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ABSTRACT

Background: Worldwide breast cancer is one of the most common type of non-skin cancer in women and the fifth most common cause of cancer death. As the incidence of breast cancer is rising, there is a current need to educate the women on preventive measures of breast cancer. The objectives of the study were to assess the knowledge on risk factors and on the preventive measures of breast cancer among women aged 20-30 years.
Methods: The cross-sectional study was conducted among 200 women aged 20-30 years residing in an urban area in Coimbatore. A questionnaire was designed to assess the awareness levels on risk factors and the preventive measures of Breast cancer among the study participants.
Results: The study showed that most of the women (91%) were not aware about the risk factors of breast cancer and only 7.5% knew that lesser duration of breast feeding for <6 months is an important risk factor for breast cancer. 89.5% were not aware about the symptoms of breast cancer. 92.5% were not aware about the preventive measures of breast cancer. None of them were aware of breast self-examination (BSE) as an important early detection measure for breast cancer. Comparing the educational status and the level of awareness on Breast cancer among the study subjects we found that the educational status had significant influence on the level of awareness on breast cancer ($p<0.0001$).
Conclusions: The knowledge on risk factors, symptoms and on the preventive measures of breast cancer among the women aged 20-30 years was very low. To increase the awareness about breast cancer in the community, frequent educational interventions and screening programs needs to be conducted by health workers.

Keywords: Breast cancer, Breast self-examination, Screening

INTRODUCTION

Worldwide breast cancer comprises 10.4% of all cancers incidence among women, making it the most common type of non-skin cancer in women and the fifth most common cause of cancer death. It is the most common cancer among women in the United States. It is also one of the leading causes of cancer death among women of all races.[1]

The incidence of breast cancer is rising in every country of the world especially in developing countries. In India the incidence of breast cancer is on the rise and rapidly becoming the number one cancer in females pushing the cervical cancer to the second spot.

The rise in the occurrence of breast cancer is because now women are exposed to various risk factors of breast cancer. These include late age at first childbirth, fewer children and shorter duration of breast feeding. In

addition, early age at menarche and late age at menopause adds to the risk.

A landmark analysis of cancer cases in Delhi, Mumbai, Chennai and Bangalore between 1982 and 2005 (24 years) by ICMR had found that while cervical cancer cases have dipped, the incidence of breast cancer has doubled.[2]

As developing countries adopt the western culture and its habits (fat/alcohol intake, smoking, exposure to oral contraceptives, the changing patterns of child bearing and breast feeding, low parity) they are prone to develop many chronic health problems.

Breast cancer can strike at any age, and women of every age should be aware of their personal risk factors for breast cancer. Delays in diagnosing breast cancer also are a problem. Many younger women who have breast cancer ignore the warning signs- such as a breast lump or unusual discharge- because they believe they are too young to get breast cancer.[3]

Investigations include mammography, ultrasound, MRI, needle biopsy/cytology. Any patient presents with breast lump or other symptoms suspicious of carcinoma, the diagnosis should be made by a combination of clinical assessment, radiological imaging and a tissue sample taken for either histological or cytological analysis-triple assessment.[4]

The chances of cure in women who develop the disease are related to early diagnosis. One of the best ways of early diagnosis is by application of screening methods such as breast self-examination, clinical examination by physician or health staff and mammography.

India faces a potential breast cancer epidemic as women adopt Western lifestyle. A 2005 study by International Association of Cancer Research, Lyon, France, projected that there would be 250 000 cases of breast cancer in India by 2015, a 3% increase per year. Currently, India reports roughly 100 000 new cases annually.[5]

As the incidence of breast cancer is rising in developing countries like India, there is a current need to educate the women on preventive measures of breast cancer. Assessment of knowledge and imparting health education will help to determine if they have any risk factors for breast cancer and thereby they take the initiative to prevent it.

METHODS

Type of study is cross-sectional study where the study population is conducted for women in the age between 20-30 years. The study area is Peelamedu Pudur, Ellaithottam and the study period is during June- August, 2011. The dataset sample size is 200 and the selection criteria of women aged 20-30 years should not having breast cancer. The data collection procedure is questionnaire type.

Ethical consideration approves Institutional Human Ethics Committee (IHEC) permission which is received and informed consent obtained from the study participants. The plan of analysis is focused to assess the awareness levels on risk factors and the preventive measures of breast cancer among the study participants. The statistical analysis is considered such as proportions and student unpaired t test.

RESULTS

Table 1: Educational status of the study participants, n=200.

Educational status		No.	%
Never attended school		17	8.5
Primary	(class 1 to 5)	42	21
Secondary	(class 6 to 8)	33	16.5
High school	(class 9 and 10)	57	28.5
Higher secondary	(class 11 and 12)	21	10.5
Graduates		30	15
Total		200	100

The assessment of educational status shows that, among the study participants 8.5% have never attended school and 15% of them are graduates.

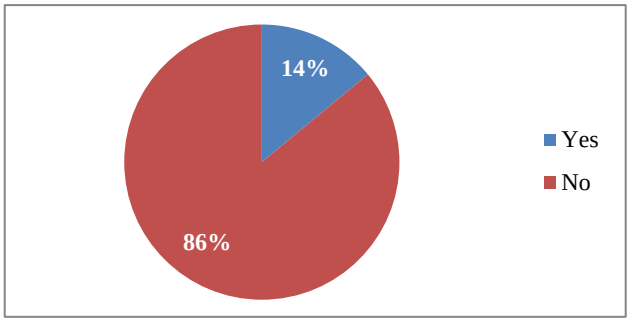

Figure 1: Proportion of the participants heard about breast cancer, n=200.

Among the study subjects, only 14% of the participants have heard about the term breast cancer.

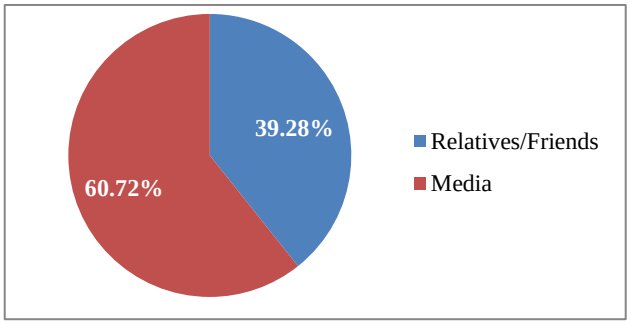

Figure 2: Source of information about breast cancer.

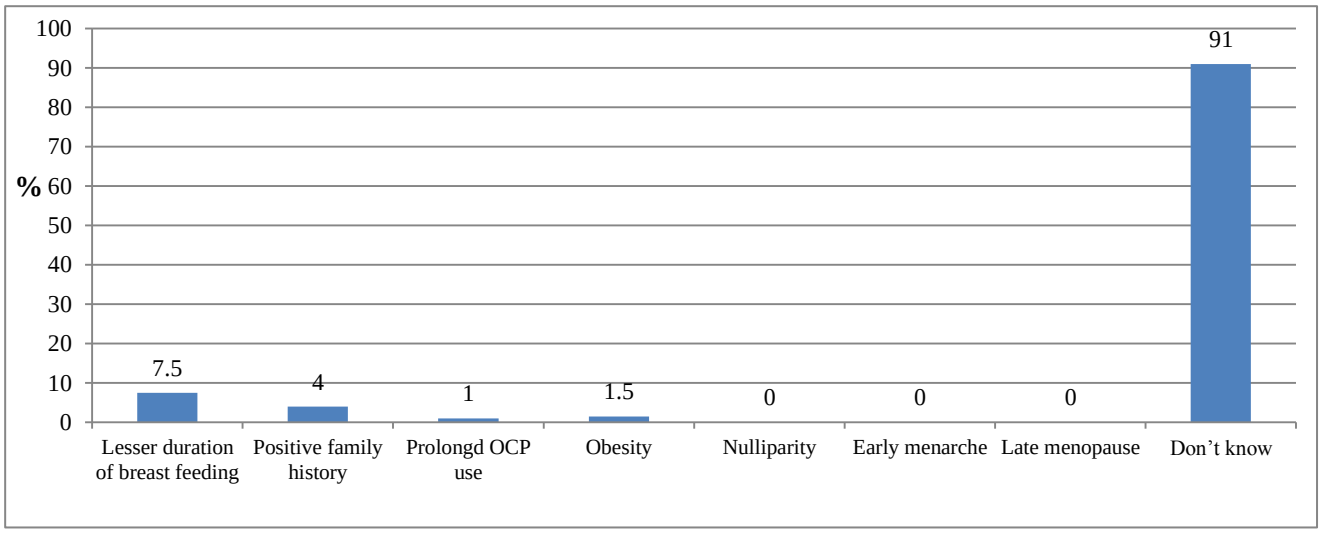

Figure 3: Awareness on risk factors of breast cancer n=200.

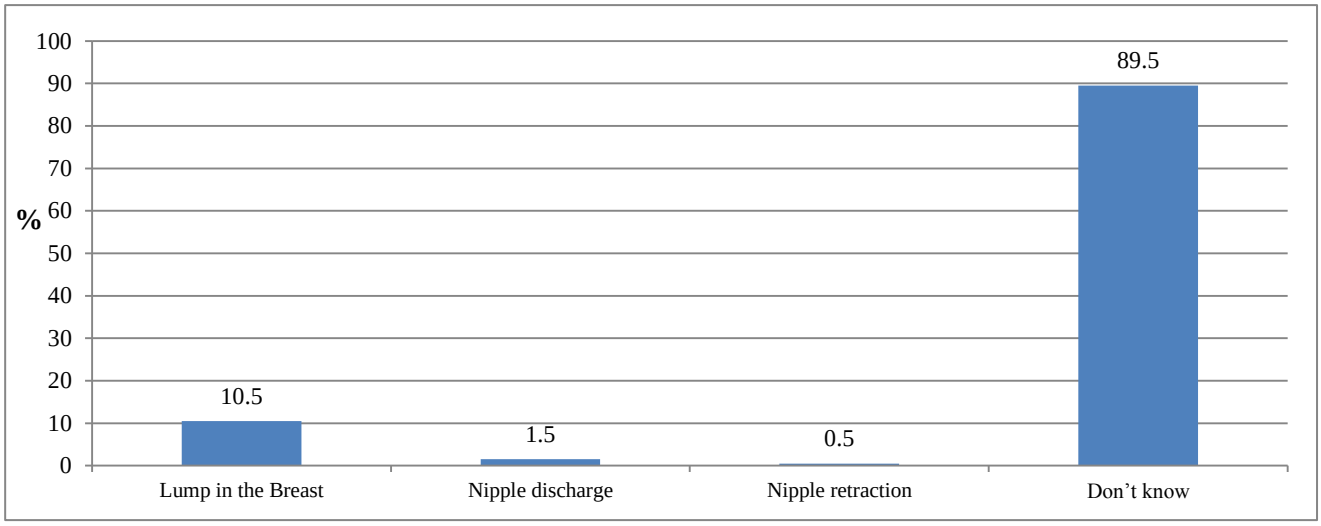

Figure 4: Awareness about the symptoms of breast cancer.

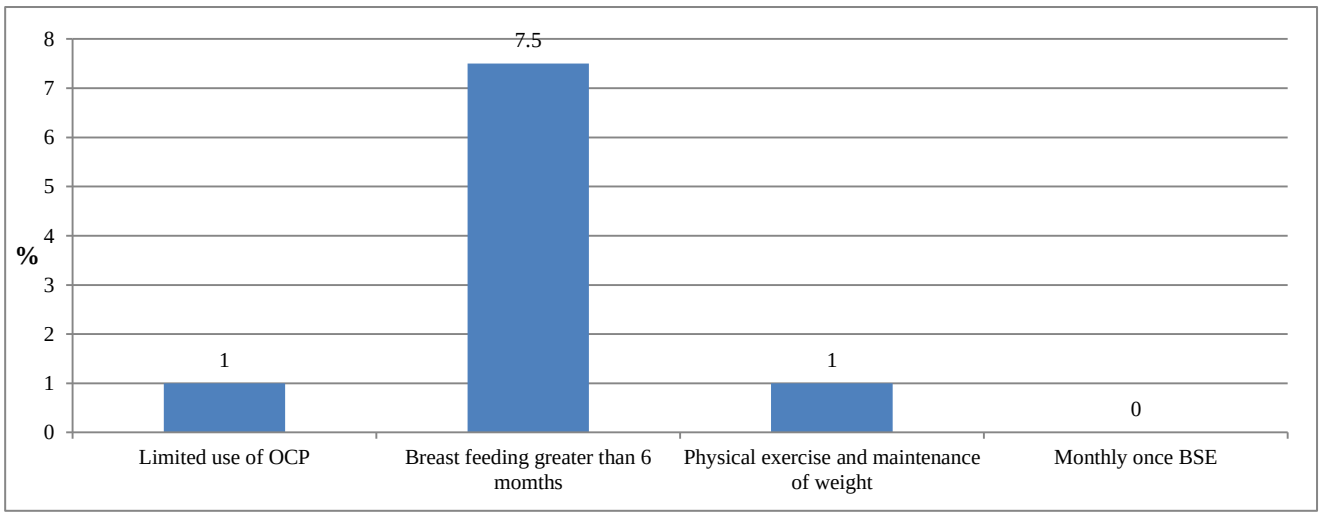

Figure 5: Awareness about the preventive measures of breast cancer.

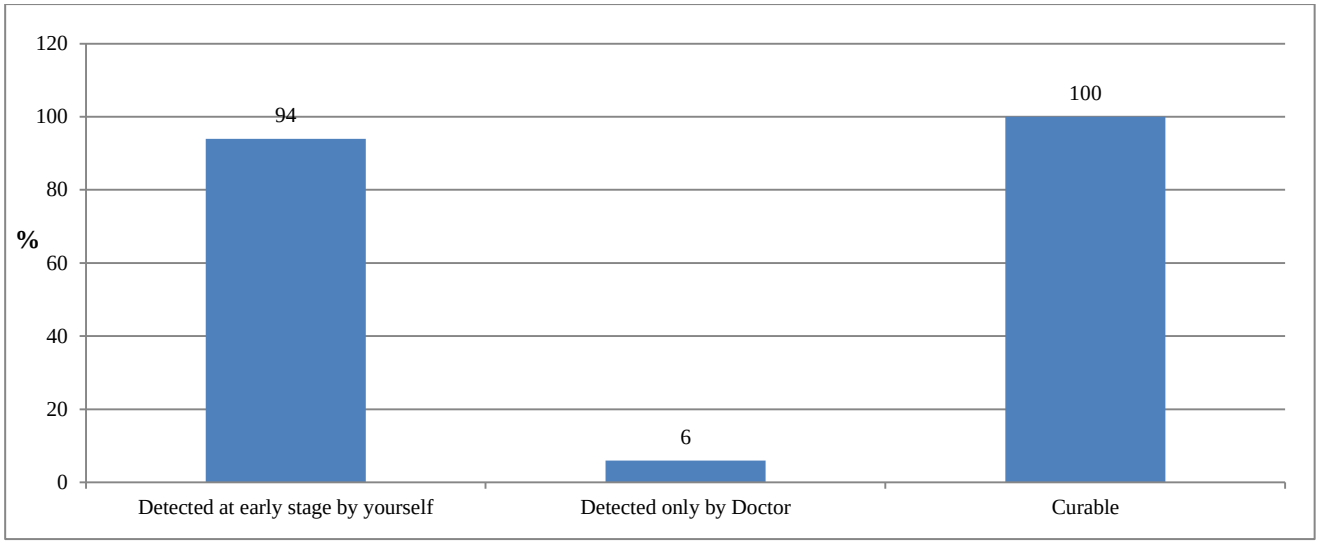

Figure 6: Awareness on the early detection and curability of breast cancer.

Media plays an important role as a source of information about breast cancer (60.72%) (Figure 2).

The assessment on awareness about the risk factors of breast cancer showed that, 91% of the participants were not aware about the risk factors. Only 9% of them were aware of risk factors like lesser duration of breast feeding, positive family history, prolonged OCP use and obesity (Figure 3).

Only 10.5% of the participants know about the symptoms of Breast cancer like lump in the breast, Nipple discharge and Nipple retraction. 89.5% are not aware about the symptoms of breast cancer (Figure 4).

Only 7.5% of the participants were aware about the preventive measures of Breast cancer like limited use of OCP, breast feeding greater than 6 months and physical exercise and maintenance of optimal weight. Most (92.5%) of them were not aware about any of the preventive measures (Figure 5).

94% among the participants were aware that the breast cancer can be detected at early stage by themselves. The remaining 6% believes that breast cancer can be detected only by doctor. All of them said that breast cancer is curable (Figure 6).

Only 3.5% out of 100% heard about Breast self-examination (Figure 7).

The remaining 96.5% never heard about the Breast self-examination (Figure 7).

All of them (100%) said that Media was the source of information on Breast self-examination (Figure 8).

The current study shows that none of the participants are practicing BSE monthly once, but everyone (100%) is willing to do BSE (Table 2).

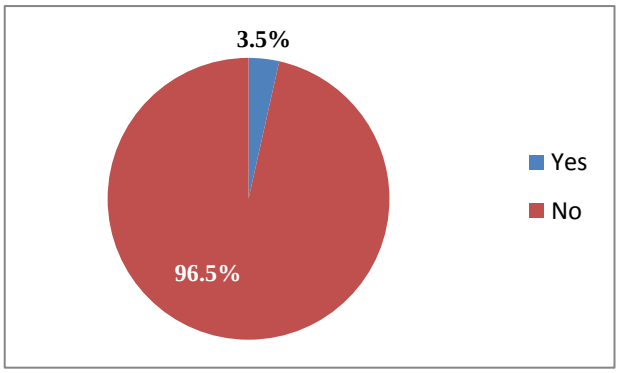

Figure 7: Proportion of participants heard about BSE.

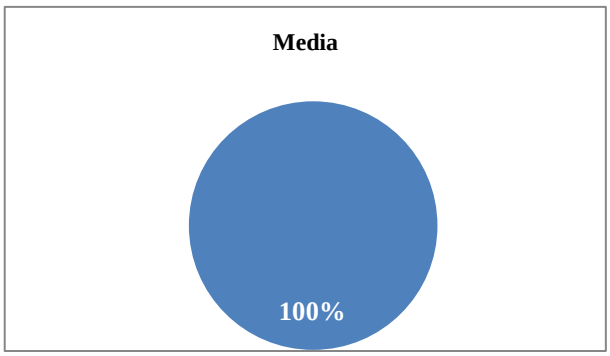

Figure 8: Source of information about the BSE.

Table 3 shows that the educational status has significant influence on the level of awareness on breast cancer ($p<0.0001$) among the study participants.

Table 2: Practice of BSE among the study participants.

Practice of BSE	Yes	No
Doing BSE Monthly once	0	100
Willing to do BSE	100	0

Table 3: Comparision of educational status and the awareness on breast cancer.

Educational status	Mean score	Std. Deviation	Std. Error Mean
≤ 8th Std	0.0109	0.10426	0.01087
≥ 9th Std	0.6389	1.69363	0.16297

p< 0.0001

DISCUSSION

Our study shows that 57 participants (28.5%) have completed their high school and 15% of them were graduates. Only 8.5% had never attended school. Even though the literacy rate was high among the participants, only 14% of them have heard about the word Breast cancer. A study conducted in a tertiary care hospital in Mumbai among women showed that 95% of the participants have heard about breast cancer.[6]

Among our participants, the main source of information (60.72%) was media and health professionals and 39.28% through friends and relatives. The study conducted at Mumbai showed friends and relatives (60%) plays an important role as a source of information comparing to the health professionals (12%). [6]

Among the 200 participants only 9% knew about few risk factors for Breast cancer. 7.5% of the women opined that lesser duration of breast feeding (<6 months) is an important risk factor. The other risk factors are positive family history (4%), obesity (1.5%) and prolonged oral contraceptives pills usage (1%). A study conducted in Riyadh showed that the study subjects were aware about the following risk factors; Smoking (54.6%), Family history (39.1%), oral contraceptives pills usage (30%), exposure to radiation (47.5%).[7]

A study on assessment of genetic instability (DNA damage and repair efficiency) as an important parameter concerning mutagenesis and carcinogenesis, showed that First degree female relatives (FDFRs) of breast cancer patients have been reported to have a 2 to 3-fold increase in breast cancer risk as compared with the general population.[8]

Regarding the awareness on symptoms of Breast cancer, only 10.5% knew about the symptoms. 10.5% said lump in the Breast as a symptom of Breast cancer, awareness on the symptoms like nipple discharge (1.5%) and nipple retraction (0.5%) were very low. A study on assessment on Breast cancer in Tanzania showed that many knew that painful lumps (67%) and nipple discharge (82%) are symptoms of breast cancer.[9] This shows that our study participants have less awareness on symptoms of breast cancer.

Among our participants we found that only 7.5% of the study subjects knew that Breast feeding for >6 months as a preventive measure of Breast cancer. Others are limited use of OCP (1%) and physical exercise and maintenance of body weight (1%). No one is aware about breast self examination (BSE), which is the important early detective measure for Breast cancer. A study conducted among the women in Mumbai, showed 80% knew about Breast feeding >6 months and 85% on performing BSE as the preventive measure for breast cancer.[7]

A study on assessment of knowledge about risk factors, signs and symptoms of breast cancer and the early detection methods done at Doha, showed that seriousness of breast cancer and the benefits of BSE were perceived by most of the participating women. One third of the women practiced BSE. The most frequent barrier identified by the participating women for not practicing BSE was their fear of not being able to do BSE properly.[10]

According to our study participants breast cancer can be detected early by themselves at home (94%). Only few (6%) said breast cancer can be detected only by a Doctor. All the participants said that breast cancer is curable. A study conducted among women in Rombo district showed that breast cancer can be detected early by themselves at home (16.7%) by doing BSE, 33.3% said that breast cancer can be detected only by a Doctor and 50% were not aware about the detection of breast cancer. 53% didn't know whether breast cancer is curable or not, 19% said that breast cancer is curable and 28% said that breast cancer is incurable.[9]

A study on breast cancer screening knowledge and practice among women in South East Asia of Iran concluded that knowledge and practice about breast cancer screening was relatively poor and it needs to be improved.[11]

In our study, only 3.5% of the participants heard about the word breast self-examination. The main source of information about BSE is media 100%. A study conducted among Nigeria women showed that 81.9% heard about BSE and only 18% never heard about BSE.[12]

Even though 3.5% heard about BSE no one is practicing BSE because they don't know how to perform BSE correctly and everyone is willing to do BSE. But in a study at Iran (34.9%) women practice BSE, 13.4% perform BSE regularly, 21.5% are irregular performers, 65.1% never done BSE. The reasons for not doing BSE is lack of knowledge (48%), forgetfulness (20%), not necessary (9%) and lack of time (4%).[13]

Assessment of knowledge, attitude and behavior of women in Qom towards breast cancer showed a moderate level of knowledge about screening methods and a positive attitude towards it. However most of the women do not practice screening methods and attention towards screening methods is necessary.[14]

In our study, we compared the educational status and the level of awareness on breast cancer among the study subjects and we found that the educational status has significant influence on the level of awareness on breast cancer ($p<0.0001$) among the participants.

The study conducted in Riyadh revealed an imbalance between the knowledge and practice of breast self examination among women and concluded that frequent community based awareness program are needed so that all women can know and practice the breast self examination which in turn help to prevent breast cancer.[7]

CONCLUSION

The knowledge on risk factors, symptoms and on the preventive measures of breast cancer among the women aged 20-30 years was assessed and found that their knowledge on breast cancer was very low. As the incidence of breast cancer is rising, there is a current need to educate the women on breast cancer and increase their awareness on the importance of early screening measures.

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