

Original Research Article

An assessment of knowledge regarding breast cancer among educated women in Kanpur Nagar, Uttar Pradesh, India

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ABSTRACT

Background: Most common female cancer worldwide including India is breast cancer. Awareness about breast cancer is very necessary for early detection and prevention as diagnosis at advanced stages of disease contributes to the high mortality rate. An assessment of existing levels of knowledge regarding cancer is a pre-requisite to find out gaps and to plan for proper educational programmes.

Methods: This cross-sectional study was carried out in a women's college, study subjects were students, female faculty members and female staff. A structured questionnaire was given, data was collected and analysed.

Results: In this study it is found that knowledge regarding risk factors for breast cancer was low, only 47.68% knew that family history predisposes for breast cancer, 28.48% knew late menopause is risk factor. 76.82% of respondents knew that lump in breast is a sign of breast cancer, whereas only 31.13% knew that discharge from nipple is sign of breast cancer. Merely 6.40% of respondents knew the procedure of breast self-examination. Majority of respondents i.e. 54.53% told media as source of information.

Conclusions: Regarding breast cancer low level of knowledge was found among the study subjects which suggests that proper information should be provided in colleges, especially health facilities and schools should increase their role in providing related information.

Keywords: Breast cancer, Early detection, Examination of breast cancer, Knowledge regarding breast cancer, Source of information of breast cancer

INTRODUCTION

Breast cancer is the most common female cancer worldwide representing nearly 19.3% of all cancers in women. The numbers of cancer cases and deaths are projected to more than double worldwide over the next 20 to 40 years.¹ In India there is lack of central cancer registry to provide comprehensive nationwide data. The only reliable data is available from the population-based cancer registries (PBCRs) and the several hospital-based cancer registries which are under the national cancer registries program of the Indian Council of Medical Research (ICMR). ICMR-NCDIR National Cancer

Registry Programme estimates 12% increase in overall cancer cases in the country by 2025. In 2020 breast cancers are estimated to contribute 2.0 lakhs.² Diagnosis at advanced stages of disease contributes to the high mortality rate, especially due to low levels of awareness, limited access to effective treatment as there are few number of treating health institutions, diagnostic facilities, specialist doctors and financial constraints of patients. According to WHO survival of breast cancer for at least 5 years after diagnosis ranges from more than 90% in high-income countries, to 66% in India and 40% in South Africa. In order to prevent and control major non communicable diseases, including breast cancer the

National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) was launched in 2010 with focus on strengthening infrastructure, human resource development, health promotion, early diagnosis, management and referral. Early detection and treatment has proven successful in high-income countries and should be applied in countries with limited resources where some of the standard tools are available. In India October is the breast cancer awareness month, an annual campaign to spread awareness regarding breast cancer. The numerous myths and ignorance that prevail in the Indian society result in an unrealistic fear of the disease.³ Breast cancer awareness programs are more concentrated in the cities and have not reached the remote and rural parts of the country.^{3,4} Low cancer awareness among the women due to the presence of stigma, fear, gender inequality and reduced engagement in screening behavior such as BSE (breast self-examination) contribute to high mortality rates.⁵ Heightening risk appraisal of breast cancer among women is seen to change women health behaviors; resulting in an adoption of breast screening practices and lifestyle modification to gain a sense of control over the disease.⁶

METHODS

Study design

This study was conducted in a private women's college of Kanpur Nagar district. Study was cross sectional type. Study was conducted from February 2021 to August 2021.

Study subjects

All undergraduate students were female, along with female faculty members and female staff of the college were included in the study.

Inclusion criteria and exclusion criteria

The study participants were those who gave consent to participate in the study. Those who did not gave consent were excluded from the study.

Sample size

The sample size was calculated using the formula, $n = Z^2(1-\alpha/2)pq/d^2$ (where $Z(1-\alpha/2)=1.96$ at 95% confidence; p = prevalence of proper practice, $q=1-p$; d = absolute allowable error. Since there was no similar study from Kanpur district we presumed maximum variability, hence $p=0.5$; $q=0.5$; $d=5\%$. Sample size thus yielded was of 384. As students, faculty and other female staff were very enthusiastic to participate in this study so all participants who gave consent were included in the study. Total of 453 students, faculty members and staff participated in the study.

Data collection tool and procedures

A structured questionnaire was designed and pilot study was conducted to test it, necessary modifications and sequencing were done and retested. Final questionnaire was administered after obtaining the informed consent from the participants. All students, faculty members and staff were given 30 minutes to read and respond. Prior to distributing questionnaire all Participants were informed about how to answer the structured questionnaire.

Data management and statistical analysis

Data collected from the questionnaire was checked and then entered for analysis. Data was tabulated on Microsoft Excel sheet and analysed.

RESULTS

Table 1 shows that 80.01% of participants were of age group ≤ 20 years and remaining were of >20 years age group, and majority of them (90.73%) were unmarried. Maximum number of participants (80.10%) were undergraduate students and rest of them were faculty members and staff, who were postgraduate or graduate. Majority of the participants (86.75%) were of general category, (7.28%) were OBCs and remaining of them were from SC and ST category. Maximum participants were from Hindu religion 85.43%, Muslims were 13.69% and only 0.88% were from other religion. Urban participants were 93.16% and rural participants were 6.84%.

Table 1: Sociodemographic profile of respondents.

Sociodemographics		Frequency	Percentage
Age in years	≤ 20	390	80.10
	>20	63	19.90
Marital status	Married	42	9.27
	Unmarried	411	90.7
Education	Pursing under graduation	390	80.10
	Graduate and post graduate	63	19.90
Caste	General	393	86.75
	Other backward caste	33	7.28
	Schedule caste	21	4.64
	Schedule tribe	6	1.33
Religion	Hindu	387	85.43
	Muslim	62	13.69
	Others	4	0.88
Resident	Rural	422	93.16
	Urban	31	6.84

Table 2 shows knowledge of participants regarding risk factors. Only 47.68% of them had the knowledge that family history predisposes for breast cancer, 13.24% had incorrect information and 39.09% had no knowledge.

Merely 7.33% knew that breast feeding prevents breast cancer, 15.89% gave incorrect response and majority i.e. 76.78% had no clue about it. Only 27.8% of the respondents had the knowledge that contraceptives pills increase possibility of breast cancer whereas 15.23% of respondents had misconception that contraceptives pills do not increase possibility of breast cancer and 56.95% had no knowledge. When asked, is late menopause a risk factor, only 28.48% respondents marked the correct response whereas 36.42% were having wrong information and 35.10% had no information regarding this. For question, is early menarche a risk factor, only 12.58% gave the correct response, 30.02% gave incorrect response and majority of them 57.40% had no information. Just 27.15% of the respondents knew that elderly age is a risk factor, 28.48% had wrong information and 44.37% had no information regarding this. Merely 15.23% had knowledge that obesity is a risk factor, 31.13% had wrong information and 53.64% had no information.

Table 2: Knowledge regarding risk factors.

Risk factors	Responses	N (%)
Family history predisposes for breast cancer	Yes	216 (47.68)
	No	60 (13.24)
	Don't know	177 (39.09)
Breast feeding prevents breast cancer	Yes	33 (7.33)
	No	72 (15.89)
	Don't know	348 (76.78)
Does oral contraceptives pills increase possibility of breast cancer	Yes	126 (27.81)
	No	69 (15.23)
	Don't know	258 (56.95)
Late menopause is a risk factor	Yes	129 (28.48)
	No	165 (36.42)
	Don't know	159 (35.10)
Early menarche a risk factor	Yes	57 (12.58)
	No	136 (30.02)
	Don't know	260 (57.40)
Elderly age is a risk factor	Yes	123 (27.15)
	No	129 (28.48)
	Don't know	201 (44.37)
Obesity is a risk factor	Yes	69 (15.23)
	No	141 (31.13)
	Don't know	243 (53.64)

Table 3 shows knowledge regarding symptoms of breast cancer. Majority i.e. 76.82% of respondents knew that the lump in breast may be a symptom of breast cancer, whereas only 31.13% new that discharge from nipple is also a sign of breast cancer and for swelling in breast 37.09% of respondents had the knowledge. When asked for swelling in armpit and changes in the skin structure as symptom of breast cancer respectively 18.54% and 17.88% had the knowledge.

Table 4 depicts knowledge regarding breast examination and treatment. Merely 6.40% had the knowledge of procedure of breast self-examination and only 9.93% knew the age at which breast self-examination should be started. Only 15.01% respondents new that mammography is done to screen breast cancer and majority i.e. 72.19% of respondents had the knowledge that treatment of breast cancer is possible.

Table 3: Knowledge regarding symptoms of breast cancer.

Symptoms	Responses	N (%)
Lump in breast	Know	348 (76.82)
	Don't know	105 (23.18)
Discharge from nipple	Know	141 (31.13)
	Don't know	312 (68.87)
Swelling in breast	Know	168 (37.09)
	Don't know	285 (62.91)
Swelling in armpit	Know	84 (18.54)
	Don't know	369 (81.46)
Changes in the skin structure	Know	81 (17.88)
	Don't know	372 (82.12)

Table 4: Knowledge regarding breast examination and treatment.

Questions for examination and treatment	Response	N (%)
Procedure of breast self-examination	Know	29 (6.40)
	Don't know	424 (93.60)
Age at which breast self-examination should be started	Know	45 (9.93)
	Don't know	408 (90.07)
Mammography is done to screen breast cancer	Know	68 (15.01)
	Don't know	385 (84.99)
Treatment of breast cancer is	Possible	327 (72.19)
	Not possible	126 (27.81)

Table 5: Major source of information.

Source of information	N (%)
Media	247 (54.53)
Friend	60 (13.25)
Health facility worker	21 (4.64)
Teachers	28 (6.19)
Family members	97 (21.41)

Table 5 shows major source of information regarding knowledge of breast cancer. Majority i.e. 54.53% of respondents told that they received the information from media, 13.25% received the information from friends, just 4.64% claimed that they got information from health facility workers, only 6.19% told teachers are source of information whereas 21.41% told that family members are source of information.

DISCUSSION

This study reveals that the study population was not having proper knowledge of breast cancer, specially about knowledge of symptoms and examination. Knowledge about risk factors is essential to know for early detection, prevention and treatment of breast cancer, this can help in increase in chance of survival and prolong healthy life.

Study conducted by Gupta et al regarding breast cancer awareness among women in India concluded that there was low cancer literacy of breast cancer risk factors among Indian women, irrespective of their socio-economic and educational background.⁷

Hassan et al conducted a study among rural Egyptian women and found that like results that poor knowledge among rural women regarding cancer breast. Breast self-examination and clinical breast examination were not well practiced.⁸

Gebresillassie et al conducted a study among university students and concluded similar results that the overall level of knowledge on breast cancer and clinical breast examination guidelines is low even though majority had positive perception toward the treatment and its outcomes.⁹

Sindi et al conducted a study in students of Makkah region and found that female non-medical university students had low level of awareness and knowledge about breast cancer which is similar to the present study.¹⁰

Study conducted by Madhukumar et al also showed low level of awareness regarding breast cancer.¹¹

Study conducted by Prusty et al regarding knowledge of symptoms and risk factors of breast cancer among women depicted similar results.¹²

Study conducted by Sarker et al among university female students also showed that students had limited knowledge on breast cancer, ranging from 30% about treatment options to 37% about symptoms, with overall correct rate of knowledge being 34.3%.¹³

In this study evaluation was done on the basis of responses provided by respondents, there might be a response bias involved. Moreover, this study was conducted in a single college in Kanpur Nagar district among educated women's which limits the results of our study.

CONCLUSION

Present study concludes that there is very low level of knowledge regarding breast cancer. Women's need to be aware of risk factors for breast cancer to adopt

appropriate practices for prevention. Breast cancer is a topic that is not freely discussed in India because of the cultural taboo, so most of the women's get improper or no information. Lack of knowledge of symptoms of breast cancer can lead to late treatment and increased morbidity and mortality. Health education at the college level is lacking and should be provided more aggressively regarding several aspects of health including breast cancer.

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