



Epidemiological Evaluation of Breast Cancer Awareness among Medical, Paramedical and General Population – A Hospital Based Questionnaire Survey

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ABSTRACT

To investigate the knowledge of breast cancer among medical, paramedical and general population of women participants. A prospective observational questionnaire survey was carried out in a tertiary care teaching hospital in northern Karnataka for a period of six months with 220 participants. Interviewer administered questionnaire was used. Data obtained was analysed using descriptive statistics. Out of 220 women, 31.36% were medical, 20.92% paramedical and 47.72% general. Almost, 94.20% of medical participants believed breast cancer as inherited. Notably, general group considered trauma (74.28%) and diet (73.33%) as major risk factors. Majority of medical and paramedical women thought lump in the breast as the initial sign of Breast Cancer. Awareness regarding mammography and biopsy in general population was 64.76% and 52.38% respectively. Moreover, 95.5% of medical women and all of the paramedical women thought that chemical / radiotherapy was the best treatment. Breast cancer knowledge and awareness was less among the general women. There is a need of developing effective interventional programs to educate women about breast cancer.

Keywords: Awareness, Breast Cancer, Knowledge, Risk factors.

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INTRODUCTION

Breast cancer stays an overall public wellbeing quandary and is presently the most common tumour in the globe.¹ It is a type of cancer that originates in the breast tissue ranging from noninvasive to metastatic carcinoma. Total number of newly diagnosed cases was estimated to account for 25% of all cancers globally. From 2008 to 2012, the global occurrence of breast cancer is increasing tremendously. Incidence has increased by 20% and mortality has increased by 14%.²

In India, most common reason of high mortality is diagnosis of breast cancer at advanced stages. Lack of awareness, illiteracy and financial constraints are the significant purpose behind late presentation of breast cancer growth.³ Diagnosis at an earlier stage allows women more treatment choices and consequently a greater chance of long term survival and a better quality of life.⁴

The etiology of breast cancer is complicated, and multiple factors are related with accumulated risk of breast cancer development such as delayed marriage, lower fertility, decreased span of breastfeeding and the lifestyle changes such as decrease physical activity and increase obesity.⁵

As breast cancer is a progressive disease, early diagnosis has a better prognosis yielding a better survival rate. Mammography, clinical breast examination and breast self-examination are the screening methods used for the early detection.⁶ Therefore, it is necessary to implement interventions aimed at increasing the comprehensive knowledge and perception of breast cancer and its screening methods in order to design and initiate effective health promotion strategies for protecting and reducing mortality against breast cancer.

It is now a well-established fact that perception and early detection can decrease the growing burden of the disease and is the first step to fight against the breast cancer. Majority of the research studies on cancer are related to its treatment. Limited studies have been conducted on the survey of breast cancer in our hospital. In this context, we planned a study to evaluate the knowledge of breast cancer among medical, paramedical and general population.

MATERIALS AND METHOD

A prospective observational questionnaire based study was carried out for 6 months at a tertiary care hospital in northern Karnataka. After obtaining verbal consent, a pretested, structured, interviewer-administered questionnaire was used to obtain information. No attempt was made to correct wrong answers or response until the completion of interview. A total of 220 women were interviewed. Ethical permission to conduct the study was granted by the institutional ethics committee.

Study population:

Data were obtained from women who belonged to medical, paramedical and general population i.e. students, health professionals, women who were admitted to hospital wards, visiting outpatient departments, pharmacy, laboratory and bystanders of inpatients. Adult females aged 15 years and older and participants who were willing to respond to questionnaire are the inclusion criteria for this study

Analysis of data:

Prospective data was gathered from women who belonged to medical, paramedical and general population by using a validated questionnaire. The filled questionnaires were analysed and monitored for the following variables:

- Age
- Educational Status
- Personal breast problem history
- First relative family history
- Marital status
- Attending screening and public health programs
- Occupation
- General concepts on breast cancer
- Knowledge about BC risk factors
- Knowledge about BC symptoms
- Knowledge about BC screening methods
- Knowledge about BC therapeutic methods

Statistical analysis:

Data was calculated using descriptive statistics namely total numbers, percentage, mean and standard deviation to represent prescribing pattern. Graphs and tables were entered in Microsoft word and excel.

RESULTS AND DISCUSSION***Age group categorization:***

In this study, total 220 questionnaires from 220 participants were collected and analyzed. Out of 220 women, 31.36% (n = 69) were medical, 20.92% (n = 46) were paramedical and 47.72% (n = 105) were general. Age was taken in to consideration by dividing into 5 age groups. Majority of participants were found in 21 – 30 years (52.57%) and 15-20 years (20.9%) were least found in the age group with a mean± SD of age 27.9± 1.9. [Result is summarized in table 1].

Table 1: Age distribution (n=220)

S.No	Age (in years)	No. of participants	Percentage (%)
1	15-20	46	20.90%
2	21-30	115	52.57%
3	31-40	22	10%
4	41- 50	21	9.54%
5	> 50	16	7.27%
		Mean = 27.9	
		Standard Deviation =1.9	

Participants who attended screening and public health programmes:

In this study, total 220 questionnaires from 220 participants were collected and analyzed. High proportion of the participants did not attend screening and health programs (60.90%) whereas only 39.09% attended. [Results were summarized in table 2].

Table 2: Participants who attended screening and public health programmes (n= 220)

S.No	Attended Health Programmes	No. of participants	Percentage (%)
1	Yes	86	39.09%
2	No	134	60.90%

General Perception about Breast Cancer:

Out of 220 women participants, 69 belonged to the medical population.85.5% of medical group had the awareness that breast cancer is not curable. 95.65% of paramedical group had awareness that Breast Cancer is usually inherited. Further, 3.80% of general group were not all aware about the general concepts. [Results were summarized in table3].

Table 3: General Perception about Breast Cancer (n=220)

S.No.	General Perception about Breast Cancer	Medical		Paramedical		General	
		Aware	Percentage (%)	Aware	Percentage (%)	Aware	Percentage (%)
1	Breast cancer is an incurable disease	59	85.5%	26	56.52%	73	69.52%
2	Breast cancer is contagious / communicable / infectious	61	88.40%	42	91.30%	79	75.23%
3	Breast cancer is usually inherited.	65	94.20%	44	95.65%	65	61.90%
4	Breast cancer can be caused by, supernatural causes	45	65.21%	18	39.13%	44	41.90%
5	Certain breast conditions, like	47	68.11%	27	58.69%	78	74.28%

	harmless breast lump, can predispose to BC						
6	Cancer cannot be cured	1	88.40%	28	60.86%	69	65.71%
7	Cancer cannot be prevented	64	92.75%	30	65.21%	82	78.09%
8	Don't know	-	-	-	-	4	3.80%

Knowledge about Risk Factors of Breast Cancer:

Comparing the risk factors of breast cancer among 3 populations, better awareness was found in medical population. Majority of medical population intended family history (95.65%) to be a major risk factor. 80.43% of paramedical population knew infertility as a risk factor of Breast Cancer. Less than half of the general population thought breast feeding to be a risk factor i.e., 46.66%. [Results were summarized in table4].

Table 4: Knowledge on Risk Factors of Breast Cancer (n=220)

S.No.	Breast Cancer Risk actors	Medical		Paramedical		General	
		Aware	Percentage (%)	Aware	Percentage (%)	Aware	Percentage (%)
1	Infertility	54	78.26%	37	80.43%	42	40%
2	Age at menarche	34	49.27%	20	43.47%	22	20.95%
3	Age at menopause	50	72.46%	29	63.04%	38	36.19%
4	Diet	62	89.85%	36	78.26%	77	73.33%
5	Family history	66	95.65%	43	93.47%	76	72.38%
6	Obesity	57	82.60%	36	78.26%	67	63.80%
7	Smoking	47	68.11%	26	56.52%	43	40.95%
8	Alcohol Consumption	46	66.66%	20	43.47%	40	38.09%
9	Breast feeding	41	59.42%	19	41.30%	49	46.66%
10	Trauma	50	72.46%	27	58.69%	78	74.28%
11	All of the above	19	27.53%	8	17.39%	5	4.76%
12	Don't know at all	-	-	-	-	4	3.80%

Knowledge about Breast Cancer Symptoms:

Based on the awareness about symptoms of breast cancer data of the study participants, medical group believed that lump in the breast as the initial sign of breast cancer, followed by pain (95.65%) and redness of the breast skin (94.20%) whereas same results were obtained by paramedical group. Majority (94.28%) of women in the general group revealed pain being the initial sign of breast cancer. [Results were summarized in Figure 1].

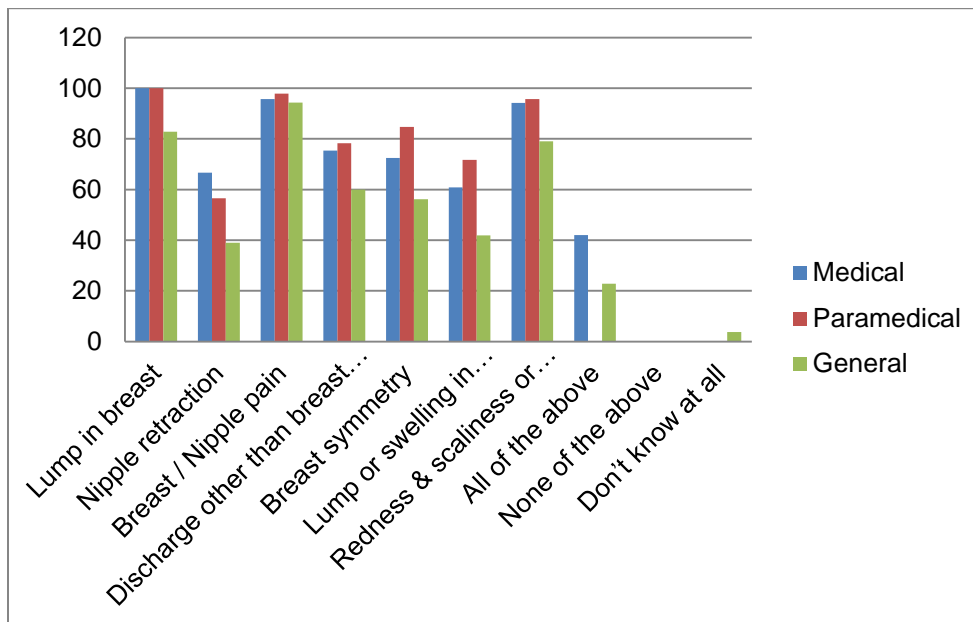


Figure 1: Knowledge on Symptoms of Breast Cancer (n=220)

Knowledge about Screening Methods of Breast Cancer:

On assessing the knowledge about various screening methods of breast cancer, 97.10% medical and 93.47% paramedical respondents were aware of mammography. Although, only few participants ever had Breast Self- Examination (BSE) and Mammogram. Only more than half of the general population has awareness about mammography (64.76%) and biopsy (52.38%). [Results were summarized in Figure 2].

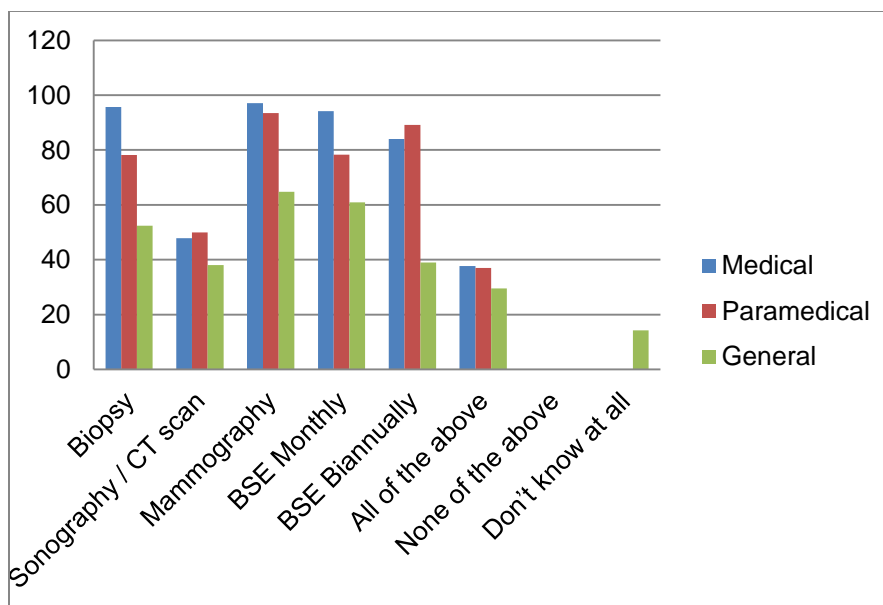


Figure 2: Knowledge on Screening Methods of Breast Cancer (n=220)

Knowledge about Breast Cancer Therapeutic Methods:

Based on the data on knowledge about breast cancer therapeutic methods, it was noticeable that 95.5% of medical population and most of the paramedical population thought that chemical / radiotherapy was the best treatment followed by surgery. Similar results can be seen in general respondents. [Results were summarized in figure 3].

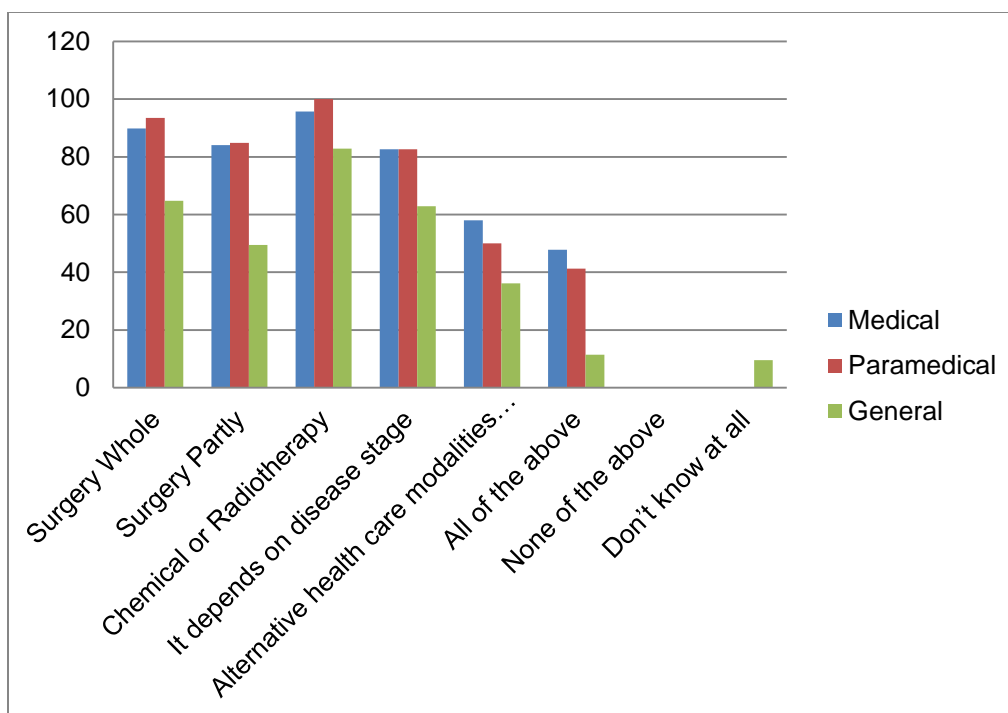


Figure 3: Knowledge about Breast Cancer Therapeutic Methods (n=220)

DISCUSSION

Knowledge of breast cancer, breast awareness and breast self-examination could improve the health seeking behavior of women leading towards early reporting of symptoms, screening for breast cancer and increase chances of survival.⁷ The primary goal of breast cancer awareness programs in developing countries is to encourage the awareness about the importance of its early detection.⁸

In the present study, it was discovered that younger participants had the highest levels of awareness. Awareness in higher ages was lesser than the lowest age groups. These findings are similar to other studies which found higher awareness among young women.⁹

Most of the participants did not attend screening and health programs (60.90%) whereas only 39.09% attended. This data shows that most of them are not aware about the importance of these health related programs and how those screening helps in improving breast cancer care and health.

The study conducted by Gadgil A. *et al*¹⁰ found that 83% of the women have knowledge that breast cancer is curable if it is detected in the early stage and were ready to have more

information about breast cancer. In this study, we found most of the participants have sufficient information about these facts and were willing to receive more information. Hence, it is essential to create more awareness about breast cancer in order that patients come in the earlier stage and have better survival rates. Additionally, we need to discover the boundaries keeping patients from coming early and not completing the entire treatment in such a way that we can work on those barriers and break them to improve our health care and health-seeking system.

With respect to the risk factors, higher proportion of medical and paramedical group considered family history as major risk factors i.e, 95.65% and 93.57% respectively. Moreover, it is significant that health personnel are having the knowledge on risk factors of breast cancer, in order to guide the patients for the necessary screenings.

An investigation done in UK on older women revealed that intervention in the form of knowledge about breast cancer symptoms helped them in detecting breast cancer in their early stage.¹¹ In this current study, most of them had awareness on the screening methods but only few had their test performed.

Mammography as a standard procedure of screening has performed annually for women at aged 40 or older in general population in western countries and it has not recommended for women age less than 40. In this study, only less number of the general population had awareness about mammography (64.76%). Compared to the other 2 groups, general group had less knowledge on the BSE.

Considering the treatment for breast cancer, most of participants regarded chemical / radiotherapy as the treatment of choice followed by surgery. Learning about the treatment modalities helps to alleviate the fear about carcinoma of breast and will increase confidence level. This will alter the health-seeking behavior of the population.

CONCLUSION

Knowledge level of breast cancer and its awareness was less among the general participants compared to the medical and paramedical groups. These findings emphasis on raising awareness about breast cancer among women as an effective way to overcome increasing trend and burden of breast cancer disease. Training on the latest evidence about the risk factors of breast cancer shall be offered to healthcare providers and community workers to raise their cancer literacy so they can then transmit this knowledge to other sections of the society.

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