

Assessment of Awareness about Breast Cancer among Women Residing in Urban Poor Sector of Belagavi - A Cross Sectional Study

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Abstract: Breast cancer is the most prevalent cancer in the world, India accounting for largest estimated deaths. Women present with advanced stages at which little benefit is derived from therapy resulting in poor survival. Women from poor sectors are at more risk because of inadequate knowledge and health care approach. Increasing their awareness can help in early detection and alter their treatment seeking attitude thus improving the survival rates. In order to assess the same, a Cross Sectional Study was conducted in 2015 among 393 poor urban women between the ages of 18-45 years, residing in Khasbag, Belagavi. Awareness of breast cancer, risk factors showed that 11.2% had poor knowledge, 57.5% had fair knowledge and 31.3% had good knowledge. With respect to signs and symptoms of breast cancer 71% had good knowledge, 27.7% had fair knowledge while only 1.3% had poor knowledge. Majority of the women had good overall knowledge (60.1%) and attitude (91.6%) levels. Most of them (97.2%) showed positive attitude towards seeking treatment. Association between knowledge and attitude was statistically significant ($p < 0.05$); the women with fair (32.8%) to good (58.8%) knowledge had good attitude.

Keywords: breast cancer awareness, knowledge, attitude, urban area, poor women

1. Introduction

Cancers are a group of diseases that are caused by an abnormal growth of cells with an ability to invade adjacent tissues and distant organs. Cancer can lead to death when progresses beyond the stage where it can't be successfully removed or treated. [1] Every year 10 million deaths occur out of 19.3 million cancers detected worldwide. [2]

Breast cancer is one of the most common cancer globally with 2.3 million cases every year accounting for 13.6% mortality of total cancers in women. [2, 3] The incidence of breast cancer is rising in the developing world because of increased life expectancy, urbanization and the adoption of unhealthy lifestyles. [4] The mortality rate of breast cancer in India is 13.3 per lakh population which makes it the highest contributor towards cancer deaths. [5] Breast cancer is three times higher in urban parts of India than in rural parts. [6]

High proportion (over 70%) of women with breast cancer present in late stages at which therapies have less benefit and are not much helpful. [7] Various epidemiological studies suggested that increasing women's knowledge about the early signs and symptoms can help early detection and alter their treatment seeking attitude thus improving the survival rates. [8] Despite of introduction of screening tools to detect palpable and non-palpable lesions, there is limited knowledge on screening of breast cancer and poor attitude towards seeking treatment. [9]

Knowledge is a predetermining factor for behavioral change and health seeking approach. It definitely influences the attitude and consequently improves the screening practices. With this background, the study was planned and conducted to explore the knowledge gap among women about breast cancer.

Objectives

- 1) To determine the awareness of breast cancer among poor urban women.
- 2) To assess the knowledge regarding signs, symptoms and possible risk factors among poor urban women.
- 3) To assess the attitude towards care seeking behaviour and breast self-examination among poor urban women.

2. Materials and Methods

The present Cross Sectional Study (A Qualitative KAP type) was planned and conducted in Khasbag, a suburb area of Belagavi city of Karnataka from June to October 2015. The ethical approval was obtained from institutional ethical committee. The study was carried out among adult reproductive age group women (18 to 45 years) residing in 5833 households of Khasbag (as per the micro-plan of pulse polio programme Jan 2015).

Inclusion criteria for participation in study:

Women between the age group 18 – 45years.
Females who consented for the study

Exclusion criteria for participation in study:

Women who were mentally challenged.
Women who were not willing to participate in the study

Considering the prevalence of knowledge of breast cancer in women as 43.6% from a study [10], Sample size of 393 was calculated using the formula. $4pq/d^2$ [p =prevalence, $q=100 - p$, $d=5\%$). For this study required sample of 393 women were selected using a Systematic Random Sampling Technique. Every 14th house was visited to select a study participant. In absentia the next house was included for the study. After taking written informed consent, participants were directly interviewed using a structured questionnaire in their vernacular language. The information was collected on

socio-demographic details, knowledge about risk factors, knowledge about signs and symptoms of breast cancer and attitude towards health seeking behavior and breast self-examination.

The level of knowledge/attitude about breast cancer was assessed using scoring method. Every correct answer was scored 3, wrong answer as 1 and don't know as 2 and the levels of knowledge and attitude were defined as poor, fair and good based on the score. The association between the various factors and levels of knowledge and attitude were analyzed and significant differences between them were determined using chi-square test.

3. Results

Table 1: Distribution of women according to sociodemographic details

Socio demographic variables	Number	%
Age:		
18-25 years	90	22.9
26-35 years	141	35.9
36-45 years	162	41.2
Socio economic status:		
Class I	9	2.3
Class II	29	7.4
Class III	83	21.1
Class IV	136	34.6
Class V	136	34.6
Religion:		
Hindu	357	90.8
Muslim	25	6.4
Jain	11	2.8
Education:		
Illiterate	30	7.6
Primary	12	3.1
Middle school	51	13.0
High school	174	44.3
Pre-secondary + diploma	75	19.1
Graduate	45	11.5
Post graduate	6	1.5
Occupation:		
Housewife/household	289	73.5
Service	56	14.2
Laborer	11	2.8
Skilled	13	3.3
Student	24	6.1
Marital status:		
Married	337	90.8
Unmarried	42	6.4
Widows/separate	14	2.8
Type of family :		
Nuclear	252	64.1
Joint	141	35.9
History Of Breast Cancer	52	13.2
History Of Other Cancers	20	5.1
No Family History	321	81.7
History Of Breast Disease	4	1.0
No History of Breast Disease	389	99.0

n=393

The study results were analyzed and the socio-demographic details are presented as in Table 1. Among the participants of this study 391 (99.5%) women had heard of cancer in general. The common cancers named by women were breast cancer 142 (36.1%), uterus/cervical cancer 69 (17.6%),

blood cancer 33 (8.4%) and oral cancer 28 (7.1%). Among participants 182 (46.3%) women didn't know the burden of breast cancer. This study also revealed that 251 (63.9%) women had heard of breast cancer; of which 141 (41%) had gained information through their friends, neighbors or relatives and 131 (33.3%) of women pointed out TV, newspaper and books to be their source of information, while only 32 (8.1%) notified health care workers as their source of information. In the study 223 (56.7%) correctly pointed out that women between age groups 30-50 years are at more risks and 35 (14%) said it could occur at any age, while 45 (11.5%) were not aware of it. About 254 (64.6%) women believed that breast cancer can be detected early while 116 (29.5%) denied it. Almost 377 (95.9%) opined that if breast cancer is detected in early stages there could be better cure and prognosis. It also showed that 275 (70%) women knew breast self-examination could help early detection. Mammography 222 (56.5) was the most commonly recognized detecting tool of breast cancer followed by biopsy 86 (21.9%) and 134 (34.1%) did not have any clue about methods for detection. Only 86 (21.9%) women recognized breast self-examination as one of the detecting methods.

The knowledge about risk factors and signs and symptoms of breast cancer were analyzed and have been shown in Table 2 and 3.

Table 2: Distribution of women according to the knowledge about risk factors of breast cancer

Variables	Yes *N (%)	No N (%)	Don't know N (%)
Smoking	267 (67.9)	68 (17.3)	58 (14.8)
No/less breast feeding	253 (64.4)	68 (17.3)	72 (18.3)
Use of OCPs	200 (50.9)	56 (14.2)	137 (34.9)
Family history	149 (37.9)	183 (46.6)	61 (15.5)
Drinking alcohol	144 (36.6)	158 (40.2)	91 (23.2)
Elderly primigravida	130 (33.1)	95 (24.2)	168 (42.8)
Radiation exposure	122 (31.0)	92 (23.4)	179 (45.5)
Low physical activity	115 (29.3)	169 (43.0)	109 (27.7)
Fat rich diet	111 (28.2)	170 (43.3)	112 (28.5)
Nulliparity	103 (26.2)	142 (36.1)	148 (37.7)
Early menarche	060 (15.3)	125 (31.8)	208 (52.9)

***N-number n=393**

Table 3: Distribution of women according to the knowledge about signs and symptoms of breast cancer

Variables	Yes N (%)	No N (%)	Don't know N (%)
A lump or thickening in the breast	330 (84.0)	15 (09.8)	48 (12.2)
Pain in one or both breasts/armpit	285 (72.5)	25 (06.4)	83 (21.1)
Lump or thickening under armpit	261 (66.4)	34 (08.7)	98 (24.9)
Discharge or bleeding from the nipple	256 (65.1)	20 (05.1)	117 (29.8)
Changes in size/shape of breast/nipple	217 (55.2)	39 (09.9)	137 (34.9)
Puckering or dimpling of breast skin	184 (46.8)	33 (08.4)	176 (44.8)
Redness of the breast skin	180 (45.8)	43 (10.9)	170 (43.3)
A nipple rash	160 (40.7)	57 (14.5)	176 (44.8)
Pulling in of the nipple	115 (29.3)	52 (13.2)	226 (57.5)
Change in the position of nipple	107 (24.2)	58 (14.8)	228 (58.0)

n=393

In this study, 226 (57.5%) had fair knowledge, 123 (31.3%) had good knowledge and 44 (11.2%) had poor knowledge regarding risk factors. More than half 279 (71%) had good knowledge, 109 (27.7%) had fair knowledge and 5 (1.3%) had poor knowledge about signs and symptoms. With respect to knowledge regarding general factors (age vulnerability, early detection, BSE etc) 229 (58.3%) had good knowledge, 154 (39.2%) had fair knowledge and 10 (2.5%) had poor knowledge.

Table 4: Distribution of woman according to the attitude towards breast cancer

Variables	N	%
Attitude towards care seeking on any changes in breast		
Yes	382	97.2
No	11	02.7
First approach on noticing any change in breasts *		
Spouse		
Mother	235	59.8
Relatives/family members	47	12.0
Friend	100	25.5
Health worker/doctor	17	4.3
	21	5.3
Approach doctor about any symptoms		
Yes	391	99.5
No	2	0.5
Approach towards type of health care setting		
Government hospital	128	32.6
Private hospital	263	66.9
Quack	000	00.0
Approach to doctor based on condition of symptoms		
Immediately	241	61.3
On causing any discomfort	106	27.0
On affecting daily activity	7	1.8
When it doesn't subside	15	3.8
On experiencing pain	22	5.6
Never	2	0.5
Attitude towards BSE		
Regularly	111	28.2
Whenever symptoms are present	190	48.4
Occasionally	40	10.2
Not necessary	52	13.2
Attitude towards acquiring knowledge on breast cancer		
Yes	382	97.2
No	11	2.8

n=393 *includes multiple answers

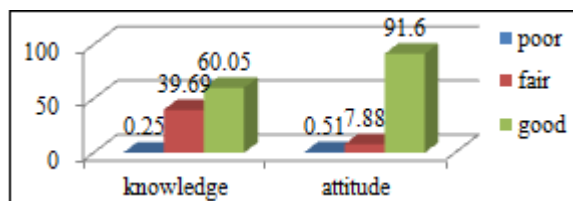


Figure 1: Distribution of women according to the levels of knowledge and attitude towards breast cancer

The association between levels of knowledge and attitude was statistically significant ($p < 0.05$). Among the women who had good knowledge, 231 (58.8%) had good attitude and 5 (1.3%) had fair attitude. Among those who had fair knowledge, 129 (32.8%) had good attitude, 25 (6.4%) had

fair attitude and 2 (0.5%) had poor attitude. And among those with poor knowledge 1 (0.3%) had fair attitude. As level of knowledge improved the level of attitude was improved.

4. Discussion

The present study was conducted among the 393 poor urban women of Belagavi of reproductive age group, 18-45 years whose awareness level plays an important role, since they are the ones who are prone for breast cancer.

The mean age of our study participants was 31.89 ± 8.3 years. In this study, 41.2% belonged to the age group of 35-45 years, almost 90.8% were married and majority (90.8%) were Hindus. A study in Udipi (42.1%, 85.9%) and China (33.5%, 96%) also had similar ages and marital status population respectively. [6, 11] About 69.2% women were below class IV and most of them were home makers (73.5%). These observations were similar to the study done in Udipi, where in most (59.4%) had their monthly family income between Rs.3001- 5000, 92.5% were Hindus and 59.4% were housewives. [6] In the present study many (64.1%) belonged to nuclear family, majority (44.3%) had high school level of education and only a few were illiterates (7.6%) as compared to a study of south Delhi (46%). [12]

History of breast cancer among family member was present in 13.2% of women which was higher compared to the other studies conducted in Shah Alam (7.6%) and in Eastern China (1.1%) [11, 13]. This draws concern towards the vulnerability of the woman due to genetic predisposition and the burden of breast cancer in this community. Family history of other types of cancers were present in 5.1% participants which is slightly lower than (15.6%) as seen in Malaysian women. [13].

In this study, most of the respondents (63.9%) had heard about breast cancer and friends, neighbors or relatives (41%) were the most common source of information which was same as in South Delhi (41%). The role of health care workers as the source of information was very low (8.1%) compared to 19% in South Delhi and 13% in Shah Alam study. [12, 13] Our women lacked the knowledge that breast cancer is one of the most common cancer among women. This highlights the lack of focus on breast cancer by health care staff.

Though in the present study 70% of women knew breast self-examination could detect breast cancer, only 21.9% pointed it out as a detecting tool for early stage. This was less compared to 85.35% response seen in the study conducted in Muscat. [14] This could be due to lack of awareness about importance of breast self-examination and also their low self-confidence. The present study found that about one fifth (21.9%) knew of biopsy to detect breast cancer and 56.5% were aware of Mammography. The awareness about mammogram in other studies was 50% in Shah Alam, 19% in Udipi and 3% in South Delhi. [6, 12, 13] About 34.1% didn't know of any methods for detection which was consistent with the study in South Delhi [12].

Most of the study participants (64.6%) believed that early detection of breast cancer is possible which was similar to

study from Ahmedabad (65.6%) and South Delhi (53%) [12, 15] and slightly lower than a study in Jaipur (81.42%). [16] About 29.5% thought that, it could only be detected at late stages. This can be driven out by making them aware of breast cancer and importance of early detection measures. Almost 95.9% opined that if breast cancer is detected in early stages there could be better cure and prognosis. The opinion was similar to studies in Ahmedabad (98.9%) and better than Eastern china (70.6%). [11, 15]

In this study it was noticed that smoking (67.9%) was the most commonly recognized risk factor which was similar to findings among students of Muscat (66.24%) and Malaysia (65.2%). [13, 14] Next recognized risk factor was no or short duration of breast feeding (64.4%). Concurrent findings were seen in Jaipur (62.85%) and Ahmedabad (80%). [15, 16] About half of the participants knew, using oral contraceptive pills (50.9%) is one of the risk factor and this knowledge was better than in Shah Alam (34.0%) and South Delhi (8%) study. [13, 18] Less than half had knowledge about risk factors like positive family history (37.9%) which was comparatively lower than studies done in Jaipur (68.57%), Shah Alam (88.0%) and Ahmedabad (40.8%). [13, 15, 16] However 46.6% denied the fact that it could be genetically predisposed. Nulliparity was identified as a risk factor by only 26.2% of women, similar to a study by Shah Alam (23.6%) [13] whereas, it was lower than that of Jaipur (77.14%). [16] Early menarche was the most unrecognized risk factor as only 15% recognized it. Studies in Eastern China (11.2%) and Shah Alam (15.2%) confirmed the same. [11, 13]. In the present study, overall knowledge score revealed that, 11.2% had poor knowledge, 57.5% had fair knowledge and 31.3% had good knowledge regarding risk factors, which was comparatively less than Muscat participants (60%). [14].

Regarding the knowledge of signs and symptoms a lump or thickening in the breast (84%) was the most common symptom identified by the participants. These findings were consistent with those studies conducted in Jaipur (84.28%) and Shah Alam (90.8%) whereas; better than Eastern China (48.5%) study group. [11, 13, 16] Pain in breasts and armpit was the second common symptom identified (72.5%), similar findings were seen in Jaipur (74.28%) [16], however it was better than South Delhi (41%) finding. [12] In present study, discharge or bleeding from nipple (65.1%) was another common symptom identified, which is consistent with Shah Alam (71.2%) and better than that of Jaipur (45.71%) [13, 16] Inversion of nipple (29.3%) was one of the least recognized symptoms and similar observation was noted in Eastern China (21.3%) study. [11] Overall the knowledge about signs and symptoms of breast cancer was better in this study as well as other parts of the country.

This study revealed good attitude of women towards breast cancer. It showed that 97.2% of women would seek help if they noticed any change in their breast and would initially approach their spouse (59.8%) or family friends rather than doctor as only 5.3% said they would approach health Worker/Doctor first; eventually all (99.5%) would consult a doctor for breast complaints. But the timings of seeking medical help varied, such that many (61.32%) would go

immediately but rest would go on experiencing any discomfort, pain and on affecting daily activity.

About 48.4% said that Breast self-examination should be done whenever symptoms are present and 13.2% said it is not necessary which once again justifies their ignorance of its importance in early detection. In this study 28.2% of women said that BSE should be done regularly which is quite low compared to 72.6% as told by university students of Malaysia. [14]. The difference could be attributed to the high educational level of those students as compared to our participants. (Table no.4)

The overall knowledge was assessed and levels were derived based on the total scores. This study revealed that 60.1% had good knowledge, 39.7% had fair knowledge and only 0.3% had poor knowledge scores. Which in contrast was higher than the studies conducted in selected villages of Udupi [poor knowledge (46.6%), average knowledge (45.3%) and good knowledge (8.1%)] [6]. In Eastern China however, 18.6% were highly aware about breast cancer and 81.4% were poorly aware. [11] In our study, 91.6% women had good attitude, 7.9% women fair attitude and 0.5% had poor attitude towards breast cancer.

A significant association was observed between knowledge regarding risk factors and age, religion and type of family ($p < 0.05$). Younger (18–25 years) women had good knowledge about risk factors compared to older women. Jain women were more aware of risk factors for breast cancer followed by Hindu and Muslim women. Women belonging to nuclear family had better knowledge (92%) than those belonging to joint families (83%). The women with family history of other cancers and breast cancer were more aware of signs and symptoms (85% and 82.7%) than those with no such history (68.2%) which was statistically significant ($p < 0.05$).

This study noted a statistically significant association among those who had family history of cancers and the overall knowledge levels ($p < 0.05$). Study from Shah Alam also found similar association. [13] Although other socio-demographic variables and levels of knowledge were significant in the many studies conducted worldwide. Such significance was not seen here as majority of these study participants were from poor sector, having similar demographic pattern and uniform knowledge levels.

The association between literacy status and attitude of women towards breast cancer was statistically significant ($p < 0.05$). Women who were graduates had very good attitude (100%) towards breast cancer, followed by those who attended college or high schools (93.3% and 92.5%). The present study also revealed that the association between levels of knowledge and attitude was statistically significant $p < 0.05$ and as the level of knowledge increased, the level of attitude also improved.

5. Conclusion

- 1) The study concludes that the overall knowledge about breast cancer among women was good and most

common source of knowledge was friends or TV than the health care settings; more than half knew about costly diagnostic tests like mammography rather than simple Self breast Examination skill as detection tool.

- 2) Most of women knew important risk factors of breast cancer but some were ignorant about scientific or medical risk factors. Though, most of women had good knowledge about signs and symptoms of late stages, but they lacked the knowledge of early signs & symptoms of breast cancer.
- 3) Most of them showed positive attitude towards seeking medical help whereas, few were having apprehension towards regular self-breast examination and preferred family members or relatives as first approach rather than doctor or health care workers.

6. Recommendations

- 1) Study recommends Health education or awareness program to provide adequate and scientific information about breast cancer, its risk factors, early signs & symptoms and its early detection measures especially on breast self-examination. It should be emphasized through mass media and trained health care workers.
- 2) Study recommends an effort to change the attitude of older and illiterate women by influencing their perceptions.
- 3) Study also recommends existing health services to extend the services to reproductive age group women towards identifying risk groups, early screening and referral services for breast cancer.

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