

Original research article**A facility-based, descriptive, cross-sectional study assessing knowledge, attitude and practice towards breast cancer and breast cancer screening among women****¹Dr. Gokul Kumar K, ²Dr. Deivanayagame B, ³Dr. Ramkumar Boopathirajan**¹Assistant Professor, Department of Community Medicine, St. Peter's Medical College Hospital and Research Institute, Hosur, Tamil Nadu, India²Associate Professor, Department of Physiology, Sri Lakshmi Narayana Institute of Medical Sciences, Ossudu, Agaram Village Villianur Commune, Kudapakkam Post, Puducherry, India³Professor, Department of Community Medicine, MNR Medical College and Hospital, Sangareddy, Telangana, India**Corresponding Author:**

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Email: drgocool.india@gmail.com**Abstract****Aim:** The aim of the present study was to assess the knowledge, attitudes and practices surrounding breast cancer awareness and screening among women.**Methods:** This was a facility-based, descriptive, cross-sectional study, conducted in the Department of Community Medicine. Women from all age groups and backgrounds were eligible to be included in this study. Out of 220 selected detainees, 200 participants responded to the questionnaire with a response rate of 90.90%**Results:** The mean age was (36, standard deviation (SD): 13.7) years, and the ages of more than half of them 290 (60%) are from 18-30 years. 84 (42%) of them were illiterate and 72 (36%) had primary education. Regarding their marital status, the majority of them 116 (58%) was married. Additionally, 144 (72%) were housewives. About the participants' knowledge about breast cancer, the majority of them 120 (60%) agreed that breast cancer is the most common cancer among females, and 120 (60%) said that breast cancer is a curable disease. Moreover, nipple discharge was the most commonly chosen symptom by the participants 88 (44%), and smoking was the most commonly selected risk factor for breast cancer 104 (52%). Furthermore, 104 (52%) of the participants did not know the methods of breast cancer diagnosis. The overall score of the participants' revealed that more than half of them had poor knowledge about breast cancer, poor knowledge about breast cancer was significantly associated with low educational status, however it was not associated with the occupation of the participants and wasn't associated with neither their marital status, nor their age. In this study, it was also observed that 70% of the study participants had positive attitude toward breast cancer screening. Despite having good knowledge and attitude toward breast cancer screening, the practice levels were still seen to be very low among study participants.**Conclusion:** The majority of the respondents think about breast self-examination as an important issue but they have poor practice. Thus, we recommend more health campaigns and educational sessions in such facilities.**Keywords:** Knowledge, attitude, practices, breast cancer.**Introduction**

Breast cancer is a life-threatening disease affecting women across the globe ^[1]. Breast cancer is a type of malignant tumor that starts in the cells of the breast and commonly occurs in women ^[2]. This abnormal cell could destroy healthy tissue and then, spread beyond its usual boundaries ^[3]. It is the most prevalent type of cancer among women and is the primary cause of cancer related mortality ^[4]. According to the WHO, 2.3 million women were diagnosed with breast cancer and 685,000 deaths were attributed to it globally in 2020 ^[5]. Although the disease prevalence is higher in developed countries, three-quarters of the worldwide disease-associated deaths are arising from developing countries, crossing cultures and countries ^[6, 7]. This is 13% of all new cancer cases and 25% of female cancers. Breast cancer is the fifth most prevalent cause of cancer mortality in women, following lung, liver, colorectal and stomach cancers. Developing nations have more breast cancer mortality than industrialized ones despite greater occurrences ^[8].

The most common risk factors of breast cancer are being a woman and getting ≥ 50 years old, having dense breasts, having a family history of breast cancer, early menstruation, and late menopause, late pregnancy, being on birth control pills, race, atypical hyperplasia of the breast, and previous treatment

using radiation therapy^[9, 10]. Lifestyle factors are obesity, lower amounts of physical activity, alcohol, and foods like high fats and low fiber diets^[10].

Women have one in eight risk of having breast cancer during their lifetime and early detection through screening is the only way to reduce morbidity and mortality^[11-13]. Health care professionals should emphasize the importance of awareness and recognition of breast changes^[14]. American Cancer Society (ACS) guidelines for the early detection of breast cancer in average-risk women consist of a combination of regular clinical breast examination (CBE), counseling to raise awareness of breast symptoms beginning at age 20 years, and annual mammography beginning at age 40 years. Women should undergo CBE every 3 years between the ages of 20 and 39 years, and annually after age 40 years.

Breast self-examination (BSE) is one of the non-invasive methods of screening in which a woman looks at her breast for any abnormal findings like lumps, distortions, discharges or swellings with an intention to detect it early for early initiation of treatment and better chance of survival for breast cancer patients^[14, 15]. BSE is suitable and applicable than other methods for developing countries. It is safe, non-invasive and economic^[16]. The awareness of breast cancer plays an important role in early detection and prevention of the disease and the primary healthcare center is the first basic level of contact between women and families within the health system.

Therefore, our study aimed to evaluate the knowledge, attitude, and practice of breast cancer screening methods among female patients attending primary healthcare centers.

Materials and Methods

This was a facility-based, descriptive, cross-sectional study, conducted in the Department of Community Medicine. Women from all age groups and backgrounds were eligible to be included in this study.

Data collection tools

220 participants were randomly selected from the total population of the facility which was 460 persons, using a formula with prevalence of 0.5 and a confidence level of 95, by randomly picking 220 numbers out of 460 numbers list of the total population. Out of 220 selected detainees, 200 participants responded to the questionnaire with a response rate of 90.90%.

The questionnaire is divided into 4 sections; socio-demographic section, knowledge section, attitude section, and breast self-examination section. Nine items were used to assess the knowledge by asking about symptoms, signs, protective factors, diagnosis, risk factors and curability, and three items were used for the attitude section. In breast self-examination section two items were used to assess the knowledge about breast self-examination by asking about the reasons, place, steps of self-examination, two items were used for the attitude, and three items for the practice.

Copies were handed in person to participants. Codes were used instead of names to ensure confidentiality. The Scoring for knowledge, attitude and practice for breast cancer and self-examination items was per-formed by a consultant oncologist.

Data analysis

Statistical Package for Social Science 24.0 (SPSS) software was used for data entry and analysis. Categorical variables were presented as frequencies, and continuous Variables as means and standard deviations. Additionally, Chi-square test was used to test the association between categorical variables. P value of less than 0.05 was considered statistically significant.

Ethical considerations

An ethical approval was obtained from the institutional review committee. In addition, a written consent was taken from the prison administration and verbal consent was obtained from each participant before conducting data collection.

Results

Table 1: Demographic characteristics of the study participants

	Frequency	Percentage
Age		
Mean 36		
Minimum 16		
Maximum 80		
Age groups		
18-30	120	60
31-40	48	24
41-50	24	12
More than 50	8	4
Educational level		
Illiterate	84	42
Primary	72	36

Secondary	20	10
University	20	10
Post-graduate	4	2
Occupation		
House wife	144	72
Employee	56	28
Marital status		
Single	44	22
Married	116	58
Divorced	24	12
Widowed	16	8

The mean age was (36, standard deviation (SD): 13.7) years, and the ages of more than half of them 290 (60%) are from 18-30 years. 84 (42%) of them were illiterate and 72 (36%) had primary education. Regarding their marital status, the majority of them 116 (58%) was married. Additionally, 144 (72%) were housewives.

Table 2: Participants knowledge about breast cancer

Questions	Frequency	Percentage
Breast cancer is the most common cancer among females?	120	60
Yes No	20	10
I don't know	60	30
Breast cancer is a curable disease?	120	60
Yes No	30	15
I don't know	50	25
Early diagnosis of breast cancer increases the chances of treatment?	156	78
Yes No	10	5
I don't know	34	17
Unequal breasts size after puberty is normal?	128	64
Yes No	52	26
I don't know	20	10
In most of the cases, breast cancer appears as non-painful lumps in the breast?	120	60
Yes No	20	10
I don't know	60	30
Normal breast feeding decreases the probability of acquiring breast cancer?	96	48
Yes No	40	20
I don't know	64	32
What are the symptoms of breast cancer?	20	10
Axillary lymph nodes enlargement Breast redness or change in color Nipple discharge	48	24
Sever Weight loss	40	20
I don't know	72	36
Breast cancer can be diagnosed using:	50	25
Tissue biopsy	52	26
Ultra sound Mammograp	30	15
I do not know	104	52
Risk factors of breast cancer include:	104	52
Smoking	64	32
Alcohol	56	28
Aging:	36	18
Late menopause	50	25
Family history of BC Obesity	40	20
Long term use of contraceptive pills	60	25
I don't know	70	35

About the participants' knowledge about breast cancer, the majority of them 120 (60%) agreed that breast cancer is the most common cancer among females, and 120 (60%) said that breast cancer is a curable disease. Moreover, nipple discharge was the most commonly chosen symptom by the participants 88 (44%) and smoking was the most commonly selected risk factor for breast cancer 104 (52%).

Furthermore, 104 (52%) of the participants did not know the methods of breast cancer diagnosis. The overall score of the participants' revealed that more than half of them had poor knowledge about breast cancer, poor knowledge about breast cancer was significantly associated with low educational status, however it was not associated with the occupation of the participants and wasn't associated with neither their marital status, nor their age.

Table 3: Depicts attitude toward breast cancer and practice of self-breast examination among women

Parameters	N%
Attitude towards screening	140 (70)
Practice of BSE	60 (30)
Practice of CBE	30 (15)
Practice of Mammography	14 (7)

In this study, it was also observed that 70% of the study participants had positive attitude toward breast cancer screening. Despite having good knowledge and attitude toward breast cancer screening, the practice levels were still seen to be very low among study participants.

Discussion

Breast cancer is the most prevalent cancer among females globally, encompassing nearly a quarter of diagnosed cases among females, since 1.15 million cases are diagnosed annually around the world^[17-19]. Breast cancer is common in both developed and developing countries. Nevertheless, its rates are three times higher in developing countries^[20]. Breast cancer is a leading cause of mortality among females in Africa^[21]. Evidence suggests that practicing BSE depends on different factors including females' knowledge, attitude, socio-demographic and sociocultural factors^[22]. Other reasons for low rates of practice have been reported including lack of time, forgetfulness, and low level of education^[23].

The mean age was (36, standard deviation (SD): 13.7) years, and the ages of more than half of them 290 (60%) are from 18-30 years. 84 (42%) of them were illiterate and 72 (36%) had primary education. Regarding their marital status, the majority of them 116 (58%) was married. Additionally, 144 (72%) were housewives. About the participants' knowledge about breast cancer, the majority of them 120 (60%) agreed that breast cancer is the most common cancer among females, and 120 (60%) said that breast cancer is a curable disease. Moreover, nipple discharge was the most commonly chosen symptom by the participants 88 (44%), and smoking was the most commonly selected risk factor for breast cancer 104 (52%). However in the study by Tilaki KH *et al.*, it was the second most commonly chosen after alcohol consumption^[25]. Furthermore, the overall participants' knowledge about breast cancer in this study was poor and it was associated with low education status. This association was also suggested in other studies^[25, 26].

Furthermore, 104 (52%) of the participants did not know the methods of breast cancer diagnosis. The overall score of the participants' revealed that more than half of them had poor knowledge about breast cancer, poor knowledge about breast cancer was significantly associated with low educational status, however it was not associated with the occupation of the participants and wasn't associated with neither their marital status, nor their age. In this study, it was also observed that 70% of the study participants had positive attitude toward breast cancer screening. Despite having good knowledge and attitude toward breast cancer screening, the practice levels were still seen to be very low among study participants. The association between the level of education and level of knowledge regarding BSE was positively concluded in our findings, higher level of knowledge about the disease was associated with higher level of education, similar observation was noticed in other studies^[24, 27, 28].

In a study done on Kashmiri females^[29] in which only 5.6% and 4% had practiced BSE and CBE, respectively. Furthermore, in a study done on Indian teachers, it was seen that only 36% had heard about BSE and this dismal awareness level was reflected in practice as none had ever practiced BSE, CBE and mammogram^[30]. Mammography is a very useful but expensive technique and for this reason difficult to adopt in a country like India as a routine public health measure^[31]. Breast cancer mortality is common in India because women present it in very advanced stages which could be majorly reduced by early detection and screening. This review surely indicates lack of breast cancer literacy among women in India. Lack of awareness is one of the barriers which needs to be removed for proper detection and prevention of breast cancer. Social stigma attached to breast cancer also needs to be cleared out, and women should be encouraged for self-examination of their breasts which could be the first step in reducing the incidence of breast cancer.

Conclusion

The majority of the respondents think about breast self-examination as an important issue but they have poor practice. Thus, we recommend more health campaigns and educational sessions in such facilities. Additionally, educational broadcasts and mini-videos illustrating the steps of breast-self-examination ought to be delivered via these imprisonments' radios and televisions. Furthermore, more research projects are encouraged to address this issue in other amenities and geographical locations also a comprehensive breast cancer screening program is also recommended.

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