

## **A Study to Assess the Knowledge Regarding Self Breast Examination on Prevention of Breast Cancer among Women Attending Urban Health Center, Virugambakkam, Chennai**

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### **Abstract**

*Breast cancer is a major public health problem and the most common progressive cancer in women, which accounts for high mortality rates worldwide accounting for approximately 1 in 4 cases of cancer among women. Several studies have found that the annual incidence of breast cancer is rising in developing countries. According to the International Agency for Cancer Research, approximately 10980 new cases of breast cancer have been identified with family history of cancer, delay in menopause, reproductive behaviours, and lifestyle-related factors such as obesity, smoking, physical activity decline, and exposure to radiation, stress, and anxiety. The study aims to assess the level of knowledge regarding breast self-examination in the prevention of breast cancer among women. The quantitative research approach descriptive research design total of 60 women who were attending OPD at an urban health centre participated in this study and they were selected by non-probability convenient sampling technique. The demographic data and knowledge of self-breast examination on the prevention of cancer among women was collected by using the self-questionnaire checklist. The outcome result showed that 36(60%) of women had poor knowledge, 14(23.3%) of women had moderately adequate knowledge and 9(15%) women had adequate knowledge regarding self-breast examination.*

**Keywords:** *Cancer, Knowledge, Self-Breast Examination, Women.*

### **Introduction**

Breast cancer is a serious public health issue and the most frequent type of progressive cancer in women, contributing to high mortality rates around the world [1]. In 2018, approximately 1.2 million new cases were diagnosed, accounting for approximately 1 in 4 cases of cancer among women [2]. The highest incidence is in North America with 99.4 per 100,000 while the lowest incidence is in African countries [3]. The incidence of this cancer is increasing more rapidly in Asia and Africa than in North America and Europe [4]. According to the International Agency for

Cancer Research, approximately 10980 new cases of breast cancer in Iran have been identified that family history, delay in menopause, reproductive behaviours, and lifestyle-related factors such as obesity, smoking, physical activity decline, and exposure to radiation, stress, and anxiety have been reported to be characteristic of the disease incidence [5].

Breast cancer screening is one of the most effective strategies for lowering mortality by detecting, managing, and treating illness early, which improves patient survival and quality of life [6]. Screening methods used for early

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diagnosis of breast cancer include breast self-examination, clinical breast examination (CBE), and Mammography has been called the best method of early detection of breast cancer, which reduces the mortality rate by 15–25% [7]. The global burden of breast cancer is expected to cross 2 million by the year 2030, with growing proportions from developing countries [8]. A recent study found the overall incidence of breast cancer was 22.5 per 100,000 women [9]. However, women of reproductive age (15-49) are most vulnerable to developing breast cancer possessing an occurrence rate of 19.3 per 100,000 and the death rate was 21% in 2010 in Bangladesh [10].

The presence of a lump in the breast and bloody discharge from the nipple are two major symptoms of breast cancer [11]. It can be detected at an early stage using screening tests like breast self-examination (BSE), clinical breast examination (CBE), and mammography [12]. Risk factors for breast cancer include age, and the likelihood of developing cancer rises with age. According to the research, 30-year-old women are 10 times more likely to have breast cancer, and 40-year-old women are 40 times more likely to develop breast cancer than those who are 20 years old [13]. The genetic mutation of two genes called BRCA1 and BRCA2 influences the development of breast cancer in humans [14]. Recommended preventive techniques to reduce breast cancer mortality and morbidity include breast self-examination (BSE), clinical breast examination (CBE), and mammography [15]. CBE and mammography require hospital visits and specialized equipment and expertise whereas BSE, on the other hand, is a low-cost device that women themselves can use [16]. Women who self-examine their breasts gain two benefits: they gain familiarity with the feel and look of their breasts and can identify any changes in them as soon as practical [17]. Even though breast self-examination is a simple, quick, and cost-free procedure, the practice of breast self-examination is low and varies in

different countries [18]. Lack of time, lack of trust in their ability to perform the method correctly, fear of finding a lump, and regret related to breast manipulation were all listed as reasons for not performing self-breast examination [19].

Epidemiology of breast cancer of different population-based cancer registries (PBCRs) in India shows an increasing trend for incidence and mortality mainly due to urbanization, industrialization, population growth and increasing age [20]. In developing countries like India with ample burden of breast cancer, the most effective and efficient approach to tackle this issue is through early detection of breast cancer which could be achieved by promoting awareness about this malignancy. In addition, social and cultural barriers that hinder timely health-seeking need to be taken into account. For a realistic plan to reduce the burden of this lethal malignancy, there should be baseline data. A current study was carried out to identify a gap regarding knowledge of BSE among young females to promote early detection. Breast cancer presents most commonly as a painless breast lump and a smaller proportion with non-lump symptoms. For women to present early to the hospital they need to be "breast aware"; they must be able to recognize symptoms of breast cancer through the routine practice of practicable screening. At present, routine mammography cannot be recommended in developing countries due to financial constraints and the lack of accurate data on the burden of breast cancer in these countries<sup>[21]</sup>. The main of this study is to assess the level of knowledge regarding breast self-examination in the prevention of breast cancer among women.

## Methods and Materials

**Study Design:** The quantitative approach with descriptive research design was adopted for the current study to assess the level of knowledge regarding breast self-examination in the prevention of breast cancer among women.

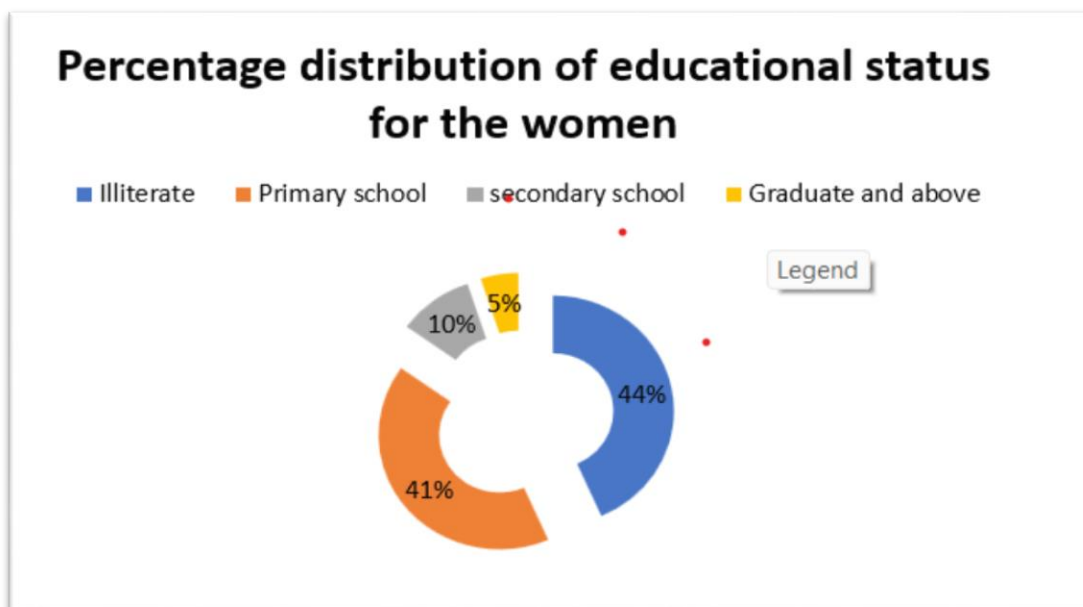
**Study Setting:** The study was conducted for 1 week from 13<sup>th</sup> May 2023 till May 19<sup>th</sup>.2023 the survey was undertaken by the women who were attending OPD at the urban health centre. **Ethical Approval:** After obtaining an ethical clearance from the institutional ethical committee (IEC) of Saveetha Institute of Medical and Technical Sciences and also formal permission from the medical officer of the urban health centre, the study was conducted. **Study Participants:** A total of 60 women attending OPD in selected centres (n=60) who met the inclusion criteria were recruited as study participants. The inclusion criteria for the study participants were women in the age group of 23-40 years, who can read and write Tamil and English, mothers who are willing to participate, and who were free from cancer. **Sampling Technique:** A total of 60 women were recruited based on the inclusion criteria using a non-probability convenient sampling technique. **Informed Consent:** The purpose of the study was explained clearly in depth to each of the study participants and written informed consent was obtained from

them. **Pre-Assessment:** The demographic data and knowledge of self-breast examination on the prevention of cancer were collected using a self-structured questionnaire. **Post-Assessment:** after that, the level of knowledge on self-breast examination was analysed using descriptive and inferential statistics.

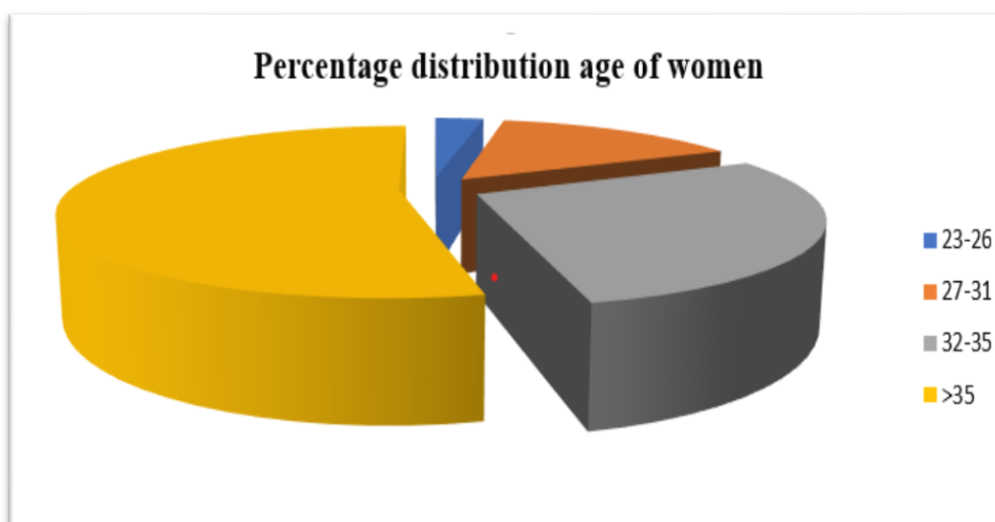
## Results and Discussion

### Description of the Demographic Variables for the Women in Urban Health Center

With regards to demographic and clinical characteristics as shown in fig 1 & fig 2, it shows that most of the women, 9(15%) were aged between 27-31years, 3(5%) were graduate and above, 53(88.3%) were working mothers, 24(40%) belongs to nuclear mother, 16(26.6%) had own business, 24(40%) had a family monthly income of 20000/- 30000/-, Work Experience from Industries were 17(28.3%), Own Business was 16(26.6%), Labour was 27(45%).



**Fig.1.** Percentage Distribution Age of Women Attending OPD for Assessing Knowledge on Breast Self-Examination



**Fig 2.** Percentage Distribution Age of Women Attending OPD for Assessing Knowledge on BSE

**Table 1.** Level of Knowledge Regarding Breast Self-Examination

| Level of knowledge | Frequency | Percentage | Mean & standard deviation    |
|--------------------|-----------|------------|------------------------------|
| Poor<60            | 36        | 60 %       | Mean = 10.87(51%), SD = 5.03 |
| Moderate 60 - 80   | 14        | 23.3%      |                              |
| adequate>80        | 10        | 16.6%      |                              |

### Assessment of Level of Knowledge for Breast Self Examination Assessment of Mean and Standard Deviation of Knowledge Score

Level of Knowledge Frequency Percentage poor 36(60%) Moderately 14 (23.3) % Adequate 10 (16.6%). Table 1 & fig 3 show that 60% of women had poor knowledge, 23.3% of women had moderately adequate knowledge and 16.6% of women had adequate knowledge regarding breast self-examination.

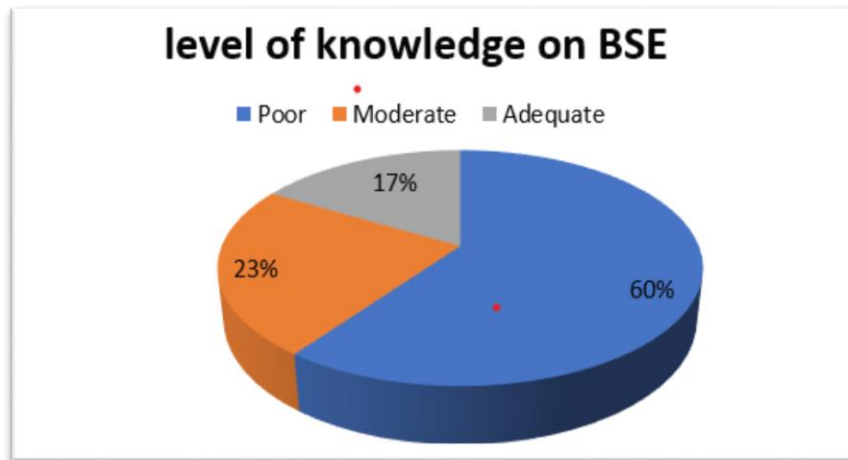
Present study findings supported by a cross-sectional study conducted by Pooja Prakash, et al., (2022) conducted a study to assess the knowledge of breast self-examination among female adolescents in Nepal among 120 female adolescents were participated in the study they were given with self-structured questionnaires. The study findings revealed that 67.5% of participants had knowledge about breast cancer and 40% had knowledge of breast self-

examination (breast self-examination). 94.2% had a poor knowledge of breast self-examination followed by 5.8% had a moderate level of knowledge of breast self-examination. The mean knowledge score was  $18.7 \pm 3.5$ . The study concluded that most (94.2%) of the participants had poor knowledge of breast self-examination [22].

The present study findings are supported by a cross-sectional study conducted by Abdurrahman Muhammad Sani, et al., (2016) a study explored the influence of educational level on knowledge and practice of BSE among women in Sokoto, Nigeria. A quantitative cross-sectional design was employed using a structured questionnaire. A sample of 400 participants was selected for the study using a multistage sampling technique among educated women in Sokoto. Statistical Package for Social Sciences used for data analysis. Chi-square was used to establish significant relationships. The results Findings showed that 75% (294/392) of

women had average knowledge of BSE, but only 34.4% (135/392) practised BSE regularly. Moreover, there was a significant relationship

between educational level and the knowledge and practice of BSE [23].



**Fig 3.** Level of Knowledge on Self-Breast Examination among Women Attending Urban Health Centre

The present study findings supported by Saran C, et al., (2020) conducted a study to assess the knowledge on breast self-examination among women in selected tertiary hospitals, in Kelambakkam, Tamil Nadu, India. The sample of the study was chosen by purposive sampling technique, which includes 256 women who are inpatients. The study findings revealed that 17.58% had inadequate knowledge, 56.64% as shown in Fig 3 had moderate knowledge and 25.78% had adequate knowledge. A majority of the women had a fair understanding of breast self-examination procedures [24].

The present study findings were also supported by Rachna R. (2021) conducted a study to assess the knowledge regarding breast self-examination among Nursing students. A descriptive strategy was utilized to purposefully choose 60 nursing students. To gather information, a self-administered questionnaire was used. The study involves 60 nursing students in all. The majority of nursing students 48.3% (29) had good knowledge regarding breast self-examination, 41.7% (25) had average knowledge, and 10% (6) had below-average knowledge. The study concluded that knowledge of breast self-examination was low even though the majority of them have good

attitudes [25].

The present study findings were also supported by Florence, A. (2016) conducted a study to assess the knowledge and practice of breast self-examination (BSE) amongst students in the Department of Nursing Science of a tertiary institution in Benin City, Edo State towards self-breast examination (SBE). A descriptive, cross-sectional study was conducted in the nursing department of a tertiary institution in Benin City, Edo state. The age range of the study population was between 17-31 years. A convenient sampling technique was used to select 200 female students results of this study indicated that the majority of the students were knowledgeable about the self-breast examination and the majority of them practiced self-breast examination [26].

### **Association of Level of Knowledge Regarding Breast Self Examination among Demographic Variables**

The demographic variable level of knowledge on breast self-examination among women with age above 30 years is a significant association between age, number of children, education and occupation (p-value<0.05) level respectively and the other demographic variables had not shown statistically significant

association with level of knowledge and skill regarding Breast self-examination among women.

The present study findings were also supported by Parvin Yavari (2007) et al, who conducted a study to identify the relationship between Iranian women's socioeconomic status and their knowledge and practice of BSE. Data were from a hospital-based case-control study among women diagnosed with breast cancer. Control subjects were matched to patients on age. 303 breast cancer patients and 303 control women were interviewed. Socioeconomic status and information including knowledge and practices of breast self-examination and clinical breast examination were recorded and compared. Results: The mean  $\pm$  SD age of cases and controls was  $48.2 \pm 9.8$  and  $50.2 \pm 11.1$  (range 24-84 years), respectively. The study revealed that there were significant relationships between education level and knowledge and practices of breast self-examination in both cases and controls, with an increase in usage being observed with the level of education [27].

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## Limitations

The study was collected for only one week. A larger sample size will improve generalization. It is exclusively done on women. Similar research with a larger sample size can be conducted. A longer time data collection can be conducted.

## Conclusion

The present study assessed the knowledge regarding breast self-examination in the prevention of breast cancer among women attending urban health care centres. The study concluded that the majority of the women had poor to moderately adequate knowledge and hence health education on breast self-examination can be given to the women in the hospital setting and the community area.

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## Conflict of Interest

Nil.

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Nil.

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