



## AWARENESS OF BREAST CANCER AMONG SOUTH INDIAN WOMEN: A SURVEY

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### ABSTRACT

**Aim:**-To create an awareness on breast cancer among South Indian women.

**Objective:**-The objective of this study is to test the efficacy of women with the knowledge, skills, confidence and motivation to detect symptoms and seek help promptly, with the aim of promoting early presentation with breast cancer symptoms.

**Background:**-Breast cancer is one of the most common cancers among females worldwide. Global statistics show the annual incidence of breast cancer is increasing and this is occurring more rapidly in countries with a low incidence rate of breast cancer. It has been reported that each year over 1.15 million women worldwide are diagnosed with breast cancer and 502,000 die from the disease. Early detection of breast cancer plays the leading role in reducing mortality rates and improving the patients prognosis.

**Method:**The survey was carried out by preparing a set of questionnaires. These questionnaires were circulated among women to determine their awareness about breast cancer. The sample size for this survey was 200, which includes various age group. Data collected was then analysed statistically with the help of SPSS online software.

**Result:**Awareness for breast cancer is very much necessary among women. Our present study came out with a result of 81.9% awareness among South Indian women population. Media is interpreted to be a boon for creating awareness of 88% among the population. 37.2% of the subjects believe that formation of any lumps or thickening in one or both the breast is the major symptoms for breast cancer. Almost half of the subjects (56.1%) were not aware that overweight or obesity can cause the risk for breast cancer and also not aware that non cancerous breast lumps/cyst or fibrocystic breast cancer disease can also increase the risk for breast cancer (51.3%). 27.6% of the population believe that all the breast cyst or lumps to be cancerous. But our study shows 30.8% were not aware about the screening programs, while those who were aware (69.2%), reported that Mammography (38.3%) followed by BSP (Breast screening program) (22.2%), BSE (Breast self examination) (18.6%). 32.5% and 29.3% were aware only about surgery and chemotherapy procedures.

**Conclusion:** Our study found high awareness of breast cancer among South Indian women. The subjects had a moderate level of knowledge about breast cancer risk factors and signs and symptoms. Our study also shows media plays a vital role in educating the people about breast cancer. BSE practices were very less among the population. To spread on more awareness about the risk factors, symptoms and BSE, campaigns can be launched.

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## INTRODUCTION

According to WHO estimates for year of 2011, Cancer now cause more deaths than all coronary heart disease or all stroke (1). Breast cancer is the 2<sup>nd</sup> leading cause of cancer deaths in women and poses a global public health concern (2). The amount to a total 4,11,000 deaths from breast cancer accounting for 14% of female cancer death worldwide (3,4).

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Socio economic status along with its primary component including education and income employment status become obvious correlates of cancer mortality disparities (5-7).

Contributing factors to breast cancer mortality rate include

1. Inadequate awareness and knowledge of disease
2. Inadequate access to prompt treatment.
3. Genetic and poverty. (8)

Lack of knowledge about breast cancer is found to be very important factor in preventing women visiting screening facilities, engaging in BSE and delayed treatment (3,9,10).

Early detection rates through breast self-examination (BSE) plays an important role in decreasing the morbidity and mortality rates in addition to several other factories(11).

It has been recognized that some human breast cancers are hormone-dependent. Estrogen regulates the differentiation and proliferation of breast epithelial cells and interacts with the estrogen receptor (ER) in the nucleus. Prolonged exposure of estrogen is an important risk factor for cancer. Progesterone receptor (PR) expression in normal breast epithelium is regulated by ER(12). Presence of ER, PR and human epidermal growth factor receptor-2 (HER-2) status in invasive breast carcinoma is now-a-days routinely estimated as these markers are considered to be important prognostic factors(13). The role of high penetrant genes like BRCA1, BRCA2, PTEN etc. also take part to form etiology of breast cancer. However, the role of low penetrant gene variations are much investigated(14). Evading the immune destruction is one of the eight hallmarks of cancer (15). Interleukin-10 (IL-10) is a cy- tokine known for its immune suppression. Normally T cells, B cells, dendritic cells and monocytes/macro-phages express IL-10 during in ammation (16). IL-10 is abundantly produced by tumor associated macro- phages (TAMs) which form a major component of tumor tissue (17). Hence, it is hypothesized that IL-10 might facilitate tumor cells escape immune surveillance.

India is going through epidemiologic transition. It is reported that the incidence of breast cancer is rising rapidly in India as a result of changes in reproductive risk factors, dietary habits and increasing life expectancy(18). Barriers such as 'low cancer awareness', also referred to as 'awareness deficit' or scarcity of awareness' among women, the presence of stigma, fear, gender inequity and reduced engagement in screening behaviours, such as breast self-examinations, contribute to high mortality rates (19). With the rising breast cancer incidence in India and disproportionately higher mortality, it is essential to understand the level of cancer literacy. Therefore we conducted this survey to evaluate breast cancer awareness among South Indian Women, which include age, family history, personal history, screening program and treatment procedures.

## METHODS

The survey was carried out by preparing a set of questionnaires. These questionnaires were circulated among women to determine their awareness about breast cancer. The sample size for this survey was 200, which includes various age group. Data collected was then analysed statistically with the help of SPSS online software. Before starting the survey, official permission were taken from the institution and also from subjects.

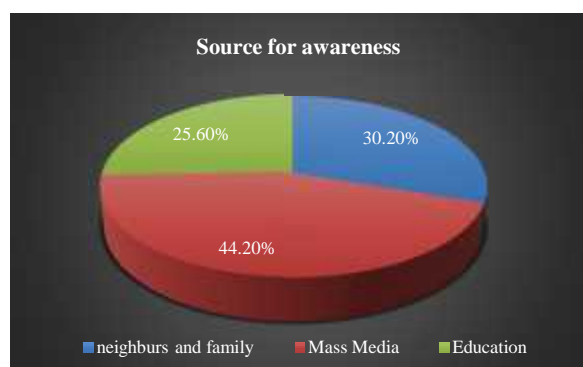
Following are the set of questionnaires prepared:

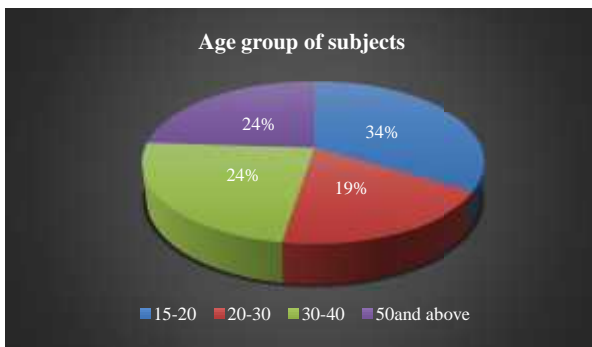
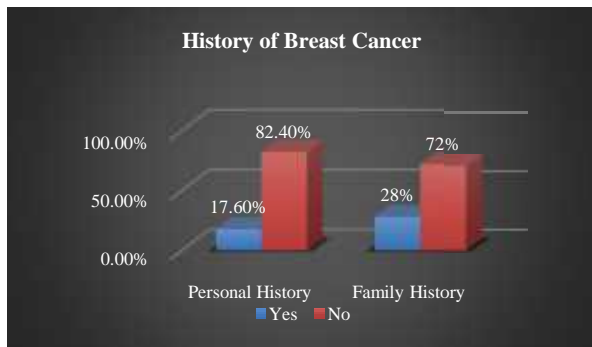
1. Are you aware about Breast cancer?
2. If yes, How?
3. Which age group do you belong to?
4. Do you have any History of breast cancer?
5. Any family history of breast cancer?
6. Which of the following symptoms are more likely to occur breast cancer?
7. If you find a lump in your breast will you hesitate to consider a doctor?

8. Are you aware about the screening programs available for breast cancer?
9. If yes what are the screening programme you are aware?
10. Are you aware that overweight increases the risk of developing breast cancer?
11. Non cancerous breast lumps/cyst (fibrocystic Breast disease) also increases risk of breast cancer?
12. Is all breast lumps/cyst cancerous?
13. Are you aware that examination for BSE (Breast self examination) includes lumps
14. How often you check any lumps in your breast?
15. Are you aware about treatment procedures available for breast cancer?
16. If yes, what type of treatment you are aware?
17. Do you think breast cancer is fully curable?
18. Are you aware about Angelina Jolie who removed her breast as a prevention of breast cancer?
19. Do you think removing of breast will completely cure breast cancer?

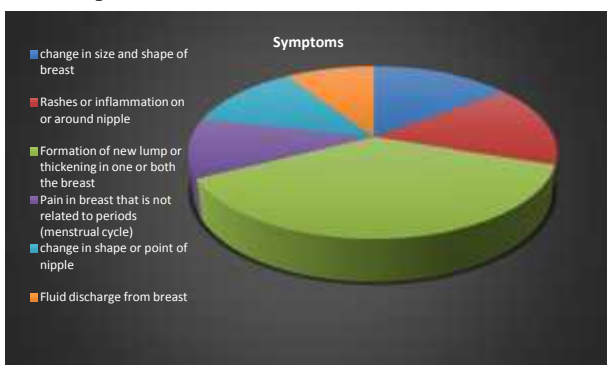
## RESULT ANDDISCUSSION

Breast cancer is the 2<sup>nd</sup> leading cause of cancer deaths in women and poses a global public health concern(2). Awareness for breast cancer is very much necessary among women. Our present study came out with a result of 81.9% awareness among South Indian women population. While 18.1% of the population were not aware. Media plays important role in the each and every persons life. Media can be either a boon or a curse. In our study media is interpreted to be a boon for creating awareness of 88% among the population.51% of the population were well educated to be aware of the breast cancer.Majority of the study population belongs to 15-20 age(33.5%)and then are those who were above the age of50 (24%) followed by 30-40 ( 23.5%) and 20-30 (19%). Among the 200 subjects 17.6%informed that they had personal history of breast cancer, while28% informed about the presence of family history in breast cancer.





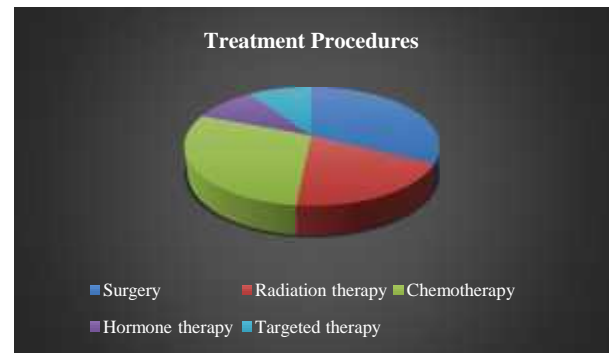
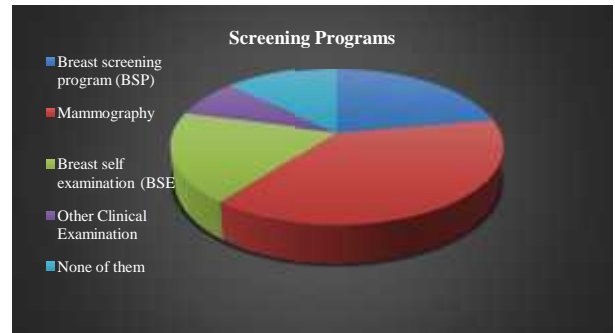
37.2% of the subjects believe that formation of any lumps or thickening in one or both the breast is the major symptoms for breast cancer. And 15.3% of the population believe that even rashes or inflammation around nipple can also be a symptom, Change in size and shape of breast and change in shape or point of nipple is also interpreted to be a symptom by 14.8% and 12.2% respectively. Almost half of the subjects (56.1%) were not aware that overweight or obesity can cause the risk for breast cancer and also not aware that non cancerous breast lumps/cyst or fibrocystic breast cancer disease can also increase the risk for breast cancer (51.3%). 27.6% of the population believe that all the breast cyst or lumps to be cancerous.



India has launched many screening programs for breast cancers. But our study shows 30.8% were not aware about the screening programs, while those who were aware (69.2%), reported that Mammography (38.3%) followed by BSP (Breast screening program) (22.2%), BSE (Breast self examination) (18.6%). Whereas 48% of the subjects were not aware that BSE examination also includes examination of lumps under arms.

Despite tremendous change in medical industry and treatment procedures, 32.5% and 29.3% were aware only about surgery and chemotherapy procedures. Radiation therapy had influenced 19.1% of the population. Whereas hormone

therapy and targeted therapy had very less influence among 9.6% of the subjects.



When the subjects were put forward with the question whether breast cancer is completely curable or not, 49.5% had no clear idea about it and 41.9% reported breast cancer is completely curable. A very few of them believe that breast cancer is fatal and can't be treated (8.6%). But 53.1% believe that removing the breast will be best procedure to completely cure the breast cancer. To make our study more interesting we added a fact about Angelia Jolie and removal of her breast as a preventive measure from breast cancer, 49.7% were not aware about this fact.

Even though there is 81.9% of awareness for breast cancer, there are few people reported that they are reluctant to visit gynaecologist if they come across any lumps in their breast (21.1%). And 47.7% of population reported frequency for BSE is never addressed. 22.3% reported that once in a year they assess BSE. Only 17.3% of the population check for BSE frequently once in a month. To address this issue we created a campaign by giving counselling to all the subjects with the help of professionals.

**CONCLUSION**

Our study found high awareness of breast cancer among South Indian women. The subjects had a moderate level of knowledge about breast cancer risk factors and signs and symptoms. Our study also shows media plays a vital role in educating the people about breast cancer. BSE practices were very less among the population. To spread more awareness about the risk factors, symptoms and BSE, campaigns can be launched.

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