

Breast Cancer- A Survey among Female Population in Chennai

M.Shalini¹ Dr.M.P.Brundha².MD.,DNB path

¹Student, Second Year BDS, ²Professor,

¹Saveetha dental college and hospitals ,162, Poonamalle High Road, Velappanchavadi, Chennai,Tamil Nadu

Abstract

Background:

Breast cancer is the most common invasive cancer in females globally. It accounts for 20-30% of all the cancers in the world. The treatment of the advanced stages is often futile making early diagnosis a prime concern in the medical field. Lack of awareness and screening programs makes the uneducated individuals oblivious to the disastrous disease. The purpose of this study is to analyse the percentage of people aware of breast cancer of a particular colony.

Aim: To determine the awareness of breast cancer among the general population.

Setting and design: A community based cross sectional study was conducted in a colony in Chennai.

Materials and methods: A pre-structured questionnaire was used to collect information regarding breast cancer.

Conclusion: A total of 60 participants were included in the study. They were divided into 3 age groups 20-30, 30-50, 50-70. A mean of 40.33 individuals were aware of breast cancer. It showed that graduates were more aware of breast cancer as a disease than homemakers. Our study showed a general lack of knowledge about breast cancer. We should keep in mind to focus more on eliminating the misconceptions about breast cancer in individuals by conducting awareness campaigns.

Key words- invasive, breast cancer, awareness, screening programs

INTRODUCTION

Breast cancer awareness is an effort to raise awareness among people to reduce the stigma of breast cancer by organising 'awareness campaigns' through education on the signs and symptoms of the disease. Volunteers believe that greater knowledge leads to earlier detection and helps the society to be socially aware about breast cancer. Breast cancer culture is also called the pink ribbon culture which is a social movement which supports it. The pink ribbon is a symbol of breast cancer awareness. The month of October is considered to be the national breast cancer awareness month. They receive financial supports from corporate sponsorship and individuals who are willing to raise funds for the cause.

Breast self-examination makes women more "breast aware", which in turn may lead to an earlier diagnosis of breast cancer. (1) Although breast cancer usually develops after the age of 45, the age of onset is decreasing, and more young women than ever are affected. (2) Young women's cancers are generally more aggressive and result in lower survival rates, making early detection even more important. (3) Data from national and regional cancer centers from 1984 to 2002 show that there is an increase in the incidence of breast cancer and found to be gradually overtaking cancer of the cervix. (4)

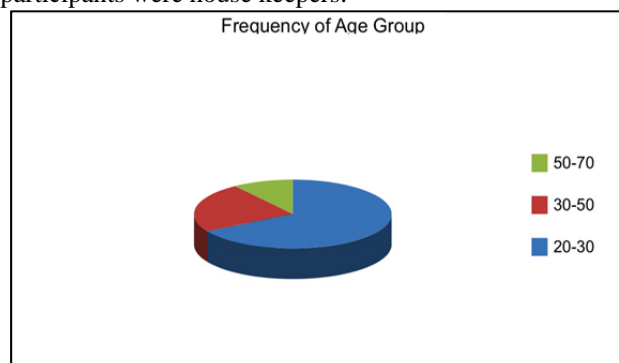
After the breast cancer awareness movement a lot of marketing companies are involved in 'pink washing' which is associated with the use of the pink ribbon symbol in their products to show their support for the breast cancer charities as a marketing technique.

MATERIALS AND METHODS

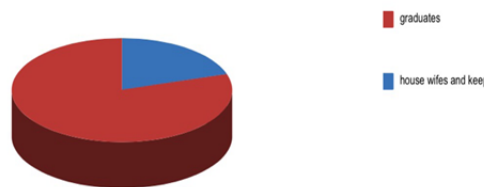
A cross-sectional community based survey was conducted in Shanmuganarsalai, Shakthi nagar, in choolaimeadu area. The study area contained many undergraduates students in various fields, illiterate and unemployed individuals and house wives. However the study participants included graduates and house wives and they were divided into three age groups 20-30 years, 30-50 years and 50-70 years. The prestructured questionnaire was given to each individual and asked to fill.

RESULTS

A total of 60 people participated in this study. 66.7% (n=40) of people were aged 20-30 years, 23.3% (n=14) of people were aged 30-50 years and 10% (n=6) of people were aged 50-70 years out of which 80% (n=48) of the participants were graduates and 20% (n=12) of the participants were house keepers.



Frequency of educational status



Knowledge about the causes and risk factors of breast cancer

38.3% (n=23) of the participants have told that it causes through improper breast feeding, 13.3% (n=8) of the people told that's it is caused by wearing tight clothes, 18.3% (n=11) people have suggested that it is caused by genetic reasons, 8.3% (n=5) have told that it is caused by nulliparity, 15% (n=9) of participants have answered that family history is a cause, 10% (n=6) of the people have suggested that prolonged hormonal treatment is a cause, 100% (n=60) of participants have told that radiation exposure is the main cause, 8.3% (n=5) of people have answered that high fat and low fiber diet can be a potential cause and 5% (n=3) have told that obesity is a cause.

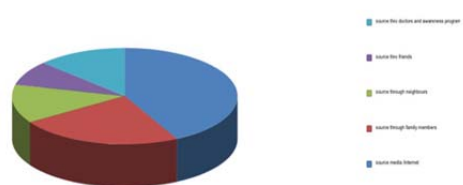
Heard of breast cancer

Out of the 60 participants all of them have heard of breast cancer.

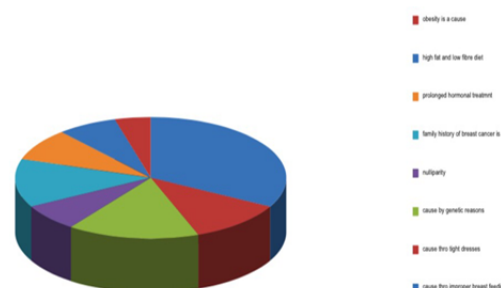
Source of information

Out of the 60 people who have participated in the study, 61.7% (n=37) of people have heard of it through media/internet, 33.3% (n=20) of them have heard of it through family members, 18.3% (n=11) of them through neighbours, 11.7% (n=7) of them through friends and 18.3% (n=11) through doctors and awareness programmes.

Source of Knowledge

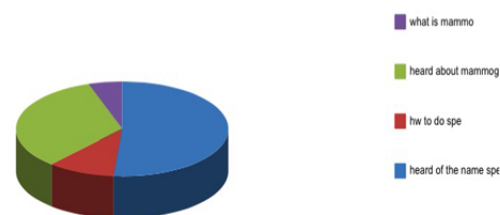


Awareness about the risk factors



Awareness about the screening methods

Awareness about screening methods



Severity of the disease

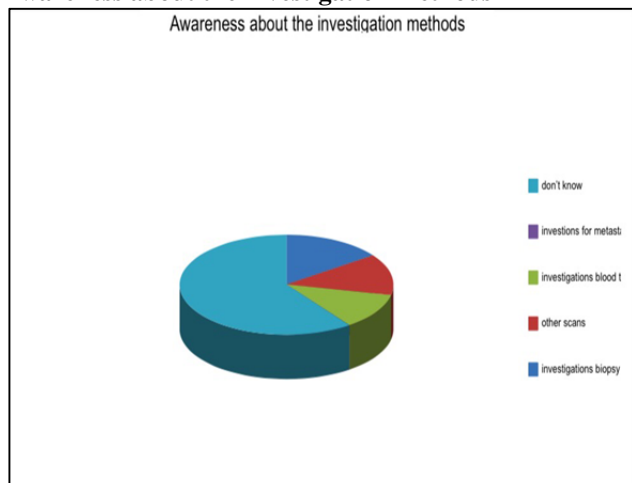
Only 65% (n=39) are aware that it can cause death and 23.3% (n=14) have answered that it does not cause death and 11.6% (n=7) are not sure if it causes death.

Knowledge about common age groups affected

Out of the 60 members 48.3% (n=29) have selected 20-40 years, 33.3% (n=20) have selected 40-55 years, 6.7% (n=4) have chosen more than fifty years, 8.3% (n=5) have chosen more than twenty years and 3.3% (n=2) are not aware of the age groups affected.

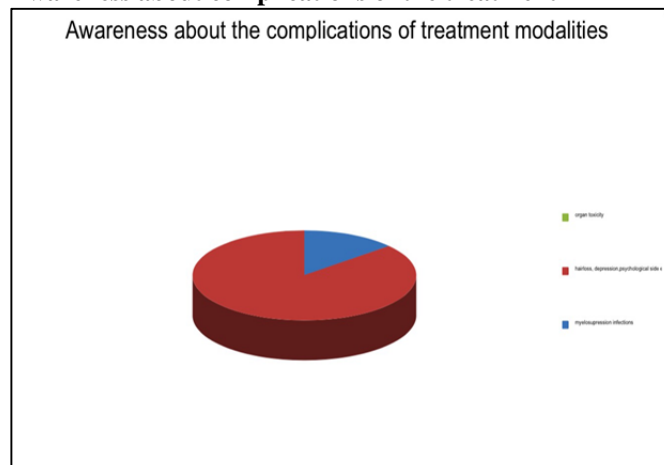
Out of the 60 participants 33.3% (n=20) of them have heard about the screening and preventive methods and 6.7% (n=4) of them are aware of how to do the screening methods and 21.3% (n=13) have heard of the term 'Mammogram' and 5.1% (n=2) are aware of what a mammogram is and its use.

Awareness about the investigation methods



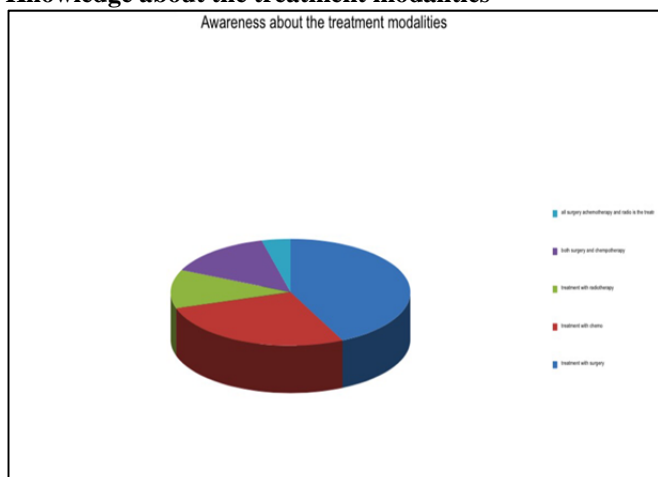
Only 15% (n=9) out of the 60 members are aware of biopsy as an investigation method, 13.3% (n=8) have opted for 'other scans' as a choice, 11.7% (n=7) have answered that blood test can be taken and 100% (n=60) have told that there are other investigation methods for metastasis.

Awareness about complications of the treatment



Out of the 60 participants 5% (n=3) have told that patients might suffer from myelosuppression and 31.7% (n=19) may suffer from hairloss, depression and psychological side effects and 100% (n=60) have answered that it's toxic to organs.

Knowledge about the treatment modalities



55% (n=33) of the participants have told that breast cancer can be treated by surgery, 35% (n=21) of them have answered that chemotherapy is the most commonly performed treatment, 15% (n=9) of them have suggested that radiation therapy is performed, 18.3% (n=11) have answered that both surgery and treatment is used to treat the disease and 5% (n=3) have suggested that all the three (I.e) surgery, chemotherapy and radiation therapy is used to treat breast cancer.

Knowledge about spread of breast cancer

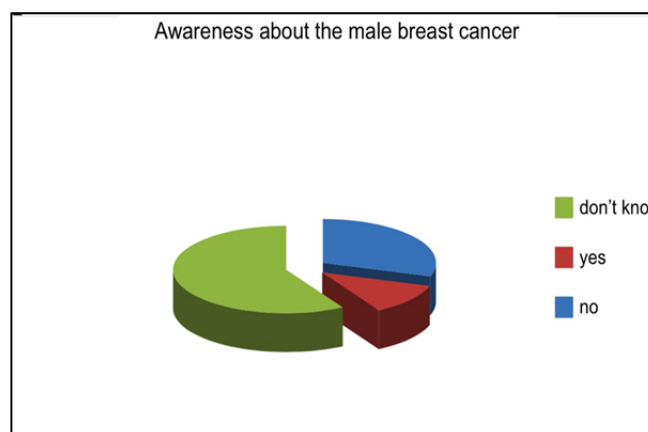
Out of the 60 participants, 5% (n=3) of them have answered that it can spread to the lymph nodes, 5% (n=3) of the participants have suggested that it may spread to the bones, 3.3% (n=3) of them have told that it may spread to the brain, 16.7% (n=10) of them have answered that it can spread to any part of the body, 8.3% (n=5) have told that it may spread to uterus and ovaries and 1.7% (n=1) of the participants have told that it may spread to the liver.

Main cause of delay is diagnosis and treatment

41.7% (n=25) of the participants have answered that hesitation can be a reason for delay in diagnosis and treatment, 31.7% (n=19) of them have told that patients may be afraid of neighbors, the cost of treatment and 58.3% (n=35) of them have answered that delay may be because of unawareness and carelessness of the patients.

Knowledge of the affected males

Out of the 60 participants 11.7% (n=7) of them are aware that males are affected by this disease and 88.3% (n=53) of them are not aware of the males affected by breast cancer.



DISCUSSION

From the above statistical data a mean of 40.33 individuals are aware of breast cancer and the calculated p value for this study is ($p > 0.1$) and is statistically insignificant. Breast cancer is the most invasive cancer of all the cancers in females globally. Breast cancer accounts for 16% of all the cancers occurring in women and 22.9% of the invasive cancers globally (5). 18.2% of all the cancer caused deaths in both males and females are due to breast cancer.

The mature breast is mainly made up of connective tissue, fat and lobules which produces milk. In a normal tissue, there are millions of cells which multiply and divide in an orderly fashion and the old cells undergo apoptosis (programmed cell death) after they finish their cell cycle and are replaced with new cells. In a cancerous tissue cells proliferate excessively and evade apoptosis. They become self sufficient to growth signals and eventually become insensitive to growth inhibitors.

Ductal carcinoma in situ is a condition which accounts for about 83% of all the in situ cases where the normal epithelial cells are replaced by abnormal cells and the ducts may enlarge greatly. This condition may or may not progress to form invasive cancer. The incidence of lobular carcinoma in situ is much less about 13% compared to ductal carcinoma in situ. It is not a precursor of invasive cancer but a marker for it.

The signs and symptoms of breast cancer include redness of skin over the area of the breast or the nipple, discharge of the fluid from the nipple, a small pea sized lump on the underarm, change in the size, shape and contour of the breast, a dimpled, puckered or scaly appearance of the skin of the breast or the nipple. (6)

There are a lot of risk factors associated with breast cancer but the best documented ones include the age of the individual and its incidence is very low before the age of 30 and increases until the age of 80 (high incidence up to the menopausal age). Unlike the association of cigarette smoking and lung cancer, researchers haven't found any association of breast cancer with lifestyle and environmental factors. Alcohol consumption may increase the risk of breast cancer but one drink per day (12g approximately) may not significantly affect the risk of breast cancer. Heavier doses of consumption increase the risk of the disease. (7) Premenopausal women BMI does not play a significant role as it does in the post menopausal women. High BMI in post menopausal women contributes to the risk of acquiring the disease. (8,9) Adipose tissue is an important source of estrogens in post menopausal women, exposure to these estrogens may increase both the initiation and promotion of breast cancer. In 1995, almost 40% of the women in the United States have used hormone replacement therapy to control menopausal symptoms and to prevent osteoporosis. (10) The effects of hormone replacement therapy apply to the risk of occurrence of breast cancer. The breast cancer risk increases in women receiving radiation therapy on the chest for treatment of Hodgkin's lymphoma. (11) The carcinogenic effects of radiation exposure is evident from studies from atomic bomb survivors. (12)

Breast cancer in men is very rare and accounts to about 1% of the total population in the United States. (13) Gynecomastia is the most common disorder occurring in males. It appears as a small button like growth under the nipple and areola which can be seen and felt. This occurs mainly because of the imbalance of hormones during adolescence. This condition can also develop because of some endocrine disorder which may produce more estrogen, the female hormone. (14) Obesity can also contribute to increased levels of estrogen in men. Ductal

carcinoma in situ, paget's disease of the nipple, inflammatory breast disease, infiltrating lobular carcinoma and infiltrating ductal carcinoma are the types of breast cancer in men.

There are many treatment options available according to the stage, type and histology of the cancer.

Cancer stage and type	Primary treatment
Stage 0 –lobular carcinoma in situ	No treatment, prophylaxis with tamoxifen
Stage 0 – ductal carcinoma in situ	Mastectomy and radiation therapy
Stage I and II – early stage invasive	Breast conserving surgery and radiation therapy
Stage III – locally advanced, non inflammatory	Induction chemotherapy, breast conserving surgery, radiation therapy
Stage III- locally advanced, inflammatory	Induction chemotherapy, mastectomy, radiation therapy
Stage IV – metastatic, initial or recurrent	Radiation therapy or bisphosphonates to be given for bone pain
Recurrent- local after breast conserving surgery	Mastectomy
Recurrent- local after mastectomy	Wide excision
Recurrent – local inoperable	Induction chemotherapy

CONCLUSION

Our results showed a mean of 40.33 of individuals living in choolaimedu were aware of breast cancer. This shows a general lack of knowledge of breast cancer. There is a necessity to bring into focus the need for developing breast cancer education and prevention campaigns to remove the misconceptions about the disease and its ignorance. This ignorance may be due to the lack of education of these individuals. In this study a lot of men weren't aware that breast cancer may affect their gender and also many individuals thought that a mammogram may induce a breast cancer to spread. These myths must be eliminated from the people's mind. This ignorance can be overcome by conducting community based awareness campaigns, advertising in different media, going to schools and educating them and by creating 'breast cancer awareness movement'. The online social media can be an effective way to disseminate the facts and figures of breast cancer.

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