CHAPTER- 1

INTRODUCTION

1.1 BREAST CANCER

Breast cancer is the most common cancer in women worldwide, comprising 16% of all female cancers. Breast cancer originates from breast tissue, most commonly from the inner lining of milk ducts or the lobules that supply the ducts with milk. Cancers originating from ducts are known as ductal carcinomas; those originating from lobules are known as lobular carcinomas

When cells become differentiated, they take different shapes and forms to function as part of an organ. Cancerous cells lose that differentiation. Cells that normally line up in an orderly way to make up the milk ducts become disorganized. Cell division becomes uncontrolled. Cell nuclei become less uniform. Pathologists describe cells as, well differentiated (low grade), moderately differentiated (intermediate grade), and poorly differentiated (high grade). Poorly-differentiated cancers have a worse prognosis (Bloom-Richardson grade). Cancer stage

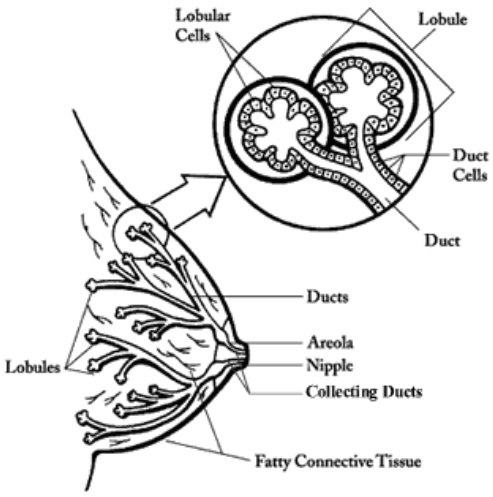


Fig. 1.1 Structure of Breast

is based on the size of the tumor, whether the cancer is invasive or non-invasive, whether lymph nodes are involved, and whether the cancer has spread beyond the breast. There are different stages of cancer :

Stage 0 : It is a non-invasive breast cancers stage, there is no evidence of cancer cells or non-cancerous abnormal cells breaking out of the part of the breast in which they started, or of getting through to or invading neighboring normal tissue.

Stage I : invasive breast cancer (cancer cells are breaking through to or invading neighboring normal tissue) in which:

- the tumor measures up to 2 centimeters
- no lymph nodes are involved

Stage II : invasive breast cancer, where tumor varies in size from 0 cm up to 5 cms in size

Stage III : invasive breast cancer where there may be no sign of cancer in the breast or, if there is a tumor, it may be any size and may have spread to the chest wall and/or the skin of the breast.

Stage IV : This stage is also invasive breast cancer stage in which the cancer has spread to other organs of the body usually the lungs, liver, bone, or brain.

The first noticeable symptom of breast cancer is typically a lump that feels different from the rest of the breast tissue. More than 80% of breast cancer cases are discovered when the woman feels a lump. By the time a breast lump is noticeable, it has probably been growing for years. The earliest breast cancers are detected by a mammograms. Indications of breast cancer other than a lump may include changes in breast size or shape, skin dimpling, nipple inversion, or spontaneous single-nipple discharge. These symptoms can be identified if a women performs breast self examination (BSE) every month, BSE is an early detection technique which should be started as early as possible from the age of 15 years as by then females starts developing breast. However, the practice of BSE has been seen to empower women, taking responsibility for their own health. Therefore, BSE is recommend for raising awareness among women at risk. Early detection in order to improve breast cancer outcome and survival remains the cornerstone of breast cancer control (Anderson et al., 2008). Following are the steps for BSE :

Step 1: After a bath, step in front of a large mirror and put your hands on your hips. Look at the size, shape, and color of your breasts. They should look as they normally do with no visible dimples, puckering, or swelling.

Step 2: Raise your arms above your head and clasp your hands together. Examine your breasts as you did in step one and look for dimples, puckering, swelling, rashes, or inverted nipples.

Step 3: Place your arms at your side and gently squeeze each nipple between finger and thumb to check for any discharge.

Step 4: Next, lie down, and use your right hand to feel your left breast and then your left hand to feel your right breast. Taking three fingers, firmly press the breast in small circles from top to bottom and side to side. Make sure to go as far as the collarbone to the top of the abdomen and from cleavage to armpit. Do this three times, first with a soft touch, then with increased pressure, and on the very last time press firmly and deeply

Step 5: Finally, either sitting in a chair or standing, feel your breasts as you did in step four.

The primary risk factors that have been identified are a family history of breast cancer, sex, age, lack of childbearing or breastfeeding and higher hormone levels. In a study published on breast cancers in 1995, by ICMR well-established risk factors accounted for 47% of cases while only 5% were attributable to hereditary syndromes. As far as treatment of breast cancer is concerned it involves surgery, followed by chemotherapy and radiotherapy. Surgery includes mastectomy which can be partial or complete removal of breast depends on the severity of the condition and lumpectomy which refers to the removal of breast lump.

1.2 BACKGROUND

Breast Cancer occurs in both men and women, although male breast cancer is rare and it accounts only 1 % of all diagnosed breast cancers. Cancer of the breast is the most common cancer among women in many regions of our country and has overtaken cervix cancer, which was the most frequent cancer a decade ago (*Murthy et al; 2009*). Of the 10 million new cancer cases seen each year worldwide, 4.7 million are in the more developed countries and nearly 5.5 million are in the less developed countries. Although the disease has often been regarded principally as a problem of the developed world, more than half of all cancers occur in the developing countries. In developed countries, cancer is the second most common cause of death, and epidemiological evidence points to the emergence of a similar trend in developing countries. A relatively large proportion of breast cancers in India occur in younger women which reflects not only a younger age structure of the Indian population but also the observation of lower risk in

post-menopausal women as compared to that in western women(*Dinshaw et al; 2001*). The number of cases worldwide has significantly increased since the 1970s, a phenomenon partly attributed to the modern lifestyles. As developing countries grow and adopt Western culture they also accumulate more disease that has arisen from Western culture and its habits (fat/alcohol intake, smoking, exposure to oral contraceptives, the changing patterns of childbearing and breastfeeding, low parity). When doctors started to understand the human circulatory system in the seventieth century, they also managed to establish a link between breast cancer and the lymph nodes in the armpits. Between the seventeen and eighteen hundreds, the French surgeon Jean Petit and Scotsman Benjamin Bell were the first ones to remove the lymph nodes, breast tissue and chest muscle in an effort to save woman from breast cancer. By the 1880s, William Halsted started performing mastectomies. His procedure became known as the Halsted Radical Mastectomy and it remained a popular procedure in the fight against breast cancer right up to the 1970s. In the 1970's the movement to increase breast cancer awareness began to grow rapidly. More and more non-profit organizations, governmental organizations and other organizations have been formed in order to increase knowledge and awareness of this disease, but also to sponsor research to aid in its eradication. While breast cancer survival rates have gone up somewhat in the last twenty years, the fact remains that this disease is still far too prevalent and killing too many women.

1.3 RATIONALE FOR THE STUDY

Breast cancer rate is rising rapidly all over the world, However, in developed countries prevalence of breast cancer is already high. Main concern is developing countries of southern Asia, like India where its rate is mounting day by day. The need of the study is to identify the level of awareness of breast cancer among females of reproductive age group i.e., 15 to 49 years of age. This age group is mainly taken because if they are aware of the disease and its consequences, its spread can be prevented and it can be managed at an early stage. As if they are familiar to the disease & its symptoms and know how to do self examination i.e. BSE, they can consult a doctor early and the progress of the disease can be prevented.

1.4 BENEFITS OF THE STUDY

This study helps understand the breast cancer awareness in females in India. As well as this study also brings about the awareness of breast cancer among females of reproductive age (15 to 49 yrs) group who belongs to all educational groups from illiterate to literate, working women to housewives, and unmarried women to married women. This is the age group who should have proper knowledge of breast cancer and breast self examination so that they can self examine it and detect it at an early stage.

1.5 OBJECTIVES OF THE STUDY

Following were the objectives to fulfill the purpose of the study :

1. To assess the knowledge of Breast cancer among females of reproductive age group (15 to 49 yrs of age)
2. To assess the knowledge of correct methods of Breast Self Examination (BSE) as a early detection technique.
3. To know various myths & misconceptions related to breast cancer among females
4. To assess the awareness of various risk-factors related to breast cancer.

1.6 LITERATURE SURVEY

The incidence of breast cancer in India is on the rise and India accounts for nearly six percent of deaths due to breast cancer globally. The seriousness of the situation is apparent after going through a report from Indian Council of Medical Research (ICMR, April 2009).

The rise is being documented mainly in the metros, but it can be safely said that many cases in rural areas go unnoticed due to lack of awareness about breast cancer among the females as well as males. A on breast cancer risk in India revealed that 1 in 28 women develop breast cancer during her lifetime. This is higher in urban areas being 1 in 22 in a lifetime compared to rural areas where this risk is relatively much lower being 1 in 60 women developing breast cancer in their lifetime. (*Dinshaw et al; 2001*). In India the average age of the high risk group is 43-46 years unlike in the west where women aged 53-57 years are more prone to breast cancer. Breast cancer is rapidly overtaking the number of cervical cancer cases among Indian women. There

will be approximately 250,000 new cases of breast cancer in India by 2015, says a study by the International Agency for Research on Cancer (IARC). According to the Indian journal of cancer, more than a million new patients suffer from breast cancer annually in the world. In India, the incidence of breast cancer has steadily increased over the years and as many as 100,000 new patients are being detected every year.

In many developed countries, smaller families, delayed childbearing and reduced breast-feeding has driven the increase in breast cancer. The same trend is now seen in India. It is estimated that 519 000 women died in 2004 due to breast cancer, and although breast cancer is thought to be a disease of the developed world, a majority (69%) of all breast cancer deaths occurs in developing countries (WHO Global Burden of Disease, 2004). Breast cancer survival rates vary greatly worldwide, ranging from 80% or over in North America, Sweden and Japan to around 60% in middle-income countries and below 40% in low-income countries (Coleman et al., 2008). The low survival rates in less developed countries can be explained mainly by the lack of early detection programmes, resulting in a high proportion of women presenting with late-stage disease, as well as by the lack of adequate diagnosis and treatment facilities. Some of the causes that have been collectively associated with breast cancer are:

- The chances of breast cancer depends on age, as the person gets older the chances of it are more.
- Personal history of breast cancer: A woman who had breast cancer in one breast has an increased risk of getting cancer in her other breast.
- Family history of close relative like mother, sister and daughter who has been diagnosed with breast cancer increases the risk factor. The risk is even higher if her family member got breast cancer before age 40. Having other relatives with breast cancer (in either her mother's or father's family) may also increase a woman's risk of developing breast cancer.
- Early start onset of menses and early menopause are also associated with breast cancer.
- Exposure to radioactive rays or harmful chemicals (like working in a chemical factory that uses harmful chemicals like Organochlorines) which are carcinogenic can increase the chances of breast cancer.
- Certain breast changes: Some women have cells in the breast that look abnormal under a microscope. Having certain types of abnormal cells increases the risk of breast cancer.

- Race: Breast cancer is diagnosed more often fair women than in dark complexion females.
- Late childbearing or having first child at the age of 30 years or more.

A National Cancer Institute (NCI) study of 72,000 women found that those who had a normal body mass index at age 20 and gained weight as they aged, had nearly double the risk of developing breast cancer after menopause in comparison to women maintained their weight.

According to a study on Assessment of burden of non- communicable diseases, Cancer results in 113,696 deaths in the year 1998, and incidence rate of 83.16 per 100,000 deaths. Breast cancer causes highest number (21,570) of deaths in females than other cancers. Cervix uteri is the second highest killer of females which results in 13,395 deaths.

Table 1.1 Burden of cancer in India in 1998 (Females)

Cancer sites	Incidence per 100,000	No. of deaths	YLL per 100,000	DALY per 100,000
Mouth and Oropharynx	5.1	6,223	15.5	30.6
Cervix uteri	15.4	13,395	36	81
Breast	20.8	21,570	61.3	167
Ovary	6.9	7,592	20.5	40.5
Leukaemia	0.8	6281	27.2	28.2
Bladder	0.7	654	1.1	3.1
Colon and rectum	2.7	4,424	10.7	17.7

Source : Assessment of burden of non- communicable diseases, WHO India Project.

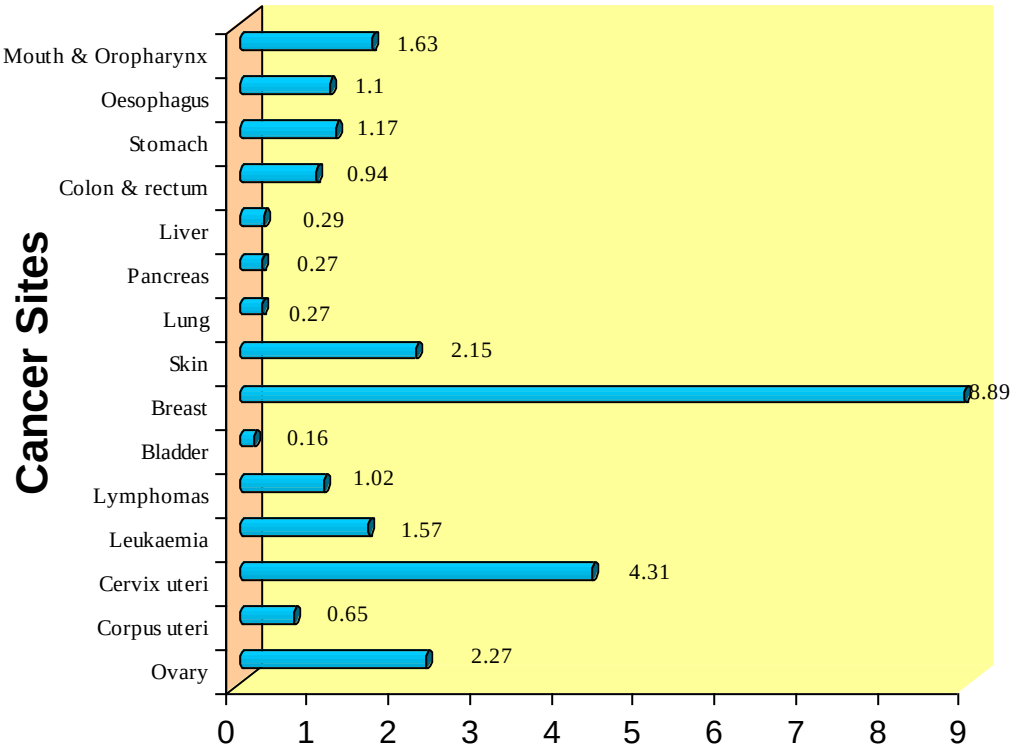


Figure 1.2 Number of DALYs (in lakhs) due to cancer in females in India (2004)

Source : BOD-WHO Study, 2004

According to a WHO study on Burden of diseases, 2004, data shows that Breast cancer results in 8.89 lakhs of DALY (Disability adjusted life years) which is again the highest among all other cancers.

According to a study by international agency for research on cancer (IARC) a branch of WHO, following are the facts about breast cancer in India:

- As of today,1 in every 22 women in India in their lifetime is expected to be diagnosed with breast cancer.
- More than 92% of breast cancers are diagnosed at stage II or later.
- 1out of every 2 women diagnosed with breast cancer does not survive the disease; mostly due to late stage diagnosis.
- There will be approximately 2,50,000 new cases of breast cancer in India by 2015.

- In 2008, Dr.Umberto Veronesi, the father of modern breast cancer initiative said that breast cancer will become an epidemic in India in another 10 years.

WHO promotes breast cancer control within the context of comprehensive national cancer control programmes that are integrated to non-communicable diseases and other related problems. Comprehensive cancer control involves

- Prevention
- Early detection
- Diagnosis and treatment
- Rehabilitation
- Palliative care

Many low- and middle-income countries face now a double burden of breast and cervical cancer which represent top cancer killers in women over 30 years old. Control of specific modifiable breast cancer risk factors as well as effective integrated prevention of non-communicable diseases which promotes healthy diet, physical activity and control of alcohol intake, overweight and obesity, could eventually have an impact in reducing the incidence of breast cancer in the long term. Although some risk reduction might be achieved with prevention, these strategies cannot eliminate the majority of breast cancers that develop in low- and middle-income countries. Therefore, early detection in order to improve breast cancer outcome and survival remains the cornerstone of breast cancer control (Anderson et al., 2008). Early diagnosis remains an important early detection strategy, particularly in low- and middle-income countries where the diseases are diagnosed in late stages and resources are very limited. There is some evidence that this strategy can produce "down staging" (increasing in proportion of breast cancers detected at an early stage) of the disease to stages that are more amenable to curative treatment (Yip et al., 2008). Mammography screening is the only screening method that has proven to be effective. It can reduce breast cancer mortality by 20 to 30% in women over 50 yrs old in high-income countries when the screening coverage is over 70% (IARC, 2008). Mammography screening is very complex and expensive in low and middle income countries. However, the practice of BSE has been seen to empower women, taking responsibility for their own health. Therefore, BSE is recommend for raising awareness among women at risk rather than as a screening method.

The Breast Cancer Rehabilitation Program offers a full spectrum of physical rehabilitation for the breast cancer survivor in a supportive environment. Loss of strength and function of the shoulder and a decrease in overall fitness often accompanies the surgical removal of the breast and lymph nodes. Services may include post-operative physical or occupational therapy, general exercise and fitness, and lymphedema (swollen arm) management

Palliative care is an essential part of cancer control and can be provided relatively simply and inexpensively. Palliative care for patient is the active total care of the patient's body, mind and spirit, and also involves giving support to the family. It begins when illness is diagnosed, and continues regardless of whether or not the patient receives treatment directed at the disease. Health providers must evaluate and alleviate a patient's physical, psychological, and social distress. Effective palliative care requires a broad multidisciplinary approach that includes the family and makes use of available community resources; it can be successfully implemented even if resources are limited. It can be provided in tertiary care facilities, in community health centers and even in patient's homes. Palliative care improves the quality of life of patients and families who face life-threatening illness, by providing pain and symptom relief, spiritual and psychosocial support to from diagnosis to the end of life and bereavement.

1.7 NATIONAL CANCER CONTROL PROGRAMME

Cancer is an important public health problem in India with nearly 8 lakh new cases occurring every year in the country. With the objectives of prevention, early diagnosis and treatment, the National Cancer Control Programme (NCCP) was launched in 1975- 76 with the objectives of primary prevention of cancers, early detection and prompt treatment. In view of the magnitude of the problem and the requirement to bridge the geographical gaps in the availability of cancer treatment facilities in the country; the Programme was revised in December 2004.

There are 5 schemes under the revised Programme -

1. Recognition of new Regional Cancer Centres (RCCs): A one-time grant of Rs. 5.00 crores is being provided for New RCCs.

2. Strengthening of existing RCCs: A one-time grant of Rs.3.00 crores is provided to the existing RCCs.

3. Development of Oncology Wing: One-time Grant of Rs. 3.00 crores to the Government institutions (Medical Colleges as well as government hospitals).

4. District Cancer Control Programme: The grant-in-aid of Rs. 90.00 lakhs spread over a period of 5 years.

5. Decentralized NGO Scheme: A grant of Rs. 8000/- per camp will be provided to the NGOs for IEC activities.

Under the Tenth Five year Plan, the major focus has been on correcting the geographical imbalance in the availability of cancer treatment facilities in the country.

A National Task Force for developing a "Strategy for Cancer Control in India during the 11th Five Year Plan" (2007-2011) has been constituted with the following Terms of Reference:-

1. To review the current strategy

2. To develop a comprehensive strategy for the 11th Plan period

3. To develop institutions in underserved/ unserved areas in the country

4. To develop a strategy to create awareness on the link between cancer and risk factors such as tobacco, diet etc.

5. To identify resources as regards manpower, material and finance

6. To ensure geographical balance in availability of cancer care facilities

7. To identify and strengthen the components of the NCCP

8. Identify strategies to evaluate and monitor the implementation of the Programme

9. To ensure sustainability

10. To study the Financing Options

11. To ensure Community Participation, Ownership

Approaches to Cancer Control

There are four principal approaches to cancer control:

1. Prevention

2. Early Detection

3. Diagnosis and Treatment

4. Palliative Care.

Although it is established that screening by Mammography can substantially reduce mortality from breast cancer, especially in women over the age of 50 years (12), breast cancer screening programs involving imaging techniques are expensive and for this reason cannot be adopted in developing countries as a routine public heath measure. Economic constraints of Mammography apart, compared to the west, a relatively large proportion of breast cancers in India occur in younger women.

CHAPTER- II

RESEARCH METHODOLOGY

2.1 Study Area

The study was carried out in urban areas of Ghaziabad, it is an industrial city in the Indian state of Uttar Pradesh and comes in National capital region (NCR). 10 areas were randomly selected for conducting the study viz. were Indirapuram, Vasundhara, Raj Nagar, Nehru Nagar, Model Town, Govind Puram, Gagan Enclave, Kailash Nagar, Pratap Vihar and Vijay Nagar .

2.2 Target Population

Females of reproductive age group (15 to 49 yrs of age) were targeted for inclusion in the study.

2.3 Study Design

It was a simple quantitative research technique. Two stage random sampling procedure was followed. At first stage colonies were selected followed by selection of households with female respondents in the reproductive age group.

2.4 Quantitative Research Technique

Structured questionnaire with close ended questions were used to interview the target respondents. A draft questionnaire was prepared and discussed with the mentors for their expert comments & feedback for finalization of the study tool. First a pilot testing was done in some areas of Ghaziabad which revealed many changes in the study tool, which were then corrected and finally the survey was conducted in the field. Multistage sampling is done to select the required sample. First of all 10 urban areas were randomly selected in the district of Ghaziabad, secondly households were selected, first House was randomly selected than interval "I" was calculated by taking an assumption that "*n'* numbers of HHs exists in an area, *n* was divided by 10 (total number of samples to be taken from one area). "$I^{th} = n / 10$", after that every I^{th} HH was selected, selection of HH was followed by selection of eligible respondents. In those HH where

numbers of eligible respondents were more than one, KISH table/grid was used to select the respondents to combat the biasness in the study.

2.5 Sample Size

Sample of 100 was taken using the formula stated below. A total sample size of 100 with precision error 10 % and 95 % confidence interval was taken to carry out the study.

$$N = t^2 * p\,(1-p) / m^2 * df$$

Where,

N = Sample size

t = z value (e.g. 1.96 for 95 % confidence interval)

p= percentage of indicator (0.5 used for sample size)

m= margin of error(10 % is used)

df = design effect (assumed 1.5)

This formula gives a sample size of 96, so, 100 sample size was taken.

2.6 Data processing and analysis

Completed questionnaires were entered for data processing. Processing includes data coding, data entry and data analysis. The tabulation plan was prepared and shown to the mentor for his expert comment and suggestions. Based on the comments received from him tabulation plan was finalized. The required tables were generated using Statistical package for social studies (SPSS) version 12. All the major key indicators such as awareness on breast cancer, awareness of diagnostic tests, awareness of various available treatments, Breast self examination, awareness of risk factors and myths and misconceptions were considered. The following tables were also represented in graphical forms wherever required.

CHAPTER- III

RESULTS & FINDINGS

In this section, results and findings of the survey conducted in the field will be discussed which includes background characteristics of the respondents, their knowledge & awareness on breast cancer, risk factors related with the disease and various myths and misconceptions will be discussed.

3.1 Background characteristics of the respondents.

Respondents include females of reproductive age group (15 to 49 yrs of age), respondents were further classified according to their education, occupation and their marital status.

Tab3.1 Background characteristics of respondents

Background characteristics	Percentage of respondents
Age	
<20 yrs	8
21 - 29 yrs	37
30 - 39 yrs	30
40 +	25
Education	
Illiterate	6
Up to 12th standard	19
Technical education	28
Graduate & above	28
Occupation	
Housewife	33
Unemployed/Retired/not working	9
Student	17
Domestic servant/ labour	10
Business(large/small/ medium)	19
Service (Pvt./ Govt.)	12
Marital status	
Unmarried	29
Married	71
Total (N)	**100**

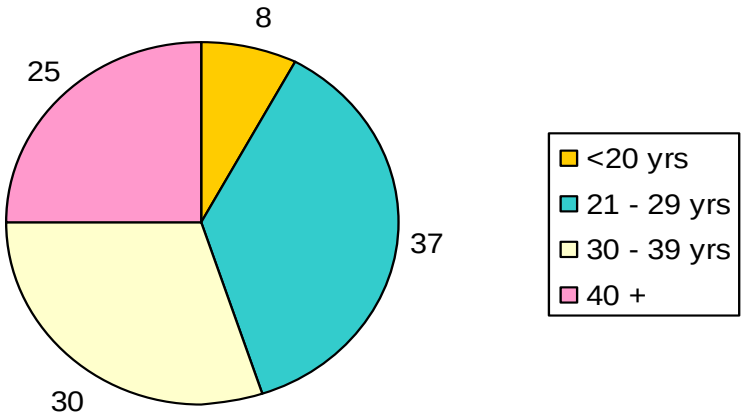
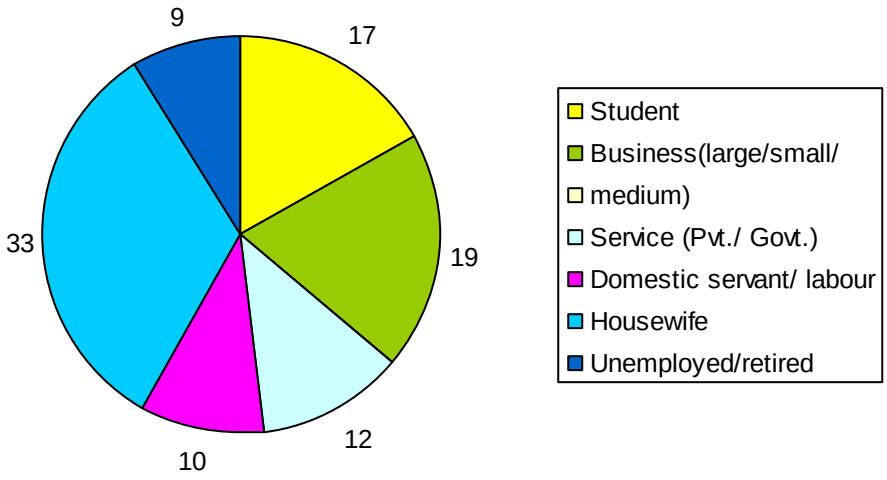


Figure 3.1.a Showing Age group of respondents

Tab3.1 shows that there were 8 percent of females who were below 20 yrs of age, 37 percent belongs to 21 – 29 yrs of age, 30 percent of 30 – 39 yrs and rest belongs to age group of above 40 years. Among them 28 percent had graduate and above degrees and 28 percent had done technical diploma, 19 percent were up to 12^{th} standard which includes all those respondents who are currently studying or have completed their schooling. Only 4 percent and 2 percent were illiterate and literate with no formal education who were also participated in the survey interviews.

Fig. 3.1b Showing Occupational status of respondents



As far as occupation of the respondents is concerned Table 3.1 shows that there were 33 percent housewives who had contributed to the survey, 19 percent had small. Medium or large business of their own, 12 percent of the respondents were employed with government or private firms, 17 percent of students and 10 percent of domestic servants and labors (non- agriculture) had also participated in the survey. Among them 71 percent of the respondents were married and rest of the 29 percent were unmarried.

3.2 Awareness of Breast cancer among females

As far as awareness of breast cancer is concerned, Table 3.2 shows that 88 percent out of 100 respondents were aware of breast cancer. Figure 3.2 shows the awareness was mainly through Television as out of 88 respondents 67 percent says that they get awareness of breast cancer through this medium, while 11 percent came to know about breast cancer through their friends and relatives and rest of the 8 percent and 2 percent through books, magazines or newspaper and government health service providers respectively.

Tab3..2 Proportion of respondents aware of Breast cancer

Background characteristics	% of respondents
% Aware of Breast cancer	88
Source of awareness	
Television / Radio	67
Books/ newspaper/ Magazine	8
Government health service provider	2
Friends /Relative	11
Total (N)	**100**

Fig. 3.2 Source of awareness of Breast cancer

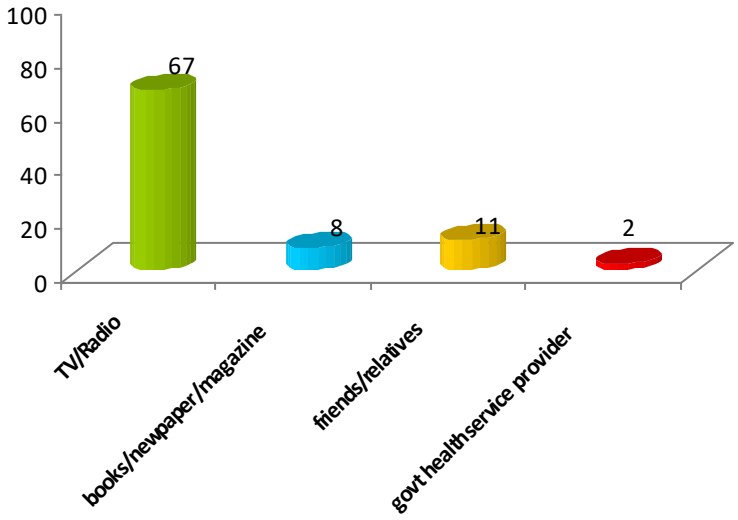


Fig 3.2 shows that government health service providers are not a popular source of awareness among the respondents, it depicts that people are not taking much advantage of government services for taking treatment of breast cancer.

3.2.1 Awareness of various diagnostic tests

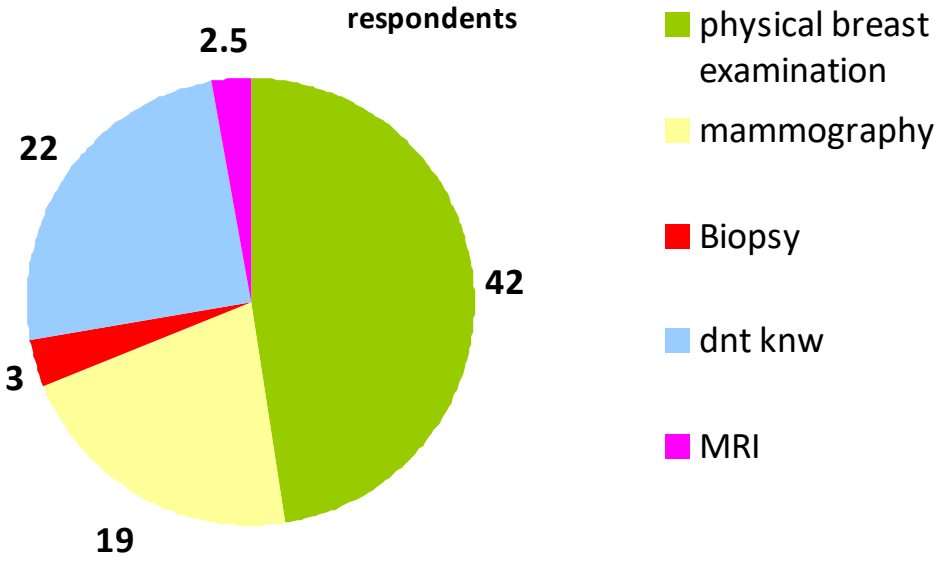
Above result shows that only 88 respondents are aware of breast cancer and out of this, only 70 percent respondents were aware of the diagnostic tests available to detect the breast cancer. Table 3.2.1 shows that out of these 70 respondents 42 percent says that physical examination by a physician can be done to detect breast cancer, 19 percent knows about mammography and only 3 percent and 2.5 percent respondents are aware of breast biopsy and MRI respectively.

Tab3.2.1 Proportion of respondents aware of various diagnostic tests.

Responses	% of respondents
Aware of diagnostic test	70
Various Diagnostic test	
Physical examination by a physician	42
Mammogram	19
Breast biopsy	13
MRI	4
Don't know	22
Total (N)	**88**

Out of 70 respondents who know that there are diagnostic tests available to detect the cancer, 22 percent doesn't know about the various tests to detect the breast cancer which shows lack of proper knowledge among the female respondents.

Fig. 3.2.1 Showing awareness of various diagnostic tests among respondents



The result of the study shows (fig.3.2.1) that only 19 percent females knows about Mammography which is the most important diagnostic test of all. Only 3 percent know about Biopsy and only 2.5 percent females are aware of MRI. Near to half of the respondents don't know about any diagnostic tests available for the breast cancer.

3.2.2 Awareness of various available treatments

Out of total 88 respondents who are aware of breast cancer, 84 percent of the respondents are aware of the treatments available for the breast cancer as shown in Table 3.2.2. Among them 79 percent respondent said that surgery can be done to cure breast cancer. 8 percent says that chemotherapy is also effective and only 1 percent of respondents are aware of radiotherapy and hormone replacement therapy respectively.

Tab3.2.2 Percentage aware of various available treatments.

Responses	% of respondents
Aware of treatments	84
Various treatments	
Surgery	79
Chemotherapy	9
Radiotherapy	2
Hormone therapy	3
Don't know	7
Total (N)	**88**

Fig. 3.2.2 showing awareness of various treatments among females

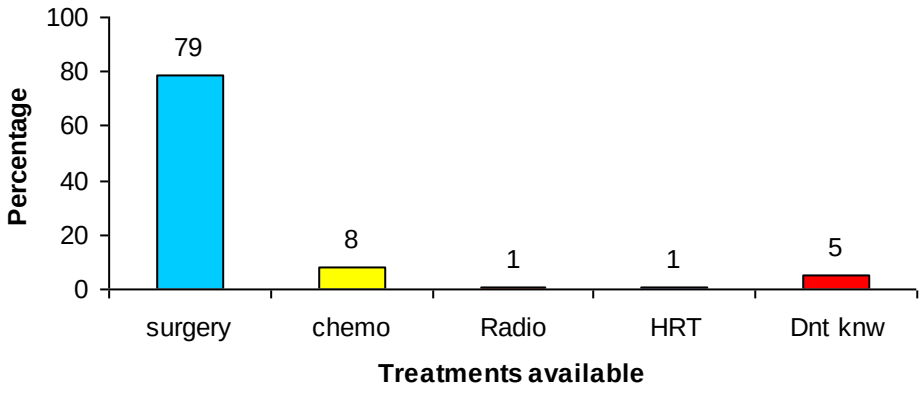


Fig 3.2.2 shows high awareness of Surgery among females and lack of awareness of other treatments which are also the part of the treatment modalities. Chemotherapy and radiotherapy are as important as surgery as without them treatment is not complete. They played a crucial role in the treatment of the breast cancer. So people should be aware of these treatments also.

3.2.3 Percentage of respondents who take treatment if they face any problem

There were some respondents who said that they have experienced symptoms like lump in the breast, swelling, puckering, and sometimes discharge also.

Responses	% of Respondents	
Experienced symptoms / changes in the breast	17	
Taken treatment	Yes	No
Doctor	5	4
Nurse/ANM	1	0
Friend/ Relative	3	4
Total	**88**	

Table 3.2.3 Showing percentage of respondents took treatment

Above table shows that 17 percent out of 88 respondents who knows about breast cancer, experiences changes or symptoms of breast disease in their breast. Tab 3.2.3 also depicts that out of 17 respondents only 5 respondents goes to doctor but didn't took treatment. 1 percent goes to nurse and 3 percent consulted their friends and relatives.

Fig. 3.2.3 Showing percentage of respondents of taking treatment

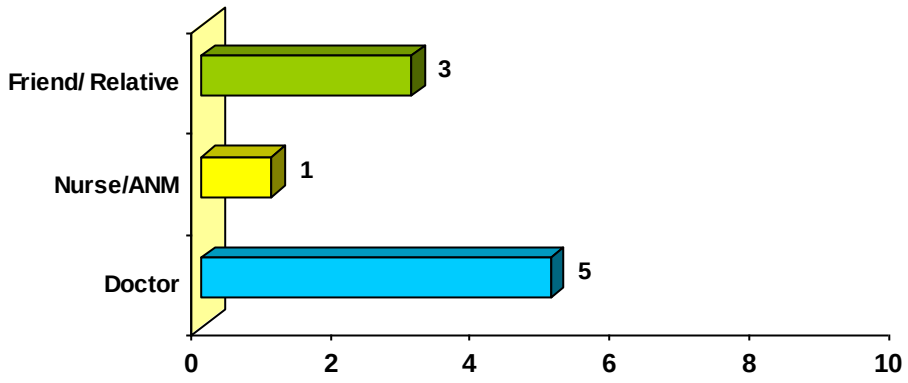
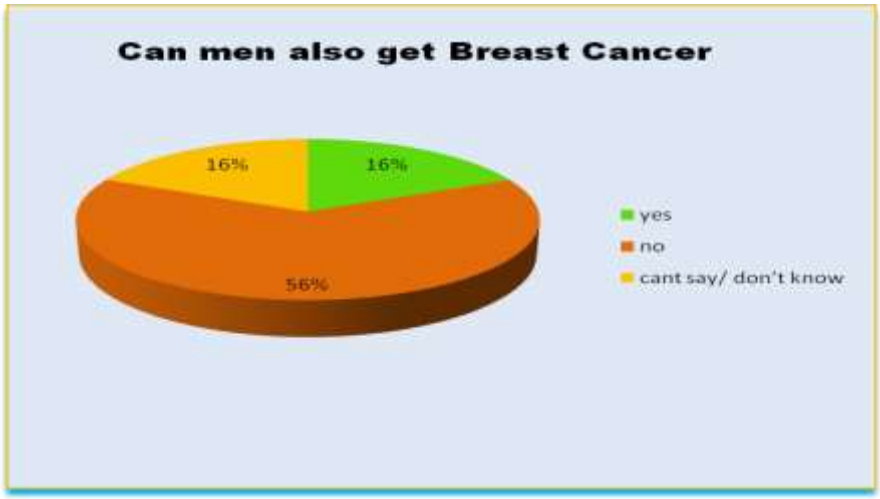


Fig. 3.2.3 shows lack of awareness on the part of taking treatment, respondents shows lack of seriousness towards the disease as well as they are not bothered about to whom to consult if they face or experience any problem in their breast.

3.2.4 Awareness of Breast cancer in males among females of reproductive age group

Although the incidence of breast cancer among males is only 2 – 3 % according to the report by WHO on cancer, but according to figure 3.2.3, only 16 percent out of 88 respondents knows that breast cancer can occur in males also.

Fig.3.2.4 Percentage of females aware of breast cancer in males



3.3 Knowledge on Breast self examination (BSE)

Breast cancer is the most common cancer among women worldwide and it can be detected at an early stage through breast self-examination (BSE).Table 3.3 shows that out of 88 respondents only 39 respondents are aware of BSE, and among these respondents only 7 respondents ever performed BSE on themselves. 3 percent respondents learned this technique through the medium of television, 1 percent and 2 percent learned BSE from friends or relatives and newspaper or magazines respectively.

Tab3.3 Percentage of respondents who have knowledge of Breast self examination (BSE)

Responses	% of respondents
% Aware of BSE	39
%who have performed BSE on themselves	7
Source of awareness	
Nurse	1
TV	3
Newspaper/ magazine	2
Friends/ relatives	1
Total (N)	**88**

3.4 Knowledge of various risk factors associated with Breast cancer

Knowledge on risk factors were measured on likert's five point scale. Where Strongly agreed scored 1, somewhat agree 2, neither agree nor disagree scores 3, somewhat disagree 4, and strongly disagree 5, responses which came as don't know or can't say were coded as 99 for all the responses. There are risk factors which are associated with the breast cancer which may not cause it but can contribute to this disease and make a person more prone to have this disease. According to the study respondents are strongly agreed to the statement that "If a family member has developed breast cancer in the past, or currently has breast cancer, a women in that immediate family has a greater risk for breast cancer than those without family history" with Mean of 1.8. some respondents were somewhat agreed to the statement that "Older women have

high risk for developing breast cancer" with Mean value-2. Similarly respondents are strongly agreed(Mean value-1.9) that "Fair women have more chances of developing breast cancer than dark". When we asked about that "Women who experienced early menstrual cycle are more prone to develop breast cancer" respondents were somewhat agree to this risk factor with Mean value of 2.3. Respondents were strongly disagree with Mean value-2.3 to the risk factor that "Women who had their menopause after 55 years of age have high risk of breast cancer". Respondents were somewhat agreed(Mean value-2.4) to the statement that "Obese women or overweight face a greater chance of developing breast cancer women" Female respondents were strongly in favor of the risk factor that "Women who have not had children, or who had their first child after age 30, have a slightly higher risk of breast cancer" with Mean value-3.7. Women were strongly disagree with Mean value-2.5 to the risk factor that "Women who breastfed their children for 1 year or more have lower risk of breast cancer".

3.5 Knowledge on various myths and misconceptions

There are common myths and misconceptions among people associated with breast cancer. As depicted in Table 3.5, Out of 88 respondents 82 respondents said that "breast cancer can be caused by antiperspirants like by using deodorants". Similarly out of total respondents who are aware of breast cancer 70 respondents thinks that "if there is no family history of the breast cancer in the family one cannot develop it". 69 respondent thinks that "birth control pills can cause breast cancer"..

Tab3.5 Percent of Myths and Misconceptions among females of reproductive age group

Myths & Misconceptions	% of respondents
Antiperspirants causes cancer	82
If there is no family history of breast cancer, one can not develop it	70
Birth control pills can cause breast cancer	69
Link between breast cancer risk and environmental pollutants	69
Women who work at night have a higher risk of breast cancer.	51
A high-fat diet can increase the risk of developing breast cancer	10
Total (N)	**88**

According to the survey result, 69 respondent thinks that environmental pollutants can also cause breast cancer. 51 respondents says that women who works late at night like nurses in the hospitals are on higher risk of developing breast cancer. Only 10 percent said that taking high fat diet increases the risk of developing the breast cancer among the females.

CHAPTER- 1V

CONCLUSION & RECOMMENDATIONS

4.1 Conclusion

Breast cancer is overcoming uterus cancer rate in India. This study shows that almost all the respondents know about Breast cancer about 88 percent out of 100.Very few percent respondents know about diagnostic test available for breast cancer but they don't know about any specific test which can be done to test the breast cancer. Likewise only very few percent of respondents know that there are treatment for breast cancer but again they don't know about the specific treatments for it. Only 39 percent know about BSE but they don't know the procedure to perform this technique, so that if any problem occurs, they can know it at its earliest and can visit the doctor as soon as possible to seek treatment so that the disease can be diagnosed early and mortality can be prevented. In many developing countries like India, females are not even aware that they have developed breast cancer, they come to know about the disease when it's on its last stage or on that stage from where recovery is not possible.

4.2 Recommendation

A variety of methods can be employed for educating people as a preventive strategy so that they can be made aware of the disease and the mortality due to the disease can be prevented. As people can start changes in their lifestyles and other preventable risk factors to overcome the risk of developing the disease. Following are the methods that can be adopted:

1. Conducting drawing and essay competitions for Higher secondary school children on the topics related with breast cancer, so they can become aware of the disease at its earliest. Children can become source of spreading information to their parents and other older people in the society.

2. Debates, discussions, seminars and street play competitions on breast cancer for Youth and University students can be done to spread awareness among them. As this is the stage when a female should be aware of breast cancer so that she can take care of herself.

3. Participatory workshops and training sessions on breast cancer by NGO groups, municipal, District and State health administration in various urban and rural areas for general population. It can help a lot in making them aware of the disease.

4. Structured training and field activities by Medical colleges. Students of medical colleges can be trained for giving training to the people in the community and other activities like conducting sessions on awareness of breast cancer.

5. Participatory programmes on radio and television using mass media. It's an effective method by which a large population can be covered for spreading awareness on breast cancer.

6. Descriptive articles in newspapers and magazines on breast cancer by various renowned doctors of government and private hospitals can be published in English and other local languages.

7. Exhibitions and public lectures for general population. Well-illustrated audiovisual educational materials are extremely useful for literate and as well as illiterate populations. While health-education is an interesting method of communication, it should be clearly understood that education is a process, which goes through the modalities of changes in knowledge, attitudes and practices over a period of time and it takes a long time before the impact of education becomes evident.

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