
A STUDY ON BREAST CANCER AWARENESS AMONG WOMEN IN INDIA

“Every Pink Ribbon Makes A Difference”



BREAST CANCER IN INDIA: A SNAPSHOT

Breast cancer affects **women** both in the developed **and** the developing **world**

Breast cancer accounts for 14% of cancer in Indian Women



It is reported that with every **4 minutes**, an Indian woman is diagnosed with breast cancer

If breast cancer is detected early, and adequate treatment & measures are available, there is a good chance that breast cancer can be cured

If detected late, palliative care to relieve the suffering of patients and their families is the only option in front

Low breast cancer literacy risk factors among Indian women, irrespective of socio-economic and educational background

Thus, an urgent need for nation- and state-wide awareness programs, as well as engagements with community-level organizations and health system is needed

Research
Question

What is the awareness level about breast cancer among adult women population of India?

Objective

To understand awareness among Indian women on breast cancer between age group of 20-75 years by assessing their knowledge and understanding regarding disease progression and support

1.38 Million
new breast cancer
cases each year

Every
four minutes,
an Indian woman is
diagnosed with breast
cancer

458000
deaths from breast
cancer every year

**THE
ALARMING
STATISTICS**

one woman dies of
breast cancer, every
13 minutes
in India.

Review of Literature			
Author, Year	Study Title	Sample Size	Salient Features
Anil Kumar , Sunita Srivastava1 2022	Breast Cancer Survivorship among Indian Women: An Overview	Nearly 500 women	This review article made a modest attempt to look into the already available published literature on breast cancer survival health concerns from an Indian perspective. It also aims to make a distinction between the survival requirements of Indian women in urban and rural areas.
Parashar Rai , Ranvijay Singh 2021	Breast Cancer Awareness among Women in Urban Setup in Western India	500 women	According to this study, the majority of women are aware that breast lumps are a common sign of breast cancer (90.47%), however knowledge of other symptoms is lacking. Compared to stay-at-home moms, women who were educated or employed had higher levels of awareness.
Anushree Patil , Ranjan Kumar Prusty, 2021	Increasing breast cancer awareness among women for health education and capacity building of primary healthcare providers: A Pre-post intervention study in low socioeconomic area of Mumbai, India	410 women	The study's goal was to advance (BC) knowledge and practises by using information, education, and communication (IEC) modules and health education workshops for women and primary healthcare providers. female participants stated they did so through the media (53%) and doctors (25%), compared to the majority of those who said they did so through awareness campaigns following the intervention.
Taneja, Neha Pal, 2021	Knowledge, practice & attitude towards breast cancer and its screening among women in India	7545 women	A plan on BC education is required, Women from all demographic groups need to be motivated to make positive changes about breast cancer screening, early detection, and treatment.
Saxena,Tapasvi Farjana, 2019	Can urban Accredited Social Health Activists - ASHA be change agent for breast cancer awareness in urban area: Experience from Ahmedabad, India	104 ASHA	The research revealed that the intervention group's awareness of breast cancer and breast self-examination considerably enhanced between the pre- and post-test. Following the intervention, the study group shown a 33% overall gain in breast cancer awareness, a 54% method improvement, and a 42% practise improvement.
Prasad S and Pandey U, 2019	Breast Cancer Awareness in India	_____	Breast cancer death rates are disproportionately higher in India due to breast cancer being diagnosed at an advanced stage due to a lack of knowledge and quick diagnosis and treatment. Brest cancer prevalence is also increasing in India, and this is causing an increase in fatality rates

Review of Literature			
Author, Year	Study Title	Sample Size	Salient Features
Sunita Singh, Niraj Kumar Srivastava 2018	Level of Awareness & Practices of Women Regarding Brest Cancer in Chhattisgarh, India: An Institution-Based Survey	500 women	The study found that women had a significant lack of knowledge on the signs, risks, and screening procedures associated with BC. Lack of knowledge on the symptoms, dangers, and screening measures for the illness is to blame for the delay in Breast Cancer diagnosis.
Muhammad Daniyal Muhammad Akram, 2017	Awareness and Current knowledge of Breast Cancer	500 women	Breast cancer, which can be lethal to female patients, is the most prevalent cause of mortality for women, according to the research.The review showed how greater public awareness, breast cancer awareness, and improvements in breast imaging had improved breast cancer identification and screening
Sudhir Singh, Pooja Ramakant 2017	Survey on Brest Cancer Awareness Among Medical, Paramedical, & General Population in North India Using Self-Designed Questionnaire: a Prospective Study	220 women	According to the survey, there are three main ways to increase BC awareness: more television and social media advertisements, roadside campaigns, group discussions, and debates in colleges, as well as grassroots efforts involving Anganwadi workers and nurses to raise awareness in villages. Compared to those in the medical and paramedical fields, non-medical women had less knowledge and awareness of breast cancer.
Arti Mishra , Subhojit Dey1 , 2015	Brest Cancer Awareness at the Community Level among Women in Delhi, India	2017 women	The research assesses Delh women's awareness of several aspects of braest cancer from a variety of socioeconomic groupings. Among the women in the survey, 84.5% were aware that BC frequently presents as a lump, yet 73.9% believed incorrectly that discomfort was BC's initial symptom. Women in Delhi are less aware about BC in relation to their socioeconomic position. Moving on to the first stage, the most important sources for increasing awareness are television and the media.
Gupta,K. Shridhar, P.K Dhillon, 2015	Study of breast cancer awareness among women in India: Cancer literate or awareness deficit	7066 women	This study discovered that Indian women, regardless of their socioeconomic and educational levels, lack appropriate cancer awareness on breast cancer risk factors. In order to enhance cancer literacy in India, this article suggested national and regional awareness initiatives that include a wide range of social stakeholders and the health system

METHODOLOGY

Plan of analysis

Analysis of the data planned through Questionnaire survey by Convenience Sampling method among women residing in India with a brief on Knowledge, Awareness and Understanding of Detection treatment & Risk factors for Breast Cancer

Data source

The methodology is followed through structured literature search and updates from news and articles using combined keywords undertaking on bibliographic databases

Data collection method

Primary Research – Data collected from Online questionnaire using google form.
Secondary Data – Collected from database and research articles such as PubMed, Cancer Registries, Cancer Journal, NCBI, Globocan, Research Gate.

Rationale for study

The purpose of the study is to determine how much of India's female population is aware about breast cancer. The study will give an overview of the conventional treatments used to manage breast cancer and offer suggestions for educating women about ways to lower their chance of developing breast cancer in the future.

Ethical considerations

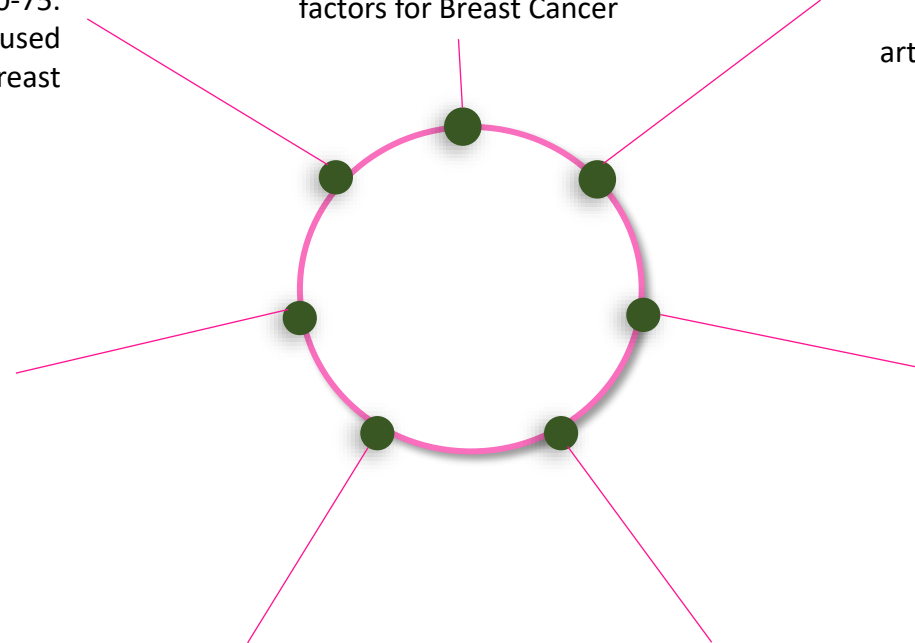
It is inevitable that duty, right, and ethical issues will arise in the fight against breast cancer. This study takes into account moral concerns like the participants and their families' informed permission. When discussing about awareness, its diagnoses and treatment options, participants comfort level is also taken into account.

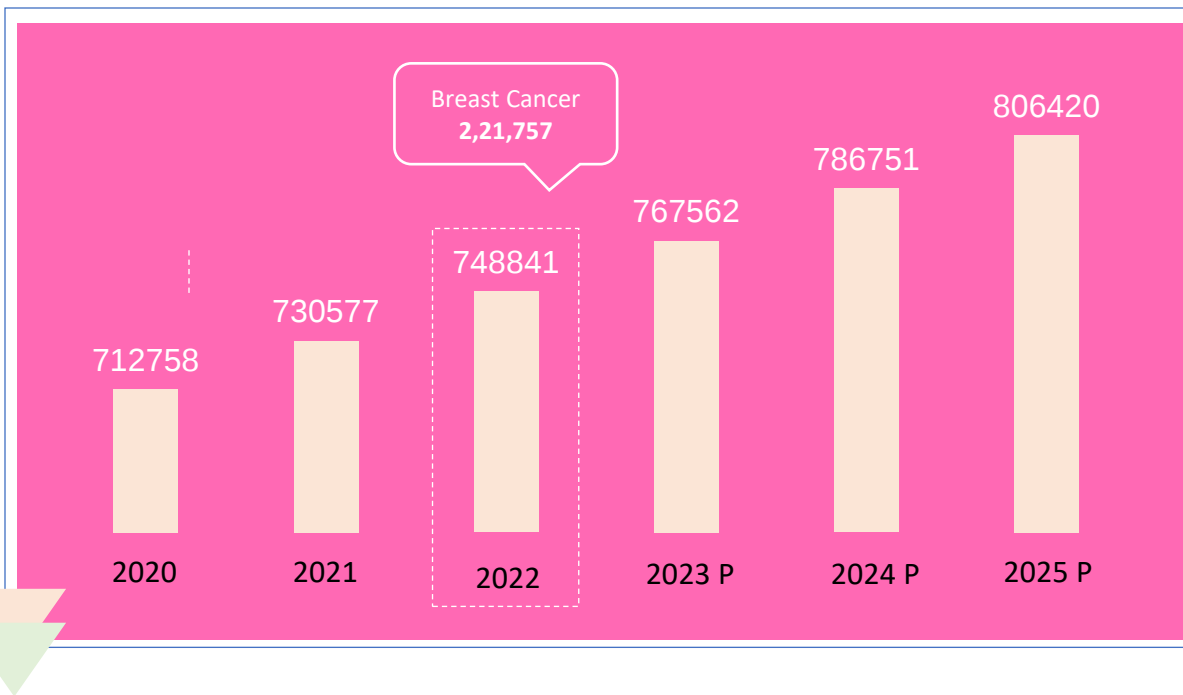
Study variables

The outcome variables used in the analysis is breast cancer. Many Dependent & Independent variables like Economic and socio-demographic factors are taken into consideration

Study population

The study population is young and middle-aged women of India between the age-group 20-75. Also, multiple sources from literature were used for gathering information and analysis of breast cancer





India has a lower survival rate. According to recent studies, this condition is becoming more prevalent in younger Indian women within the age range of 25-50, accounting for nearly 50% of cases

According to an Indian study of rural women with breast cancer, the five-year survival rate is only 9% when the disease is discovered at stage IV, but it rises to 78% if discovered earlier.

Age wise Incidence Risk

4%	20-30% of Population
16%	30 – 40% of Population
28%	40 - 50% of Population

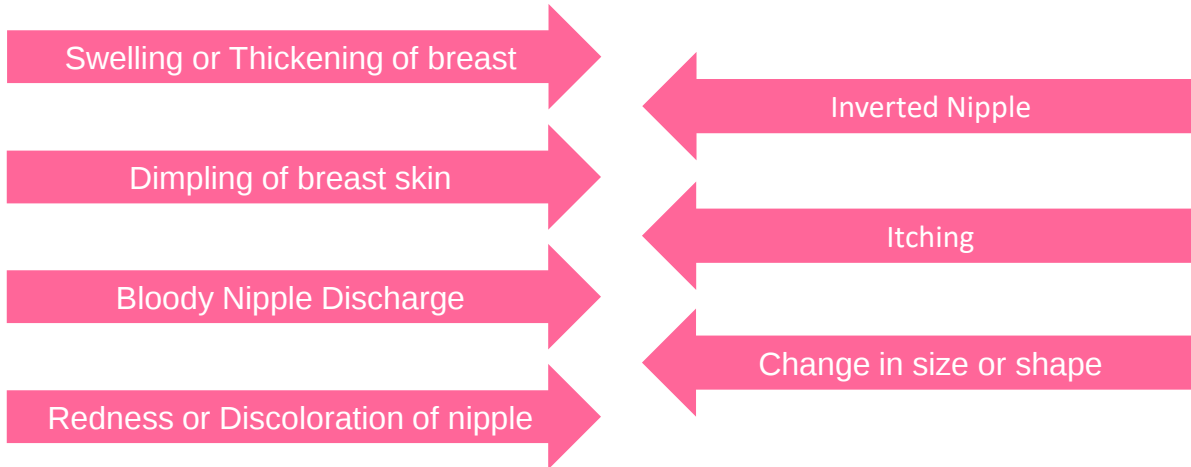
- ✓ Breast cancer accounts for a third of all the cancers that affect women in India. In recent years breast cancer has overtaken cervical cancer in terms of incidence as well as mortality⁴
- ✓ Out of all the types of cancers, breast cancer has become a major health concern across Indian cities, especially in the metropolitan cities like Delhi, Bengaluru, and Chennai as it accounts for more than a fourth of all female cancers²
- ✓ Nearly 60% patients with breast cancers are diagnosed in advanced stages⁵
- ✓ Oncologists have expressed concern over the fact that Indian women have been found to display more aggressive forms of cancers at relatively younger ages as compared to those in western countries⁴
- ✓ Only 7-10% of breast cancers are inherited; the remainder can be avoided by changing one's lifestyle. Most breast cancer patients do not have symptoms in the early stages of the disease

Some particulars about Breast Cancer Understanding

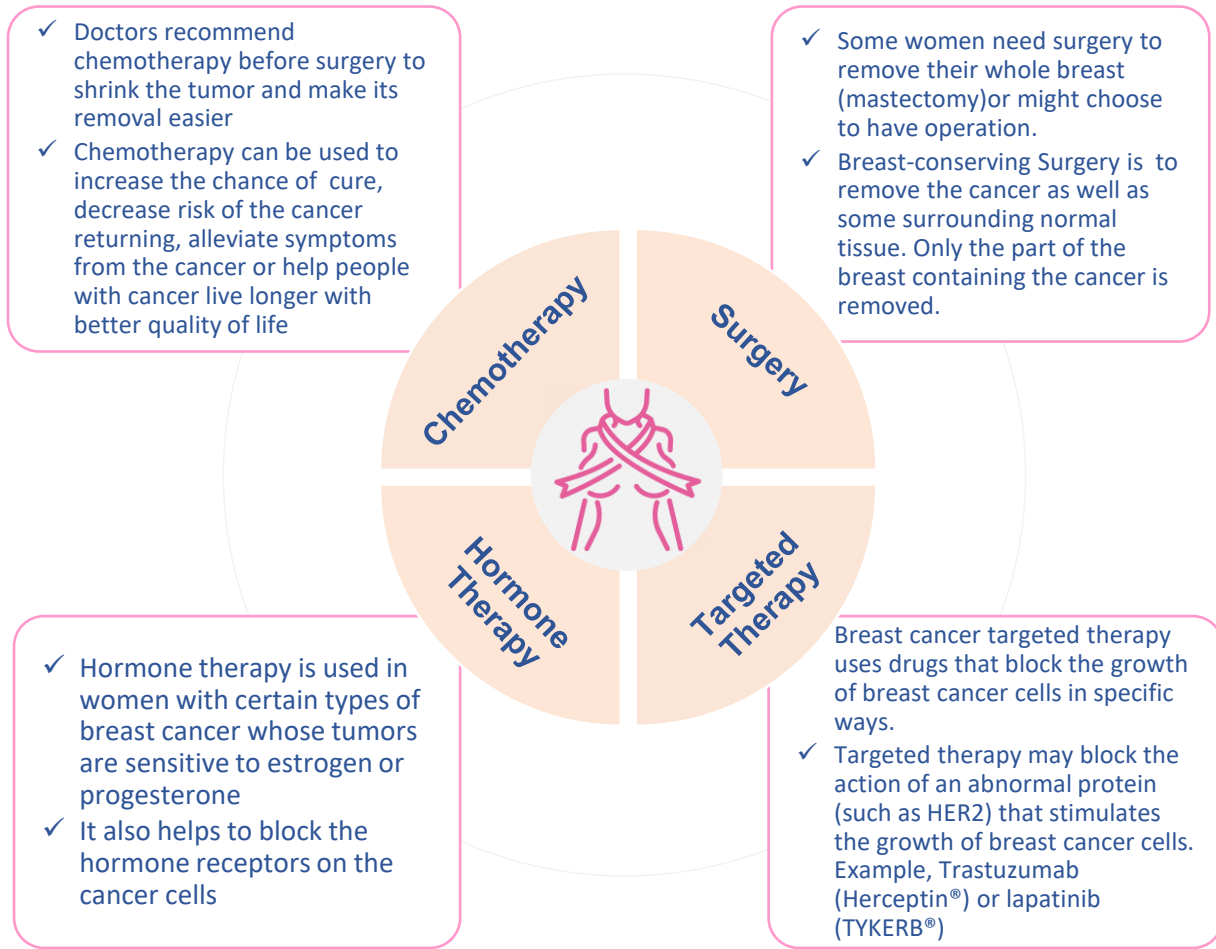
Risk Factors for Breast Cancer

Smoking & Alcohol	Gender
Family History of Breast Cancer	Hormonal & Reproductive Factors
Beginning of Periods at younger age	Beginning Menopause at later age

Symptoms for Breast Cancer



Breast Cancer Treatment Option



Complementary & Alternative Medication

 Acupuncture

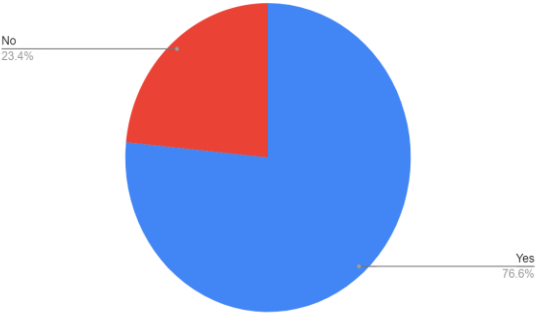
 Supplements

 Aromatherapy

 Massage Therapy

RESULTS

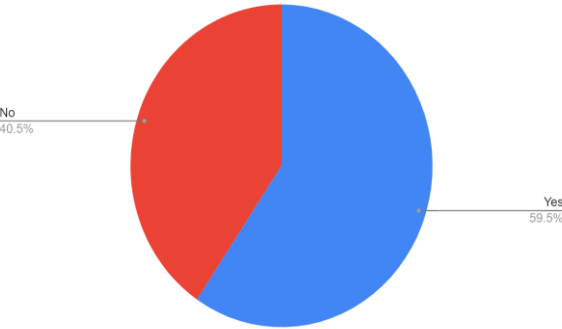
Do you know any symptoms of breast cancer?



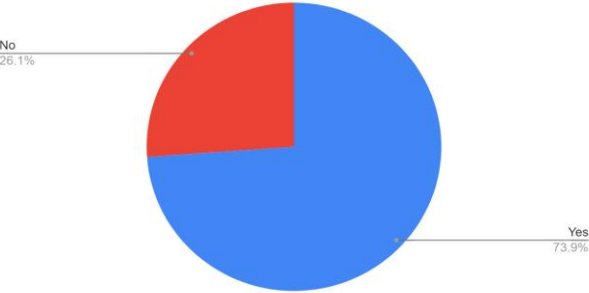
Among those who were surveyed for Breast cancer symptoms awareness, 77% of respondents know about symptoms while 23% of them were not aware. Bloody Nipple Discharge(54%), swelling or thickness of breast(53%) is rated the highest.

A fair amount of knowledge for Self-detection methods was found out among those surveyed, 59.5% of respondents know about risk factors while 40.5% of them were not aware. Circular Method (59.5%) for Self-detection method was rated the highest.

Do you know any Self-detection method for Breast Cancer?



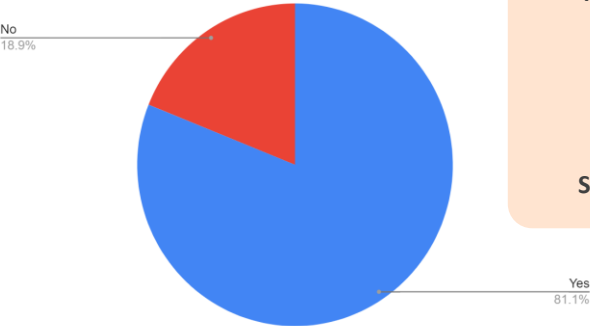
Have you heard about early detection methods of breast cancer referred by physician/doctor?



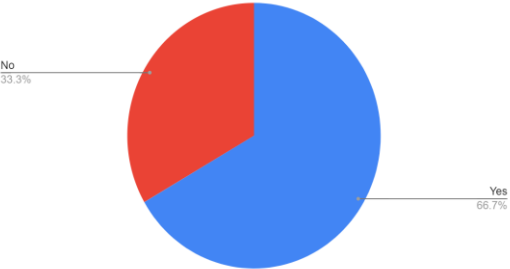
Physician led detection methods was given a positive outlook from those who were surveyed, 74% of respondents know about symptoms while 26% of them were not aware. Mammography method (66%) was rated the highest.

Among those surveyed, 81% of respondents know about treatments while 19% of them were not aware. Chemotherapy Treatment (69%) was rated the highest.

Do you know any treatments for Breast Cancer

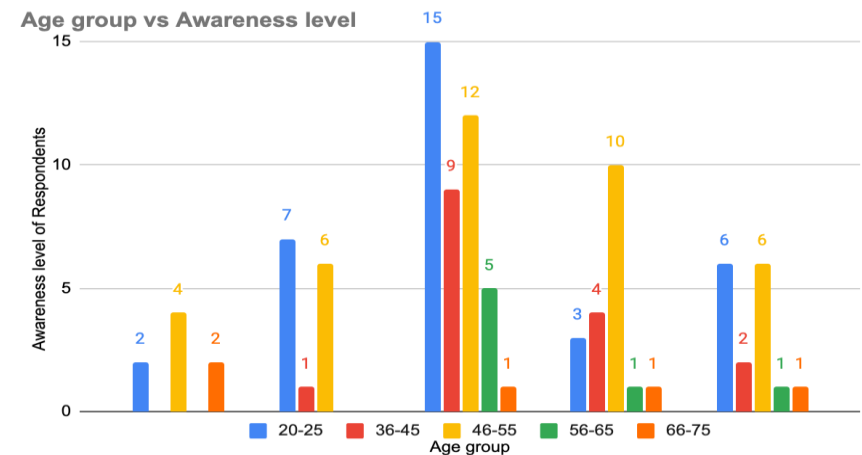


Do you know about side-effects for treatments for Breast Cancer



Among those surveyed, 66.7% of respondents know about symptoms while 33.3% of them were not aware. Respondents were aware about Chemotherapy & Surgical procedure side-effects.

Bar Graph depicting Highest awareness level with corresponding verticals



The risk of breast cancer seems to rise with age. This findings demonstrates the need of focusing on specific age groups, in particular young and middle-aged women who are more aware of the value of early detection and screening.

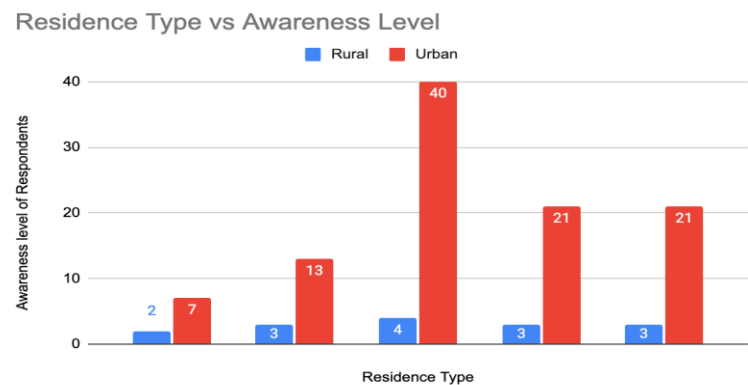
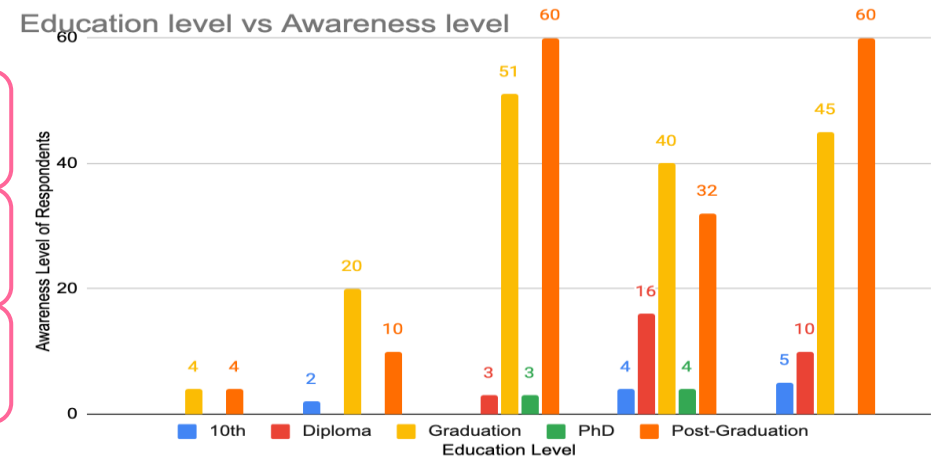
Awareness being highest in age group among 20-25 followed by 46-55. Maximum rating was given to 3 which has been found in this study followed by rating 4. As most of the respondents were from age group 46-55 and in sum they rated breast cancer awareness the highest.

46-55 years individuals are more aware possibly due to post-menopausal period where they undergo routine breast check-ups and mammograms screening which can make an effective contribution for decreasing chance of Breast cancer risk.

Education being a significant component of socioeconomic position and is measured, there is a favourable correlation between a high level of education and breast cancer awareness.

Various levels of education may lead to various levels of knowledge about breast cancer, which may have an impact on the patient's treatment, symptoms and risk factors course of opinion. The findings demonstrated that residence, age and education remained dependent determinants for breast cancer awareness.

The above graph shows that Post-graduation respondents rated the highest awareness level among all which directly signifies higher the level of education , higher the awareness presenting more clarity for awareness and understanding for Breast cancer factors



Awareness being highest among Urban Respondents giving an overall awareness rate of 3 as compared to rural people having less knowledge and understanding about breast cancer risk factors due to lack of health facilities and less access to quality of health services.

Lack of health education among rural is a major reason leading to such findings in the study. Urban respondents invariably shows the highest awareness rate due to awareness because of health camps, quality of health services and absence of social stigma and taboos.

- Urban residence included the respondents from metropolitan cities like Surat, Ahmedabad, Baroda, Mumbai, Delhi & others.
- Rural residence included respondents from PHC and nearby villages of India.

DISCUSSIONS



Diagnosis of Breast Cancer

- ✓ A general indifference towards women's health, the lack of breast cancer screening programs, and delay in seeking advice for a recognized health problem due to financial and social reasons, result in delayed diagnosis
- ✓ As a result, Indian breast cancer patients present with advanced disease stage and have numerous poor prognostic factors with poor awareness levels
- ✓ Introduction of screening programs, campaigns, government initiatives all will have a positive effect on the number of people being diagnosed earlier



Treatment of Breast Cancer

- ✓ Poor access to high-quality treatment facilities, few treatment facilities for a huge population, and poor financial resources on the patient's part as well as the health care provider's part result in compromised quality of care to patients with established disease
- ✓ Majority of patients here are still treated at locally advanced and metastatic stages
- ✓ Due to a large variation in the health care standards between regions, the quality of treatment available for breast cancer patients varies from pathetic to world-class

Epidemiology of breast cancer across different PBCRs in India shows increasing trends for incidence and mortality mainly due to rapid urbanization, industrialization, population growth and ageing affecting almost all parts of India

Factors as marital status, location (urban/rural), BMI, breast feeding, waist to hip ratio, low parity, obesity, alcohol consumption, tobacco chewing, smoking, lack of exercise, diet, environmental factors were major risk factors in India leading to increasing incidence cancer; however, the reason for high incidence of breast cancer in younger women are not well known

For trying to increase breast cancer screening on a population level, the development and implementation of AI to diagnose breast cancer is paving its way towards destigmatization, beliefs and early diagnosis of breast cancer in women of India

To ensure that no one suffers from substandard causes, the “**infrastructure for the seven pillars of cancer care**—prevention, surgery, chemotherapy, radiotherapy, imaging, laboratory diagnostics, and palliation”—should be made adequate.

Improving outcomes for Indian women by changing perception and increasing awareness about Breast Cancer

- ✓ *India lacks a nationwide organized screening program, so treatment occurs only after a woman seeks care for symptoms, putting Indian women at a disadvantage in fighting breast cancer*
- ✓ *This disadvantage can be readily seen when comparing survival rates of **60%** in India with the **90%** survival rate for breast cancer patients in the United States*

LIMITATIONS

The findings may not be generalized across the country as they will be derived from certain specific locations in different geographical regions of the country and the results of this research may also not be generalized to larger groups

India's heterogeneous populations with different socioeconomic, cultural, and social factors may yield wider variations than observed, though it is unlikely that literacy levels would be higher as this dissertation includes major metropolitan cities

The number of studies and time span are too narrow for an evaluation of significant changes in breast cancer and their attitude towards it over time



Information about the disease, its risk factors, BSE, and CBE needs to be disseminated by **using the mass media** (television, radio, newspapers, magazines) as well as the social media to spread the message to all far and near



Through **educational initiatives**, raise public awareness of illness prevention, avoidable risk factors, the benefits of early detection, and the availability of screening services.



Breast cancer prevention starts with **healthy habits and lifestyle changes**, a strong will to prevent cancer in oneself, and behavioural change



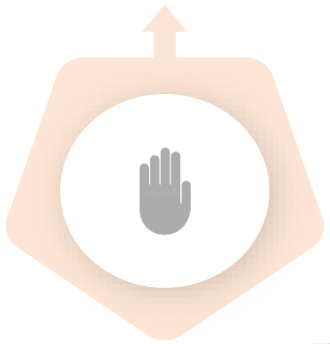
Government of India has initiated a screening program for breast cancer which aims at **training doctors** at various district-level hospitals, ANM and ASHA workers for spreading awareness and screening population using a standard method of breast examination



Swachh Bharat Abhiyan and **JahaSochWahaSochalay**, two recent government efforts, are exceptional delineations of social promoting efforts that are effective. **'One Nation One Health Card'** programme, can be incorporated for free breast cancer screening to women as feature for digital health card.

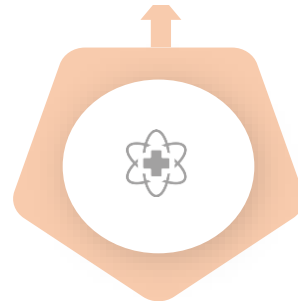
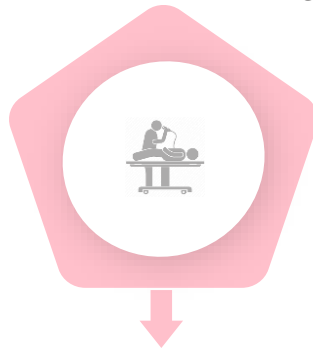
CONCLUSION AND SUGGESTIONS

By promoting preventive behavior among individuals, it is possible to make them understand the severity of a possibly serious consequence and the perceived benefit of a positive outcome. Address socioeconomic disparities in breast cancer awareness by collaborating with community clinics, non-profit organizations



Through education and information campaigns (EIC), efforts should be made to raise public knowledge about breast cancer. Collaborate with community organizations, schools, and workplaces to provide targeted educational sessions and resources. Utilize diverse communication channels, such as social media, websites, and community events, to reach individuals with varying levels of education.

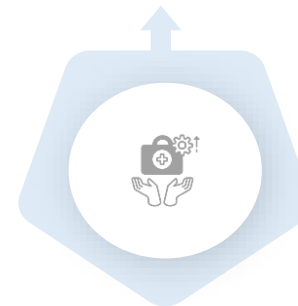
Outreach to Underserved Communities: Focus on reaching out to underserved communities and rural public where access to healthcare and information may be limited. Offer free or low-cost screening programs, provide transportation assistance, and host educational events in community centres or local organizations.



To effectively fight the disease burden of breast cancer, advanced technologies and start-ups operating in this digital space should be encouraged. Every woman should be taught at an earlier stage in life to look out for symptoms



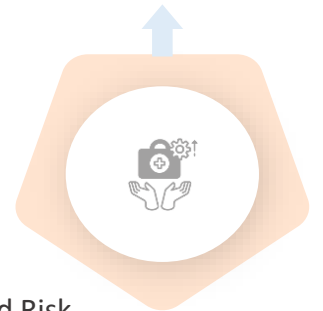
Screening Programs: Collaborate with healthcare providers and organizations to promote regular breast cancer screenings, such as mammograms, clinical breast exams, and self-examinations. Encourage women to schedule screenings and emphasize the benefits of early detection in improving treatment outcomes.



Target Specific Age Groups and Risk Factors: Tailor the awareness campaign to address the unique needs and risks of different age groups. Develop targeted messages and materials for young women, women in their reproductive years, and post-menopausal women. Consider specific risk factors, such as family history or genetic predisposition, and provide guidance on genetic counseling and testing when appropriate



The recent emphasis by governmental agencies, institutions, and non-governmental and charity organizations on improved health awareness, promotion of early detection, providing comprehensive multimodality treatment in a protocol-based manner, and providing support for breast cancer management



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THANK YOU!

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