A Survey On Risk Assessment Of Breast Cancer Among Female Patients Admitted In Selected Hospital In Navi Mumbai

Ms.Ann Maria Thomas[1], Ms. Prachiti Vayangankar[2]
D Y Patil University School of Nursing, Navi Mumbai

Abstract

Cancer is a broad term. It describes the disease that results when cellular changes cause the uncontrolled growth and division of cells. Some types of cancer cause rapid cell growth, while others cause cells to grow and divide at a slower rate. Breast cancer (BC) is the commonest malignancy among women globally. It has now surpassed lung cancer as the leading cause of global cancer incidence in 2020, with an estimated 2.3 million new cases, representing 11.7% of all cancer cases. The Researchers aims to have a survey on "Risk assessment of breast cancer among female patients. The main objective of the study is to assess the degree of exposure to risk factors of breast cancer and to determine the association of risk factors with selected demographic variables.

Method

The study was conducted as a Descriptive design, with 200 samples (female patients admitted in the hospital) were surveyed in Dr. D Y Patil Hospital Research Center. The sampling technique adopted for the current study was a convenient sampling technique. In this study Modified Risk Assessment Tool was used to collect the data on risk exposure through the interview technique. The demographic data were collected by using a structured questionnaire.

Result

The study findings of the survey on risk assessment of breast cancer reveals that, according to their exposure to risk factors, 66% of the study participants had a low risk of having breast cancer, while 21% had a moderate risk and 13% had a high risk. There was no evidence that any of the study samples were at a prohibitive risk for the same. According to the results of the Chi-square test, Age has a substantial correlation with breast cancer risk, whereas other demographic factors including marital status, religion, education, and age of menarche have no significantly correlated with risk levels among the study participants.

Conclusion

The current study comes to the conclusion that early risk factor detection and avoiding exposure to risk factors that cause breast cancer can help to lower the incidence.

Key Words:.

Introduction

Breast cancer is a malignant proliferation Of epithelial cells lining the ducts or lobules of the breast.[1] According to global cancer statistics, Globocan, in 2020, there were 2,261,419 incident cases of breast cancer worldwide which accounts to 11.7% of all cancers among women, the highest in the world. It is estimated that in 2020 worldwide over 684,996 women have died due to breast cancer (6.9% of all cancer deaths).[2] At present, India reports around 100,000 new cases annually according to the Indian council of medical research (ICMR). About 30,000 women die from breast cancer in India annually.[3] Cancer survival becomes more difficult in higher stages of its growth, and more than 50% of Indian women suffer from stage 3 and 4 of breast cancer. Women can self-diagnose their condition and know of the presence of lumps or masses that suggest cancerous outgrowths. The very reason for a low breast cancer survival rate of women in India accounts from its lack of awareness and poor early screening and diagnosis rates.

With the latest study reports, India's highest cancer rate is listed in the state of Kerala. Other states with high cancer rates in India include Mizoram, Haryana, Delhi and Karnataka. Mizoram accounted for the highest cancer death rates in the country, followed by Kerala and Haryana. As the most common cancer type in Indian women, women in their early thirties till fifties are at considerable risk to develop breast cancer, and the incidence risk increases till its peak by the time they reach 50-64 years of age. One in twenty-eight Indian women is likely to develop breast cancer during her lifetime. It is more (1 in 22) for urban women than the rural group (1 in 60). A report stated that cancer caused 5% of the total disability-adjusted life years (DALYs) in the Indian population in 2016.

The numbers are staggering and constantly rising. The Indian Council for Medical Research recently published a report which stated that in 2016 the total number of new cancer cases is expected to be about 14.5 lakhs. This figure will likely increase to 17.3 lakhs in 2020.

Henock Duche, et al in 2021 did a Case-control study on Identifying Risk Factors of Breast Cancer Among Women Attending Selected Hospitals in addis ababa city 110 sample were selected Cases were initially detected by mammography screening accompanied by histopathological examinations, while controls were those women who were negative by mammogram testing, stress levels were assessed by perceived stress scale (PSS) and body mass index measured by WHO norm results shows that the importance of physical exercise, breastfeeding, menopausal status, and nutritional status in the occurrence of breast cancer. Actions aimed at increasing physical activity, breastfeeding habits and keeping a balanced diet will help to minimize the incidence of breast cancer.

A cross-sectional study using convenience sampling of all women aged 30 years and above was conducted in Mumbai. Of the 2430 women enumerated in the study area, 1158 women participated in the study. Risk factors for breast cancer assessed included age at menarche; age at first child birth; breastfeeding; use of oral contraceptive pills, age of menopause, first degree relatives with history of breast cancer, history of current and past breast cancer; history of any previous breast related abnormalities. 15.5% of the women had at least one risk factor for breast cancer. The prevalence of individual risk factors was below 6%.

The survival rates of breast cancer in India are low because the detection takes place late. The only way to change these numbers is by increasing awareness. Breast cancer is a treatable disease and chances of survival are higher if it's detected in time. The only way to do so is by being aware of how it can be detected and early diagnosis can be done. Awareness of risk factors too can contribute in bringing down the rising scenario of cancer cases as it focuses on the quote "Prevention is better than cure"

1.1 Problem Statement
"A survey on risk assessment of breast cancer among female patients admitted in selected hospital, Navi Mumbai

1.2 Objectives
- To assess the degree of exposure to risk factors of breast cancer
- To determine the association of risk factors with selected demographic variable.

1.3 Research Approach
The approach for research chosen for the study is a quantitative approach as it will gather and analyze numerical data using statistics and provide findings that will be represented in the form of graphs and tables.

1.4 Research Design
For this study descriptive design was used to assess the degree of exposure to risk factors of breast cancer.

1.5 Variables of the Study
- **Independent Variable**: Modified risk assessment tool
- **Dependent Variable:** Risk assessment scores among female patients.

1.6 Research Setting
The study research setting in D Y Patil Hospital, Navi Mumbai.

1.7 Population
Female patients who are admitted in D Y Patil Hospital, Nerul Navi Mumbai.

1.8 Target Population
The target population of this study is Female patients in D Y Patil Hospital, Navi Mumbai.

1.9 Sample and Sample size
200 respondents are planned to be recruited who are admitted in hospital.

1.10 Sampling Criteria
In this study, respondents were selected as follows:

Inclusion Criteria
- Patient who are conscious and oriented.
- Patient who are admitted in D Y Patil Hospital
- Patients who are female.

Exclusion Criteria
- Person who are not admitted in hospital.

1.11   Technique and Tool
In this study, interview techniques were used for data collection to collect demographic data and to access the degree of exposure to risk factors of breast cancer.

Tools Used For The Study

Based on the study objectives the tool designated for the study were

TOOL1–Interview schedule

Section I: includes baseline variables suchasage,maritalstatus, Religion, education, occupation, monthly income, family type,age at menarche, age at marriage.

TOOL 2: Risk assessment modifiedtool used to accessthe degree of exposure to risk factors of breast cancer.

1.12   Content Validity
To determine the content and construct validity, the tool was given to experts from the Nursing and medical field. After receiving their valuable inputs, the researcher in consultation with the research guide made needed modifications.

1.13   Data Gathering Process
The data was collected on the basis of convenient sampling strategy was used to choose 200 respondents.

Patients who were getting admitted were given a Patient Information Sheet. They were informed about the protocol of the research by the researcher. The respondent's demographic data were collected. The researcher collected the data on risk exposure through interview techniques with the help of a Modified Risk Assessment Tool.

Data Analysis Plan
Descriptive Statistics: Frequency and percentage were used to analyze the baseline demographic data.
Inferential Statistics: A Chi-square test was used To determine the association of risk factors with selected demographic variable. Analyzed data was presented in the form of tables and graphs. The level of significance was determined at a 5% level.

Data Analysis
SECTION 1: Frequency percentage distribution of demographic data.

INTERNATIONAL NEUROUROLOGY JOURNAL

Demographic Variables	Frequency	Percentage
Age		
Less than 30 years	8	4%
31-40 years	12	6%
41-50 years	96	48%
51 years & above	84	42%
Marital status		
Married	194	97%
Unmarried	4	2%
Divorced	2	1%
Widow	0	0%
Religion		
Hindu	131	66%
Muslim	59	30%
Christian	10	5%
Others	0	0%
Education		
No formal education	45	23%
Primary education	80	40%
Secondary education	43	22%
Higher secondary education	18	9%
Graduate	14	7%
Others	0	0%
Occupation		
Unemployed	99	50%
Self-employed/business	48	24%
Part time employee	40	20%
Full time employee	13	7%
Others	0	0%
Family Type		
Nuclear family	91	46%
Joint family	101	51%
Extended family	8	4%
Age at Menarche		
Less than 12 years	52	26%
12-14 years	95	48%
15- 17 years	47	24%
Above 17 years	6	3%
Age at Marriage		
Less than 18 years	49	25%
18 - 23 years	98	49%
24 - 29 years	47	24%
30 - 35 years	5	3%

Table 1 The above demographic data consist of Age, Marital status, Religion, Education, Occupation, Family type, Age of menarche, Age of marriage.

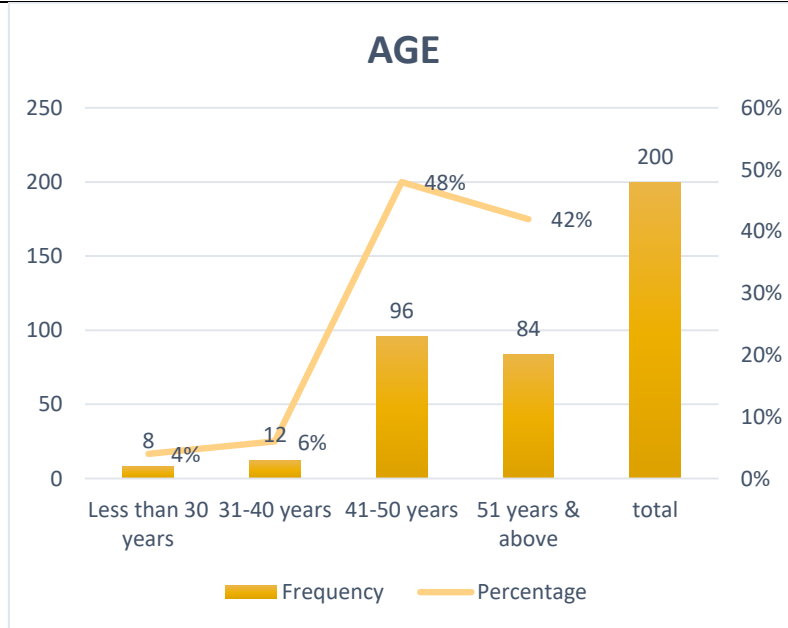**Figure 1: Bar Graph Showing Percentage Wise Distribution According to the Age of the Respondent.**
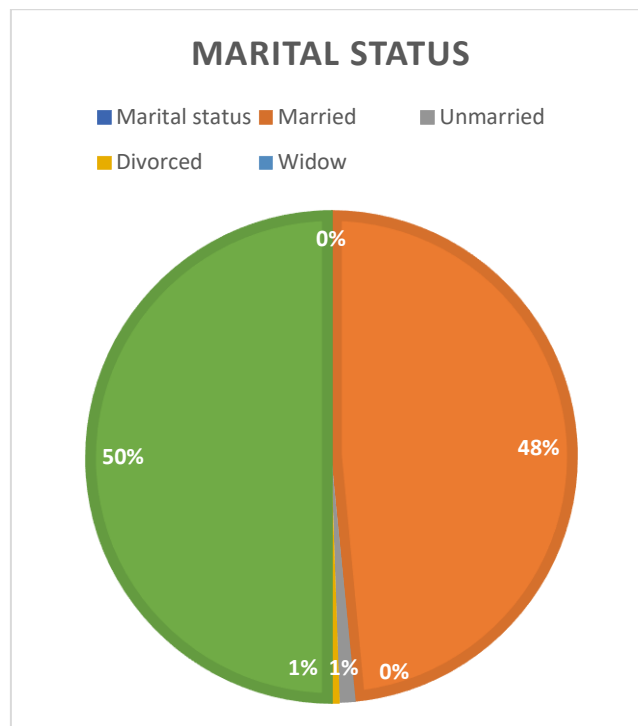

Figure 2: Pie Diagram Showing Percentage-Wise Distribution According to the Gender of the Respondents.
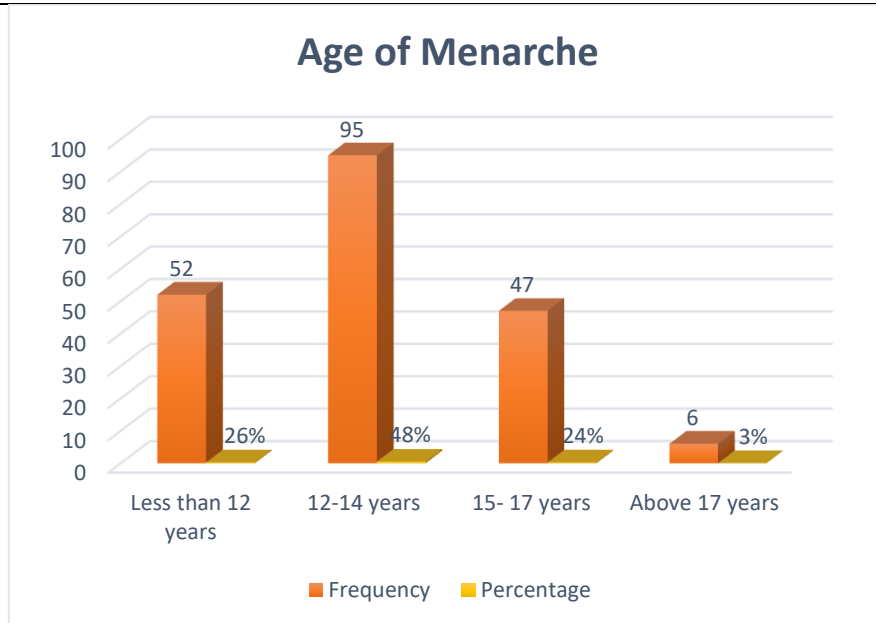
Age of Menarche

Figure 3: Bar Graph Showing Percentage-Wise Distribution According to the Age of Menarche of the Respondents.

SECTION B: Distribution of Data Based on Degree of Exposure to Risk Factors of Breast Cancer

Degrees of Risk Exposure categorization

Sr. No	Degree of risk	Criteria for classification
1	Low	0-25%
2	Moderate	26-50%
3	High	51-75%
4	Prohibitive risk	76-100%

Degree of Exposure to Risk Factors of Breast Cancer

Table No.2

N=200

Sr. No	Degree of Risk for Breast Cancer	Frequency	Percentage
1	Low	141	71%
2	Moderate	37	19%
3	High	22	11%
4	Prohibitive risk	0	0%

Table two reveals that the 71% of the respondent are in low, 19% of the respondent, 11% of the respondent are in moderate degree of exposure to risk factor of breast cancer.

SECTION 3 Association of Risk Factors with Selected Demographic Variable

		RISK FACTORS			
		Total	Value	df	Asymptotic Significance (2-sided)
AGE	Less than 30 years	8	103.253[a]	6	<.001
	31-40 years	12			
	41-50 years	96			
	51 years & above	84			
Total		200			
Marital status	Married	1	52.438[a]	6	<.001
	Unmarried	193			
	Divorced	4			
	Widow	2			
Total		200			
Religion	Other	0	226.362[a]	6	<.001
	Hindu	131			
	Muslim	59			
	Christian	10			
Total		200			
Education	Other	0	267.526[a]	10	<.001
	No formal education	45			
	Primary education	80			
	Secondary education	43			
	Higher secondary education	18			
	Graduate	14			
Total		200			
Occupation	Other	0	272.518[a]	8	<.001
	Unemployed	99			
	Self-employed/business	48			
	Part time employee	40			
	Full time employee	13			
Total		200			
Family type	Nuclear family	91	128.934[a]	4	<.001
	Joint family	101			
	Extended family	8			
Total		200			
Age of menarche	Less than 12 years	52	214.132[a]	6	<.001
	12-14 years	95			
	15- 17 years	47			
	Above 17 years	6			
Total		200			
Age of marriage	Less than 12 years	52	214.132[a]	6	<.001
	12-14 years	95			
	15- 17 years	47			
	Above 17 years	6			
Total		200			

Table 2 Reveals there is no Significant Association between the Risk Factors with the Demographic Data.

Discussion

Interpretations

SECTION A: Analysis of Sample Characteristics in Relation to Demographic Variables

Majority of the study subjects 96(48%) belonged to the age group 41-50 years,194 (97%) of the study subjects were married. Also, majority of the participants ie.,131(66%) were Hindus, and 80(40%) had primary education.Similar study was conducted at Shirdi Sai Baba Cancer Hospital and Research Center, Manipal, Udupi District, 188 participants were included in the study, 94 cases and 94 controls. All the study participants were between 25 to 69 years of age group. The cases and controls were matched by ± 2 years age range. More than 7 to 12 years of education (OR 4.84 CI 1.51-15.46) had 4.84 times risk of breast cancer as compared with illiterate women.

Majority 95(48%) study subjects attained menarche at the age between 12-14 years and 52(26%) subjects reported age of menarche before 12 years. Majority of the samples i.e,98(49%) reported the age of marriage as

18 - 23 years, 49(25%) got married before 18 years and 5(3%) participants reported their age of marriage as after 35years.

SECTION B: Distribution of Data Based on Degree of Exposure to Risk Factors of Breast Cancer
Table no.2 reveals that majority i.e,141(71%) of the study subjects were at low risk of developing breast cancer in relation to their exposure to risk factors whereas 22(11%) were at moderate and 26(13%) were at high risk of developing breast cancer. None of the study samples showed up to be at prohibitive risk for the same. The study finding is contradictory to the findings of study by Yuksel s.et al. in 2017 in which 39.6% of the women considered themselves as high-risk carriers.

SECTION C: Association of Degrees of Exposure to Risk Factors of Breast Cancer with Selected Demographic Variables
As per table no.3, Chi-square test reveals that there is a significant association between the demographic variable age with the degree of risk of developing breast cancer whereas the other selected demographic variables like Marital status, Religion, Education and Age of Menarche had no significant association with the degrees of risk among the study subjects.This finding is contradictory to the study by Ramachandra Kamath et.al 2013, in which the findings showed more than 7 to 12 years of education had 4.84 times risk of breast cancer as compared with illiterate women.

Implications
- Nurses holds a great responsibility in educating and creating awareness among the patients as well as the community.
- Nurses have a key role in preventive aspects than the curative aspect. As in key position, a nurse can take initiation to provide training programme to young women so that they can do early identification and prevent breast cancer by reducing the exposure to risk factors.
- Health education programme can be conducted among various groups (patients, family members, community groups) to foster their preventive measures of breast cancer
- Mass health education programme on preventive measures of breast cancer can be conducted for teenage girls.

Recommendation
Keeping in view the findings of the study, the following recommendations are made:
- A similar study can be conducted on large samples, thereby findings can be generalized for a larger population.
- A comparative study can be conducted in the community area to assess the level of exposure to risk factors among peoples residing at rural and urban communities.
- A study can be conducted about the effectiveness of different teaching strategies in improving the knowledge on risk factors
- A study can be done on effect of self assessment module for breast cancer among middle aged female.

Conclusion
The present study concludes that early identification of risk factors and avoidance of exposure to the risk factors contributing to breast cancer can help in reducing the incidence. Raising general public awareness on the breast cancer problem and the mechanisms to control as well as advocating for appropriate policies and programmes are key strategies of population-based breast cancer control. There are evidences that early detection 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.

References
1. Lippmann ME. Breast Cancer. In: Dan L, Anthony SF, Dennis LK, Stephen LH, Larry J, Joseph L, editors. Harrison's Principles of Internal Medicine.18th edi. The McGraw Hill Companies, Inc. USA. 2012;1:90-5.
2. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, Bray F. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer Clin. 2021:71:209-49.
3. Reddy N, Ninan T, Tabar L, Bevers T. The Results of a Breast Screening Camp at a District Level in Rural India. Asian Pacific J Cancer Prev. 2012;13(12):6067-72

4. Antony M P, Surakutty B, Vasu T A, Chisthi M. Risk factors for breast cancer among Indian women: A case–control study. Niger J Clin Pract2018;21:436-42

5. Sankaranarayanan R, Ramadas K, Thara S et al. (2011). Clinical breast examination: preliminary results from a randomized controlled trial in India. Journal of the National Cancer Institute, 103:1476-1480

6. Njiaju UO, Olopade OI. Genetic determinants of breast cancer risk: a review of current literature and issues pertaining to clinical application. Breast J. 2012 Sep;18(5):436-42.

7. Yüksel, S., Altun Uğraş, G., Çavdar, İ., Bozdoğan, A., Özkan Gürdal, S., Akyolcu, N., Esencan, E., Varol Saraçoğlu, G., & Özmen, V. (2017). A Risk Assessment Comparison of Breast Cancer and Factors Affected to Risk Perception of Women in Turkey: A Cross-sectional Study. Iranian journal of public health, 46(3), 308–317. Available from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5395526/

8. Kamath, R., Mahajan, K. S., Ashok, L., & Sanal, T. S. (2013). A study on risk factors of breast cancer among patients attending the tertiary care hospital, in udupi district. Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine, 38(2), 95–99. https://doi.org/10.4103/0970-0218.112440