



To Estimate the Survival Rate of Women Diagnosed with Breast Cancer

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Problem statement

“To estimate the survival rate of women diagnosed with breast cancer at tertiary care level Hospitals”.

Abstract

Background:

Breast cancer is cancer that develops from breast tissue which is the leading cause of death in India. More than one million new cases of breast cancer are diagnosed in the world every year. In India, more than 100,000 new cases of breast cancer are diagnosed every year with high mortality rate. The major reason for low survival rates of breast cancer in India is that the lack awareness about cancer and its treatment, which causes late detection. AIM:- To estimate the 5 year survival rate of women diagnosed with breast cancer and various factors influencing the survival rate of the women's diagnosed with breast cancer and to find the strength of association of the various variables of breast cancer with survival rate. This will be helpful for early detection and treatment actions, improve treatment and care proposals in the particular areas of health and health care. MATERIAL AND METHOD: - This study was conducted to find out the survival rate of women's diagnosed with breast cancer 5 years back. For this study survival rate was calculated of total 100 samples from august 2012 to Jan 2011 by using retrospective record based study design. These samples were selected by using Non-Probability consecutive sampling technique. STATISTICAL ANALYSIS:- Descriptive statistics, Chi Square Test was used to find the association and statistical significance between each variable. RESULTS:-Results were found that total 65% of women's had their survival for 5 years, and 35% were death before 5 year. The 5 year survival rate was found 90%, 85%, 57.89% & 0% for stage I, II, III, & IV respectively. Also factors like origination of Ca breast, Tumor size, no of lymph node, level of metastasis, stage of cancer and surgery undergone had great impact on survival rate($p < 0.0001$). CONCLUSION: - Although survival rate was dependent on the stage of cancer, there is need to raise awareness about early diagnosis and treatment,

and continue with various studies that deepen the factor that favor more to improve survival, since professionals can become aware of the importance of carrying out health education actions and offer conditions of care appropriate to the needs that may arise during the disease.

Key Words: Survival Rate, Breast Cancer

Introduction

Cancer of breast is the most frequent cancer among women, about 2.1 millions of women are being impacted each year, and also causes the more number of cancer-related deaths among women. In 2018, estimation is done that 627,000 women died from breast cancer – that is approximately 15% of all cancer deaths among women. Developed regions are having more breast cancer rates among women and the rate are increasing in nearly every region globally. To improve breast cancer outcomes and survival, early detection is plays important role. The two early detection approaches for breast cancer: early diagnosis and screening. Due to limited resource settings and weak health care, the majority of ladies are diagnosed in late stages where they should prioritize early diagnosis programs based on awareness of early signs and symptoms of cancer of breast and prompt recommendation should be given to diagnosis and treatment therapy of breast cancer .[1]

It is the most commonly occurring cancer. And considering in women it is a 2nd most common cancer overall. In 2018 there were total 2 million new cases diagnosed with breast cancer. It is researched that there was strong evidence of in taking alcoholic drinks, excessive body fat in whole adulthood, weight gain are the main causes of postmenopausal breast cancer. The Panel also judged evidence that physical activity (including vigorous physical activity) and excessive body fat in young adulthood protect against postmenopausal breast cancer. [2]

The second most common cancer among Indian women is Breast cancer, which accounts for 7% percent of global burden of the disease. Survival rate among the women with a cancer of breast is very poor because most of them start treatment in late stage of the disease. Lack of awareness about the breast cancer and poor facilities of screening programme by health care may be the major reason for delay of treatment.[3]

The main aim was to estimate the 5 year survival rate of women diagnosed with breast cancer and various factors influencing the survival rate of the women's diagnosed with breast cancer and to find the strength of association of the various variables of breast cancer with survival rate. This will be helpful for early detection and treatment actions, improve treatment and care proposals in the particular areas of health and health care.

Need of the study:

Breast Cancer is considered as most common cancer in women in India. Every 4 minutes one woman is diagnosed with breast cancer, in India, and every 8 minutes one woman dies of Breast cancer, in India. As per calculation 70,218 women died of breast cancer in India, for the year 2012, the highest in the world for that year.

The numbers of women being diagnosed with breast cancer is going to increase as India has a predominant and more young population. India is seeing an increase in the cases of breast cancer in the age group of 30 to 50. [4]

By according to the stage (extent) of the cancer the outlooks for women with breast cancer vary. It was also founded that the survival rates are better for women with earlier stage cancers. But, the view for each woman is specific to her situation. Looking at people diagnosed with breast cancer between 2007 and 2013, the numbers below come from the National Cancer Institute's SEER database.[5]

The goal of this study is to know the various factors that influence the survival rate of the women's who has diagnosed with breast cancer. And after knowing the factors that influence survival rates will be helpful for early detection actions, and improve treatment and care proposals in all the areas of health and health care.

Aim of the study: To estimate the 5 year survival rate of women diagnosed with breast cancer.

Objectives

1. To determine the age of diagnosis of breast cancer among women attending tertiary care hospital.
2. To estimate survival rate of breast cancer.
3. Association of Demographic Variable with Survival Rate

Assumption:

Research design: Non-Experimental Retrospective Record Based Study Design was used to achieve the aim of the study.

Subjects and Methods

Research setting: The study was conducted on breast cancer women from the selected hospitals

Subjects: The subjects of the study include women diagnosed by Ca breast confirmed by Histo pathological report (FNAC positive) which consisted of 100 women's

Statistical analysis: The data were computerized and verified using the SPSS (statistical package for social science) version 16.0 to perform tabulation and statistical analysis.

Results

The data was analysed and presented in the following sections:

Section 1:

Distribution of subjects in relation to demographic data.

Section 2:

To estimate survival rate of breast cancer

Section 3:

Association of Demographic Variable with Survival Rate.

Table (1): Distribution of subjects according to socio demographic variable: - (frequency and percentage of demographic data)

Sr no	Socio-demographic variable	Frequency(n)	Percentage(%)
1) age	a) 20-30	5	5 %
	b) 31-40	14	14 %
	c) 41-50	37	37 %
	d) 51-60	27	27 %
	e) 61-70	13	13 %
	f) 71 & Above 71	4	4 %
2) religion	a) Hindu	90	90 %
	b) Muslim	9	9 %
	c) Christian	1	1 %
3) residential background	a) Urban	31	31 %
	b) rural	69	69 %
4) marital status	a) Married	85	85 %
	b) Unmarried	1	1 %
	c) Widow	13	13 %
	d) Divorced	1	1 %
5) type of family	a) Joint	52	52 %
	b) Nuclear	48	48 %
6) educational status:-	a) Higher secondary & higher studies	16	16 %
	b) Secondary	23	23 %
	c) Primary	28	28 %
	d) Illiterate	33	33 %
7) Economic status:-	a) Low	28	28 %
	b) Average	62	62 %
	c) High	10	10 %
8) occupation	a) Housewife	77	77 %
	b) Employed	23	23 %

Table 1 depicts that majority of the women's 37(37 %) of samples belongs to age group 41-50, in terms of religion majority of samples 90 (90 %) were Hindu ,about 69(69 %) were residing in rural area. Majority of samples 85(85%) were married. Near about 52(52 %) lived in Joint family. 33(33%) samples were illiterate, majority 28(28 %) of women came in average economic status and 77(77%) were housewife.

Table (2) Survival rate of breast cancer

Patients existence:-	Result	Percentage
a) Alive	65	64 %
b) death	35	36 %

Graph no 1- Percentage distribution of survival rate.

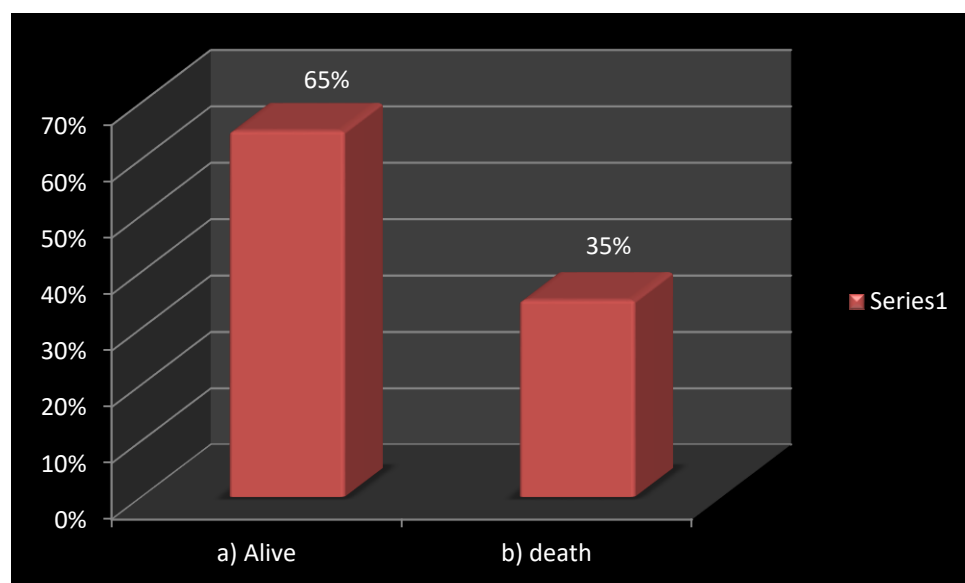


Table 2 and graph no 1 depicts that overall 5 years survival rate was found to be 65% i.e (65 % survived and remaining 35%) were dead of stage I, II, III and IV together respectively.

(Table 3): The following table represents Association of Demographic Variable with Survival Rate

Age	Total		Survived		Death		Chi square	df	P value
	Result	%	result	%	result	%			
20-30	5	5 %	2	40 %	3	60 %	9.008	5	0.1087
31-40	14	14 %	10	71.42 %	4	28.57%			
41-50	37	37 %	29	78.37 %	8	21.62 %			
51-60	27	27 %	17	62.96 %	10	37.03 %			
61-70	13	13 %	5	38.46 %	8	61.53 %			
71 & Above 71	4	4 %	2	50%	2	50%			
Religion									
Hindu	90	90 %	58	64.44%	32	35.55 %	0.5617	2	0.7552
Muslim	9	9 %	6	66.66%	3	33.33%			
Christian	1	1 %	1	100%	0	0%			
Residential background									
Urban	31	31 %	18	58.06	13	41.93	0.5595	1	0.4545
Rural	69	69 %	47	68.11	22	31.88			
Marital Status Of The Women									
Married	85	85	59	69.41%	26	30.58%			

Unmarried	1	1	0	0%	1	100%	6.471	3	0.0908
Widow	13	13	6	46.15%	7	53.85%			
Divorced	1	1	0	0%	1	100%			
Type of family.									
Joint	52	52%	33	63.46%	19	36.54%	0.0050 76	1	0.3198
Nuclear	48	48%	32	66.66%	16	33.33%			
Educational Status:-									
Higher secondary & higher studies	16	16 %	10	62.5	6	37.5	3.508	3	0.3198
Secondary	23	23 %	18	78.26	5	21.73			
Primary	28	28 %	19	67.85	9	32.14			
Illiterate	33	33 %	18	54.54	15	45.45			
Economic status									
Low	28	28 %	16	57.14	12	42.85	1.784	2	0.4099
Average	62	62 %	41	66.12	21	33.87			
High	10	10 %	8	80	2	20			
Occupation									
Housewife	77	77 %	49	63.63	28	36.36	0.0750 8	1	0.7841
Employed	23	23 %	16	69.56	7	30.43			

(Statistical significance is considered - p value > 0.0001) .

For the Comparison of all variables with survival rate i. e for demographic variables, the calculated P value was > 0.0001 in terms of age, religion, residential background, marital status, type of family, educational status, socio-economic status and occupation. This indicated that the demographic variables were not significantly associated with the survival rate of breast cancer.

Discussion:

The present study was conducted to estimate the survival rate of women's diagnosed with breast cancer at tertiary care level hospital and it was a hospital based study. The estimation of survival rate is a very major component as it indicates the effectiveness of various new treatments. In the present study 5 years breast cancer survival rate was founded about 65%. The study conducted by Jenika Ferreira Dias, Natália Silva Martins & et.al(1981) has shown 5 years survival rate to be 61.29% of women's diagnosed with breast cancer[2], also Vahdaninia M, Montazeri A. & et.al (2004) the overall relative 5-year survival rate was found to be 62% [6].

Surprisingly, this observed that of the 37 % of women's belongs to age group 41-50 years, and 27 % of women's belongs to age group 51-60 years. This concluded that the risk of breast cancer is higher in the age from 41 years to 60 years. Also this study showed that as the age increase the survival rate of the women's decreases and also younger age women's had poor survival. Jenika Ferreira Dias, Natália Silva Martins & et.al (1981) [2] , Sant M , Capocaccia R & et.al (1998) [6] said that the women's with 40-49 years at diagnosis had the best prognosis but Women younger than 30 years at diagnosis had a worse prognosis than those aged 30-

Also considering the factor of residential background, 69 % of women's from the rural area were diagnosed as breast cancer and this showed that there is lack of awareness of breast cancer in the rural areas and so more women's suffered with breast cancer. This study also concluded that about 85 % of women's were married and this shows that there is more risk for the married women's to get breast cancer as compared to unmarried women. Also 33% of women's were illiterate, and remaining were literate. This also showed that as the educational qualification decreases from Higher secondary, Secondary, Primary to Illiterate, the survival rate also decreased to 62.5%, 78.26%, 67.85 %, to 54.54% respectively. Similar findings were also observed by Boffetta P, Merletti F & et.al (1993). [7]

Present study showed that about 62 % women came in average economic status and the survival rate was relatively low 57.14% in the women's having lower economic status. This means that there should be more emphasis on free medical treatment for the women's with low socioeconomic status. This study was supported by Magdalena Lagerlund & et.al conducted a study (2005) on Socio-economic factors and breast cancer survival [8].

In terms with association the calculated P value was > 0.0001 in terms of age, religion, residential background, marital status, type of family, educational status, socio-economic status and occupation. This indicated that the demographic variables were not significantly associated with the survival rate of breast cancer.

Conclusion:-

In the present study the survival rate was found relatively good, but then too there is a need to continue the studies about breast cancer and survival that facilitates to improve the survival rate. Also with this study the health care professionals can become more aware of carrying out the health education and offer a care appropriate to it and to determine feasible cost effective public health approaches of early detection to equitable, accessible treatment facilities to control breast cancer.

Recommendations: The following recommendations are suggested:

The main emphasis is to calculate the survival of 7 years, 10 years for large scale in the community.

- 2) The study should be translated in regional languages.
- 3) A similar study can be replicated in different setting to strengthen the findings.
- 4) The study can be replicated with large samples in the same setting for reinforcement.
- 5) Various screening programs can be organized by nursing professionals in the community.
- 6) The same study can be conducted after 5 years to see the improvement in the survival rate.

REFERENCES

1. Preventing cancer - world health organization. <https://www.who.int/activities/preventing-cancer>.
2. Bray F;Ferlay J;Soerjomataram I;Siegel RL;Torre LA;Jemal A; Global cancer statistics 2018: Globocan estimates of incidence and mortality worldwide for 36 cancers in 185 countries, CA: a cancer journal for clinicians. U.S. National Library of Medicine. Available at: <https://pubmed.ncbi.nlm.nih.gov/30207593/>
3. Shinde, S. and Kadam, S. (2016) Breast cancer awareness among women in Vikhroli: A suburban area of Mumbai, Maharashtra, India, Amanote Research. Medip Academy. Available at: <https://research.amanote.com/publication/rqSDAXQBKQvf0BhiH9-F/breast-cancer-awareness-among-women-in-vikhroli-a-suburban-area-of-mumbai-maharashtra>
4. The pink smiles. The Pink Initiative | NGO promoting Breast Cancer Awareness in India. Available at: <https://thepinkinitiative.org/>
5. American Cancer Society: Cancer Facts & Statistics (2017). Available at: <https://cancerstatisticscenter.cancer.org/>.
6. Breast cancer. World Health Organization. Available at: <https://www.who.int/news-room/fact-sheets/detail/breast-cancer>.
7. Dr Halls (2018) Breast cancer statistics, 2019, CA: a cancer journal for clinicians. U.S. National Library of Medicine. Available at: <https://pubmed.ncbi.nlm.nih.gov/31577379/>.
8. Breast cancer - statistics (no date) Cancer.Net. Available at: <https://www.cancer.net/cancer-types/breast-cancer/statistics/2015>.

