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Sociodemographic Status of Breast Cancer Survivors in Chennai

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ABSTRACT

Breast cancer is a life-threatening illness and is the type of cancer most often diagnosed in women. While the survival rate increases with the current option of screening and care, this disease is found in one out of four women. Patients' demographic profile has also had a significant influence on patients' morbidity and mortality, and socio-demographic and clinical factors need to be studied. This research is intended to examine breast cancer survivors' socio-demographic and clinical profile in Chennai, Tamil Nadu, India. Descriptive cross-sectional research was performed at a tertiary care hospital that included 150 breast cancer survivors on therapy with a structured questionnaire to collect data. Participants' mean age was 51.57 ± 9.51 years, 56.67% were overweight, 59.33% had primary education, and 88% were married. Almost all of the participants were semi-urban residents, homemakers and 93.3% received treatment for less than five years and were in the third stage of cancer receiving hormone therapy. Considerably 41.33% of them are living with diabetes as a co-morbid condition. Most of them (76 %) had 4 to 8 hours of sleep. Breast cancer is a public health issue that needs urgent attention. The result will widen the reach for potential researchers and help policymakers prepare exclusive schemes for breast cancer survivors that will increase their quality of life and productivity.

KEY WORDS: BREAST CANCER SURVIVORS, CLINICAL VARIABLES, HORMONE THERAPY, SOCIO-DEMOGRAPHIC VARIABLES.

INTRODUCTION

The most common life-threatening illness among women worldwide is breast cancer. It has a significant effect on

about one in ten women in developing countries and is the primary cause of high mortality (Doyle, 2008). It also accounts for about 30% of the total cases of cancer and 15% of cancer deaths (ASCO, 2019; Siegel et al., 2019). Breast cancer is among the leading causes of disability among older women worldwide (Ginsburg et al., 2017). The cancer burden worldwide has risen to 18.1 million new cases, and 9.6 million deaths were caused by cancer in 2018 (Bray et al., 2018). In India, women are considered at risk of developing breast cancer in their early thirties to fifties. However, the risk of occurrence increases before they hit their optimum by 50-64. As a matter of concern, one in 28 Indian women is likely to develop breast cancer

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during her lifetime, and urban women are also more likely to develop breast cancer (1 in 22) than the rural population (1 in 60). (ICMR, 2001).

Once they have been advised that once you have cancer, your life will change forever, and it might be challenging even to learn anything else beyond that word "cancer." You have been a cancer survivor by this time (East, 2000). For a person, the cancer survivorship journey starts at the time of diagnosis and continues until the end of life (Rogers et al., 2017). An individual diagnosed with cancer is also called a survivor of cancer (ASCO, 2020). Breast cancer is also distressingly debilitating (Payne et al., 1996). Adverse effects associated with mental health, such as sleep disruption, have also been documented both during and after cancer treatment (Sarvard et al., 2001). Breast cancer incidence was associated with residence in urban areas, high age at first childbirth and high level of education in which the urban women were tended to have better survival in comparison with the rural women. Increased incidence and high case fatality were correlated with childlessness, while the high educational level was associated with the lowest case fatality (Robsham et al., 2005). Exposure to various kinds of environmental toxins can also lead to breast cancer (Carbin et al., 2018).

In breast cancer survivors, cancer recurrence has been related to modifiable behavioural factors and clinical and socioeconomic factors that are not modifiable. Obesity (Demark et al., 2012), alcohol intake (Kwan et al., 2010, Simapivapan et al., 2016), hormone replacement therapy (Holmberg et al., 2008), stress (Paresh et al., 2007) and poor physical activity (Lahart et al., 2015, Freidenrich et al., 2016) are lifestyle factors that raise the risk of recurrence of breast cancer (Patterson et al., 2010, Heitz et al., 2018). Clinical factors such as tumour features, hormone receptor status, and primary tumour therapy also predict and do so more strongly than behavioural factors, behavioural factors and socio-demographic and clinical factors have a significant effect on the lives of breast cancer survivors (trialists, 2005, Dent et al., 2007).

Patients with breast cancer survival vary widely depending on a variety of factors, such as age, stage of diagnosis, marital status, level of education, hormonal status, clinical degree of disease, and treatment that contributes to the survival rate of women with breast cancer in India (Sathwara et al., 2017). Despite the growing prevalence of breast cancer, which has been closely linked to socio-demographic factors acting at an early stage in breast cancer identification, no in-depth research has been done so far. The goal of this study is to assess the socio-demographic and clinical profile of survivors of breast cancer.

METHODOLOGY

Study Design and Patients: This was a descriptive cross-sectional study conducted among breast cancer survivors. A total of 150 participants were selected using a

convenience sampling technique among those attending Oncology Department, Tamil Nadu Government multi-super speciality Hospital, Chennai – 02. The inclusion criteria were a) diagnosed as adult cancer patients availing treatment, b) able to understand and speak Tamil and c) attending cancer Outpatient and Inpatient department.

Data collection: Potentially eligible women were informed about the study in their preferred Tamil language, and both oral and written consents were obtained. The data collection was done with a structured questionnaire consisting of socio-demographic and clinical variables questionnaire which includes the age, BMI, educational status, marital status, employment status, family income, type of family, co-morbid conditions, cohabitation status, duration of children and presence of children. About 15 minutes were spent on each participant to complete the tool.

Data analysis: Descriptive statistics were used in which demographic variables in categories were given in frequencies with their percentages.

Ethical Approval: Necessary Ethical approval granted by the Institutional Ethics Committee of Tamil Nadu Govt Multi Super Speciality Hospital vide ref.no:1577/P&D-I /TNGMSSH/2017 /PMS/003/07/2020. The study also registered with India's clinical trial registry: CTRI/2020/08/027291.

RESULTS AND DISCUSSION

The socio-demographic and clinical variables are considered specific in the disease's occurrence and for enhancing their survival rates. The results of the socio-demographic variables (Table 1) in our study are as follows Among the Breast Cancer Survivors who participated in our study, the age of the participants was, a majority of (34.67%) patients were between 51–60 years, 30.67% patients were between 41–50 years, 20.00% patients were between 41–50 years, and 14.67% patients were between 30–40 years. The mean age of the patients was 51.57 ± 9.51 years (Figure 1). The present study findings correlated with a study conducted by Sathwara JA et al, 2017 in which age of patients ranged from 21 to 89 years with a mean age of 49 years.

The body mass index of the participants were (56.67%) belongs to overweight, 27.33% were under the category of healthy weight, 12% belongs to unhealthy overweight and only 4% of them are underweight (Figure 2). It is consistent with the study of (Chan D.S.M et al, 2014) who concluded that higher the weight leads to the lesser chance of survival. The study findings highlighted that the most of the participants (59.33%) had undergone their primary education, 19.33% had an informal education, 14.67% of them had their higher secondary education and only 6.67% of them were graduates (Figure 3) In terms of their marital status, mostly all the participants (88%) were married, 5.33% of them were single and only 3.33% were divorced. As a part of religion, majority of

(82%) them belongs to Hindu religion,(10%) belongs to Muslims and 8% belongs to Christianity. Based on the place of residence, they predominantly were from semi

urban habitat (62.67%).36% of them were residing in urban area whereas only 2(1.33%) of the reside in rural areas (Figure 4).

Table 1. Socio Demographic Variables Of Breast Cancer Survivors

Demographic variables		Number of patients (n=150)	%
Age group	30-40 years	22	14.67%
	41-50 years	46	30.67%
	51-60 years	52	34.66%
	61-70 years	30	20.00%
Body mass index	Underweight	6	4.00%
	Healthy weight	41	27.33%
	Overweight	85	56.67%
	Unhealthy overweight	18	12.00%
Education status	Informal education	29	19.33%
	Primary education	89	59.33%
	Higher secondary education	22	14.67%
	Graduate	10	6.67%
	Professional	0	0.00%
Marital status	Married	132	88.00%
	Divorced/separated	5	3.33%
	Partnered/significant other	2	1.33%
	Single	8	5.33%
	Widow	3	2.00%
Religion	Hindu	123	82.00%
	Muslim	15	10.00%
	Christian	12	8.00%
Residential area	Urban	54	36.00%
	Semi urban	94	62.67%
	Rural area	2	1.33%
Employment status	Full time	3	2.00%
	Retired, not working at all	4	2.67%
	Part time	2	1.33%
	Retired, working part time	0	0.00%
	Full time home maker	122	81.33%
	Laid off /un employed	4	2.67%
	Disabled	0	0.00%
	Self employed	5	3.33%
	Students	0	0.00%
	Others	10	6.67%
Monthly income	< Rs 5000	42	28.00%
	Rs 5000 - Rs 10000	84	56.00%
	> Rs 10000	24	16.00%
Type of family	Nuclear family	123	82.00%
	Joint family	27	18.00%
	Extended family	0	0.00%
Co morbid disease conditions	Nil	87	58.00%
	Arthritis	1	0.67%
	Osteoporosis.	0	0.00%
	Asthma	0	0.00%

Continue Table 1

	Congestive heart failure	0	0.00%
	Heart attack	0	0.00%
	Stroke /TIA	0	0.00%
	Neurological diseases	0	0.00%
	Diabetes mellitus	62	41.33%
	Hypertension	0	0.00%
Cohabitation status	Lives alone or with one other person	50	33.33%
	Stays with two or more other persons	63	42.00%
	Stays with five or more other persons	37	24.67%
Duration of marriage	Nil	8	5.33%
	Less than or equal to 10 years	6	4.00%
	More than 10 years	119	79.33%
	Unknown	17	11.33%
Children	Yes	131	87.33%
	No	19	12.67%

Figure 1: Age Distribution of Breast Cancer Survivors

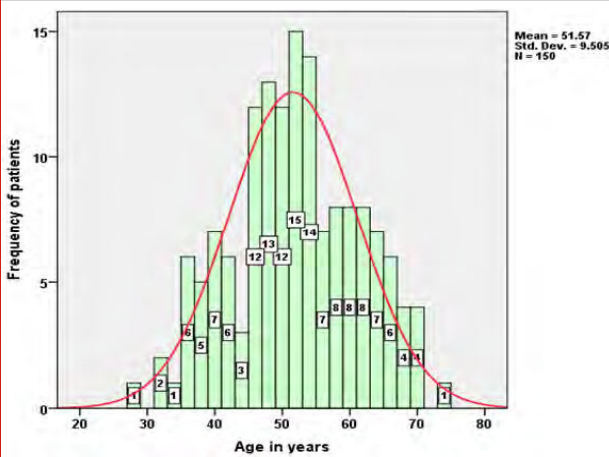


Figure 2: Bmi of Breast Cancer Survivors

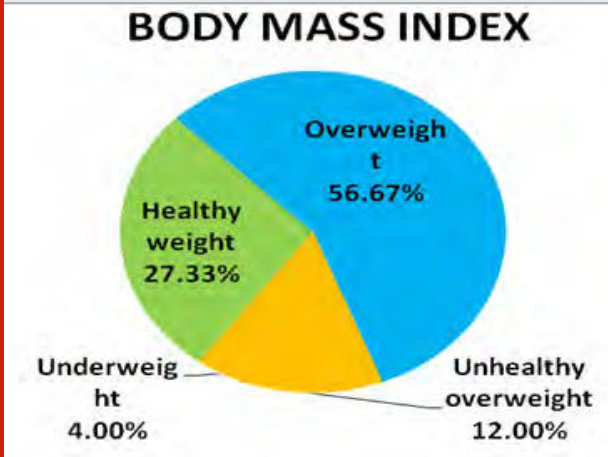


Figure 3: Education Status of Breast Cancer Survivors

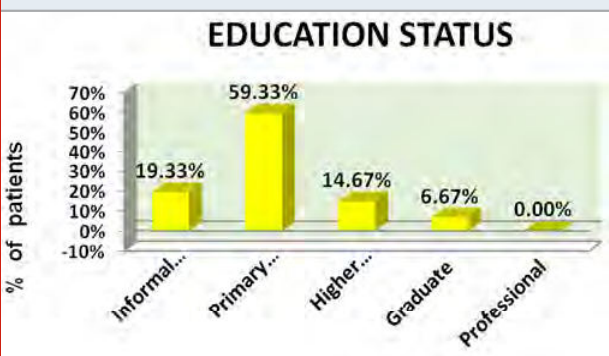
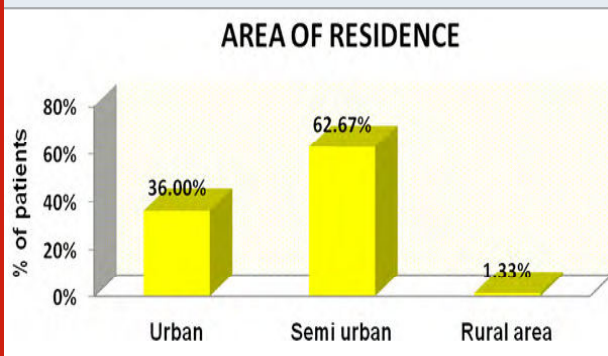


Figure 4: Area of Residence of Breast Cancer Survivors



Most of the participants (81.33%) were full time home makers whereas unemployed and retired persons belongs to 2.67% respectively, 2% of them are working on full time basis ,1.33% of them were part time workers and others significantly contribute (6.67%). The level of monthly income of the participants were mostly (56%) in the income range of Rs 5000 – Rs 10000, 28% of them were < Rs 5000 and only 16 % of them were > Rs 10000. About 82% of the participants were living in nuclear family whereas only 18% of them belongs to joint family

and none of them belongs to extended family. Most of the participants (58%) do not have any co morbidities, whereas nearly (41.33%) half of them were affected with diabetes mellitus which in turn deteriorates their general health.

The study findings enlightened that the diabetes will increase the mortality rate among breast cancer survivors and decrease their survival (Stephanie s et al,2018). Based on the cohabitation status, most of the participants of

(42%) were lives with two or more persons, 33.33% of them lives alone or with only one person and 24.67% of them lives with five or more persons along with them. Based on the clinical variables, majority of (93.33%) of the participants were diagnosed with breast cancer of less than five years whereas 6.67% of the participants were diagnosed more than five years and their survival rate was as such respectively (Figure 5). With regard to the stages of breast cancer ,61.33% of them were in Stage III,20.67% were in stage IV,12.66% of the participants had an reoccurrence of the disease,4.67% were having stage II of breast cancer but considerable proportion(0.67%) o comes under stage I (Figure 6).

Figure 5: Duration of Survivorship of Breast Cancer Survivors



Figure 6: Stages of Cancer of Breast Cancer Survivors

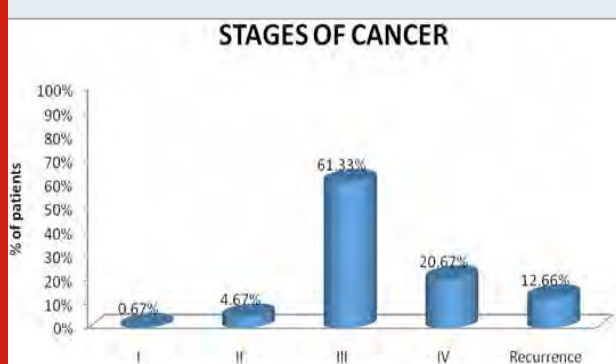
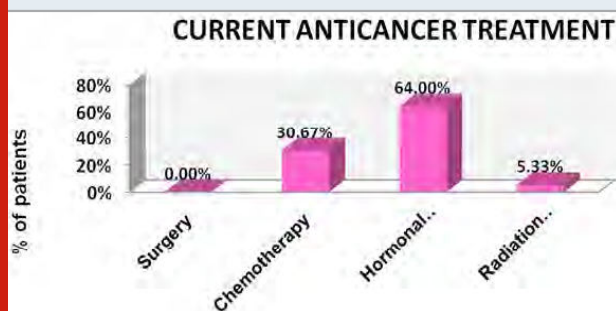


Figure 7: Current Anticancer Treatment of Breast Cancer Survivors



Most of the breast cancer survivors (50%) had cancer on their right side breast whereas 48% of them were with left sided breast cancer and only 2% of them were affected on

both sides. The breast cancer survivors were undergoing various treatments that includes 64 % of them on hormonal therapy, 30.67% were under chemotherapy and 5.33% of them under radiation therapy. Regarding their performance level, most of (92%) the participants were able perform their activities independently whereas 8 % of them were partially dependant on others for their needs fulfilment. Majority of the (76%) participants sleeps for a period of 4 to 8 hours per day whereas 24 % of the participants sleeps less than 4 hours a day but no one sleeps more than 8 hours.

The sleep problems were consistent with the study by Chan YN et al, 2021 which depicts breast cancer survivors were affected by sleep disorders. The study conducted by Prusty et al the quality of life of breast cancer survivors are hence related to clinical variables such as treatment regimen, performance status, adequate sleep and its risk was 8 times higher among unmarried women, 3 times more among nulliparous women .Breast cancer among urban women which increased with increase in proportion of overweight or obese. Its also found that most of the breast cancer cases were confined to women aged 40–49 years, home makers and upper economic strata group (Prusty et al, 2020)

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Conflicts of Interest: There are no conflicts of interest.

Recommendations:

1. Based on the study result, the nurse investigator should focus on obtaining baseline data before starting any intervention.
2. The generalization of the study results can be made further replication of the studies in various settings and larger population.
3. The basic needs of breast cancer survivors can be associated with the socio demographic factors.
4. The early detection and prevention of breast cancer can be done based on the demographic data.
5. Baseline data will help the policy makers to implement appropriate schemes for cancer survivors

CONCLUSION

The leading cause of death due to malignancy in women is breast cancer and it is a public health issue that needs urgent attention. This research included information on breast cancer survivors as a baseline. Even though the study is limited to minimal participants(150), it helps the future researchers to plan for their further research and to provide quality care for breast cancer survivors. The findings help policymakers to plan the intervention scheme and specific planning time based on preventive measures for breast cancer and the allocation of specific resources, together with this to overcome the burden of disease, it must be regularly checked for the speedy recovery of clients as early as possible.

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