Original Research Article

A Study on the Alternative Supportive Care Adopted By Breast Cancer Patients and Its Association with Socio-Demographic Characteristics: A Cross-Sectional Study in a Tertiary Care Centre, Gujrat

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Abstract:

Background: The incidence of breast cancer is rising rapidly and risk factors associated with it. Medical and surgical methods are available to cure Breast cancer however; many patients turn to alternative supportive care before reaching to hospital or after experiencing the side effect of conventional breast cancer treatment.

Objective: To study the various alternatives supportive cares adopted by breast cancer patients and its association with socio-demographical & patients characteristics in a tertiary care centre, Gujrat.

Methodology: This was hospital based Cross-Sectional Study in the tertiary care cancer and research institute situated in Central Gujarat. 215 breast cancer patients were included in the study using Convenient Sampling method from the pool of patient visiting hospital for treatment over a year.

Results: No evidence was found statistically significantly related to any addiction, occupational radiation or opportunistic infection among them. 82% patients suffer from various Co-morbid conditions like Hypertension, Diabetes etc. Among the study population 74(34.4%) breast cancer female adapted/ tried alternative supportive care.

Conclusions: Nearly half of the patients were 41 to 50 years old and nearly 50% was illiterate. Co-morbid conditions like Hypertension, Diabetes etc. Less than 1/4th of patients do have family history of breast cancer among their near ones.

Keywords: Breast-cancer, Medical Care, Surgical Treatment, Hospital.

Introduction

Breast cancer is the second-leading cause of cancer death for women worldwide and affects one in eight women (after lung cancer). The incidence of breast cancer is increasing quickly in India due to changes in reproductive risk factors, nutritional habits, and rising life expectancy, all of which are acting in conjunction with hereditary variables. This is due to epidemiologic shift.

Breast cancer is one of the most crucial illnesses for women to be aware of, not only because it is a common or deadly condition but also because it is a huge worry for many women even if they do not have the condition.[1] While some data indicate that factors related to women's knowledge and beliefs about breast cancer and its management may significantly influence medical help-seeking behaviours, other data indicate that older women in developed countries are more likely to delay their presentation with breast cancer.[3-5] When advanced stages are present, which affect 70% of Indian women, little to no gain from medication can be expected, leading to low survival rates and high fatality rates.[6]

However, the processes involved in raising one's own awareness of their own breast cancer risk are intricate and may include a variety of elements, such as psychological, spiritual, and cognitive factors (such as knowledge and beliefs about cancer), past experiences with cancer, and physiological factors like a history of benign breast disease.[7] The anticipation of a cure is just one of the numerous needs that patients with breast cancer have. Additionally, whether treating an early-stage disease or an advanced-stage disease, patients need

symptomatic control, which includes managing pain, nausea and vomiting, psychological distress, and other symptoms. There is a need to accomplish all of these objectives that goes outside the purview of scientific medicine. Supportive care is a complementary form of cancer treatment that focuses on treating the whole patient—body, mind, and soul. When standard breast cancer therapy has adverse effects, many people seek out alternative supportive care. Patients can utilise nutritional supplements and mind-body techniques to treat symptoms, promote overall wellness, and give them a greater sense of control.[8]

As a result, the current study aimed to comprehend the many forms of alternative supportive care utilised by breast cancer patients and its relationship with sociodemographic and patient characteristics in a tertiary care setting.

Material and Methods:

Study Design: A hospital based Cross-Sectional Study

Study area: Study was conducted in tertiary care cancer and research institute situated in Central Gujarat in one of the largest cities of Gujarat.

Study Duration: September 2016 to August 2017

Sample Size: There were total 1947 patients of breast carcinoma registered in a year 2015-16, as per Hospital Based Cancer Registry (HBCR) at the study site. The sample size was calculated using the Open-Epi software (5) using the formula:

n = [DEFF*Np(1-p)]/ [(d 2 /Z 2 *(N-1) +p*(1-p)] where:

Zα for 5% α error is 1.96,

P = 85%; Percentage of patients using alternative medicines;[6]

(1 – P) = 0.15, L = Allowable error = 5%.

Using, this formula at 95% Confidence interval derived sample size is 196; adding 10% of this and rounding up total 215 patients were included in the study.

Sampling Method: To select the women with breast cancer convenient sampling method was used. Women with breast cancer admitted for chemotherapy or surgical treatment or radiotherapy and minimum 6 months should have been completed after detection of the cancer at GCRI hospital, Ahmedabad was selected.

Inclusion criteria:

Female patients detected for breast carcinoma admitted in hospital for chemotherapy or surgical treatment or radiotherapy. Minimum 6 months should have been completed after detection of the cancer.

Exclusion criteria:

Male breast cancer patients, patients visiting OPD for diagnosis and those who severely ill were not included in this study.

Data collection:

Informed consent was obtained from the patients. The permission from the Hospital was taken and information was collected using semi-structured, pre-tested tool to collect information on Socio demographic details, Personal history regarding diet and addiction, Obstetrics and gynaecological history, Past and Family history related to breast cancer, Investigation and treatment history and related to Alternate supportive care.

Statistics:

Data was entered into MS Office- Excel 2007 and analysis was done in Epi info version 3.7.1. Chi square test were used to test statistical significance.

Results:

The sample's age range, as shown in Table 1, is 28 to 75 years old. The age range of 41 to 50 years saw the highest percentage of female cancer patients (46.5%). The average age was 47.26 years (SD: 9.59). A majority of women (82.3%) who are married work as homemakers, are nearly half (45.6%) illiterate, and are primarily from socioeconomic classes IV and V (73.5%). The participants' personal histories revealed that 5.6% of the patients had disclosed addiction histories, the majority of which involved tobacco chewing. However, one-third of females occasionally ingest eggs. Only 3.3% of female workers were exposed to radiation in their line of work, and only 5.1% of them reported having experienced an opportunistic infection. According to the participants' obstetric histories, 69.1% had one or less children. Women took oral contraceptive tablets at a rate of 33.8% overall. 11.0% of the study group's participants had never breastfed a child. 9.0% of respondents who were married reported being infertile. With 35.0% of patients having a history of hypertension and 29.0% of patients being diabetes, co-morbid conditions are common in our participant group. Family history revealed that 15.8% of the sample had a history of breast cancer, with 23.5% of the women having a first-degree relative who had the disease. Case fatality was reported to be 8.8% among those family members. Among the participants, 71.2% express their complaints about lumps first, while 15.8% list breast pain as their main issue. 95.8% of the participants in the research had unilateral breast cancer. Breast cancer with a left location is most frequently diagnosed (60.5%).

According to Table 2, the most common modality of treatment for patients with breast cancer is a

combination of surgery, chemotherapy, and radiotherapy (38.2%), which is followed by just surgery and radiotherapy (17.2%). 74 (34.4%) females with breast cancer in the study population adopted or tried alternate supportive care. Women who underwent medical or surgical procedures favoured foods rich in antioxidants and other ingredients that boost immunity, such as fruit and fruit juice. Following therapy, a high percentage of subjects consumed diets high in protein, and this diet modification was found to be statistically significant. (P< 0.05 for the chi-square test) The majority of patients (84.2%) reported overall weakness throughout treatment, followed by body discomfort (81.8%). According to Table 3, among them, Ayurvedic treatment (21.4%) was the most popular alternative care they adopted. Table 4 displays the majority of people who used alternative supportive care were under 50 (39.2%) and were literate (47.0%). Age and reading level were both statistically determined to be significantly correlated with this attribute ($\chi2=4.25$, $\chi 2=18.02$, respectively, $p<0.05$). The majority of users (70.0%, 53.7%) and users who were not recently married (30.0%) both belong to social classes II and III, which was also determined to be statistically significant when compared to non-users. ($P<0.05$, $\chi2=20.79$, respectively). Alternative care was discovered to be prevalent among patients who lived in cities and in residential settings.

Table 1: Socio-Demographic detail of patients with breast cancer visiting tertiary care hospital in central Gujarat (N=215)

Age (in years)	Frequency (N=215)	Percentage (%)
≤30	07	3.2
31-40	37	17.2
41-50	99	46.0
51-60	53	24.7
61-70	18	8.4
≥71	01	0.5
Education		
Illiterate	98	45.6
Primary	56	26.0
Secondary	49	22.8
High-school	08	3.7
Under-graduation	03	1.4
Post-graduation	01	0.5
Occupation		
Homemaker	183	85.1
Labourer	28	13.0
Professionals	04	1.9
Marital status		
Married	177	82.3
Divorcee/ Separated	18	8.4
Widowed	15	7.0
Unmarried	5	2.3
Religion		
Hindu	178	82.8
Muslim	26	12.1
Others	11	5.1
Social-Economic class		
Class- I	06	2.8
Class- II	10	4.7
Class-III	41	19.0
Class –IV	94	43.7
Class –V	64	29.8

*Socio-Economic Status According to Modified Prasad's classification

Table 2: Treatment history of patients with breast cancer visiting tertiary care hospital in central Gujarat (N=215)

Type of Treatment	Frequency	Percentage (%)
Surgery	23	10.7
Chemotherapy	12	5.6
Radiotherapy	19	8.8
Surgery + Chemotherapy	39	18.1
Surgery + Radiotherapy	37	17.2
Surgery +Chemotherapy+ Hormonal	03	1.4
Surgery +Chemotherapy + Radiotherapy	82	38.2

Table 3: Alternative supportive care adopted by patients with breast cancer visiting tertiary care hospital in central Gujarat (N=215)

Supportive Care	Frequency	Percentage (%)
Naturopathy	22	10.2
Ayurveda	46	21.4
Yoga	14	6.5
Homeopathy	11	5.1

*Multiple responses were included.

Table 4: Characteristic of Alternate Supportive care users and Non- users among the breast Cancer patients and its association with Socio-demographic factors (N=215)

Characteristics	User N (%)	Non-user N (%)	χ^2 p value
Age group			
≤50	56 (39.2)	87 (60.8)	χ^2=4.25
>50	18 (25.0)	54 (75.0)	p<0.05*
Education			
Illiterate	19 (19.4)	79 (80.6)	χ^2=18.02
Literate	55 (47.0)	62 (53.0)	p<0.05*
Occupation			
Home-maker	59 (32.2)	124 (67.8)	χ^2=2.58
Working	15 (46.8)	17 (53.2)	p>0.05
Marital Status			
Married	54 (30.0)	123 (70.0)	χ^2=6.78
S/D/W	20 (52.6)	18 (47.4)	p<0.05*
Social class			
Class- I	4 (66.7)	2 (33.3)	χ^2=20.79
Class- II	7 (70.0)	3 (30.0)	p<0.05*
Class-III	22 (53.7)	19 (46.3)	
Class –IV	31 (33.0)	63 (67.0)	
Class –V	10 (15.6)	54 (84.4)	

*Statistically significant

Discussion:

The average age of participants in this study was 47.26 (9.59) years. Similar results were found in studies conducted by Vinod Raina et al.[9] in New Delhi and Navneet Kaur et al.[10]: in Delhi, India. The mean age group in the study conducted in Malaysia by Noor Mastura Mohd Mujar et al.[11] was 53, which was comparable to the study conducted by E. Tautz et al.[12], which had a mean age of 56 years.

According to sociodemographic information, the majority of survey participants (54.4%) were from literate backgrounds. Amgiasvasanth A. M., Pushpa S. Patil reports that 76.5 percent of the study subjects in a study conducted in Dharwad, Karnataka, were literate. [13] Similar results were found in research conducted in Turkey by Abdurahman Kuzhan and Mustafa Adli with a (52.3%) literate study population. [14] More than 80.0% of the breast cancer patients in the study who were female were Hindu, married, and housewives. Pushpa S. Patil discovered (82.7%) married Hindu women in an Amgiasvasanth A. M. study conducted in Dharwad, Karnataka.[12] In Massachusetts, according to research by Harold J. Burstein et al., 60.0% of women were married.[15] 75% of the participants in a Scottish study by Gill Hubbard et al. were married women. Only 4.5% of women in the same Scottish research were housewives. [16]

According to the modified Prasad classification, the majority of respondents (43.7%) belonged to

socioeconomic class IV. Patients from socioeconomic class II (60.59%) make up the majority of respondents in a study conducted at Dharwad, Karnataka, by Amgiasvasanth A. M. and Pushpa S. Patil.[12] According to the data, 23.0% of breast cancer patients were from outside Gujarat state and 60.0% were from rural areas. Abdurahman Kuzhan's study found that Mustafa Adli (19.4%) patients come from a rural background.[14]

38.2% of patients had treatment that included surgery, chemotherapy, and radiation. Surgery alone was 10.7%, Surgery and Chemotherapy was 18.1%, and Surgery and Radiotherapy was 17.2%, respectively. The most popular kind of complementary supportive care is ayurvedic (21.4%), followed by naturopathy (10.2%) and yoga (6.5%). Nearly 3/4 of patients received some sort of alternative supportive care regimen in addition to allopathic treatment.

In research by Harold J. Burstein et al.[15], where roughly 38.8% of the participants had alternative therapy, a similar observation was made. Breast cancer patients in a Malaysian study by Noor Mastura Mohd Mujar et al.[11] received alternate supportive therapy; of these, 30.3% used naturopathy while 1.8% used Ayurveda. Additionally well-liked for people with breast cancer is yoga. 6.5% of the participants in my study practised yoga, which was comparable to the 5.0% of participants in a Malaysian study by Noor Mastura Mohd Mujar et al. [11] But only 1.0% of people, according to a study by Nurfaizah Saibul et al.[17], practise yoga for the same reason. The patients in my study did not favour naturopathy alone as an alternate kind of supportive therapy. In Heather Greenlee et al., it was 5.8% as opposed to 10.2% in this case.[18]

Numerous studies have discovered a statistically significant relationship between a number of breast cancer patient characteristics, including age, education level, marital status, and socioeconomic status, and their use of alternative therapy modalities. [11,12,17,19,20,21] In stark contrast, a Canadian study by Bahadir M. Gulluoglu et al.[22] reveals that the number of complementary and alternative medicine users who receive any type of treatment is disproportionately high, particularly among those who receive chemotherapy and radiotherapy and is statistically significant. Since alternative healthcare options were more widely accessible in metropolitan areas, there were more users there than in rural areas. The statistical significance of this result was established by ($\chi2$ =10.3 p < 0.05, respectively). However, this relationship with occupation was statistically insignificant.

Conclusion:

Younger individuals who are literate and members of high socioeconomic classes who are single, widowed, or divorced have used one or more alternative care treatments. In addition, urban areas use supportive care more frequently than rural areas. The most popular kind of alternative supportive care was ayurvedic therapy.

Considering alternative supportive care as a developing area in healthcare, it is essential that doctors, especially oncologists, have knowledge of alternative supportive treatment. The function of alternative supportive care should be discussed with patients by oncologists, and patients should be encouraged to take part in alternative supportive care.

Limitations of the study: The study was carried out in one hospital; hence the results may not be generalized to the whole population.

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