
Manuscript Title:

Assess the prevalence for needs of breast cancer survivors' in the oncology ward at a selected tertiary care hospital



Abstract: The unmet needs of breast cancer survivors are not being addressed as the number of survivors continues to climb.

Aim and Objective: To determine the prevalence of post-treatment unmet needs and association between unmet needs of breast cancer survivors with selected demographic variables. A descriptive research study was conducted in a tertiary care hospital's oncology outpatient clinic and wards.

Material and Method: Data was gathered in two sections: I – baseline data, and section II – Modified needs assessment questionnaire. 35 needs were categorized as physical, emotional, family, spiritual, practical routine, and sexual relationship needs, with 'Yes' scored as '1' and 'No' scored as '0'. Data was collected for one month. Data tabulation and analysis was done. **Result:** The majority of BCS had a monthly income of Rs.3000-10000/- (50.8%) and menopause had occurred in 54 (45%) of the women under the age of 45. Majority 65 (78%) did not have health insurance, whereas 42 (35%) had it. Majority 108 (90.33%) breast cancer survivors had high level of needs, whereas 12 (10%) had moderate level of needs. High physical needs reported by 87 (72.50 %) and 32 (26.67%) moderate physical needs. All 100% BCS reported high emotional need. Whereas 2(1.67%) less need, 14(11.67%) moderate, 56 (46.67%) high needs and 48 (40%) very high reported family and spiritual need and 39 (32.5 %) BCS reported moderate level of practical needs. Participants 14(11.67%) less needs, 39 (32.50%) moderate, 22(18.33%) high and very high 8(6.67%) reported practical needs. 100% of breast cancer survivors (BCS) reported physical includes Hot flashes, a change in appetite or eating pattern. Family and spiritual requirements of BCS were found to be strongly related to age, P 0.036. Age, education, occupation, income, stage of cancer, and health insurance are not associated with the overall and physical needs of breast cancer survivors ($p > 0.05$).

Conclusion: Breast cancer survivors' needs are more prevalent and have an impact on quality of life, prognosis, and recovery of clients. Real, appropriate assessment of breast cancer survivors needs is an important steps in development of need base intervention to improve quality of life. As a result, health care providers should address the needs of BCS patients as soon as possible in order to make better use of scarce health resources.

(Key Words: Breast cancer survivors, Prevalence, Needs and Tertiary Care Hospital)

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1. INTRODUCTION

As breast cancer becomes more prevalent as a chronic disease, a rising number ,approximately half of patients between the ages of 25 and 40 are diagnosed,¹ which is an alarming trend with the increased life expectancy of up to ten years. In the year 2020 there were 2.3 million women diagnosed with breast cancer and 685 000 deaths occurs globally. At the end of 2020 there were 7.8 million women's alive, which were diagnosed with breast cancer in the last 5 years.

Breast cancer survival has improved as diagnosis and therapy have progressed. According to research, quality of life declines once the breast cancer treatment is completed. After breast cancer therapy, there is no clear guideline for breast cancer survivors. During this survival period breast cancer survivors face many problems after completion of treatment .²

In Indian women's the needs were physical needs includes fatigued , Hot flashes, pain , insomnia, practical needs were help in household activities emotional needs includes fear of recurrence, isolation , depression and it requires family support, counseling and emotional support needs. ³ Older breast cancer survivors have much higher level of psychological needs may be due to fear of recurrence linked with depression.⁴

Younger breast cancer survivor after breast cancer surgery for less than a year have higher unmet need in all domain except for the sexuality domain.⁵⁻⁶ financial informational is the basic needs of breast cancer survivors as the cancer treatment leads financial Burdon on the family . Studies have shown unemployed group of breast cancer survivors had higher levels of unmet needs.

Breast cancer survivors after breast cancer surgery for less than a year after surgery higher unmet needs in all need domains except for the sexuality domain. Patients who survived for 1-3 years had much higher psychological and information needs. Unmet needs were linked to depression and quality of life ⁶ uncertain about the future, fear about the spreads of cancer, feeling of sadness, death and dying , concern about family. Psychological needs had poor association with QOL.⁷

The middle age group 46-53 years old had significantly higher levels of needs that the older group as these younger age have many family responsibility .Unemployed group had higher level of needs as they lack of social networking , interpersonal relationship ,emotional stability. ⁸⁻⁹

According to studies, needs differ depending on the stage of breast cancer. In the first and second stages, it is necessary to control the acute therapeutic adverse effects while also maintaining physical function. Those with advanced cancer, whose treatment may cause adverse effects, have a higher risk of recurrence and it is difficult to perform daily activities, leaving individuals with growing demands. During and after diagnosis, they may require housekeeping assistance, family support, counselling, emotional support, and financial assistance. People with breast cancer in India pray to God to relieve them from curses and evil spirits, believing that disease is caused by God's curse on the elderly and evil spirits.³ Maximum with cancer believed that spirituality help them to strengthen their hope.¹⁰ Breast cancer survivors needs for information on signs and symptoms of cancer recurrence.¹¹

In western countries breast cancer survivors are reported to have high levels of unmet needs for 'psychological problems' but in Eastern countries the level of unmet needs for 'information and education' is found to be high. ^{12,13}

Following primary treatment for breast cancer, women are left with a variety of demands that affect their quality of life. In India, there is a lack of literature to determine the needs of breast cancer survivors. There was a strong desire to explore the unmet needs of breast cancer survivors and redesign their life. Real, appropriate assessment of breast cancer survivors needs is an important steps in development of need base intervention to improve quality of life. Hence the study undertaken to explore the prevalence for needs of breast cancer survivors.

2 Objectives

To determine the prevalence of post-treatment unmet needs and association between unmet needs of breast cancer survivors with selected demographic variables.

3 Methodology

Descriptive research study design was chosen. The research was carried out in oncology wards and tertiary care hospitals' outpatient departments. The study used a non-probability sampling method. Out of 147 participants 120 had given consent to participate in the study .

3.1 Participants

The research included a breast cancer survivor who met inclusion criteria and was willing to participate in the study. The study included 120 breast cancer survivors (with first, second, or third stage breast cancer) who were above the age of 18 and were completed primary treatment in the form of radiation, chemotherapy, or surgery. They also had to be able to read and understand Marathi, Hindi, and English. The study excluded breast cancer survivors with psychological illnesses or cognitive deficiencies, as well as survivors with hearing or visual impairments.

3.2 Data Collection Period

The data collected for Fifteen month period (1 October 2019 to 30 January 2021).

3.3 Ethical Permission

The research proposal was approved by the Research Review Committee (RRC) and the Institutional Ethical Committee (IEC), and ethical permission was obtained. The permission of the competent hospital authority was acquired in order to conduct the study. The participant's written informed consent was obtained and were reassured about the data's confidentiality.

3.4 Tools and Technique

A literature review was used to create the breast cancer survivor needs assessment questionnaire, which was then validated by experts in the field. The research was conducted using a paper pencil technique. The tool is divided into two sections: Section I – baseline data – was prepared, as were Sections II and I – two-point modified needs assessment questionnaire. Thirty-five unmet needs were divided into five domains: physical, emotional, family,

spiritual, practical, routine, and sexual relationship needs, each with its own questionnaire. The participant's response, which was either "Yes" or "No," determined the item's score. If BCS responds "Yes," you will receive a one (1), and if BCS responds "No," you will receive a zero (0). Unmet needs were categorised together because the overall score was 35. For unmet needs, the score was added up and converted into a percentage. If the score was (0-9) "0-25 % less needs" were identified, (10-18) 26-50 % of "moderate needs" were identified, (19-27) 51-75 % of "high needs" were identified, and "very high prevalence needs" were identified if the score was (28-35) 76-100%. The tool was prepared in the regional language of Marathi. To determine the tool's validity, experts were consulted. The tool's reliability was tested, and it was found to be $r=89$.

3.5 Data collection Process

The concerned authorities granted permission for the data acquisition. Participants were chosen, the environment was made comfortable for participants, and the researchers explained the study's goal. Informed written consent was obtained. A tool was provided, and the participant was instructed to fill in the relevant information. The Structure questionnaire was provided to measure unmet needs, and participants were asked to check the boxes next to the statements that applied to them. The form was given enough time to complete (40–50 minutes), and forms were collected by the researcher after they were completed. Participants were greeted for their contribution and valuable information and were assured of its anonymity and confidentiality. Data was collected for one month. Data tabulation and analysis was done.

4 Result

4.1 Baseline data: According to the study's findings, 50 (41.66 %) of breast cancer survivors were under 45 years old, while 70 (58.33%) were over 45. The participants' average age was 52 years old. In total, 58 (48.33 %) of the BCS had graduated from high school. The maximum number of home makers was 52(43.33 %). Then comes a daily wage of 33(27.5 %). The majority of BCS had a monthly income ranging from Rs.3000 to Rs.10000/- (50.8 %).

4.2 Reproductive history: Menopause had affected 54 (%) of women under the age of 45. The BCS has 98 married people (81.66 %), 44 participants (41.12%) had two children.

4.3 Medical history: Our study reported that 90% of participants had no history of breast cancer in their family, 95% never had a personal tumor before. The diagnosis period for all BCS was 1 to 2 years. The bulk of them had stage I cancer (72.50%), while 33 (27.50%) had stage II cancer. Chemotherapy (99.17%), Radiation Therapy (96.67%), Surgical Treatment (63.33%), and (44.7%) of breast cancer survivors received hormone therapy. A modified mastectomy was performed on 42.10 % of the BCS. No participants reported comorbidity .

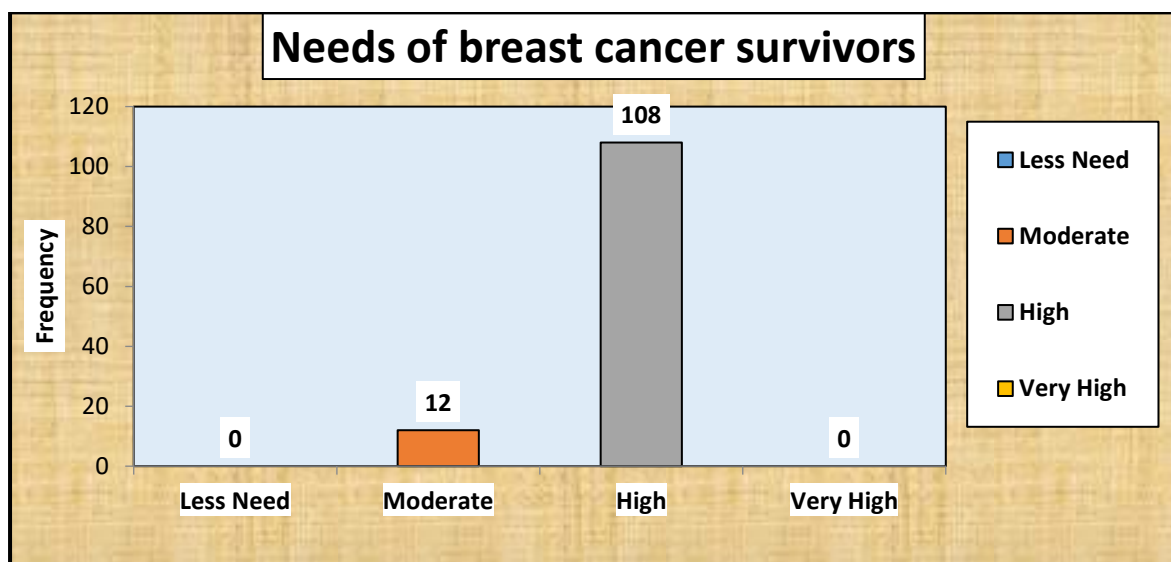
4.4 Personal History: A total of 65.83% of them do not take calcium and vitamin D supplements on a daily basis. The majority of BCS (78%) did not have health insurance, while 42 (35 percent) did.

Sr.No	Variable	Groups	Frequency	Percentage
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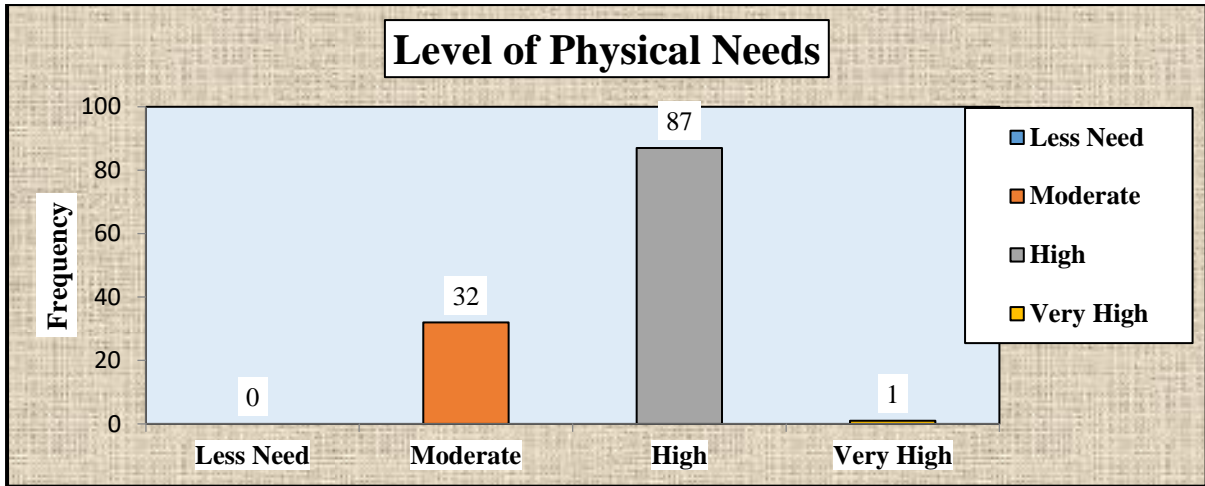
		18-22	1	0.83
1	Age	23-26	3	2.50
		27-31	10	8.33
		32-36	8	6.67
		37-45	28	23.33
		45-50	32	26.67
		above 50	38	31.67
		Post-Graduation	16	13.33
2	Education	Graduation	26	21.67
		Secondary	58	48.33
		Primary	20	16.67
		Business	15	12.50
3	Occupation	Service	20	16.67
		Home maker	52	43.33
		Daily Wages	33	27.50
		Rs.3000/- - Rs. 10000/-	61	50.83
4	Monthly Income (In Rupees)	Rs.11000/- - Rs. 20000/-	22	18.33
		Rs.21000/- - Rs. 30000/-	14	11.67
		Rs.31000/- & Above	23	19.17
	Reproductive History			
5	Age at menopause	Below 45	54	45.00
		Above 45	39	32.50
		Not yet achieved	27	22.50
6	Marital Status	Single	12	10.00
		Married	98	81.67
		Widow	10	8.33
		None	21	19.63
7	No of Children	One	15	14.02
		Two	44	41.12
		Three	40	37.38
	Medical History			
8	Family History of Breast Cancer	Yes	12	10.00
		No	108	90.00
9	Past personal Tumor History	Yes	6	5.00
		No	114	95.00
10	Stage of cancer	Stage I	87	72.50
		Stage II	33	27.50
11	Treatment received	Chemotherapy	119	99.17
		Radiation Therapy	116	96.67
		Surgical Treatment	76	62.50

		Hormonal Therapy	53	44.17
		Mastectomy	23	30.26
12	Surgical Treatment	Modified Mastectomy	32	42.10
		Axillary lymph node dissection	21	27.63
13	Duration of treatment	6mon -1Year	4	3.33
		1-2Years	116	96.67
		Diabetes Mellitus	0	0.00
		HTN	0	0.00
		Myocardial Infarction	0	0.00
14	Medical Comorbidity	Renal Diseases	0	0.00
		Anaemia	0	0.00
		Liver disorder,	0	0.00
		Musculoskeletal disorder	0	0.00
		None	120	100.00
	Do you regularly take either of the following Calcium & Vitamin D supplements	Yes	41	34.17
15		No	79	65.83
16	Do you have health insurance	Yes	42	35.00
		No	78	65.00

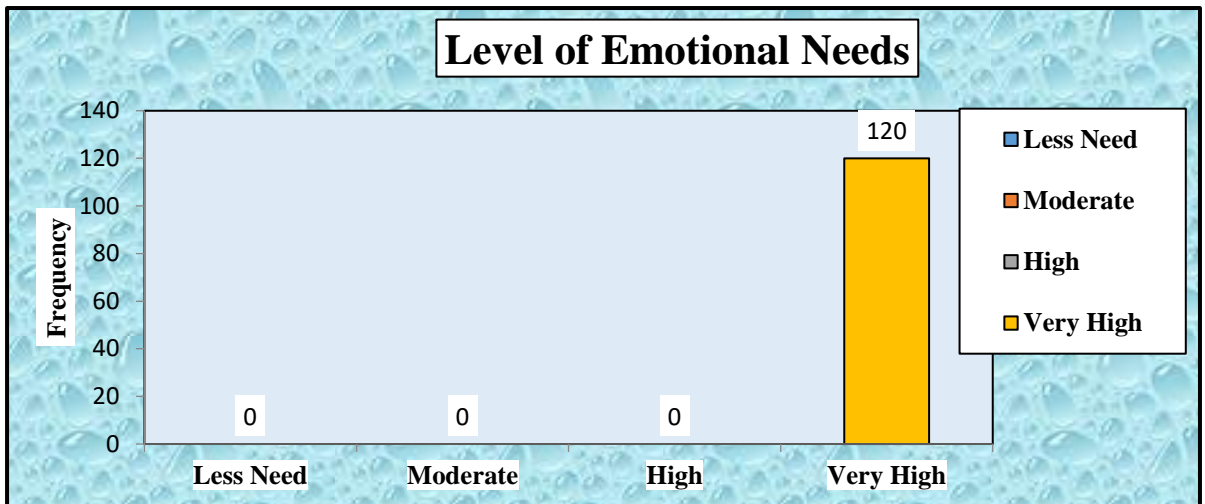
4.5 Needs of breast cancer survivors



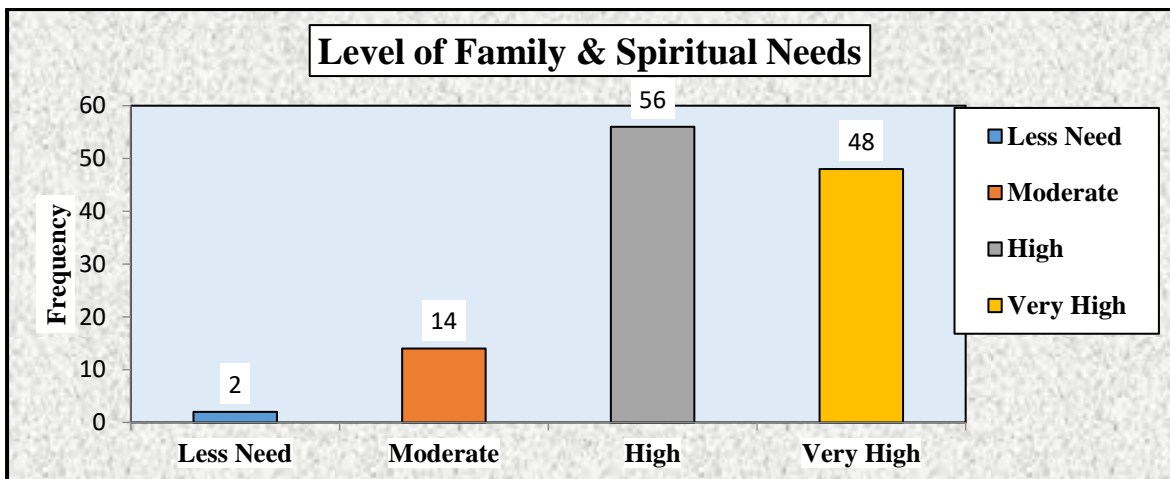
A) Level of overall unmet needs of BCS



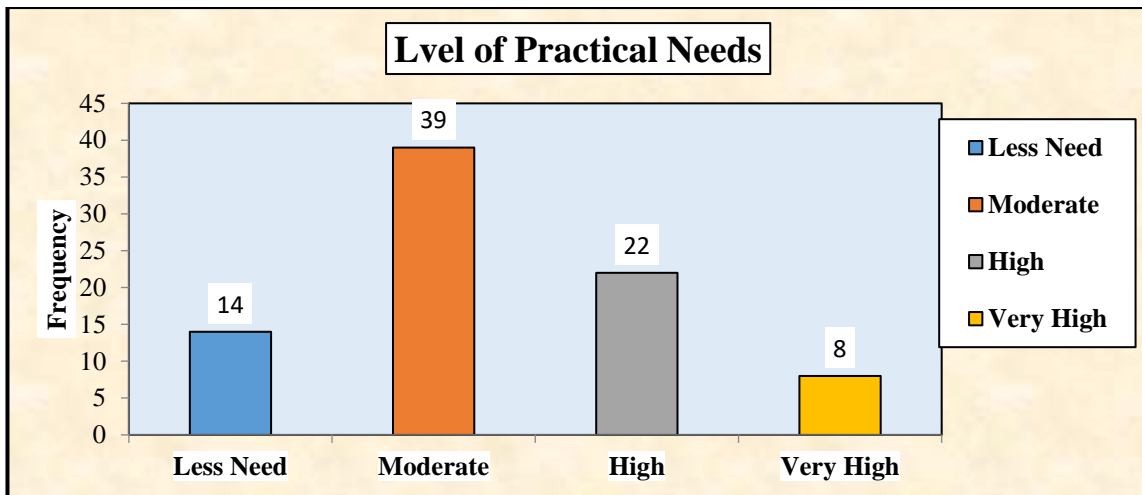
B



C



D



E

Fig. No.1. Categories of Levels of unmet needs for Breast cancer survivors (A)Level of overall unmet needs of BCS, (B) Levels Physical Needs ,(C) Levels Emotional needs,(D) Levels Family and spiritual needs and (E) Levels Practical Needs.

Needs of breast cancer survivors present study majority 108 (90.33%) breast cancer survivors had high level of needs, where as 12 (10%) had moderate level of needs. High physical needs reported by 87 (72.50 %) and 32 (26.67%) moderate physical needs. All 100% BCS reported high emotional need. Whereas 2(1.67%) less need, 14(11.67%) moderate, 56 (46.67%) high needs and 48 (40%) very high reported family and spiritual need where as 39 (32.5 %) BCS reported moderate level of practical needs. Participants 14(11.67%) less needs, 39 (32.50%) moderate, 22(18.33%) high and very high 8(6.67%) reported practical needs.

Overall, the mean was 21.31 ± 2.38 , with bodily requirements being 10.46 ± 1.76 , emotional needs was 4.81 ± 0.40 , family and spiritual needs becoming 3.26 ± 0.78 , and practical needs was 2.78 ± 1.11 , respectively. Among physical needs hot flashes were experienced by 68% of the participants. 81 %of BCS stated that strenuous activity causes them to become fatigued. During exertion, 53 % reported feeling out of breath. 53% pain on strenuous activity. 78% of those BCS said their sleep had been disturbed. 55% had dry, itchy or sore skin. 32% find change in your body weight which was increase. Tingling in the hands and feet were experienced by 33 % of BCS. No one reported that they suffered from any other health problem. 99% reported a change in appetite or eating pattern, whereas 59% had issues from indigestion. Diarrhea or constipation impacted 86 % of the subjects. A cough was mentioned by 18 % of those assessed. 45 reported breathlessness on activity. 81% experienced a change in their personal appearance.70% sore or dry mouth. 50% reported they occasionally experience nausea or vomiting. 56% noticed the difference in taste. 65% have trouble communicating with others. 32 %t of people noticed an upsurge in their body weight. 18% of those respondents admitted having sexual dysfunctions and had not yet sought counselling. Majority 100 % BCS reported emotional needs which included worry anxiety, feeling sad or depression , anger ,frustration, or guilt problem, lowliness and isolated needs were at the top. Whereas 81% reported sexual concern's needs.

Family and spiritual needs the majority BCS had positive family relations with 93% of children and 92 % of partners. In contrast, 85 % said they had positive relationships with others. A loss of hope or other spiritual concern was expressed by 50% of BCS respondents. 5.8% of respondents think they have lost their sense of meaning or purpose in life. Whenever it comes to cooking preparations or cooking, 53% of participants stated they have trouble remembering things Practical needs Majority BCS females reported 32% problems at work or education. 33% said they have problems for making activity plans. Less than half of BCS reported that have get adequate information. 19% replied that sometimes they have problems with bathing and dressing. All the BCS reported problem with housing or finance. 53% replied get trouble while preparing food.

Table No.1. Mean and SD of Needs of Breast Cancer Survivors (N=120)

	Physical	Emotional	Family Spiritual	&	Practical	Over all Need
Mean	10.46	4.81	3.26		2.78	21.31
SD	1.76	0.40	0.78		1.11	2.38

4.6 Association with Demographic Variables

The Chi-square was used to see the association between demographic variables with the level of needs. The test was conducted at 5% level of significance, assuming the null Hypothesis, that there will be no significant association between levels of needs with demographic variables. Age, education, occupation, income, stage of cancer, health insurance is not associated with the overall and physical needs of breast cancer survivors ($p > 0.05$). Age 0.32 Education P 0.41, occupation P 0.034, income P 0.16, and cancer stage P 0.37 and Health Insurance 0.89 were discovered to have no significant associations. The family and spiritual requirements of BCS were found to be strongly related to age P 0.036. A chi - squared test was not possible since all of the samples had such strong emotional needs. Practical needs of Breast Cancer Survivors had significant association with education, occupation, monthly income and stage of cancer as P value less than 0.05 level of significance.

Table No.2. Association of Needs of Breast cancer survivors with selected demographic variables (N=120)

Variables	Age	Education	Occupation	Income	Stage of Cancer	Health Insurance
Over all Needs of Breast cancer Survivors						
Chi Square	6.99	2.85	3.33	5.12	0.78	0.016
d.f	6	3	3	3	1	1
p value	0.32	0.41	0.34	0.16	0.37	0.89
S/NS	NS	NS	NS	NS	NS	NS
Physical Needs of Breast Cancer Survivors						
Chi Square	16.32	1.21	7.05	5.61	1.35	1.09
d.f	12	6	6	6	2	2
p value	0.18	0.98	0.32	0.47	0.51	0.58
S/NS	NS	NS	NS	NS	NS	NS
Emotional Needs of Breast cancer survivors	All sample had very high emotional need , hence cannot conduct chi square test					

Family and spiritual Needs of Breast Cancer Survivors						
Chi Square	30.14	6.16	11.79	9.42	7.73	6.55
d.f	18	9	9	9	3	3
p value	0.036	0.72	0.23	0.4	0.052	0.09
S/NS	S	NS	NS	NS	NS	NS
Practical Needs of Breast Cancer Survivors						
Chi Square	15.24	29.72	20.68	20.68	8.28	5.38
d.f	18	9	9	9	3	3
p value	0.65	0.00	0.014	0.014	0.041	0.15
S/NS	NS	S	S	S	S	NS

5. Discussion

To determine the prevalence of post-treatment unmet needs and association between unmet needs of breast cancer survivors with selected demographic variables . majority BCS had High school education findings are opposite to Napoles AM et al. (2020 Jul), 80% had less than a high school education. ¹⁴ Maximum BCS were house wife and daily wages findings are corresponds with the Nitin Gangane et al. 2017 study, 62% were the wife's. ¹⁵According to Neelam Sharma's findings, 75% of the respondents had a low socioeconomic status study findings corresponds to present study¹⁶. According to Suhani S. et al. (2020), 50 % of post - menopausal women 39 (32.5%) of those who participated were over the age of 45 current findings corresponds with the study¹⁷.

Present study found 81.66% women were married findings were congruent with Nitin Gangane et al. A 2017 study the majority of participants, or 83.6%, were married ¹⁴. Current study found that 90% of participants had no family history of breast cancer, similar findings were reported by Suhani S. et al. (2020)15% of the participants had a family history of BC ¹⁷. Yan B et al. 2016 reported that approximately 89 percent of participants had mastectomy and surgical treatment, which corresponds with the current study. Participants had some form of health insurance with a low co-payment¹⁸.

Needs of breast cancer survivors: In the present study, the majority of breast cancer survivors had high levels of needs, whereas 10% had moderate levels of needs. Maximum BCS reported high to moderate physical needs. 100% of BCS participants reported having a high level of emotional need. Whereas 40% of BCS reported very high levels of family and spiritual needs, 32.5% reported moderate levels of practical needs. The current study findings, which are similar to those of Zubaida Edib et al. (2016), reveal that physical domain had the highest unmet supportive care needs and the

psychological domain had the lowest 78.6 % were uncertain about the future, 76.1 % were afraid of cancer, 69.2 % were sad, 68.4 % were afraid of death, and % were depressed. ¹²

Physical needs includes hot flashes, strenuous activity causes them to become fatigued. During exertion, feeling out of breath, pain on strenuous activity, sleep had been disturbances, dry, itchy or sore skin. Find change in your body weight which was increase due to lack of physical activity. Tingling in the hands and feet were experienced by 33 % of BCS. No one reported that they suffered from any other health problem. Maximum reported a change in appetite or eating pattern, whereas maximum had issues from indigestion and Diarrhea or constipation. A cough and breathlessness on activity. Experienced a change in their personal appearance, sore or dry mouth. Experience nausea or vomiting. Noticed the difference in taste. Unmet physical and emotional needs are very common in breast cancer survivors.¹⁹ Similar findings were reported by Marta Capelan 40% survivors reported at least one physical need followed by emotional need. ²⁰

Study reveled that younger age below 45 years had moderate to high level of physical needs, high to very high level of family and spiritual needs where as moderate level of practical needs but very high level of emotional needs. As the family responsibility demands the attention of BCS hence the needs are more prevalent. Our study finding similar with Byung Joo Chae et al and Emmanuel Joseph Fong et al.^{8,9}

Lower education (Primary and Secondary) level had moderate to high to very high level of physical ,family and spiritual needs and moderate level of practical needs than higher education levels .But Very high emotional needs were reported by the BCS . Current study findings are similar with Fiszer C that lower education levels report greater unmet needs.¹²

Occupation: Housewives and daily wage BCS workers had a moderate level of practical needs. Practical needs were found to be strongly associated to the occupation. In comparison to working BC, homemakers expressed strong physical, family, and spiritual needs. Being younger was linked to having more practical needs. When it comes to cooking preparations or cooking, practical needs, inability to remember what is in the kitchen. Getting into trouble while cooking. Due to the treatment and visiting schedule, there may be difficulties in making activity plans at work or in school. Only around half of the people got enough information.

BCS had a high level of emotional need. Younger respondents reported having sexual dysfunctions in addition to emotional needs such as concern, anxiety, sadness, depression, anger, frustration, or guilt problems, with isolated needs accounting for the largest. When it came to sexual or body image, the results were similar. Vaginal dryness has been associated with a lower quality of life.^{21,22,23}

The needs of family and faith: :The vast majority of BCS had good relationships with their children and partners. On the other hand, they reported having positive relationships with others. As respondents

believe they have lost their sense of meaning or purpose in life, they are concerned about a lack of hope or other spiritual concerns. Similar findings were reported by Wong KF.²⁴

The lower income groups had moderate to high levels of physical need, whereas they had a high to very high level of family and spiritual need and a moderate level of practical needs. BCS had poor health insurance coverage. Health insurance was not associated with demographic variable but overall health insurance unmet need was high.

As compared to the second stage of BCS, the first stage reported a high level of physical need, very high family and spiritual needs, and a moderate level of practical requirements. When it came to the first and second stage of breast cancer, practical needs were important.

Health care professional must pay attention towards physical, psychological and practical, and family and spiritual unmet needs of the breast cancer survivors. Supportive need base intervention should be provided to improve quality of life.

6. Conclusion

Breast cancer survivors' needs are more prevalent and have an impact on quality of life, prognosis, and recovery of clients. Hence, needs can be satisfied by undertaking support programme, receiving written information or use of low cost self –management resources .Hospital Authority can implement counselling sessions, information display boards, and training to health care providers for identify unmet need and address the needs appropriately for better recovery.

7. Significance of the Study

It will aid in the planning of need-based interventions and the provision of comprehensive care to breast cancer survivors beyond treatment completion. This will aid in a better prognosis and recovery. The findings will contribute to a better understanding of the needs of breast cancer survivors.

8. Conflict Of Interest

There is no conflict of interest.

9. Limitation of the Study

Samples were from one Tertiary care hospital with a specific geographical area hence generalization to whole country is not possible, smaller sample size with purposive sampling technique. Self-reported data might have influence the result through participants' bias. Needs were limited other needs should be studied for making health policies. Such type of study can be undertaken at large scale at country level to overcome the limitation.

10. Conflict of Interest

Authors have no conflicts of interest to disclose.

11. Source of Funding

The Author did not receive any type of funding for current study from external sources.

12. Acknowledgement

Author would like acknowledge and to thanks to all who have supported for conducting this study Dr.Sunil N. Mhaske Dean Medical college and hospital for granting the permission to conduct the study.

13. Competing Interest

Authors have declared that competing interest exist.

14. Authors Contribution

In the above study author 1. Designed the study proposal, conducted the study and statistical analysis, literature searches, and wrote the first draft of the manuscript. Author 2. Literature searches, reviewed and managed the analysis of the study, Reads and approved the final manuscript. Final Manuscript is finalized by both the author.

15. Consent

Written informed consent were taken regarding their willingness for participation in the study and they were told that their participation in the study is voluntary and informed that they can withdraw from the study at any point of time. Detail explanations regarding study and its objectives, were given to study subjects. Subjects were assured anonymity and confidentiality of data given by them at the time of outcome dissemination.

16. Ethical Approval

All authors hereby declare that study is approved by Institutional Ethical and have the therefore been performed in accordance with the ethical standards.

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