

# A Study to Assess the Effectiveness of Self Instructional Module for Improvement in Quality of Life of Breast Cancer Patients

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## ABSTRACT

**Introduction:** The mortality and morbidity due to breast cancer has been a concern in the health care settings. Breast cancer is the most common form of cancer in females which requires early diagnosis and intervention.

**Materials and methods:** An experimental study was conducted in two Hospitals of New Delhi at LNJP Hospital and Safdurjung Hospital. The sample size was 150. The tool consisted of a structured questionnaire (demographic, knowledge, practice, attitude, stress and quality of life). The breast cancer patients who participated in the study were given a pre test and Self Instructional Module on Breast Cancer and its management was administered. Four post tests were conducted on 7<sup>th</sup>, 30<sup>th</sup>, 90<sup>th</sup> and 180<sup>th</sup> day. An opinionnaire on acceptability of the SIM was administered on the last post test day.

**Results:** There was a significant difference between the mean of pre test and post test scores. 't' value between the pre and post test scores of knowledge and practice areas highly significant, and attitude and stress scores with quality of life was not significant. There was no association between knowledge and practice scores with age, education, family history of breast cancer and prior experience in care; However there was association between attitude with education; stress with education and prior experience in care, and quality of life with family h/o of breast cancer and prior experience in care.

**Conclusion:** The study concluded that the SIM was effective in enhancing the knowledge, practice, attitude, stress and quality of life of breast cancer patients regarding breast cancer and its management and there was a high level of acceptability of SIM by the breast Cancer patients.

**Key words:** Breast cancer, knowledge, practice, attitude, stress and quality of life.

## INTRODUCTION

Breast cancer incidence rates are increasing worldwide, yet the relatively well established risk factors account for no more than 50–55% of the breast cancer risk among westernized populations. The major risk factors of breast cancer are family history of breast cancer, menarche before 12 years of age, menopause after 55 years of age, nulliparity or first child after 30 years of age, lack of or short-term breast-feeding, obesity, alcohol intake, excessive exposure to the ionizing radiations between puberty and 30years of age, personal history of

breast cancer, oral contraceptive use, hormonal dysfunction, stress, unhealthy lifestyle, race long-term use of hormone replacement therapy (HRT), ovarian hormones, particularly estrogens, physical activity, etc. <sup>(1)</sup>

Breast cancer is the most common form of cancer in women. Each year 1.1 million cancers are diagnosed around the globe. The annual worldwide incidence of breast cancer has almost doubled since 1975. International comparisons of disease rates by area and time of diagnosis can provide important clues to the underlying

causes of the diseases and the effects of natural or planned interventions, and serve as indicators of the scope for preventive strategies. There is at least 10 fold variation in breast cancer incidence rates worldwide, as a consequence of large range of socio-economically correlated differences in the population prevalence of several reproductive, hormonal and nutritional factors. <sup>(2)</sup>

Studies of quality of life indicate the directions needed for more efficient treatment of cancer patients. Among the quality of life studies in cancer patients, breast cancer has received most attention for several reasons. First, the number of women with breast cancer is increasing. It has been reported that each year over 1.1 million women worldwide are diagnosed with breast cancer and 410,000 die from the disease. Secondly, early detection and treatment of breast cancer have improved and survivors now live longer, so studying quality of life in this context is important. Thirdly, breast cancer affects women's identities and therefore studying quality of life for those who lose their breasts is vital. In addition, it is believed that females play important roles as partners, wives, and mothers within any family. Thus, when a woman develops breast cancer, all members of family might develop some sort of illnesses. In fact, breast cancer is a family disease. Other reasons could be added, but overall it is crucial to recognize that with increasing improvements in medicine and medical practice during recent years studying quality of life for any cancer, for any anatomical site and for either gender is considered highly relevant. A descriptive study of the published papers (230 articles) on non-biomedical outcomes (quality of life, preferences, satisfaction and economics) in breast cancer patients, covering the literature from 1990 to 2000, found that the most frequently reported outcomes were health-related quality of life (54%), followed by economic analyses (38%), and patient satisfaction (14%). Only 9% measured patient preferences.

Breast cancer surgery including conservative surgery followed by irradiation, and modified radical mastectomy or radical mastectomy followed by immediate reconstruction is associated with different side-effects including pain, and fatigue and thus affecting quality of life in breast cancer patients.

In order to reduce the risk of recurrence and death, breast cancer patients usually receive systemic therapies (chemotherapy, hormonal therapy and biological treatments) after surgery. Several studies evaluated quality of life in breast cancer patients receiving systemic therapies. Chemotherapy has considerable effect on quality of life of breast cancer patients. In a study of postoperative adjuvant chemotherapy in primary node positive breast cancer patients (one or more axillary node), women receiving a single agent or a multi-drug regimen indicated that the treatment was 'unbearable' and 'burdensome'.

The diagnosis of breast cancer and its subsequent treatment has significant impact on the woman's physical functioning, mental health and her well-being, and thereby causes substantial disruption to quality of life (QOL). Factors like patient education, spousal support and employment status, financial stability etc., have been found to influence QOL in the breast cancer patient.

In India, comprehensive cancer care is provided in the tertiary care centres and due to fewer numbers of such centres there are ever increasing patient load on each of them. Most patients present in locally advanced stage and achieving a good survival is still a priority. However, a few attempts have been made to comprehend and address the psychological and social needs of cancer patients.

The psycho-social taboo regarding breast cancer is a major cause why the majority of women never come for treatment in early stages.

In India, almost 80 percent of patients are in advanced stages when they

come to hospitals, whereas in the West the number is just 20 percent. Many times social taboos regarding breast cancer prevent women from talking to their friends and families, let alone doctors.

The need of the hour is to create awareness and bring out a media campaign on this disease so that there's an acceptance and awareness about the disease and its cure. Doctors point out that treatment techniques are also reaching new dimensions. The treatment of breast cancer has developed greatly these days. For similar-sized lumps in different patients, different medications are given these days. Even the treatment has become highly specific. Earlier techniques like restructuring were used, but now breast conservation is the treatment of choice, Hooda added.

For women over 40, doctors advise an annual checkup by a doctor and self-examination every month. But for women with a genetic history of cancer, regular checkups are a must once they turn 35 years of age.

Breast cancer is one among the few cancers that can be cured completely, but the treatment needs proper planning. The major issue pertaining to the treatment of breast cancer is that it is considered a simple form of cancer that can be treated in every hospital by any physician – and that is a misconception. It should be handled by an oncologist. The facilities available at health centres from where a patient receives treatment are also very important.

### **OBJECTIVES OF THE STUDY**

- 1) To assess the knowledge of breast cancer patients before and after administration of SIM.
- 2) To assess the practice of breast cancer patients before and after administration of SIM.
- 3) To assess the attitude of breast cancer patients before and after administration of SIM.

- 4) To assess the stress of breast cancer patients before and after administration of SIM.

- 5) To assess the quality of life of breast cancer patients before and after administration of SIM.

- 6) To evaluate the effect of SIM on the gain in knowledge, practice, attitude, stress, quality of life score of Breast Cancer patients and their after exposure to SIM.

- 7) To find association between knowledge, practice, stress, attitude & quality of life of breast cancer patients after administration of SIM with

Age, Education, Family history of breast cancer and Prior experience with breast cancer patient care.

- 8) To determine acceptability of SIM.

### **METHODOLOGY**

Research Design was experimental research. Research approach was One group pre –test, post-test quasi experimental design was selected for the study by including the Self Instructional Module as an intervention among breast cancer patients. (O1 x O2, O3, O4, O5). The conceptual framework is based on Callista Roy's General System Theory.

Research Setting was the hospitals selected for the pilot study was AIIMS and final study was Safdarjung hospital and LNJP New Delhi. Population:- The population comprised of female breast cancer patients after diagnosis by physician and attending day care centre of oncology department of above said institutes.

Sample size was 150 Subjects, and sampling technique - Purposive sampling technique. Sampling criteria for inclusion included ambulatory patient (breast cancer); > 25 year of age; literate; available during data collection period at day care centre and willing to participate. Exclusion criteria included unwilling to participate; not available during the period of data collection period; has undergone same type of study and those included in pilot study.

### Variables under study were

**Dependant variables:** Changes in patients in terms of knowledge, practice, attitude, stress and quality of life.

**Independent variables:** Treatment with SIM on breast cancer.

**Extraneous variables:** Age, Educational Level, Family History of breast cancer, Prior experience in Care of person with cancer.

### Research hypothesis

**H 1 – H 5 :-** There will be a significant difference between the means of pretest and post test knowledge, Practice, Attitude, Stress and Quality of life scores of breast cancer patients who exposed to SIM as measured by structured questionnaire/interview schedule, at 0.05 level of significance.

**H 6 – H 10: -** There will be a significant association between post test knowledge, Practice, Attitude, Stress and Quality of life score of breast cancer patients with regard to age, educational level, family history of breast cancer and prior experience with breast cancer care at 0.05 level of significance on day 7, 30, 90 and 180.

Extensive literature review was done on literature related to women suffering from breast cancer related to breast cancer; quality of life and development, use and evaluation of Self Instructional Module (SIM).

Data collection tool & technique: consisted of structured questionnaire/ interview schedule of six parts: Part A: Demographic Data (31 items); Part B: Knowledge Data.(30 items); Part C: Practice Data (18 items); Part D: Attitude Data(15 items); Part E: Stress Data (25 items); Part F: Quality of life (46 items) and Part G: Opinionnaire on acceptability of the SIM on Breast Care and its Management. Reliability of the tool was established by applying Kuder Richardson Formula 20 and Cronbach's alpha was found to be  $r = 0.877$ . The data collected was tabulated in a master sheet. Descriptive and inferential statistics was used for analysis and interpretation.

The SIM consisted of four units as follows:

Unit I : Definition of Breast Cancer, Causes and Risk Factors, Signs & symptoms

Unit II: Investigation, BSE/CSE

Unit III: Treatment Modalities, Management, Complication, Follow up, Prognosis

Unit IV: Prevention, Health Promotion, Summary

Twenty breast cancer patients were selected for the study. Findings of the pilot study revealed it is feasible to conduct the study. Average time taken for the completion of the tool was 45 minute for each patient. No problem was faced during the pilot study.

Data collected from 26/12/12 to 18/3/13

### RESULTS AND DISCUSSION

Demographic data – Majority of the respondents were in the age group of 45 -54 years 57 ( 38%); 122 (81.33%) were Hindu by religion; educational status primary school and secondary school edn. 62 (41.33%) each; 94 (62.67%) were housewives; 127 (84.67%) were married; 70 (42.67%) had less than two children; 100 (66.7%) belonged to nuclear family; 88 (55.67%) had a family income of Rs. 5001/= to Rs 10,000/= per month; 84 (56%) had menarche below 16 years of age; 59 (39.33%) had their first child between the age of 21 – 25 years; 93 (62%) - did not breast feed their child; 68 (45.33%) had child spacing period as more than 4 years; 141 (94%) had no family history of cancer; 121 (80.67%) had no family history of breast cancer; 129 (86%) - diagnosed by Doctors & Nurses.; 40 (93.33%) -not aware of the warning signs; 49 (32.67%) felt painless lump in the breast. 28 (18.67%) found one breast larger than other, 17 (11.33%) noted a discharge from the nipple and 20 (13.33%) observed a change in shape of nipples (inverted nipples); 129 (86%) have breast cancer alone, while 21 (14%) respondents were diagnosed with breast cancer with metastasis; 91 (67.67%) diagnosed within one year of appearance of S & S. Treatment included chemotherapy - 129 (86%), radiation - 9 (6%), hormonal - 2 (1.33%) and surgery 5 (3.33%). Follow up

care was once a month- 128 (85.33%), once months -2 (1.33%).  
in 3 months - 20 (13.33%), once in 6

**Table -1: Mean and SD Values of Pre Test and Post Test in Knowledge, Practice, Attitude, Stress and Quality of Life (N=150)**

S. No		Knowledge		Practice		Attitude		Stress		Quality of life	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1	Pre test	68.60	30.59	72.53	34.89	63.97	42.41	65.37	37.02	50.98	45.25
2	Post test 7 <sup>th</sup> day	74.10	36.48	82.13	27.75	70.69	46.37	73.93	36.23	61.50	48.84
3	Post test 30 <sup>th</sup> day	85.03	25.30	84.53	17.48	76.83	43.82	79.71	39.46	66.40	46.92
4	Post test 90 <sup>th</sup> day	85.20	27.55	86.30	32.52	77.90	42.13	79.13	34.90	68.93	44.40
5	Post test 180 <sup>th</sup> day	80.80	29.05	82.00	33.66	73.63	41.83	71.95	45.37	64.73	40.30

**Table – 2: ‘t’ Value between Pretest and Post Test Scores of Breast Cancer Patients indicating the significant difference in the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> post test**

S.No		Pretest	Post Test			
			7 <sup>th</sup> day	30 <sup>th</sup> day	90 <sup>th</sup> day	180 <sup>th</sup> day
1	Between Pretest and Post Test Scores of Breast Cancer Patients indicating the significant difference in the 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> and 4 <sup>th</sup> post test					
	Knowledge		45.79	45.19	42.44	32.38
	Practice		31.61	34.44	35.28	23.29
	Attitude		35.59	36.18	25.41	27.41
	Stress		39.15	43.29	43.06	32.44
	Quality of life		55.94	49.07	65.12	44.45
2	Between Knowledge, Practice, Attitude and Stress with Quality of Life indicating the relationship between variables					
	Knowledge & QoL	15.80	15.97	17.26	17.26	17.03
	Practice & QoL	18.75	17.82	17.61	17.60	17.66
	Attitude & QoL	8.19	8.33	8.21	8.68	7.61
	Stress & QoL	9.63	9.82	10.73	10.31	9.24

**Table – 3: Chi Square Values showing Association of Breast Cancer patients Knowledge with Age, Education, Family History of Breast Cancer and Prior Experience in Care. (N=150)**

Variables		Pre test	Post test			
			7 <sup>th</sup> day	30 <sup>th</sup> day	90 <sup>th</sup> day	180 <sup>th</sup> day
Knowledge	Age	0.01	2.66	1.48	1.48	0.41
	Education	2.31	0.15	3.35	3.35	0.65
	Family h/o Breast cancer	1.46	0.01	1.89	1.89	0.40
	Prior experience in care	0.91	2.35	0.25	0.02	1.13
Practice	Age	2.64	1.32	0.43	0.13	0.13
	Education	1.31	2.60	0.63	0.90	0.90
	Family h/o Breast cancer	2.33	1.19	0.02	0.16	0.16
	Prior experience in care	7.04	3.77	7.50	0.50	0.50
Attitude	Age	2.87	1.54	1.54	1.54	1.54
	Education	3.18	7.83	7.83	7.83	7.83
	Family h/o Breast cancer	0.83	0.87	0.87	0.87	0.87
	Prior experience in care	2.31	2.20	2.20	2.20	2.20
Stress	Age	0.12	0.01	0.02	0.01	0.00
	Education	3.19	3.93	4.42	3.93	7.87
	Family h/o Breast cancer	1.86	0.27	0.46	1.05	0.25
	Prior experience in care	4.35	3.41	4.26	7.61	2.79
Quality of life	Age	0.00	0.58	0.39	0.47	0.37
	Education	2.98	2.39	1.42	3.18	4.10
	Family h/o Breast cancer	9.62	3.93	5.39	4.71	5.59
	Prior experience in care	35.50	22.09	24.68	22.83	56.36

X<sup>2</sup> value = 3.841, df = 1, p = 0.05

107 (77.33%) had no prior experience of caring for cancer patients.

Mean of all the post test knowledge scores was higher than the pre test knowledge, while it was observed that mean of the 4<sup>th</sup> post test knowledge score was declined to 80.80 than the 2<sup>nd</sup> and 3<sup>rd</sup> post

test knowledge scores ie 85.03 and 85.20 respectively.

‘t’ test computed between pre test knowledge scores and all the four post test scores (45.79, 45.19, 42.44 and 32.38) were highly significant at 0.05 level of significance. ‘t’ value computed with the pre test knowledge score with quality of life



was 15.20 which was significant at 0.05 level of significance. 't' test computed between the post test scores 15.97, 17.26, 17.26 and 17.03 was highly significant at 0.05 level of significance.

There was no association between knowledge and practice with age, education, family h/o breast cancer and prior experience in care, attitude with age, family h/o breast cancer and prior experience in care, stress with age, family h/o breast cancer, and quality of life with family h/o breast cancer and prior experience in care.

Roberts KE, & Newcomb S. in their qualitative study conducted among 30 women with newly diagnosed breast cancer. The tool used was interview schedule and time taken varied from 4 to 19 months. The results of this study provided increased in-depth knowledge regarding women's experience of living with newly diagnosed breast cancer. Their suffering was related to fighting for life, emotional chaos, bodily changes, female identity, daily activities, and social support, and they voiced experiences from different life situations. (3)

Suja JS. (2002) conducted an experimental study was conducted to evaluate effectiveness of SIM on breast self-examination for degree college students of selected colleges in Mangalore. One group pre-test – post-test quasi-experimental approach was adopted. Multi-staged random sampling was taken and 150 students were taken as the sample. Findings were 55.26% had poor, 39.4% average and 2.63% had good and very good knowledge. There was significant increase in post-test scores. This showed an increase in knowledge levels after SIM. (4)

Singh MM, et al., (1999), in their pre experimental study conducted in Udupi district of Karnataka to determine the effectiveness of self instructional module on

the prevention of breast cancer among women of a selected village, had a sample of 50 women aged 30 -60 years. The data was obtained using structured knowledge questionnaire and an observational checklist on the performance of breast self examination. Majority (62 per cent) had knowledge that breast cancer is not curable. The Self Instructional Module was found to be effective in increasing the knowledge of women in prevention of breast cancer and ability to perform Breast self examination. There was a significant correlation between the knowledge and ability to perform Breast self examination. (5)

## CONCLUSION

The SIM was effective in enhancing the knowledge, practice, attitude, attitude, stress and quality of life of breast cancer patients regarding breast cancer and its management and was a high level of acceptability of SIM by the breast cancer patients.

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