

# Impact of Awareness on Health Status of Breast Cancer Patients

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## ABSTRACT

**Introduction:** Breast Cancer is the second most common type of Cancer after lung Cancer. Hence, it is necessary to bring etiology, symptoms of awareness in the women about the breast Cancer. It is more important to the women who are affected with the Breast Cancer to be aware about the treatment, appropriate diet during the treatment, side effects of therapy and their remedies and precautions after treatment. This study was conducted to assess the impact of awareness about the disease on the health status of breast cancer patients.

**Material and methods:** A sample of 300 patients suffering from breast cancer were selected by random sampling method. Interview schedule was structured to collect information regarding awareness of breast cancer patients. Health status assessed by anthropometric measurement for BMI and waist-hip ratio, presence of clinical sign and symptoms assessed by clinical examination and estimation of hemoglobin by cyanmethemoglobin method. One way anova test was applied to determine the significance of the study.

**Results:** It was found that maximum breast cancer patients (N=242) exhibited medium status of awareness which was found to be 80.67%. The high status of awareness was observed only in 15.33% breast cancer patients which was comparatively a small number (N=46). The least number of breast cancer patients (N=12) exhibited low status of awareness (4%).

**Conclusion:** The study concluded that awareness of disease in breast cancer patients has a significant effect on their health status.

**Keywords:** Breast Cancer, Breast Cancer Awareness, BMI, Cyanmethemoglobin

## INTRODUCTION

Breast Cancer is the most common Cancer among women accounting for 22% of all female Cancer worldwide and, out of which 42% cases occur in the developing countries.<sup>1</sup> The incidence of Breast Cancer is increasing in developing countries due to increased life expectancy, increased urbanization and adoption of western life style.<sup>2</sup> Although age-standardized incidence rates in India are lower than in the United Kingdom (25.8 versus 95 per 100,000), mortality rates are nearly as high (12.7 versus 17.1 per 100,000 respectively) as those of UK.<sup>3</sup> Breast Cancer incidence rates within India display a 3-4 fold variation across the country, with the highest rates observed in Northeast and in major metropolitan cities such as Mumbai and New Delhi.<sup>4-5</sup> Reasons for this variation include differences in demographic (e.g., education), reproductive (e.g., age at first child and number of children), anthropometric (e.g., adiposity) and life style factors (e.g., tobacco, smoking and alcohol use). Diagnosis at advanced stages of disease also contributes

to high mortality rate among women due to Breast Cancer, which can be attributed to low levels of awareness (about treatment, appropriate diet during treatment, side effects of therapy and remedies and precautions after treatment), cumbersome referral pathways to diagnosis, limited access to effective treatment at regional Cancer centers and incomplete regimens.<sup>6-7</sup> With the rising Breast Cancer incidence in India (national registry) and disproportionately higher mortality<sup>8</sup>, it is essential to understand the level of Cancer literacy, especially since the average age at diagnosis is 10 years younger than women in western countries.<sup>9</sup> An assessment of existing levels of Cancer awareness is prerequisite for planning comprehensive health programs, early detection and treatment campaigns<sup>10</sup>, that effectively engage communities of women and men.

This study was aimed to find out the impact of awareness (adequate knowledge regarding disease, precautions, diet during and after treatment or therapy and possible side effects of treatment and their remedies) on health status of Breast Cancer patients.

## MATERIAL AND METHODS

The study was conducted on 300 Breast Cancer patients at Cancer Hospital and Research Institute, Gwalior, M.P. (INDIA) from October 2015 to March 2017. Upon informed written ethical approval from the hospital authority, cases were selected by random sampling method which was structured to collect information regarding causes, preventions, side effects of treatment and their remedies and adequate diet during treatment. Written consent from the patient was also taken before starting the study. Health status was assessed by anthropometric measurements for BMI and waist-hip ratio. In this study hemoglobin level and clinical sign and symptoms were also assessed.

## STATISTICAL ANALYSIS

Data analysis was performed on SPSS, IBM version 19. One way ANOVA test was applied to test the significance of hypothesis.

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Awareness	Number of Women	%age
High	46	15.33
Medium	242	80.67
Low	12	04.00
Total	300	100

Table-1: Status of awareness level

Source of Variance	df	Sum of squares	Mean sum of squares	f-value	Remark
Health Status	2	322.127	161.063	12.288*	P<0.05
Error	297	3912.123	13.172		
Total	299	4234.250	-		

\*p value is significant at 0.05 level

Table-2: Summary of one way ANOVA was applied to test significance of hypothesis

Awareness	N	Subset for alpha = 0.05	
	1	2	1
Low	12	31.92	
Medium	242		35.61
High	46		37.50
Significance		1.000	0.054

Table-3: Health Status

## RESULTS

Status of awareness level (table-1) showed that maximum Breast Cancer patients exhibited medium status of awareness which was found to be 80.67%. The high status awareness was observed only in 15.33% Breast Cancer patients which was comparatively quite low. The least number of Breast Cancer patients exhibited 4% awareness.

Table-2 showed that it is evident that  $f\text{-value}=12.288^*$  is significant at 0.05 level with  $df=2/297$ . This shows that there is a significant difference in the mean squares of health status of Breast Cancer patients among high, medium and low awareness groups. Thus the null hypothesis stated that "There is no effect of high, medium and low awareness groups upon the mean squares of health status of Breast Cancer patients" is rejected. In order to know which group is more healthy, we further analyzed the data with the help of Duncan test.

The above table (table-3) shows that no group is significantly healthier than other.

## DISCUSSION

In our study medium awareness about health status was observed in 80.67% of breast cancer patients while high awareness was observed only in 15.33% patients which was comparatively quite low. A similar study conducted on 333 women to determine the awareness about breast cancer was included. Only 56% women were aware of breast cancer, among them, 51% knew about at least one of the sign/symptoms, 43% were aware that breast cancer can be detected early, and only 6% mentioned about risk factors. Thus, awareness about breast cancer is low among women in this community. There is need for awareness programs to educate women about breast cancer, propagation of correct messages and promote early detection of breast cancer.<sup>11</sup> In

another study, it is concluded that insufficient knowledge of female teachers about breast cancer and literacy deficit in general population and health care professionals is recognized as a potential barrier in breast cancer prevention and early detection.<sup>12-14</sup>

Present study shows the significant variation among different awareness groups. It is evident that relatively low, and wide, variation in awareness of risk factors for breast cancer among women in India over the 8-year period of publications, even as breast cancer became the most common cancer in the country.<sup>15</sup> A review of the literature reveals low breast cancer literacy with regard to risk factors among Indian women, irrespective of their socio-economic and educational backgrounds, with little correlation between awareness levels and strength of evidence of the risk factors.<sup>16</sup>

## CONCLUSION

At the end we can conclude from the above discussion that the awareness among the breast cancer patients about the disease would have significant effect on their health status. There is an urgent need for awareness programs, engaging multiple stakeholders of society and the health system, to help in improvement of cancer literacy in India.

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