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Effectiveness of Pranayama on Fatigue among Women with Breast Cancer Receiving Chemotherapy in a Selected Hospital at Coimbatore

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Abstract:
Objective: To evaluate the effectiveness of Pranayama on fatigue among women with breast cancer receiving chemotherapy in a selected hospital at Coimbatore.

Methods: The studies design adopted become quasi experimental non-equal manage institution pre-test publish-test design. The conceptual framework for this examine changed into based on Imogene King's goal Attainment idea (1981). The observe became carried out in GKNM health facility at Coimbatore in 2012.

Non-possibility purposive sampling approach become followed to pick out the preferred sample. The pattern size became 60. As an intervention, 30 minutes of Pranayama for 5 days became validated for Experimental group. The information changed into gathered thru Schwartz cancer Fatigue Scale. There have been 30 individuals in every group (manage institution and Experimental organization).

The accumulated information have been analyzed by way of the use of both Descriptive and Inferential Statistical techniques. 't' take a look at changed into used to assess the effectiveness of Pranayama on fatigue among girls with breast cancer receiving chemotherapy.

Findings: With reference to effectiveness of Pranayama on fatigue amongst ladies with breast cancer receiving chemotherapy, the imply post-test score of fatigue was less than the imply pre-test score amongst experimental institution. The obtained 't' price 15.39 became significant at P<0.001 degree.

The experiment concludes that Pranayama facilitates lowering the extent of fatigue amongst ladies with Breast most cancers receiving Chemotherapy.

Keywords:- *Evaluate, Effectiveness, Fatigue, Pranayama, Chemotherapy.*

I. INTRODUCTION

Cancer-associated fatigue (CRF) is one of the most not unusual and distressing complaints suggested through most cancers patients all through chemotherapy notably impacting all factors of a affected person's existence (bodily, psychosocial, expert, and socioeconomic).

The analysis and remedy of breast most cancers can pose a large amount of bodily, mental, and emotional misery and impacts approximately eighty% of the sufferers throughout preliminary stages of their remedy. Though improvements in the remedy of most cancers have improved survival prices in cancer patients, they must undergo distressing signs and symptoms for a longer time than ever before. Sufferers with breast most cancers typically receive multimodal remedy over a long time period and enjoy a large number of signs and symptoms that grossly affect their standard high-quality of existence and survival. As sufferers stay longer with cancer, challenge is growing approximately both the fitness-associated excellent of life of those diagnosed with cancer and the high-quality of care they receive. Primary care vendors, specialists, different fitness care providers, patients, and households all have an essential function in symptom management in the course of the direction of most cancers.

Consequently, the usage of interventions that help alleviate distressful signs and symptoms and improve satisfactory of lifestyles as an add-on to standard remedies are encouraged as a cohesive strategy to mitigate this hassle. [1]

Presumed blessings of yoga encompass improved muscular power, flexibility, range of motion, electricity, relaxation, and experience of properly-being, reduced ache, advanced sleep best, strain discount, and manipulate over physiological parameters. [2]

Fatigue is the not unusual facet effect of most cancers and its treatment with the superiority from 60-96% for the sufferers who're on energetic remedy. Fatigue is related to all treatment modalities and can be supplying symptom at most cancers prognosis. A big observe located that most cancers sufferers felt that fatigue adversely affected their daily lives extra than ache or other aspect results. [N1].

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A developing wide variety of controlled intervention research have mainly focused fatigue in most cancers sufferers. Most of those researches have focused on yoga and has proven constantly fantastic consequences. A recent evaluate discovered that all of the posted yoga trials validated decrease degrees of fatigue in cancer patients who exercise yoga as compared to managed group.

Studies suggests that yoga can produce invigorating effects on bodily and intellectual power, and thereby may enhance tiers of fatigue. 3 of the research reported that there had been tremendous discounts of fatigue amongst individuals who attended a more number of yoga classes. [N2]

Yoga and meditation are gaining global-huge popularity amongst people. Pranayama, the breathing exercising enables tapping the deeper resources within us. It increases the fine of alertness of the thoughts which turns into able to searching clean and questioning in completely new ways.

Pranayama is an ancient breath method that originates from yogic practices in India. It involves controlling your breath in different styles and lengths. It has greater recently received popularity inside the western global because of the various health advantages that come from a pranayama exercise.

The intention of pranayama is to train people to prolong and alter their inhaling easy way, accordingly obtaining both physiological advantages as well as clarity of notion. Pranayama is meant to teach humans in a technique that is intuitively designed, clean to understand, and appropriate for each beginners and advanced practitioners of yoga. Pranayama physical games can be approached with out loads of training or effort, hence decreasing the boundaries to getting you started out on improving your health. [N3]

Normal use of deep respiratory has proven to have the following blessings including relieving strain and anxiety and increases awareness. It reduces blood strain and heart charge. Practicing Pranayama improves immune function and facilitates in in ache management. [N3]

- **Participants:** Women with breast cancer receiving chemotherapy from Oncology Ward at GKNM hospital, Coimbatore had participated in the study with 6 samples (patients) in the pilot study and 60 patients in the main study afterwards.

II. RESEARCH APPROACH

A Quantitative technique changed into used for studying the outcomes of Pranayama on fatigue amongst women with breast most cancers receiving chemotherapy. Participants were divided into businesses specifically “Experimental group” and “manage organization”. Experimental group was those sufferers who've received remedy and the “manipulate group” were the ones who have not given dealt with. The quasi research experimental design, non-equivalent control organization pre-take a look at submit-take a look at design. Assessment changed into made earlier than and after the intervention (Pranayama) by means of the use of standardized Schwartz most cancers Fatigue Scale.

A pilot study was conducted in GKNM Hospital, Coimbatore with selection of 6 samples. The samples were selected by following purposive sampling technique. 3 samples were considered as “Experimental Group” and the remaining 3 were considered as “Control Group”.Then Pranayama was provided to the Experimental group for 30 minutes for 5 days but for Control group, no intervention was provided. On 5th day again subjective assessment was collected for both the groups. The pilot study revealed that the study was feasible. The data were analyzed to find out the suitability of the statistical methods. Pilot study revealed that Pranayama was having some effect on the fatigue.

The study was conducted after approval of research committee of the college by receiving Ethical Clearance.

Earlier than beginning the observe, permission changed into obtained from the scientific Officer, GKNM hospital. The nature and cause of the look at become explained to the health care private worried. The samples were collected from Oncology Ward of the health center and the samples have been knowledgeable prior with the aid of the Researcher about the nature and reason of the take a look at. The written consent became acquired from the observe samples to gain complete cooperation after giving assurance of keeping the samples anonymity. After acquiring the written consent from the contributors (samples), Chemotherapy caused fatigue become measured with the aid of standardized Schwartz most cancers Fatigue Scale an hour after their normal chemotherapy remedy. At the same day, Pranayama become confirmed to the samples of Experimental organization. Samples had been told to perform Pranayama for half-hour for five days below the supervision of the researcher. On fifth day, post-check became performed for both the Experimental and manipulate companies by means of the usage of the identical standardized Schwartz most cancers Fatigue Scale.

The study was performed in GKNM health facility at Coimbatore. Non-possibility purposive sampling method was adopted to pick out the desired sample. The pattern length turned into 60. As an intervention, 30 minutes of Pranayama for five days turned into established for Experimental group. The statistics became amassed through Schwartz cancer Fatigue Scale.

III. PROCEDURE / DATA ANALYSIS

The amassed records were analyzed with the aid of using each Descriptive and Inferential Statistical techniques. ‘t’ check was used to assess the effectiveness of Pranayama on fatigue amongst ladies with Breast cancer receiving Chemotherapy. Association among the level of fatigue amongst women with breast cancer receiving chemotherapy with their decided on demographic variables was assessed by means of chi-rectangular take a look at.

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IV. RESULTS

S.No.	Demographic Variables	Frequency (n)	Percentage (%)
1	Age (in years)		
	a) 25 – 35	2	6.67
	b) 36 – 45	1	3.33
	c) 46 – 55	9	30
	d) Above 55	18	60
2	Educational Qualification		
	a) Illiterate	12	40
	b) Primary Education	10	33.33
	c) High School	3	10
	d) Higher Secondary School	1	3.33
	e) Graduate	4	13.34
3	Marital Status		
	a) Married	26	86.67
	b) Unmarried	4	13.33
	c) Divorced	0	0
	d) Widow	0	0
4	Monthly Income		
	a) Rs. 1001 – 2000/-	8	26.67
	b) Rs. 2001 – 3000/-	12	40
	c) Above Rs. 3000/-	10	33.33
5	Occupation		
	a) Housewife	23	76.67
	b) Office worker	4	13.33
	c) Coolie	3	10
	d) Others	0	0
6	Type of family		
	a) Nuclear family	10	33.33
	b) Joint family	20	66.67
7	Chemotherapy Cycle		
	a) 1st cycle	7	23.33
	b) 2nd cycle	9	30
	c) 3rd cycle	1	3.33
	d) Above 3 cycles	13	43.34
8	Duration of illness		
	a) Newly diagnosed	16	53.34
	b) Less than 5 years	10	33.33
	c) More than 5 years	4	13.33

Table 1: Figure: Frequency and Percentage Distribution of Demographic Variables of Breast Cancer Patients Receiving Chemotherapy in Experimental Group

ISSN No:-2456-2165

S.No.	Demographic Variables	Frequency (n)	Percentage (%)
1	Age (in years)		
	a) 25 – 35	2	6.67
	b) 36 – 45	9	30
	c) 46 – 55	8	26.67
	d) Above 55	11	36.66
2	Educational Qualification		
	a) Illiterate	14	46.67
	b) Primary Education	8	26.67
	c) High School	6	20
	d) Higher Secondary School	1	3.33
	e) Graduate	1	3.33
3	Marital Status		
	a) Married	29	96.67
	b) Unmarried	0	0
	c) Divorced	1	3.33
	d) Widow	0	0
4	Monthly Income		
	a) Rs. 1001 – 2000/-	16	53.33
	b) Rs. 2001 – 3000/-	6	20
	c) Above Rs. 3000/-	8	26.67
5	Occupation		
	a) Housewife	23	76.67
	b) Office worker	1	3.33
	c) Coolie	5	16.67
	d) Others	1	3.33
6	Type of family		
	a) Nuclear family	12	40
	b) Joint family	18	60
7	Chemotherapy Cycle		
	a) 1st cycle	9	30
	b) 2nd cycle	7	23.33
	c) 3rd cycle	2	6.67
	d) Above 3 cycles	12	40
8	Duration of illness		
	a) Newly diagnosed	17	56.67
	b) Less than 5 years	10	33.33
	c) More than 5 years	3	10

Table 2: Frequency and Percentage Distribution of Demographic Variables of Breast Cancer Patients Receiving Chemotherapy in Control Group

Experimental Group	Level of Fatigue									
	Not at all		A little		Moderate		Quite a bit		Extreme	
	n	%	n	%	n	%	n	%	n	%
Pre-test	0	0	0	0	0	0	24	80	6	20
Post-test	0	0	0	0	20	66.67	10	33.33	0	0

Table 3: Frequency and Percentage Distribution of Level of Fatigue among Women with Breast Cancer Receiving Chemotherapy in Experimental Group

ISSN No:-2456-2165

Control Group	Level of Fatigue									
	Not at all		A little		Moderate		Quite a bit		Extreme	
	n	%	n	%	n	%	n	%	n	%
Pre-test	0	0	0	0	0	0	27	90	3	10
Post-test	0	0	0	0	0	0	22	73.33	8	26.67

Table 4: Frequency and Percentage Distribution of Level of Fatigue among Women with Breast Cancer Receiving Chemotherapy in Control Group

Experimental Group	Mean	SD	MD	't' Value
Pre-test	22.93	1.94	5.37	15.39***
Post-test	17.56	1.68		

Table 5: Mean, Standard Deviation, Mean Difference and 't' Value of Pre-test and Post-test Level of Fatigue in Experimental Group

Control Group	Mean	SD	MD	't' Value
Pre-test	22.76	1.24	0.4	1.89^{NS}
Post-test	23.16	1.69		

Table 6: Mean, Standard Deviation, Mean Difference and 't' Value of Pre-test and Post-test Score of Level of Fatigue in Control Group

Experimental Group	Mean	SD	MD	't' Value
Experimental Group Post-test	17.56	1.68	5.6	12.873***
Control Group Post-test	23.16	1.69		

Table 7: Mean, Standard Deviation, Mean Difference and 't' Value of Post-test Score of Level of Fatigue among Women with Breast Cancer Receiving Chemotherapy in Experimental and Control Group

ISSN No:-2456-2165

S. No.	Demographic Variables	Not at all		A little		Moderate		Quite a bit		Extreme		X^2 Value
		n	%	n	%	n	%	n	%	n	%	
1	Age (in years)											
	a) 25 – 35	0	0	0	0	0	0	2	3	2	3	1.52^{NS}
	b) 36 – 45	0	0	0	0	0	0	9	15	1	2	Df=3
	c) 46 – 55	0	0	0	0	0	0	15	25	2	3	
	d) Above 55	0	0	0	0	0	0	25	42	4	7	
2	Educational Qualification											
	a) Illiterate	0	0	0	0	0	0	22	37	4	7	17.8*
	b) Primary Education	0	0	0	0	0	0	14	23	0	0	Df=4
	c) High School	0	0	0	0	0	0	13	22	1	2	
	d) Higher Secondary School	0	0	0	0	0	0	0	0	2	3	
	e) Graduate	0	0	0	0	0	0	2	3	2	3	
3	Marital Status											
	a) Married	0	0	0	0	0	0	46	77	9	15	0.46^{NS}
	b) Unmarried	0	0	0	0	0	0	4	6	0	0	Df=3
	c) Divorced	0	0	0	0	0	0	1	2	0	0	
	d) Widow	0	0	0	0	0	0	0	0	0	0	
4	Monthly Income											
	a) Rs. 1001 – 2000/-	0	0	0	0	0	0	21	35	3	5	1.07^{NS}
	b) Rs. 2001 – 3000/-	0	0	0	0	0	0	16	27	2	3	Df=2
	c) Above Rs. 3000/-	0	0	0	0	0	0	14	23	4	7	
5	Occupation											
	a) Housewife	0	0	0	0	0	0	41	68	5	8	4^{NS}
	b) Office worker	0	0	0	0	0	0	4	7	1	2	Df=3
	c) Coolie	0	0	0	0	0	0	5	8	3	5	
	d) Others	0	0	0	0	0	0	1	2	0	0	
6	Type of family											1.23^{NS}
	a) Nuclear family	0	0	0	0	0	0	22	37	1	2	Df=1
	b) Joint family	0	0	0	0	0	0	29	48	8	13	
7	Chemotherapy Cycle											
	a) 1^{st} cycle	0	0	0	0	0	0	11	18	5	8	5.24^{NS}
	b) 2^{nd} cycle	0	0	0	0	0	0	13	22	3	5	Df=3
	c) 3^{rd} cycle	0	0	0	0	0	0	2	3	1	2	
	d) Above 3 cycles	0	0	0	0	0	0	25	42	0	0	
8	Duration of illness											
	a) Newly diagnosed	0	0	0	0	0	0	25	42	8	13	6.78*
	b) Less than 5 years	0	0	0	0	0	0	19	31	1	2	Df=2
	c) More than 5 years	0	0	0	0	0	0	7	12	0	0	

Table 8: Frequency, Percentage and x2 Distribution Level of Fatigue among Women with Breast Cancer Receiving Chemotherapy with their selected Demographic Variables

Regarding the demographic variables of the experimental group, 60% of the patients were in the age group of above 55 years, 40% of them were illiterate,86.67% of them were married, 76.67% of them were housewives, 66.67% of them were nuclear family, 43.34% of them were above fourth cycle of chemotherapy, 53.33% of them were newly diagnosed.

Regarding the demographic variables of the control group 36.66% f the patients were in the age group above 55 years; 46.67% were illiterate 96.67% of them were married; 76.67% of them were housewives; 60% of them were nuclear family; 40% of them were above 3^{rd} cycle of chemotherapy; 56.67% of them were newly diagnosed.

ISSN No:-2456-2165

V. DISCUSSION

With regard to effectiveness of Pranayama on fatigue among women with breast cancer receiving chemotherapy, the mean post-test score of fatigue was less than the mean pre-test score among experimental group. The obtained 't' value 15.39 was significant at P<0.001 level.

Accordingly, the objective of the study was to assess the level of fatigue amongwomen with breast cancer receiving chemotherapy before and after Pranayama in Experimental group.

Among Experimental group, in the pre-test 24 (80%) patients had quite a bit level of fatigue, and 6 (20%) patients had extreme level of fatigue. In the post-test 20 (66.67%) patients had moderate level of fatigue and 10 (33.33%) patients had quite a bit level of fatigue.

Among control group, in the pre-test 27(90%) patients had quite a bit level of fatigue, and 3 (10%) patients had extreme level of fatigue. In the post-test 22 (73.33%) had a quite a bit level of fatigue and 8(26.77%) patients had extreme level of fatigue.

After the intervention severity of the fatigue was reduced among experimental group, but among control group there was no considerable changes in severity of fatigue.

The present study shows that Pranayama was effective for the breast cancer women who had fatigue, who were treated with chemotherapy. The investigator experienced in GKNM Hospital, samples who had fatigue were able to overcome it and there was reduction in the severity of level of fatigue.

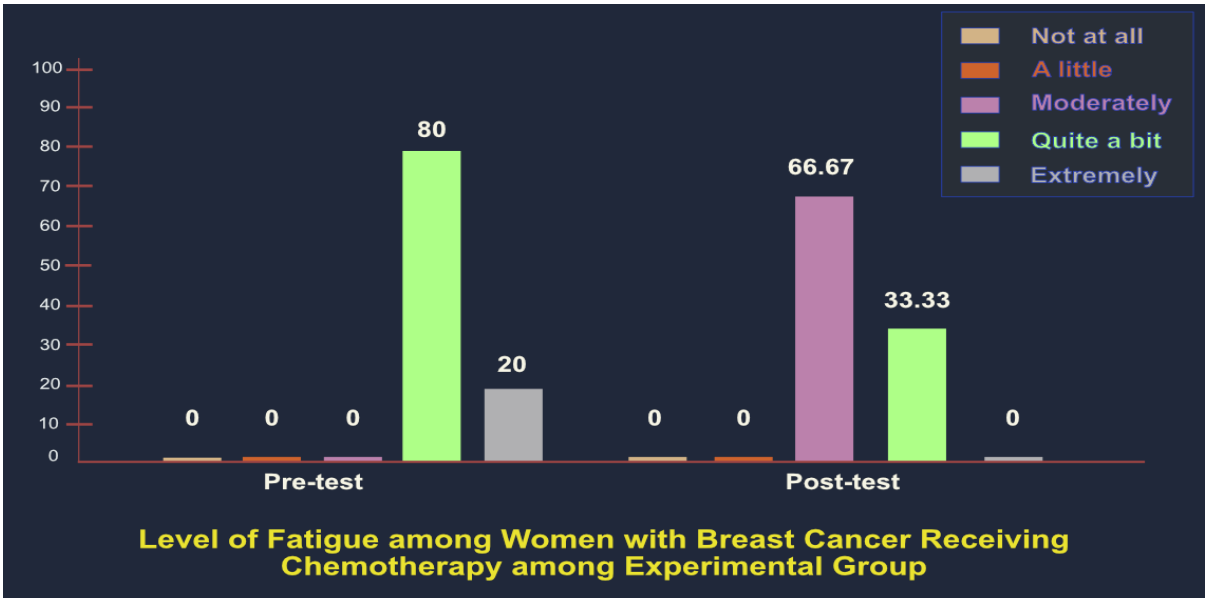

Fig. 1: Level of Fatigue among Women with Breast Cancer receiving Chemotherapy among Experimental Group

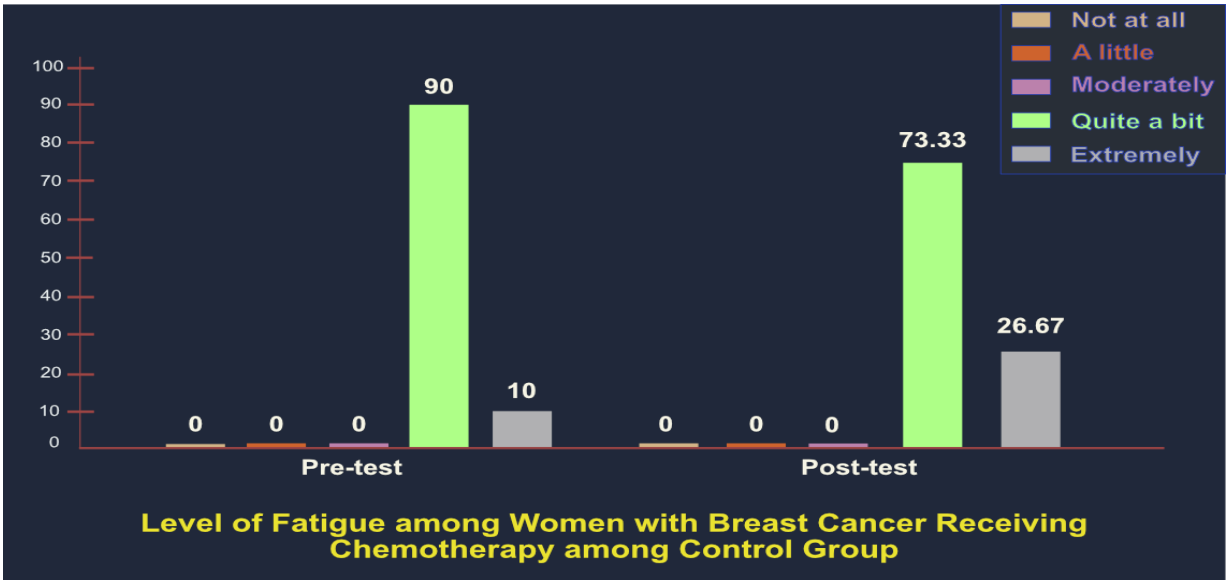

Fig. 2: Level of Fatigue among Women with Breast Cancer receiving Chemotherapy among Control Group

ISSN No:-2456-2165

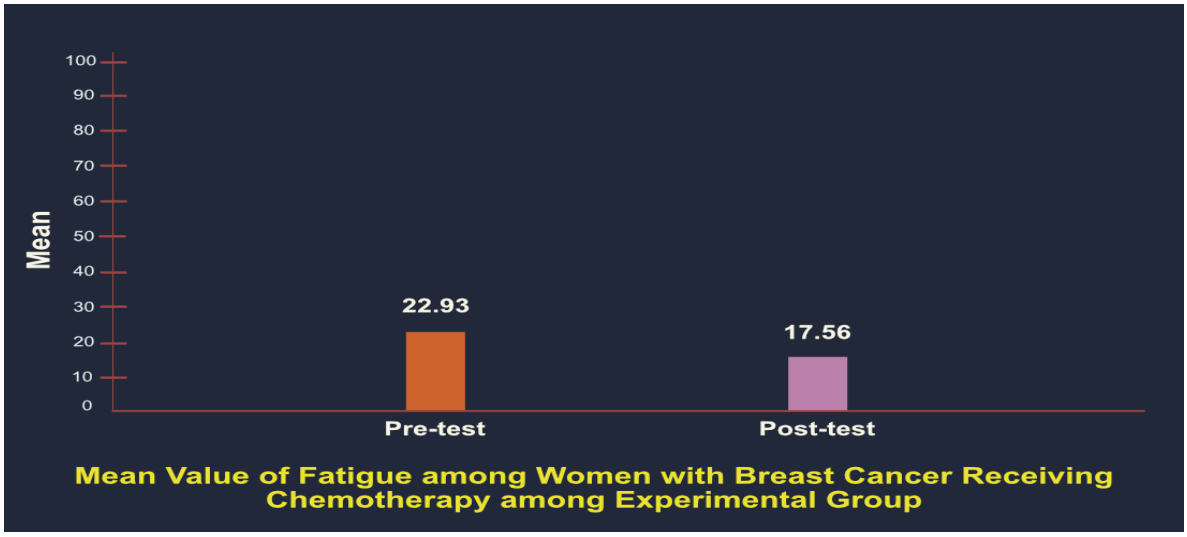

Fig. 3: Mean Value of Fatigue among Women with Breast Cancer ReceivingChemotherapy among Experimental Group

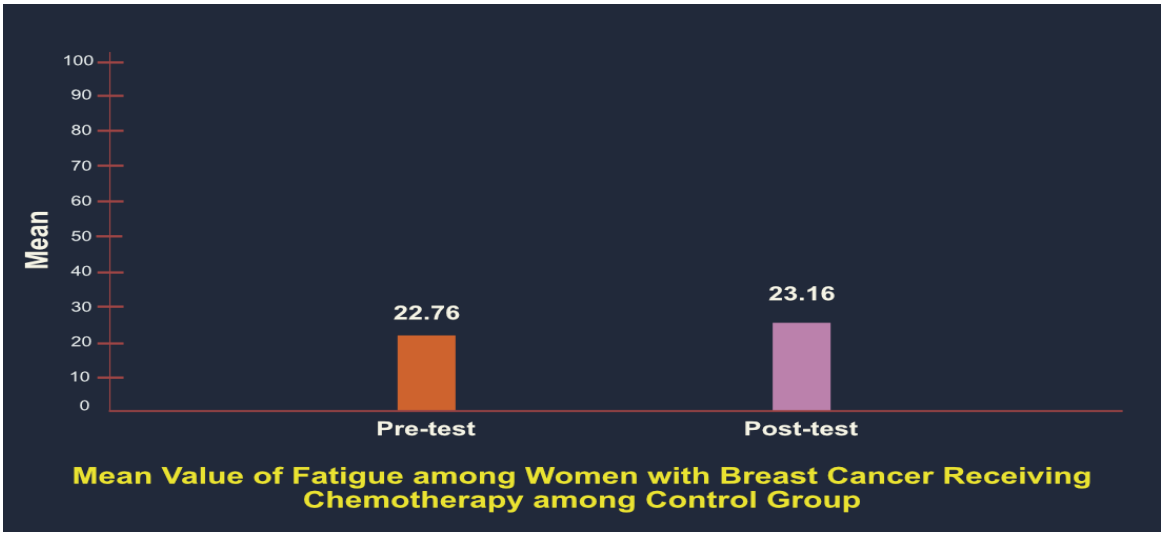

Fig. 4: Mean Value of Fatigue among Women with Breast Cancer receiving Chemotherapy among Control Group

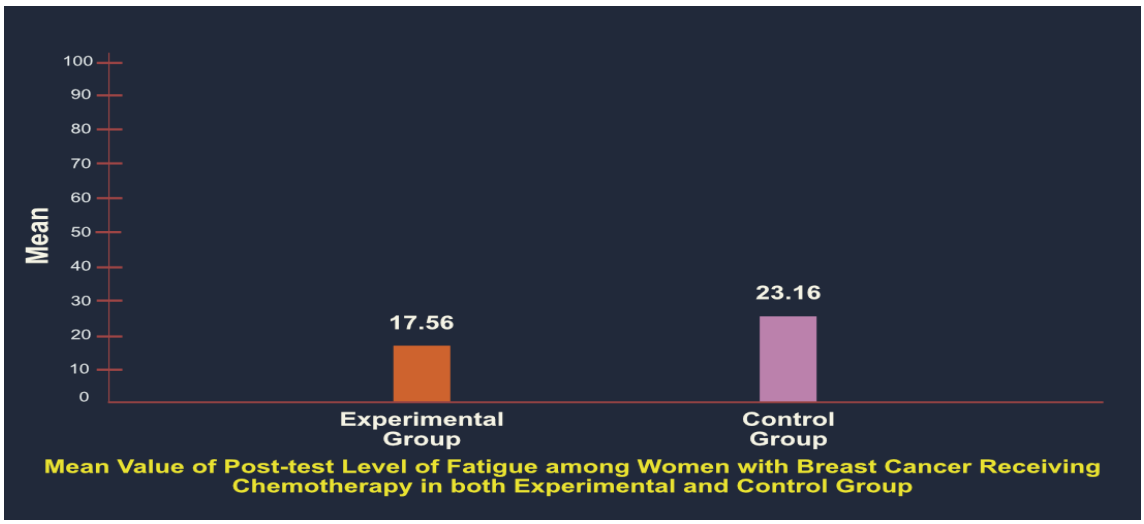

Fig. 5: Mean Value of post-test Level of Fatigue among Women with Breast Cancer receiving

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VI. CONCLUSION

The main conclusion drawn from this present study was that most of the breast cancer patients receiving chemotherapy had significant level of fatigue. After pranayama, it is found that there had been significant level of reduction in fatigue. Samples become familiar and found themselves comfortable and also express satisfaction. After the completion of the study, subjects in control group exposed to pranayama technique. The present study concludes that the pranayama effectively reducing the fatigue among women with breast cancer receiving chemotherapy.

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