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RESEARCH ARTICLE

EFFECTIVENESS OF MINDFULNESS TECHNIQUE ON STRESS AMONG WOMEN WITH BREAST CANCER AT SELECTED HOSPITAL, CHENNAI

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Abstract

Background: Breast cancer is the most diagnosed cancer among women worldwide, accounting for 1 in 4 cancer cases. It is a serious, stressful and life-threatening disease among women. Almost 50% of all cases are in the age group of 25-50.

Aims & Objectives: To study the effectiveness of mindfulness technique on level of stress among women with breast cancer.

Methodology: The researcher adopted a quasi-experimental research design for the study. 200 women with breast cancer (study -100 & control-100), who fulfilled inclusion and exclusion criteria, were selected as samples by using a non-probability purposive sampling technique. Written informed consent was obtained from the women with breast cancer. Researcher used perceived stress scale to assess the level of stress. Mindfulness technique practiced 15-30 minutes per day for 5 to 7 days for a period of 8 weeks.

Results: The study findings showed that the pretest mean stress score was 26.22 and the post-test mean stress score was 17.12 and the mean difference score was 9.10 which was significant at $p < 0.001$ level in study group whereas in control group there was no significant difference between the pre (mean-27.02, SD-3.69) and posttest (mean-26.37, SD-3.87) mean stress score among women with breast cancer.

Conclusion: The study concluded that the mindfulness technique was effective in reducing stress, coping and quality of life among women with breast cancer.

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Introduction:-

Breast cancer is the most diagnosed cancer among women worldwide, accounting for 1 in 4 cancer cases. It is a serious, stressful and life-threatening disease among women. In 2020, breast cancer accounted for nearly 12% of all new cancer cases diagnosed in 7.8 million women worldwide. Epidemiological studies have shown that the global burden of BC is expected to cross almost 2 million by the year 2030. In 2022, there were 2.3 million women

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diagnosed with breast cancer and 670 000 deaths globally. Breast cancer occurs in every country of the world in women at any age after puberty but with increasing rates in later life.¹

It's also more common in the younger age group. Almost 50% of all cases are in the age group of 25-50. And more than 70% of the cases present in the advanced stage had poor survival and high mortality. **The survival rates of breast cancer in India are low because the detection takes place late.** The only way to change these numbers is by increasing awareness. Breast cancer is a treatable disease and chances of survival are higher if it's detected in time. The only way to do so is by being aware of how it can be detected and early diagnosis can be done.²

Breast cancer patients experience physical symptoms and psychosocial distress that adversely affect their quality of life (QOL). QOL generally consists of a number of domains including physical functioning, psychological well-being (such as levels of anxiety and depression), and social support.³

All of these aroused physical and psychological symptoms increasingly interfere with the daily life of BC patients by limiting their social roles within the family and the community. They develop negative feelings, causing poor perceptions of their self-image, disrupting their sexuality, and lowering their self-esteem.⁴

Evidence-based psychosocial care and enable the development of targeted interventions to enhance QoL and reduce long term psychological and physical morbidity. Mindfulness technique is a structured complementary program that incorporate, meditation, yoga and mind-body exercises. Thus help the women to cope with stress and improve the quality of life. Therefore the overall aim of the study is to determine the efficacy of mindfulness technique interventions on reducing the stress, encouraging the ability to cope and improve the quality of life of women with breast cancer.⁵

Mindfulness technique is a structured complementary program that incorporate, meditation, yoga and mind-body exercises. Thus help the women to cope with stress and improve the quality of life. Therefore the overall aim of the study is to determine the efficacy of mindfulness technique interventions on reducing the stress among women with breast cancer.⁶

The researcher being specialized in obstetrics and gynecology nursing, during her experience in gynecology ward has noticed that the women with breast cancer had stress, poor coping ability and poor quality of life. Many hospitals focus on chemotherapy and surgical interventions for breast cancer. Health care professionals focus on the physical symptoms and the psychological problems like stress, anxiety, depression, low self-esteem, poor body image, stressful life events etc were neglected and not given much importance. This gave intuition for the researcher to proceed for the study. Mindfulness technique is simple and easy intervention helps to reduce stress, improve coping and quality of life of the breast cancer patients. The present study undertaken to test the effectiveness of mindfulness technique on stress, coping and quality of life among women with breast cancer.

Materials and Methods:-

A quantitative research approach was adopted. The researcher adopted a quasi-experimental research design for the study. 200 women with breast cancer (experimental-100 & control-100), who fulfilled inclusion and exclusion criteria, were selected as samples by using a non-probability purposive sampling technique. Written informed consent was obtained from the women with breast cancer. The study was conducted at RMD hospital, Chennai (Women's Cancer Care Center), Chennai.

The inclusion criteria's were women diagnosed with stage 0 to III breast cancer within 2 years from the date of diagnosis, currently under at least one adjuvant therapy, women who are willing to participate in the study and women who can understand tamil. The exclusion criteria's were women with current treatment for recurrent breast cancer, women who are diagnosed with stage IV breast cancer, women who are critically ill and mentally unstable, women with physically challenged and women with mental disorders.

The researcher obtained written informed consent from the women with breast cancer. Ethical approval was obtained from the ICCR-Ethics Review Board of Omayal Achi College of Nursing. Permission was obtained from the Director, RMD hospital, Chennai, Chennai to conduct the study in the selected areas. Informed consent was obtained and detailed explanation about the study was given to women with breast cancer. Confidentiality and

privacy was maintained throughout the study. The participants were given full freedom to continue participating (or) withdraw from the study at any time. A convenient timing and day was chosen to conduct the study.

Researcher assessed the demographic, clinical and risk factor variables among women with breast cancer. Researcher assessed the pretest level of stress by using perceived stress scale.⁷ Mindfulness techniques demonstrated by the investigator followed by return demonstration done by the women with breast cancer. Instructed the women to do home practice of 15-30 minutes per day for 5 to 7 days that can be recorded by using weekly record sheets. The practice of mindfulness technique practiced for 8 weeks. Hospital routine was followed for control group. Post-test level of stress was assessed 8 weeks of the intervention which was practiced by the clients everyday. Researcher assessed the post-test level of stress among women with breast cancer after 8 weeks of intervention by using the perceived stress scale.

Descriptive statistics was used to interpret the demographic variables. Student 't' test was used to assess the pre and post-test level of stress scores. Student independent 't' test was used to compare the pre and post-test level of stress scores among women with breast cancer between study and control group. Association of selected demographic variables with the mean differed stress scores in study and control group was analyzed using one way analysis of variance and student independent t-test.

Results and Discussion:-

With reference to the age of the women 64% in study and 67% in control group were 39 years above. In regard to education 43% women in study group completed high school and 34% in control group completed graduate and post graduate degree. With regard to occupation 25% in study group working as unskilled worker and 30% in control group working as a skilled worker. 72% in study and 80% in control group women were belonged to nuclear family and 90% in study and 88% in control group were married. In regard to income, majority of them in both the groups had family income of Rs.10,000 -Rs.15,000. 56% in study and 66% in control group were residing in urban region. 76% in study and 70% in control group were belonged to Hindu religion. 67% in study and 60% in control group women had previous knowledge about breast cancer. With regard to support system, 48% in study and 54% in control group women got support from husband.

In regard to clinical variables, 58% in study and 56% in control group were had second stage of breast cancer, they were diagnosed above 1 years and 40% in study and 36% in control group women were undergoing radiation. With regard to reproductive risk factors, 68% in study and 66% in control group women attained menarche at the 11-13 years, 70% in study and 68% in control group had regular menstrual cycle. In regard to age at marriage, 48% in study group married at the age of 15-20 years whereas 53% in control group married at the age of 20-15 years. In regard to parity 74% in study and control group were multipara. 76% in study and 78% in control group women gave breast feeding and none of them had a history of infertility. 52% in study and 54% in control group women not used contraceptives and none of them had family history of breast cancer in both groups.

In reference to diet pattern 64% in study and 70% in control group women were non vegetarian and 62% in study and 53% in control group had the habit of drinking coffee. With regard to tobacco use, none of the women had the habit of tobacco use and 80% in study and 76% in control group women were not exposed to radiation. None of them used hypertension HRT and anti-depressant drugs in both the groups. All the variables when compared between the study and control group using chi-square test, showed no statistical significant difference thus indicating homogeneity between the groups.

Assessment of pre and posttest level of stress among women with breast cancer in study and control group was depicted in Table 1. Comparison of pre and posttest level of stress among women with breast cancer within study and control group was depicted in Figure 1. Effectiveness of mindfulness technique on level of stress among women with breast cancer between study and control group was depicted in Table 2. In study group the percentage of stress reduction score was 22.75%, however in control group the percentage of stress reduction score was 1.63%, which clearly indicates that mindfulness technique was effective in reducing the stress among women with breast cancer in study group.

Table 1:- Assessment of level of stress among women with breast cancer in study and control group. N=200

	Level of stress	Study	Control	Chi square test

		n	%	n	%	
Pretest	Low	0	0.00	0	0.00	$\chi^2=0.32$ P=0.57 (NS)
	Moderate	48	48.00	44	44.00	
	High	52	52.00	56	56.00	
Posttest	Low	38	38.00	0	0.00	$\chi^2=88.07$ P=0.001*** (S)
	Moderate	62	62.00	51	51.00	
	High	0	0.00	49	49.00	

***significant at $p \leq 0.05$ level.

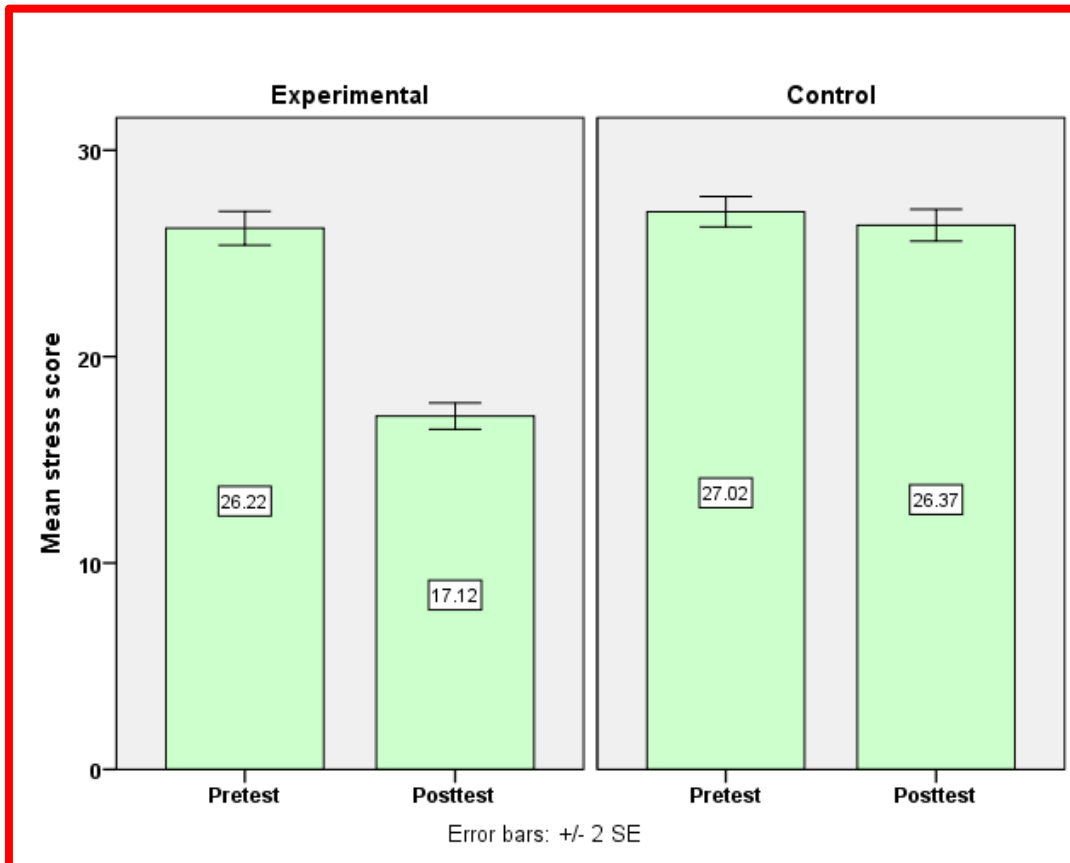


Figure 1:- Assessment of pretest and posttest level of stress score among with breast cancer in study and control group.

Table 2:- Comparison of pre and post-test level of stress score among women with breast cancer between study and control group N=200.

	Study (n=100)		Control(n=100)		Mean Difference Score	Student's independent t-test
	Mean	SD	Mean	SD		
Pretest	26.22	3.34	27.02	3.69	0.80	t=1.45 P=0.15 (NS)
Posttest	17.12	3.19	26.37	3.87	9.25	t=18.43 P=0.001** (S)

*** very high significant at $P \leq 0.001$

The study findings were consistent with the study conducted by Tacon AM, Caldera YM, Ronaghan C (2014) on effectiveness of a mindfulness-based stress reduction and relaxation program (MBSR) on stress, state anxiety,

mental adjustment to cancer, and health locus of control in 27 women with diagnosed breast cancer. Findings indicated significant decreases in pre-to-post stress and state anxiety levels; also, results showed significant and beneficial changes for mental adjustment to cancer and health locus of control scores following completion of the MBSR intervention.⁸

A randomized clinical trial conducted by Motahareh Mirmahmoodi¹, Parvin Mangalian¹, Atefeh Ahmadi¹, and Mahlagha Dehghan (2020) on effectiveness of mindfulness-based stress reduction group counseling in alleviating psychological responses such as anxiety, depression and stress. Participants were divided into 2 groups (control and intervention groups) with block randomization. The intervention group received mindfulness-based stress reduction group counseling during 8 weeks. The participants completed the Beck anxiety inventory, Beck-II depression inventory, and perceived stress scale before and after the intervention. Results revealed that the MBSR group had significantly lower stress compared with the control group ($p, 0.05$).⁹

The association of selected background variables with mean differed stress scores among women with breast cancer in the study group revealed a statistically significant association with women whose occupation is semi-profession, residing in urban area and monthly income of rupees > 15000 had more stress reduction score in study group.

The association of clinical variables with stress reduction score among women with breast cancer in study group namely women with stage 1 breast cancer, who were practicing meditation, regular menstrual cycle and no use of tobacco had reduced stress score in study group and in control group none of the clinical variable were significant.

Conclusion:-

In study group the percentage of stress reduction score was 22.75%, however in control group the percentage of stress reduction score was 1.63%, which clearly indicates that mindfulness technique was effective in reducing the stress among women with breast cancer in study group. Mindfulness technique is one of the easiest, useful and practicable intervention for cancer patients.

Source Of Support:

None.

Conflict Of Interest:

None declared.

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