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EFFECT OF MEDITATION ON SELECTED PSYCHOLOGICAL VARIABLES AMONG BREAST CANCER PATIENTS

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Abstract

The present random group experimental study was designed to find out the effect of meditation on selected psychological among breast cancer women patients. It was hypothesized that there would be significant differences in psychological variables such as stress, anxiety and self-confidence among breast cancer women patients due to the influences of meditation practices. To achieve the purpose of the study, 60 breast cancer women patients from Honk Kong aged between 40 years to 55 years were selected randomly into experimental and control group of 30 subjects each. Experimental Group underwent meditation for 12 weeks, six days a week for a maximum of one hour in the morning. The control group was kept in active rest. The pre test and post test were conducted before and after the training for all two groups. Stress was measured by Standardized stress questionnaire constructed by Dr.Latha Satish (1997) consisting of 52 questions, Anxiety was measured by Taylor`s manifest Anxiety scale Questionnaire developed by Taylor consisting of 45 questions and Self-confidence was measured by Self-confidence questionnaire developed by Rekha Agnihotri (1987) consisting of 52 questions. The data collected from the groups before and after the training period were statistically analyzed by using Analysis of Covariance (ANCOVA) to determine the significant difference and tested at 0.05 level of significance. The result of the study showed that the Stress and anxiety were significantly reduced and self-confidence improved as result of meditation. Hence .the hypothesis was accepted at 0.05 level of confidence. The conclusion was that the meditation helped to reduce the stress and anxiety and improve the self confidence among breast cancer women patients.

Key words: Yoga, Meditation, Breast Cancer Women Patients, Stress, Anxiety and Self Confidence.

Introduction

Cancer is probably the most feared disease in the modern world, although heart disease still comes first in the number of fatalities. Cancer of various verities can be related to dietary genetic and environmental factors and often more than one precipitating factor must be present for the disease to manifest. Subtle abnormalities in the immune system may also play a role in the disease. Abnormal cells with the potential for uncontrolled growth the hall mark of cancer form in everyone`s bodies with some regularity, but a healthy immune system normally gets rid of before a tumor develops. The study estimated a twenty years survival rate of 65 percent for breast cancer. Breast cancer is ranked No.1 among all Indian women cancer patients. Yogic practices may be helpful for people with cancer in reducing stress and managing side effects, both during chemotherapy and medical procedures and after. Meditation and guided imagery can be deeply relaxing and reduce anxiety. (Timothy McCall, MD, 2007).Bower et.al, (2015) conducted the study on premenopausal women diagnosed with breast cancer are at risk for psychological and behavioural disturbances after cancer treatment. They used the method for this study was randomized trial provided the first evaluation of a brief, mindfulness-based intervention for younger breast cancer survivors designed to reduce stress, depression, and inflammatory activity. Women diagnosed with early stage breast cancer at or before age 50 who had completed cancer treatment were randomly assigned to a 6-week Mindful Awareness Practices (MAPS) intervention group (n = 39) or to a wait-list control group (n = 32). Participants completed questionnaires before and after the intervention to assess stress and depressive symptoms (primary outcomes) as well as physical symptoms, cancer-related distress, and positive outcomes. Blood samples were collected to examine genomic and circulating markers of inflammation. Participants also completed questionnaires at a 3-month follow-up assessment. They found the results in linear mixed models, the MAPS intervention led to significant reductions in perceived stress ($P = .004$) and marginal reductions in depressive symptoms ($P = .094$), as well as significant reductions in pro inflammatory gene expression ($P = .009$) and inflammatory signaling ($P = .001$) at post intervention. Improvements in secondary outcomes included reduced fatigue, sleep disturbance, and vasomotor symptoms and increased peace and meaning and positive affect ($P < .05$ for all). Intervention effects on psychological and behavioral measures were not maintained at the 3-month follow-up assessment, although reductions in cancer-related distress were observed at that assessment. They have concluded from the study were mindfulness-based intervention demonstrated preliminary short-term efficacy in reducing stress, behavioural symptoms, and pro inflammatory signaling in younger breast cancer survivors. Cramer H, et al., (2015) studied on yoga and meditation for menopausal symptoms in breast cancer survivors-A randomized controlled trial. The objective of this trial was to evaluate the effects of a 12-week traditional Hath yoga and meditation intervention on menopausal symptoms in breast cancer survivors. They used the methodology for this study patients were randomly assigned either to a 12-week yoga and meditation intervention or to usual care. The primary outcome measure was total menopausal symptoms (Menopause Rating Scale [MRS] total score). Secondary outcome measures included MRS subscales, quality of life (Functional Assessment of Cancer Therapy-Breast), fatigue (Functional Assessment of Chronic Illness therapy-Fatigue), depression, and anxiety (Hospital Anxiety and Depression Scale). Outcomes were assessed at week 12 and week 24 after randomization. The results of the study were in total, 40 women (mean age ± standard deviation, 49.2 ± 5.9 years) were randomized to yoga (n = 19) or to usual care (n = 21). Women in the yoga group reported significantly lower total menopausal symptoms compared with the usual care group at week 12 (mean difference, -5.6; 95% confidence interval, -9.2 to -1.9; P = .004) and at week 24 (mean difference, -4.5; 95% confidence interval, -8.3 to -0.7; P = .023). At week 12, the yoga group reported less somatovegetative, psychological, and urogenital menopausal symptoms; less fatigue; and improved quality of life (all P < .05). At week 24, all effects persisted except for psychological menopausal symptoms. Short-term effects on menopausal symptoms remained significant when only women who were receiving antiestrogen medication (n = 36) were analyzed. Six minor adverse events occurred in each group. They concluded from this study were Yoga combined with meditation can be considered a safe and effective complementary intervention for menopausal symptoms in breast cancer survivors. The effects seem to persist for at least 3 months.

Methodology

The purpose of the study was designed to find out the effect of Meditation on selected psychological variables among Breast Cancer Patients. It was hypothesized that there would be significant difference in psychological variables such as stress, anxiety and self-confidence among breast cancer patients due to the influence of Meditation. To fulfill the goal of the random group experimental study, 60 breast cancer women patients were selected at random from Hong Kong. The age of the subjects ranged between 40 to 55 years. The subjects were assigned into one experimental group and one control group with 30 subjects each. Experimental group was involved in Meditation practices and for 12 weeks, and the control group kept in active rest.The selected variables, Stress was measured by Standardized stress questionnaire constructed by Dr.Latha Satish (1997) consisting of 52 questions, Anxiety was measured by Taylor`s manifest Anxiety scale Questionnaire developed by Taylor consisting of 45 questions and Self-confidence was measured by Self-confidence questionnaire developed by Rekha Agnihotri (1987) consisting of 52 questions.

Data analysis

The data pertaining to the variables collected from the subjects before and after the training period were statistically analysed by using Analysis of Covariance (ANCOVA) to determine the significant difference and tested at 0.05 level of significance.

Results and discussions

The Analysis of Covariance (ANCOVA) on Stress of meditation group and Control Group was analysed and presented in Table I

The obtained F ratio on pre test scores 0.02 at 0.05 level of confidence. This proved that there was no significant difference between the groups in pre test and the randomization at the pre test was equal. And F ratio of Post test was 7.13 which are significantly higher than table value of 4.01 at 0.05 level of confidence. It indicates that there is significant reduction in Post test. The result of the study showed that the stress level reduced level of confidence. The above study was substantiated by renowned experts Bower JE et al. (2015). It is clearly represented in bar graph below.
The obtained F ratio on pre test scores 0.16 was lesser than the required F value of 4.01

to be significant at 0.05 level of confidence. This proved that there was no significant difference between the groups in pre test and the randomization at the pre test was equal. The post test scores analysis proved that there was significant difference between the groups, as obtained F value 14.07 was greater than the required F value of 4.01. This proved that the differences between the post tests means of the subjects were significant .Above is substantiated by Cramer H, et al., (2015).

The obtained F ratio on pre test scores 0.07 at 0.05 level of confidence. This proved that there was no significant difference between the groups in pre test and the randomization at the pre test was equal. And F ratio of post test was 13.01 which are significantly higher than table value of 4.01 at 0.05 level of confidence. It indicates that there is significant reduction in Post test. The result of the study showed that the stress level improved. The above study was substantiated by renowned experts Bower JE et al. (2015). It is clearly represented in bar graph below.

Table I

ANALYSIS OF CO VARIANCE OF THE MEANS OF MEDITATION GROUP AND THE CONTROL GROUP ON STRESS

Test	MEDITATION GROUP	CONT GROUP	SV	SS	df	MS	F	TV 0.05
Pre test	80.167	79.267	between	12.15	1	12.150	0.02	4.01
			within	41902.03	58	722.45		
Post test	66.333	83.17	between	4250.42	1	4250.42	7.13*	4.01
			within	34588.83	58	596.36		
Adjusted	65.94	83.56	between	4652.41	1	4652.41	86.45*	4.01
			within	3067.364	57	53.81		
Mean gain	13.833	-3.90						

***Significant at 0.05 level of confidence. (Table F ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) = 4.01)**

Table II

ANALYSIS OF CO VARIANCE OF THE MEANS OF MEDITATION GROUP AND THE CONTROL GROUP ON ANXIETY

Test	MEDITATION GR	CONT GROUP	SV	SS	df	MS	F	TV 0.05
Pre test	29.63	28.5	between	19.27	1	19.267	0.16	4.01
			within	6808.47	58	117.39		
Post test	20.7	30.17	between	1344.27	1	1344.27	14.07*	4.01
			within	5542.47	58	95.56		
Adjusted	20.21	30.66	between	1631.79	1	1631.79	197.53*	4.01
			within	470.880	57	8.26		
Mean gain	8.93	-1.67						

***Significant at 0.05 level of confidence. (Table F ratio at 0.05 level of confidence for 1and 58 (df) =4.01, 1 and 57(df) = 4.01)**

Table III

ANALYSIS OF CO VARIANCE OF THE MEANS OF MEDITATION GROUP AND THE CONTROL GROUP ON SELF CONFIDENCE

Test	MEDITATION GROUP	CONT GROUP	SV	SS	df	MS	F	TV 0.05
Pre test	29.3	28.5	between	9.60	1	9.600	0.07	4.01
			within	7457.80	58	128.58		
Post test	20.17	29.07	between	1188.15	1	1188.15	13.01*	4.01
			within	5296.03	58	91.31		
Adjusted	19.87	29.36	between	1350.61	1	1350.61	65.83*	4.01
			within	1169.514	57	20.52		
Mean gain	9.13	-0.57						

***Significant at 0.05 level of confidence. (Table F ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) = 4.01)**

BAR DIAGRAM SHOWING THE MEAN DIFFERENCE AMONG MEDITATION GROUP AND CONTROL GROUP ON STRESS

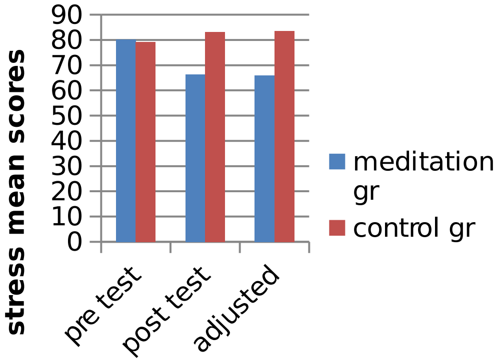

Figure 1

The Analysis of Co-variance (ANCOVA) on Anxiety of Meditation Group and Control Group was analysed and presented in Table II

BAR DIAGRAM SHOWING THE MEAN DIFFERENCE AMONG MEDITATION GROUP AND CONTROL GROUP ON ANXIETY

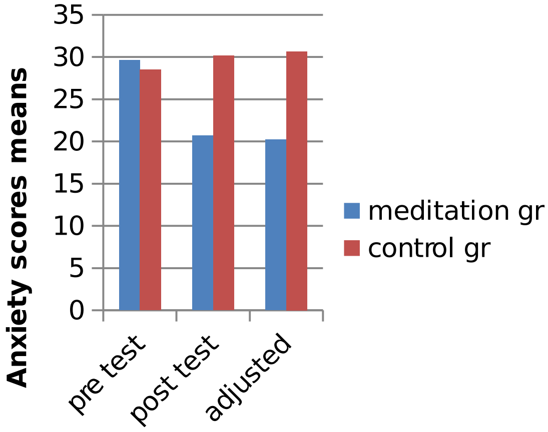

Figure 2

The Analysis of Covariance (ANCOVA) on Self Confidence of meditation group and Control Group was analysed and presented in Table III

BAR DIAGRAM SHOWING THE MEAN DIFFERENCE AMONG MEDITATION GROUP AND CONTROL GROUP ON SELF CONFIDENCE

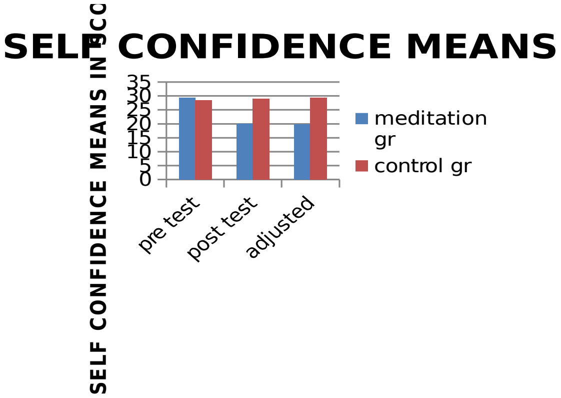

Figure 3

Hence systematic meditation reduced anxiety and stress and improved self confidence.

Conclusion

It was proved that meditation reduced stress and anxiety and improved self confidence among breast cancer patients.

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