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Effect of Mitchell Relaxation Exercise and Recreational Therapy in Cancer Patients.

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Abstract

Background: The effects of training on the physical performance of cancer patients have shown greater improvement in their quality of life, mood and the physical performance of cancer patients during and after treatment. Hence this study was aimed to know the Effect of Mitchell relaxation exercise and Recreational Therapy in Cancer Patients. **Methodology:** Quasi experimental study was conducted for Cancer Subjects N=30 from Chennai. The subjects were taught to do Mitchell Relaxation exercises, Music Therapy and Guided Imagery Training was practiced for 30 mins and Follow up duration was for 8 weeks and assessed with incentive spirometer for inspiratory volume, perceived stress scale and the self-regulation motivational questionnaires. **Result:** There was a significant difference with $p<0.001$ in Perceived stress scale (20.03± 0.66), Self-regulation motivational questionnaires was (226.37 ± 2.95) and Inspiratory volume was (400 ± 25.82) **Conclusion:** There was a significant effect of Mitchell relaxation exercise and recreational therapy in enhancing Self-Motivation, Inspiratory volume and reducing the perceived stress in cancer patients to maintain their quality of life.

Keywords
Mitchell Relaxation techniques, stress, inspiratory volume, motivation.

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INTRODUCTION:

Cancer subjects have more stress and less motivational level. Salvo et al found that 55% of cancer subjects reported at least mild level of depression. Depressed individuals have more disability and functional impairments and it can generate the somatic problems including sleep difficulties, fatigue and pain.

Earlier the role of exercise in oncological rehabilitation programmes has been mostly limited to physical treatment addressing to specific impairments. In recent years the medical attitude regarding exercise for cancer patients is changing fast. The recent studies have shown that the effects of training on the physical performance of cancer patients have shown greater improvement in their quality of life, mood and the physical performance of cancer patients during and after treatment.

The psychological stress level in cancer diagnosed patients and patients undergoing treatment has been reflected with heightened allostatic load. Leading to decreased motivation, coping up strategies, social interaction, sleep disorder, and withdrawal oneself from the society and their

responsibilities persist. The importance of sleep and the treatment of sleep disturbance during and after cancer treatment have been relatively overlooked (Savard & Morin, 2001). Various study stated that more stress level and less motivational efficacy leads to increase depression level and to reduce the functional activities and their quality of life in cancer patients.

Relaxation techniques provides a decrease in sympathetic nervous system tone, Relaxation works through psycho-physiological means implying that both the mind and the body are involved in the quieting process. Therefore, exercise could play a potential role as complementary therapy for cancer patients during and after treatment.

The brain is a dynamic system that coordinates behavioral and physiological responses to stress using reciprocal signaling with the rest of the body. Allostasis (an active process of maintaining homeostasis) happens when there is fluctuating demands between internal and external environment. The distributed network involved in stress adaptation encompasses a multitude of systems (i.e., hypothalamic–pituitary–adrenal (HPA) axis, autonomic nervous system, gut, kidneys, and the immune system) and biomediators (i.e., cortisol, sympathetic/parasympathetic mediators, cytokines, and metabolic hormones).

Regular physical activity has been shown to increase the performance status in breast cancer patients treated with conventional chemotherapy[1] and in patients after bone marrow transplantation.[2]

However, it is necessary to have more information about the effects and feasibility of exercise programmes for different groups of patients with oncological diseases. Research about the effects of exercise in the prevention and rehabilitation of cancer and the impact of physical activity on immune function is still at its very beginning.

Numerous studies have shown that exercise is an effective means for counteracting several of the negative effects that chronic diseases have on physical performance.[1] This study aimed the effect of Mitchell relaxation exercise and Recreational Therapy in Cancer patients.

Methodology:

Quasi experimental study was conducted using convenient sampling method. Cancer subjects were enrolled to the study N=30 based on the Inclusion Criteria: 1) post-menopausal women surviving with breast cancer - stage I & II; 2) Age range: 40 - 60 years, 3) physical activity level: walking less than a total of 30 - 60 · min^{-1} three days · $week^{-1}$ and performing no strenuous exercise such as running, cycling, swimming or resistance training. Women were excluded from the study if they had cardiac disease, uncontrolled hypertension (blood pressure > 160/90 mm Hg), uncontrolled pain, or any other condition that contraindicated exercise training in cancer patients or survivors and Women with lymphedema. Follow up duration was for 8 weeks and assessed with incentive spirometer for inspiratory volume, perceived stress scale and the self-regulation motivational questionnaires.

PROCEDURE:

The subjects who fulfill the inclusion criteria were included for the study and informed consent was obtained from them subjects demographic data, onset duration and treatment duration was noted. The subjects participating in this study was informed that they have to do the exercise regularly and can withdraw from the study if they have any difficulty. Pre-test values were taken prior to the exercises and post-test values were taken after 8 week's duration of the study.

Group therapy was given under supervision the Patients were asked to do the following exercises.

MITCHELL RELAXATION: The muscle is Stretched and maintained for 5 counts and then relaxation for 10 counts.

MUSIC THERAPY: To provide a relaxation, the musical therapy for 10 minutes.

GUIDED IMAGERY TRAINING: Imagination of pleasant and positive scenes, to bring about the positive mind/ body responses that stimulate the senses for 10 minutes.

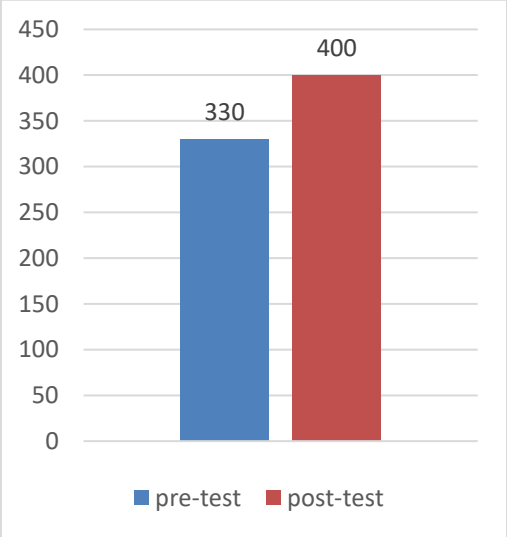
DATA ANALYSIS:

All statistical Analysis were analyzed using SPSS version 20.0. Software. The significance was set at alpha=0.005 level paired t-test was used to compare the pre and post values of Inspiratory volume, Perceived stress scale and the self-regulation motivational questionnaires.

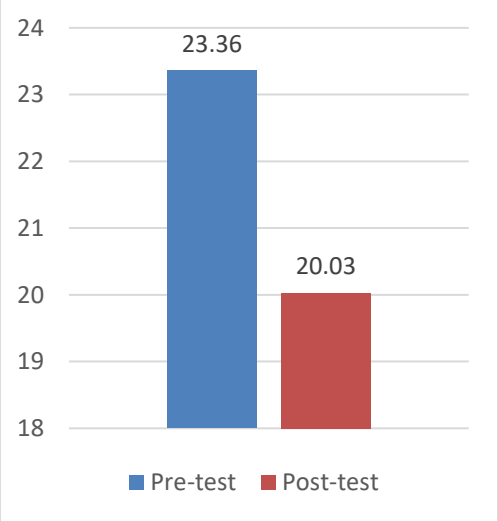
Table 1: Effect of Mitchell Relaxation Exercise and Recreational Therapy in Cancer Patients.

	Std.dev	t-value	p-value
Inspiratory volume (cc/ml) (Pre- Post IV)	968.64	2.248	.032
Perceived stress scale (Pre- Post PSQ)	19.36	4.440	.000
Self-regulation motivational questionnaires (Pre- Post SRMQ)	275.14	6.141	.000

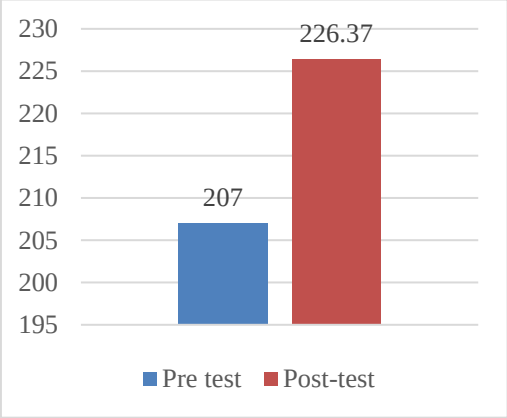
Graph 1: Effect of Mitchell Relaxation Exercise and Recreational Therapy for improving the inspiratory volume in Cancer Patients.



Graph 2: Influence of Mitchell Relaxation Exercise and Recreational Therapy to reduce Stress in Cancer Patients.



Graph 3: Effect of Mitchell Relaxation Exercise and Recreational Therapy to Enhance Self-Motivation in Cancer Patients.



RESULT:

Table 1: shows the post value mean of Perceived stress scale 20.03± 0.66, Self-regulation motivational questionnaires 226.37 ± 2.95 and Inspiratory volume 400 ± 25.82

Graph 1: shows the effect of Mitchell Relaxation Exercise and Recreational Therapy for improving the inspiratory volume in Cancer Patients.

Graph 2: shows the influence of Mitchell Relaxation Exercise and Recreational Therapy to reduce Stress in Cancer Patients.

Graph 3: Shows the effect of Mitchell Relaxation Exercise and Recreational Therapy to Enhance Self-Motivation in Cancer Patients.

CONCLUSION:

There was a significant effect of Mitchell relaxation exercise and recreational therapy in enhancing Self-Motivation, Inspiratory volume and reducing the perceived stress in cancer patients to maintain their quality of life.

DISCUSSION:

This study concludes that Mitchell relaxation exercise and recreational therapy has enhanced Self-Motivation, improved Inspiratory volume and reduced the perceived stress in cancer patients.

Psychological stress in cancer subjects is comparatively high which causes demotivation, decrease physical activity and increase fatigability. Regular physical activity has been shown to increase the performance status in breast cancer patients treated with conventional chemotherapy[1] and in patients after bone marrow transplantation[2].

Relaxation exercise decrease the stress level through Allostasis. Relaxation techniques provides a decrease in sympathetic nervous system tone, Relaxation works through psycho-physiological means implying that both the mind and the body are involved in the quieting process. Therefore, exercise could play a potential role as complementary therapy for cancer patients during and after treatment.

Recreational therapy is designed to restore, remediate and rehabilitate a person's level of functioning and independence in life activities, to promote health and wellness as well as reduce or eliminate the activity limitations and restriction to participation in life situations caused by an illness or disabling condition [ARTA],2009. Music Therapy and Guided Imagery Training is simple, and effective to reduce the stress and to improve their motivations.

The Inspiratory volume of the cancer patients were less than 600cc/ml prior to the study and after the Mitchell Relaxation techniques which involved in stretching and then relaxing the different muscle groups. In further study, an additional measure to improve their quality of life - ECOG (Eastern Cooperative Oncology Group) performance status to measure the functional activities, Increasing the sample size, long term follows up. To determine the impact of a relaxation technique on improving quality of life. It is necessary to have more information about the effects and feasibility of exercise programmes for different groups of patients with oncological diseases. However, Research about the effects of exercise in the prevention and rehabilitation of cancer and the impact of physical activity on immune function is still at its very beginning.

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