ABSTRACT

Introduction:

Cancer is a leading cause of mortality worldwide. Patients with cancer often have to deal with severe side effects and psychological distress due to adjuvant therapies, which have a considerable impact on their quality of life. The most common symptoms of cancer and the adjuvant therapies used for treatment are fatigue, depression, and pain. In addition to physical symptoms, people with cancer nearly always experience considerable levels of psychological distress. Further, it has been seen that as an adjunct to conventional cancer therapies, the complementary therapies improve quality of life through decreasing the adverse effects of anticancer treatments. In fact, now a days, Yoga is used as a complementary therapy in improving symptoms related to cancer, is a combination of breathing techniques, physical postures, and meditation that have been practiced as various styles of hatha yoga for over 5,000 years.

Objectives:

The main objective of this study was to determine the effect of progressive yoga relaxation on death syndrome and psycho-neuro-immunological, biochemical and physiological responses in cancer patients.

Methodology:

Thirty (n=30) cancer patients of homogenous disease group, age ranged from 25-55 yrs., were selected as sample from Bharat Sevashram Sangha, Vashi, New Mumbai, who were taking treatment in the Tata Memorial Hospital, Jera bai Wadia Road, Parel, Mumbai. The patients, who are staying in the accommodation provided by Bharat Sevashram Sangha, Vashi, New Mumbai, and interested to participate in the progressive yoga relaxation programme were included in this study. Further, the patients who are in advanced stage and/or underwent operation as ruled out by the consulting oncologists were excluded. The entire selected 30 subjects was divided randomly into two groups, viz, Group-A (experimental group) and Group-B (control group). Group-A was treated with Medical Treatment plus Progressive Yoga Relaxation while Group-B was treated with Medical Treatment only. The experiment was conducted in three phases: Pre-test; Treatment; Post-test; and FU (Follow Up). Before starting a treatment, all the subjects were pre-tested with the following variables: A) Psychological Variables: Anxiety; Depression; Adjustment; and Death Syndrome. B) Physiological Variables: Heart rate; Blood Pressure; Respiratory rate; and Breathing style (i.e., abdominal or chest breathing). Peak exploratory flow rate. C) Neurological Variables: Neuromuscular coordination; Reaction time. D) Haematological Variables: Hb (haemoglobin), W.B.C. For assessing the psychological variables, different standard questionnaires were administered. An interview method was also adopted to get acquainted with the cancer patients. Treatment stimuli or treatment schedule on “Progressive Yoga Relaxation” was
developed as per literature of Yoga and on the basis of the suggestions of Yoga experts. The medical doctors further verified the schedule of Yoga. After taking care of pros and cons, the patients of experimental group were allowed to participate in “Progressive Yoga Relaxation Programme” daily 1 hr. in the evening including Sundays and holidays for a minimum period of 6 weeks. Although the subjects of the control group did not participate in the said training, however, they were kept busy with some recreation activities during this experiment. Dietary restriction, if any, as per specific types of cancer, was controlled by Bharat Sevashram Sangha, Vasi (New Mumbai). After completion of the treatment period, all the patients of Group-A and B were tested with same variables as they had been tested in the pretest. After the posttest was over, neither the patients of Group-A nor Group-B were given Yoga training for another 6 weeks period. However, in this period, the subjects of the Group-A were directed to practice yoga on their own which they learnt during treatment. This 6 weeks period is known as follow-up. After completion of this follow-up period, all the subjects of the control and experimental group were again tested with the variables considered in pre- and post-tests. However, during this follow-up period, the drop-outs (due to death or absence in the experiment) were recorded carefully. The obtained data was analyzed using Factorial ANOVA followed by Scheffe’s post hoc test.

Results:

Yoga group showed significant superiority over the control group in reducing Anxiety (CD=0.68, p<0.01) Depression (CD=0.60, p<0.01) improving Adjustment ability (CD=0.60, p<0.01) and lowering Death Syndrome (CD=0.66, p<0.01). Further, Follow Up study revealed that Yoga proved better in maintaining low Anxiety level, reducing Depression (CD=0.57, p<0.01) maintaining good Adjustment level (CD=0.46, p<0.01) and lower level of Death Syndrome than the control (CD=0.58, p<0.01). In case of physiological variables Yoga group showed significant superiority over the control group in lowering Heart rate (CD=0.56, p<0.01); Systolic Blood Pressure (CD=0.65, p<0.01); Diastolic Blood Pressure (CD=0.54, p<0.01) and Respiratory rate (CD=0.50, p<0.01). While follow up study revealed that Yoga proved better in maintaining lower level of Heart rate (CD=0.51, p<0.01) Systolic Blood Pressure (CD=0.55, p<0.01) Diastolic Blood Pressure (CD=0.44, p<0.01) and Respiratory rate (CD=0.40, p<0.01) than the control group. Additionally, Yoga group showed significant superiority over the control group in changing Breathing style i.e., from chest breathing to abdominal breathing (CD=0.64, p<0.01) and improving in Peak Exploratory Flow Rate (CD=0.60, p<0.01). Further, Follow Up study revealed that Yoga proved better in changing Breathing style i.e., from chest breathing to abdominal breathing than the control (CD=0.56, p<0.01) and better in maintaining higher level of Peak Exploratory Flow Rate than the control (CD=0.54, p<0.01). In case of hematological variables Yoga group showed significant superiority over the control group in maintaining Haemoglobin level (CD=0.43, p<0.05) and controlling WBC level (CD=0.57, p<0.01) in post test as well as follow up test. In neuromuscular coordination and reaction time Yoga group showed significant superiority over the control group (CD=0.63, p<0.01). Further, follow up study showed that the subjects of yoga group could maintain higher level of
neuromuscular coordination (CD=0.51, p<0.01) and lower state of reaction time (CD=0.45, p<0.01) as compared to control group.

**Conclusion:**

The result, within limitations, records the following conclusion: Progressive relaxation programme of Yoga helped the cancer patients to maintain the associated psycho-physio-neurological and haematological attributes plausibly at normal level. This, in fact, signifies a symptom of good health for cancer patients, which may prolong their longevity. Combined therapy of Medical treatment plus Yoga could restore some favourable hope to live in reducing death syndrome of the cancer patients. Yoga was found to be an added advantage along with modern medicine for treating cancer.