

EFFECT OF VIPASSANA MEDITATION IN REDUCING PSYCHOSOCIAL STRESS AMONG CANCER PATIENTS

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ABSTRACT

The present study was conducted with the objective to study the effect of vipassana meditation in reducing psycho-social stress among cancer patients. It was hypothesized that there would be a significant effect of meditation in reducing psycho-social stress. The study was conducted on a sample of 30 subjects in the age range of 40-50 years. Subjects were categorized into two Groups (Experimental Group and Control Group), 15 subjects in each group. Cancer patients were included in both the groups. Cancer Disease was diagnosed by the physician. Before starting the intervention program, for the Experimental group subjects were trained in vipassana meditation for one month and were asked to practice the meditation for one month. For control group subjects were not given any type of intervention. For measuring psychosocial stress, ICMR Psychosocial Stressor questionnaire by Srivastav (1992) was used. Pre- Post data was compared with the help of Wilcoxon Signed Rank Test. Z value was calculated for psychosocial stress in both the groups. A significant difference was found between the pre and post scores of psychosocial stress in experimental group ($Z = 3.41$, $p < .01$) in comparison to the control group ($Z = 0.33$). Further, result shows the significant reduction in the scores of psychosocial stress in experimental group whereas no significant reduction was observed in control group. So, it can be said that there is a significant positive effect of vipassana meditation in reducing psychosocial stress among cancer patients. Practicing Vipassana Meditation is a right way of living, in illness and in health.

Keywords: Cancer patients, Psycho-social Stress, Vipassana Meditation.

I. INTRODUCTION

The Modern world of achievements can also be called as the world of stress. Modern life style often found to be resulted in severe health problems such as cancer, diabetes, coronary heart disease, arthritis, hypertension and many more. One such chronic disease which is growing very fast is Cancer. Cancer is one of the leading causes of morbidity and mortality worldwide, with approximately 14 million new cases in 2012 [1]. Recently reported by World Health Organization, WHO [2], cancer is the second leading cause of death globally, and was

responsible for 8.8 million deaths in 2015. Globally, nearly 1 in 6 deaths is due to cancer. The most common causes of cancer death are cancers of: Lung (1.69 million deaths), Liver (788 000 deaths), Colorectal (774 000 deaths), Stomach (754 000 deaths) and Breast (571 000 deaths). The morbidity and mortality of cancer all over the world present sustainable growth status, which seriously threatens human health.

Cancer is often thought of as an untreatable, unbearably painful disease with no cure. Cancer is undoubtedly a serious and potentially life-threatening illness. Cancers, cardiovascular diseases, chronic respiratory diseases, diabetes and other Non-communicable diseases (NCDs) are estimated to account for 60% of all deaths in India. The probability of dying during the most productive years (ages 30-70) from one of the four main NCDs (Cancers, cardiovascular diseases, chronic respiratory diseases and diabetes) is a staggering 26% (Bloom et al., 2014).

The Indian Council of Medical Research [3] conducted a study and found that in 2016 the total number of new cancer cases is expected to be around 14.5 lakh and the figure is likely to reach nearly 17.3 lakh new cases in 2020. Further study showed that among females, breast cancer topped the list and among males mouth cancer. The northeast reported the highest number of cancer cases in both males and females. Aizawl district in Mizoram reported the highest number of cases among males while Papumpare district in Arunachal Pradesh recorded the highest number among females. "Cancer of breast with estimated 1.5 lakh (over 10 per cent of all cancers) new cases during 2016, is the number one cancer overall. Cancer of the lung is the next with estimated 1.14 lakh (83,000 in males and 31,000 in females) new cases during 2016 and 1.4 lakh cases in 2020. Cancer of the cervix is the third most common cancer with estimated 1 lakh new cases in 2016 and about 1.04 lakh during 2020.

The harmful use of alcohol, tobacco as a risk factor, has been specifically linked to cancer, cardiovascular disease, and diseases of the liver [4]. Cancers associated with the use of tobacco account for about 30 per cent of all cancers in males and females. Among males, mouth cancer is leading in registry areas of the western states of the country while among the females of East Khasi hills in Meghalaya recorded the highest number of cases of mouth cancer among women [3].

Cancer occurs when cells become abnormal and keeps dividing and forming more cells without any internal control or order. Normally, cells divide to produce more when the body needs them to remain healthy. However, if cells keep dividing when new cells are not needed, a mass of extra tissue known as tumour or neoplasm forms, which can be benign or malignant. Benign tumours are not cancerous and, usually can be removed and when removed, in most cases, do not re-form. Cells from benign tumours also do not spread to other parts of the body and so benign tumours are rarely life-threatening. In case of malignant tumours, cancer cells can invade and damage nearby tissues and organs.

Today, however, we are increasingly exposed to prolonged mental and psychological stress. Stress can be defined as an imbalance between demands placed on us and our ability to manage them. Stress may influence the genesis of cancer by triggering dormant malignant cells or by impairing the immune system [5]. Stress-

induced immune dysregulation results in significant health consequences for immune related disorders including viral infections, chronic autoimmune disease, and tumor growth and metastasis [6]. Studies indicated that social and psychological factors play a significant role in determining the course and onset of cancer. Feeling of hopelessness, inability to discharge negative emotions and loss of support [7], absence of current social network [8], social isolation [9] may elevate risk of dying from cancer. Depression, helplessness, anxiety and grief have been cited as frequent precursors of cancer [10].

There are many types of cancer treatment like Radiation therapy, Immunotherapy, Chemotherapy, Targeted therapy, Hormone therapy and Surgery etc. Chemotherapy is a widely used treatment for cancer. Chemotherapy is the use of anticancer drugs designed to slow or stop the growth of rapidly dividing cancer cells in the body. The drugs may be used as a primary treatment to destroy cancer cells, before another treatment to shrink a tumor, after another treatment to destroy any remaining cancer cells and to relieve symptoms of advanced cancer. While chemotherapy targets cancer cells, it may also damage healthy cells and cause unpleasant side effects, such as nausea, vomiting, hair loss, fatigue and mouth sores. Individuals with a cancer diagnosis may experience heightened vulnerability to stress, anxiety, and depression as they grapple with the possibility of dying from their illness. As suggested by doctors there are effective treatment options available for cancer but the severe side effects of cancer treatment can be seen in form of psychological and behavioral problems such as depression and anxiety among survivors. So, it raises a question that is there any effective intervention available that can be practiced with the or after the cancer treatment to control the severe side effects? Previous literature shows that Complementary and Alternative Medicine (CAM) interventions can lessen the physical and psychological challenges associated with cancer and gives a direction to search for an effective way to enhancing quality of life among cancer patients undergoing chemotherapy.

Meditation affects the physical as well as mental health of an individual. Through meditation a person is expected to get mental peace. Meditative styles can be usefully classified into two types-mindfulness and concentrative- depending on how the attentional processes are directed [11]. Mindfulness practices involve allowing any thoughts, feelings, or sensations to arise while maintaining a specific attentional stance: awareness of the phenomenal field as an attentive and nonattached observer without judgment or analysis. Examples include Zen, Vipassana, and the Western adaptation to mindfulness meditation [12]. Mindfulness-based meditation helps in diminishing anxiety and depression [13]. Concentrative meditational techniques involve focusing on specific mental or sensory activity: a repeated sound, an imagined image, or specific body sensations such as the breath. Examples include forms of yogic meditation and the Buddhist Samatha meditation.

Vipassana meditation is an example of Mindfulness meditation practices. It is a very ancient meditation technique of India. Vipassana means insight. To see things as they really are, in their true perspective, in their true nature. It is a practical technique of self-examination, a scientific method of self-observation that results in the total purification of the mind and the highest happiness of full liberation. The goal of Mindfulness

meditation is to promote a sense of comfort and acceptance of the present moment as opposed to focusing on past experiences or the uncertainties of the future. “This intervention focuses on moment to moment awareness of one’s experiences, such as breathing, sound, and physical sensations”[14]. Mindfulness meditation is helpful in reducing stress and anxiety, combating depression, lowering blood pressure, improving immune function, managing chronic pain, and, overall wellbeing [15].

Ledesma and Kumano [16] evaluated the effectiveness of Mindfulness-based stress reduction technique on the psychological and physical health status of heterogeneous cancer patients. The results demonstrate that mindfulness based approaches have a positive effect on psychological disturbances associated with cancer, including anxiety, stress, fatigue, mood and quality of life. Further, in an observational study of forty-nine breast cancer and ten prostate cancer patients investigated the relationship between a Mindfulness-based stress reduction program and quality of life, mood states and stress. The post intervention outcome measures for quality of life demonstrated greater overall global quality of life as evidenced by significant changes in pre and post scores. Significant reduction in stress symptoms was also seen [17].

The perusal of related studies revealed that a number of researches have been done and are presently being done on cancer patients. However, reviews to the date reports that no research has been done so far to study the effect of vipassana meditation in reducing psychosocial stress among cancer patients undergoing chemotherapy. Present research would be a step to show that the pharmacological treatment is not the only remedy for cancer but some other supportive techniques are also available which can help in managing and living with cancer disease without any side effects. So, the present research was conducted with the following objective:

Objective: To Study the effect of meditation (Vipassana Meditation) in reducing psychosocial stress among cancer patients.

Hypothesis: There would be a significant effect of meditation (Vipassana Meditation) in reducing psychosocial stress among cancer patients.

Variables:

Independent Variable: Vipassana Meditation

Dependent Variables: Psychosocial Stress

Relevant Variables: Age, Gender, Educational Qualification

Tool: To measure Psycho-social stress, ICMR Psychosocial Stressor questionnaire by Srivastav (1992) will be used. The Questionnaire was designed to assess the extent of individual’s feeling of the basic components of psychological stress (such as pressure, tension, anxiety, conflict, frustration etc.) resulted in form perceived stress situations (such as adversities, hardships, threats, afflictions, failure, constraints, excessive demands,

conflicting roles etc.) in various spheres of his social life. The questionnaire altogether consisted of 40 items representing seven categories of social- situations of stress.

Sample: The study was conducted on a total sample of 30 subjects in the age range of 40-50 years taken from Bhopal, Gwalior and nearby areas. Subjects were randomly categorized into Two Groups (Experimental and Control Group), 15 subjects in each group. Cancer Patients were included in both the groups. In Experimental Group, there were 6 females and 9 males and in Control Group there were 8 females and 7 males. Subjects belonged to middle and upper middle class. Subjects were matched in terms of age, education, marital status and socio-economic status. For Experimental Group, subjects were selected from the Vipassana centers of Bhopal, Gwalior and nearby cities. Subjects with cancer disease, who were voluntarily attending 10-days course of vipassana meditation were included in the sample. Subjects for Control Group with cancer disease were taken from Bhopal, Gwalior and nearby cities, but they were not participating in any practices such as meditation, prayer or yoga.

The given inclusion and exclusion criteria were followed for the selection of cancer patients in Group I:

- Educated at least up to 12th standard.
- Patients should be diagnosed by a doctor to have cancer and should have been under treatment for cancer at least for last one year.
- Early-stage oral and early-stage breast cancer patients were included in the sample.
- The patient should be first generation cancer patients. The patients who had family history of Cancer disease were not included in the sample.
- Person suffering from any other fatal disease (other than cancer) like CHD, diabetes, asthma and AIDS (HIV) etc. were excluded from the sample.
- Patients undergoing any other treatment except chemotherapy will not be included in the sample.

Design: Pre and Post Test design was used in the present research.

Procedure: Initially consent was taken from the subjects. Then tool was administered on all 30 subjects. The subjects were requested to answer truly and mark the appropriate option among those given in the scales for each question. They were requested not to leave any of the items unanswered. Instructions regarding the test were given properly and they were assured that the information given by them will be kept confidential. Administration and scoring of the test was done as per the instructions given in the test manual. When the questionnaire was filled, scoring was done and tabulated data was subjected to statistical analysis.

After taking baseline scores, subjects practiced meditation under the supervision of expert for ten days at vipassana meditation center. Then, they were asked to practice meditation regularly at their home for one month. Regular feedback was taken from the subjects. After one month, post- test was administered on the subjects again. This posttest was parallel to the pretest. Psychosocial stress was measured again.

Statistical Analysis: Wilcoxon Sign Rank Test was used to study the significance of difference between the pre and post test scores.

II. RESULTS AND DISCUSSION

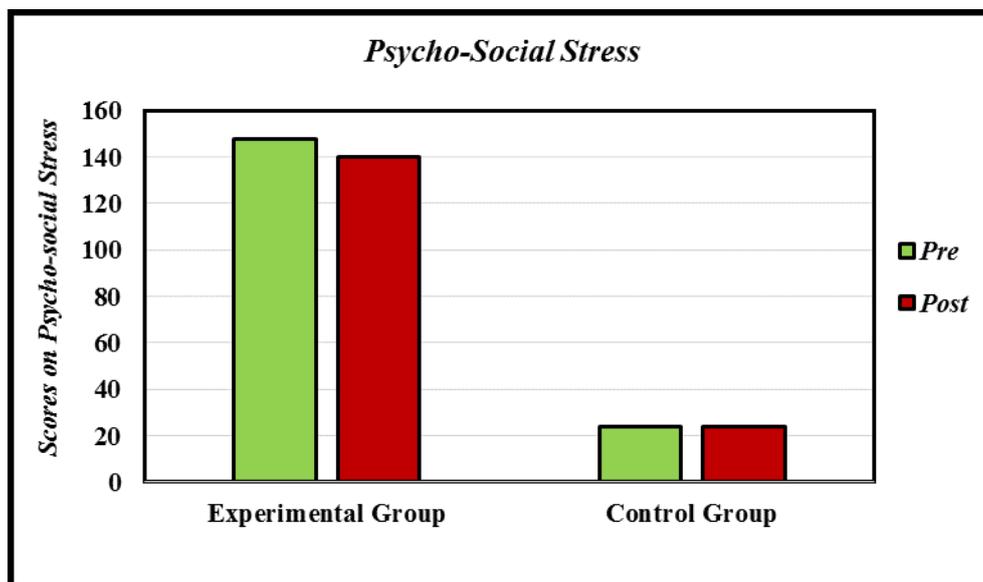
Table 1: Mean, SD and Z value of Pre test and Post test of Psycho-social Stress Scores in Experimental and Control Group

Measures		Experimental Group N= 15			Control Group N= 15		
		Mean	SD	Z	Mean	SD	Z
Psycho-social Stress	Pre	148.00	26.98	3.41**	23.93	14.98	0.33
	Post	140.27	24.75		23.86	14.55	

**p < .01

It can be observed from Table 1 that in Experimental Group the mean score for psycho-social stress in pre measure is 148.00 which has decreased to 140.27 in post measure. It shows the reduction in psycho-social stress scores. In Control Group, the mean score for psycho-social stress in pre measure is 23.93 and in post measure it is 23.86. It also shows the reduction in psycho-social stress scores.

Graph 1: Comparison between Pre Intervention-Post Intervention Psycho-social Stress Scores in Experimental and Control Group



Further, Z value was calculated to study the significance of difference between both the measures in Experimental Group and Control Group. Results reveal that in Experimental Group, Z value in respect to psycho-social stress was found to be 3.41 which is significant at .01 level. Table 1 further indicates that in Control Group, Z value for psycho-social stress was found to be 0.33 which is not significant even at .05 level. However, the mean of the post measure is lower than the pre measure in Control Group. But the difference between means is not statistically significant. So, it can be said that there is a significant positive effect of vipassana meditation in reducing psycho-social stress among cancer patients. The reduction in psycho-social stress scores in both groups is also shown graphically (Graph 1).

III. DISCUSSION

Finding of the present research is that after intervention, mean scores of psycho-social stress decreased in experimental group in comparison to the control group. Results of the present study led to the acceptance of the hypothesis that there would be a significant effect of meditation (Vipassana Meditation) in reducing psycho-social stress ($Z= 3.41, p<.01$). Introspection report and feedback given by subjects after intervention also validate the present results.

Reduction is seen in psycho-social stress in experimental group in comparison to control group. This may be because in experimental group vipassana meditation was given as intervention. Through regular practice of meditation tension and negative emotions are removed and mind feels calm and relaxed. These changes affect the thinking and behavior of an individual.

Previous research findings supported the results of present research. Practice of mindfulness meditation develops the parts of the prefrontal cortex responsible for emotional balance, fear modulation, insight, sensory awareness, intuition, response flexibility, interpersonal attunement, empathy, and morality [18]. Researches also showed that meditation practice increases emotional intelligence [19; 20], empathy [21], sociability [22], joy, happiness, positive thinking [23] and moral development. These practices also helps in management of negative emotions [24] and improves social relationships [22].

The results are also in consistence with Cohen [25] who demonstrates that yoga based meditation increases quality of life, reduces stress and boost mood among cancer patients. Pozo et al. [26] reported decrease in anxiety with practiced meditation among cancer patients. Further, Shenna, Pyne and Fenlon [27] conducted a systematic review of mindfulness interventions in cancer care. Results showed significant improvement in anxiety, depression, stress, sexual problems and immune function in oncology patients. Musial et al. [28] found that Mindfulness Based Stress Reduction (MBSR) improves mood and emotional distress in cancer patients. Similarly, Foley et al. [29] studied the effect of 8 week Mindfulness-based Cognitive Therapy program on heterogeneous cancer patients (N=115). Findings showed significant improvement in depression, anxiety, distress and quality of life.

In a recent study patients with a previous cancer diagnosis were selected and randomized into an intervention group or a waiting list control group. Intervention program consisted of an 8-week mindfulness training. Study reports the 6 month follow-up effect of a mindfulness stress reducing training program on depression, perceived stress, anxiety, positive states of mind, coping self –efficacy among patients treated for cancer [30]. Similarly, Holzel et al. [31] found that meditation and mindfulness practices were strongly correlated with gains in attention, body awareness, emotional regulation, and changes to perceptions of the self.

In another study Singh, Singh and Shokeen [32] demonstrated through a field experiment that participants who are followers of a spiritual or religious group possessed significantly better well-being, quality of life and physical health than non- followers. Spiritual practices like meditation and prayer give a positive view towards the future life. Meditation creates changes not only in the physical and mental body but also creates changes in relationships with others by making one’s aware of every thought, emotion and action. Meditation practices work as a coping strategy in daily life situations. These practices teach people to cooperate instead of competing with situations.

Thus, the results of the present research led to the conclusion that intervention of vipassana meditation is effective in reducing psycho-social stress among cancer patients.

IV. LIMITATIONS

No study is free of limitation and the present study also has some limitation. The study has been conducted on a limited sample of 30 individuals, 15 in each group. A larger sample could have increased the power of the study. The study is limited to subjects of 40-50 years of age only. So the results cannot be generalized on all age groups. Further research can be done on different age groups as well, to generalize the results for all age groups. Only one month intervention was given in the present study. In future researches it should be ascertained whether longer interventions can give still better results. Pre and post design has been used in the present research. Multiple research assessments approach can also be used in future research to get more reliable results.

V. FUTURE IMPLICATIONS

Cancer rates are increasing in India and other developing countries. Despite this, research on the physical, psychological and social aspects of the cancer patients is limited in India. Present research proves that complementary approach or supportive techniques can be used along with the pharmacological treatment for getting better results in the treatment of cancer. Practice of vipassana meditation can help in managing cancer without any side effects. Practicing Vipassana Meditation is a right way of living, in illness. Daily practice of Meditation can help cancer patients to cope up with the stressful situations which they feel during chemotherapy. Genetic factors are also responsible for some type of Cancer but by taking certain precautions these risks can be avoided.

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