

A Comparative Study To Evaluate The Effectiveness Of Breathing Exercise-Anuloma Viloma And Mindfulness Meditation In Reducing The Level Of Anxiety Among Cancer Patients In Selected Cancer Hospital Of Delhi/ NCR

Mrs. Ekta Sharma¹, Mrs. Swati Tripathy², Prof. Lavanya Nandan³, Patel Jaimikaben Babubhai⁴

¹Master's in Psychiatric Nursing, Nightingale Institute of Nursing, Noida, Uttar Pradesh, India Email - Ektamudgal005@Gmail.com

²Assistant Professor, Mental Health Nursing Department, Nightingale Institute of Nursing, Noida, Uttar Pradesh, India

³Principal, Nightingale Institute of Nursing, Noida, Uttar Pradesh, India

⁴Assistant Professor, Mental Health Nursing Department, Nightingale Institute of Nursing, Noida, Uttar Pradesh, India

Abstract

Introduction: Cancer and anxiety often go hand in hand, as dealing with cancer can be an incredibly stressful experience. Anxiety is prevalent among cancer patients, and cancer care providers frequently need to identify and treat it at first. Given the threat posed by cancer, it is sense that many patients experience anxiety. Regretfully, anxiety can occasionally develop into a clinically significant issue on its own, and it should be dealt with appropriate interventions.

Aim: The current study is a comparative study to evaluate the effectiveness of breathing exercise Anuloma-Viloma and mindfulness meditation in reducing level of anxiety among cancer patients in selected cancer hospital of Delhi/NCR.

Material and methods: A pre-experimental comparative two groups pre-test post-test design was used in the study. Purposive sampling technique was used in the study. The sample consists of 50 admitted cancer patients (25 cancer patients for breathing exercise Anuloma-Viloma group and 25 cancer patients for mindfulness meditation group) in a selected cancer hospital. Beck Anxiety Inventory (BAI) was used as a tool to assess the anxiety level. The data was analysed and interpreted as per objectives and the research hypothesis stated. Descriptive and inferential statistics were used for data analysis.

Results: Results showed that there was significant difference between mean post test scores of cancer patients in breathing exercise Anuloma Viloma group (19.88) and mindfulness meditation group (19.16) for level of anxiety score as obtained 't' value (0.386) was lower than the tabulated value (1.06) for df (48) at 0.05 level of significance.

Conclusions: The study concluded that both the interventions i.e., Breathing exercise Anuloma-Viloma and Mindfulness meditation are effective in reducing the level of anxiety among cancer patients. There was no significant difference between the effectiveness of both the interventions in reducing the level of anxiety of cancer patients which means both are equally effective. It is also concluded that there was no significant association between the level of anxiety and selected demographic variables.

Key words: Cancer; Level of anxiety; Anuloma Viloma; Mindfulness meditation.

INTRODUCTION

A cancer diagnosis can trigger anxiety due to fear of the unknown, potential pain, side effects of treatment, and concerns about mortality. The physical symptoms of cancer and its treatments (like pain, fatigue, and nausea) can contribute to anxiety. Anxiety can exacerbate symptoms of cancer and negatively impact overall health and recovery. A cancer diagnosis can result in excruciating anxiety. Managing anxiety is a crucial aspect of coping with cancer, and addressing it can significantly improve the quality of life and overall outcomes for cancer patients. Keeping the psychological impacts under control can help patients live longer. The care team for patients managing a cancer diagnosis must include mental health experts. They can help their patients find healthy coping mechanisms for stress management, reduce risky behaviours like smoking or substance abuse, and promote an active lifestyle, all of which can improve quality of life and survival rates after cancer therapy. In addition, mental health professionals can encourage patients to use stress management techniques that have been shown to reduce levels of anxiety, depression, and cancer-related symptoms, such as mindfulness, relaxation techniques, and Cognitive Behavioural Therapy (CBT).

Research indicates that yoga and meditation offer both physical and psychological benefits to people with cancer, as detailed in the article "Yoga for People with Cancer" by Hope Cristol, medically reviewed by Melinda Ratini, MS, DO (2022). While yoga is not a cure for cancer, it may alleviate some side effects of the disease and its treatments. Studies suggest that yoga can help reduce cancer-related fatigue, improve sleep, aid recovery post-surgery, and decrease symptoms of depression, anxiety, and stress¹.

The mind-body exercises of yoga and meditation are said to ease tension and increase flexibility. Asanas, which are physical postures; breathing exercises; and mindfulness exercises make up its three major components.

Traditional yoga is a spiritual discipline aimed at purifying the body and mind to connect with the Divine and achieve liberation from suffering. The connection between mind and body, often referred to as mind-body purification in modern yoga practice, remains an area needing further exploration. Cancer patients frequently experience symptoms of anxiety, depression, and fatigue. Increasingly, supportive therapies are being used to alleviate cancer-related suffering. This research examines the effects of yoga on these symptoms. Over the past two decades, numerous studies have highlighted the benefits of yoga and meditation, showing improvements in mood, symptom reduction, stress relief, quality of life, and host factors that influence cancer patient survival².

Patients may feel that their quality of life has been adversely impacted after receiving a cancer diagnosis. This may show up in their social interactions, which has an effect on their immediate family. The goal of the current study is to compare the efficacy of both approaches and examine the effects of yoga and meditation on cancer patients as a way to help them cope with the treatment process by lowering their anxiety.

According to Mitchell Alex et al. (2013), anxiety disorders are significantly more prevalent in patients who have had cancer for more than two years (17.9%), likely due to accumulating stressors and/or declining health. Various studies have evaluated the effectiveness of yoga therapy or meditation in reducing anxiety and stress among cancer patients, but no study has compared the two methods. Therefore, the researcher identified a need to conduct a study comparing the effectiveness of yoga therapy and meditation in reducing anxiety among cancer patients³.

OBJECTIVES

- To assess the level of anxiety among cancer patients in selected cancer hospitals of Delhi/NCR.
- To evaluate the effectiveness of breathing exercise Anuloma Viloma and mindfulness meditation in reducing level of anxiety among cancer patients.
- To compare the difference between effectiveness of breathing exercise Anuloma Viloma and mindfulness meditation in reducing the level of anxiety among cancer patients.
- To determine the association between the post-test level of anxiety and the selected demographic variables among cancer patients undergoing breathing exercise- Anuloma Viloma and Mindfulness meditation.

HYPOTHESIS OF THE STUDY

- **H1-** There will be significant difference between the pre-test and post-test level of anxiety among cancer patients undergoing breathing exercise Anuloma Viloma at 0.05 level of significance.
- **H2-** there will be significant difference between the pre-test and post-test level of anxiety among cancer patients after mindfulness meditation at 0.05 level of significance.
- **H3-** there will be significant difference between the post- test level of anxiety among the cancer patients undergoing Breathing exercise Anuloma Viloma and mindfulness meditation at 0.05 level of significance.
- **H4-** there will be significant association between the post- test level of anxiety after breathing exercise- Anuloma Viloma and Mindfulness meditation and selected demographic variable among cancer patients at 0.05 level of significance.

MATERIALS AND METHODS

The research design adopted for this study is pre-experimental comparative two groups pre-test post-test design. In the present study sample comprised of all kinds of cancer patients who are admitted in selected cancer Hospitals of Delhi/NCR. Purposive sampling technique was adopted to select 50 samples were divided into two groups: 25 cancer patients receiving Anuloma-Viloma intervention and 25 cancer patients receiving mindfulness meditation intervention. The cancer patients who were admitted in

selected cancer hospital, who were above the age of 20 years, were willing to participate in the study, were included in the study. The study was conducted only among those cancer patients who were able to perform Anuloma-Viloma and Mindfulness meditation, The study was conducted only on those patients who were admitted for a period of around 7-10 days. The cancer patients who were not willing to participate in the study, were absent at the time of data collection, Patients with end stage cancer or with major complications, the cancer patients below the age of 20 years, cancer patients who had previously undergone any complementary alternative (CAM) therapy and Cancer patients who were under the treatment of anti-anxiety drugs were excluded in the study. The study was undertaken with the approval of the principal of Nightingale Institute of Nursing, Noida. Ethical permission obtained from ethics committee of Nightingale Institute of Nursing, Noida. Formal administrative permission was obtained from the concerned authorities of cancer hospitals. The purpose of the study was explained. The samples of the study were assured of maintaining anonymity and confidentiality of their information. The consent form was prepared for the study participant regarding their willingness to participate in the research study.

Based on the conceptual framework and objectives of the study, the tools used to collect the data is Beck Anxiety Inventory (BAI). The tool to collect data from the selected samples consists of two sections such as- Part-1 Demographic data Part-2 Beck Anxiety Inventory (BAI).

PART 1- It consists of 9 items on demographic data of cancer patients for obtaining personal information with regard to age (in years), gender, education, religion, marital status, socio-economic status, occupation, staging of cancer and type of cancer.

PART 2- It consists of Standard anxiety tool that is Beck Anxiety Inventory (BAI) to assess the level of anxiety of cancer patients consists of list of phrases that describe certain feelings that people have. This is a 4-point rating scale where Patients will rate themselves by finding the answers which best describes the extent to which he/she has these conditions.

The Beck Anxiety Inventory (BAI) was one of the first rating scales developed to measure the severity of anxiety symptoms, and is still widely used today in both clinical and research settings. The scale consists of 21 items, each defined by a series of symptoms, and measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety). Each item is scored on a scale of 0 (not present) to 3 (severe), with a total score range of 0–63, where 0-21 indicates low anxiety, 22-35 moderate anxiety and 36 and above-potentially concerning level of anxiety.

Intervention

The researcher underwent a certification course of Anuloma-Viloma and mindfulness meditation from a yoga academy. One group of cancer patients was taught Anuloma-Viloma and Mindfulness meditation was taught to another group of cancer patients. A return demonstration was taken from each patient and practice of both interventions was continued in both the groups for 10 days under supervision.

Method of data collection

On Day 1, Pre-test was taken by assessing the level of Anxiety using Beck Anxiety Inventory (BAI). After pre-test, Anuloma Viloma and Mindfulness meditation in two different groups of admitted cancer patients was administered for 10 days. On day 12th, Post-test was administered in order to evaluate the effectiveness of interventions provided. Statistical analysis was performed through descriptive and inferential statistics. Paired and Unpaired t-test were used to assess the effectiveness of both the interventions and Fisher Exact test was used determine the association between demographic variables and level of anxiety scores in both the groups. The analysis of data involves the translation of collected information into interpretable and manageable form.

RESULTS

N=50 Demographic Characteristics of Participants

SI No.	Demographic Characteristics	Anuloma-Viloma Group (N=25) Frequency (f) %	Mindfulness Meditation Group (N=25) Frequency (f) %	Categories
1	Age in years	2 8%	3 12%	20-30 years
		2 8%	1 4%	31-40 years
		7 28%	4 16%	41-50 years
		14 56%	17 68%	>50 years
2	Gender	13 52%	9 36%	Female
		12 48%	16 64%	Male
		0 0%	0 0%	Others
3	Marital status	23 92%	22 88%	Married
		2 8%	3 12%	Unmarried
		0 0%	0 0%	Widowed
		0 0%	0 0%	Divorced
4	Educational level	6 24%	10 40%	Primary
		8 32%	5 20%	Intermediate
		7 28%	7 28%	Graduate
		4 16%	3 12%	Illiterate
5	Occupational status	6 24%	6 24%	Govt. job
		2 8%	4 16%	Private job
		14 56%	11 44%	Jobless
		3 12%	4 16%	Own business
6	Socio-economic status	1 4%	2 8%	Lower class (<10,000)
		16 64%	13 52%	Lower middle (11,000-50,000)
		5 20%	10 40%	Upper middle (51,000-99,000)
		3 12%	0 0%	Upper class (>1 lakh)
7	Religion	21 84%	24 96%	Hindu
		0 0%	1 4%	Muslim
		0 0%	0 0%	Christian
		4 16%	0 0%	Others
8	Stages of cancer	19 76%	23 92%	First
		3 12%	1 4%	Second
		1 4%	1 4%	Third
		2 8%	0 0%	Not specified
9	Type of cancer	9 36%	3 12%	Breast
		1 4%	2 8%	Lung
		2 8%	0 0%	Oral cavity
		13 52%	20 80%	Others

Table 1: Frequency and percentage distribution of cancer patients in Anuloma-Viloma group and mindfulness meditation group by demographic characteristics (n=50).

The data in Table - 1 depicted that:

- In Anuloma-Viloma group, majority, 14 (56%) cancer patients were above 50 years of age. As regard to gender, most of them, 13 (52%) was female. While in Mindfulness meditation group, majority of cancer patients 17 (68%) were above 50 years of age. As regard to gender, most of them, 16 (64%) was male.

- As per their marital status, most of the cancer patients, 23 (92%) were married in the Anuloma-Viloma group while in mindfulness meditation group, 22 (88%) were married.
- In Anuloma-Viloma group, as per educational status, majority of cancer patients i.e., 8 (32 %) were educated up to intermediate, while in mindfulness meditation group, most of them, i.e., 10 (40%) were educated up to primary level.
- According to their occupation in Anuloma-Viloma group, majority of cancer patients were jobless 14 (56%), While in mindfulness meditation group, most of the cancer patients, i.e., 11 (44%) were jobless.
- In terms of family income majority of patients in Anuloma-Viloma group 16 (64%) belonged to lower middle class while in mindfulness meditation group, majority 13 (52%) belonged lower middle class.
- Majority of the cancer patients, 21 (84%) belonged to Hindu religion in Anuloma-Viloma group. While in mindfulness meditation group, most of the cancer patients, 24 (96%) belonged to Hindu religion.
- As per the staging of cancer, majority of cancer patients in both the groups belonged to first stage of cancer i.e., Anuloma-Viloma group 19 (76%) and mindfulness meditation group, 23 (92%) respectively.
- Majority of cancer patients in both the groups were having other types of cancer i.e., in Anuloma-Viloma group 13 (52%) were having other types of cancer, while in Mindfulness meditation group, 20 (80%) were having other types of cancer.

N=25

Level of anxiety		Pre-test scores (N=25)		Post-test scores (N=25)	
Scoring		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Low anxiety	0-21	1	4%	15	60%
Moderate anxiety	22-35	10	40%	10	40%
Severe anxiety	36 and above	14	56%	0	0

Table 2: frequency and percentage distribution of pre-test and post test score of cancer patients in Anuloma-Viloma group.

Table 2 The data represents that in pre-test, majority of the subjects 56% (14) were having severe anxiety, 40% (10) were having moderate anxiety and only 4% (1) were having mild anxiety, whereas in post-test majority 60% (15) were having low level of anxiety while 40% (10) were having moderate anxiety.

N=25

ANULOMA-VILOMA GROUP	MEAN	MEDIAN	MEAN DIFFERENCE	SD	PAIRED "t" VALUE
PRE-TEST	39.56	41	19.68	11.55	16.618*
POST-TEST	19.88	17		7.29	

*df (24) = 2.06 at 0.05 level of significance

Table-3 mean, median, mean difference, standard deviation, and paired 't' value of pre-test and post test scores in anuloma-viloma group.

Table 3 reveals the mean post test scores (19.88) of cancer patients in Anuloma-Viloma group is lower than the mean pre-test score (39.56), with the mean difference of 19.68. The obtained mean difference was found to be statistically significant as evident from the 't' value of 16.618 for df (24) at 0.05 level of significance which is greater than the table value. Hence it can be inferred that Anuloma-Viloma was effective method for reduction of anxiety among cancer patients.

N=25

Level of anxiety		Pre-test scores (N=25)		Post-test scores (N=25)	
Scoring		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Low anxiety	0-21	0	0	17	68%
Moderate anxiety	22-35	5	20%	8	32%
Severe anxiety	36 and above	20	80%	0	0

Table 4: frequency and percentage distribution of pre-test and post test score of cancer patients in mindfulness meditation group.

Table 4 represents that in pre-test, majority of the subjects 80% (20) were having severe anxiety, 20% (5) were having moderate anxiety, whereas in post-test majority 68% (17) were having low level of anxiety while 32% (8) were having moderate anxiety.

N=25

MINDFULNESS MEDITATION GROUP	MEAN	MEDIAN	MEAN DIFFERENCE	SD	PAIRED "t" VALUE
PRE-TEST	43.16	41	24	8.68	14.923*
POST-TEST	19.16	19		5.77	

*df (24) = 2.06 at 0.05 level of significance

Table 5: mean, median, mean difference, standard deviation, and 't' value of pre-test and post test scores in mindfulness meditation group.

Table 5 indicates that the mean post test scores (19.16) of cancer patients in Mindfulness meditation group is lower than the mean pre-test score (43.16), with the mean difference of 24. The obtained mean difference was found to be statistically significant as evident from the 't' value of 14.923 for df (24) at 0.05 level of significance which is greater than the table value. Hence it can be inferred that Mindfulness meditation was effective method for reduction of anxiety among cancer patients.

N=50

GROUPS	MEAN	MEAN DIFFERENCE	SD	UNPAIRED "t" VALUE
ANULOMA-VILOMA	19.88	0.72	7.29	0.386*
MINDFULNESS MEDITATION	19.16		5.77	

*df (48) = 1.06 at 0.05 level of significance.

Table 6: Comparison of post- interventional mean, median, standard deviation and unpaired "t" test value of anxiety among cancer patients after the administration of "Anuloma-Viloma and mindfulness meditation" in respective groups of cancer patients

The data represented in table 6 indicates that the mean anxiety level score of groups Anuloma-Viloma was 19.88 with standard deviation 7.29. The mean anxiety level score of groups "Mindfulness meditation" was 19.16 with standard deviation 5.77. The mean difference was found to be 0.72. The obtained mean difference was thus statistically not significant as the calculated "t" value calculated by unpaired T-test was 0.38 which is lower than table value (1.06) for df (48) at 0.05 level of significance. Hence it can be inferred that both the interventions i.e., Anuloma-Viloma and Mindfulness meditation are effective in reducing the level of anxiety among cancer patients.

N=25

S.NO	CHARACTERISTICS	Anxiety SCORES (Below median)	Anxiety SCORES (Above median)	P VALUE	SIGNIFICANT/ NOT SIGNIFICANT
1	Age in years a) 21-30 years b) 31-40 years c) 41-50 years d) >50 years	2 1 3 7	0 1 4 7	0.2	Not significant
2	Gender a) Female b) Male c) Others	4 9 0	9 3 0	0.4	Not significant
3	Marital status a) Married b) Unmarried c) Widow d) Divorced	11 2 0 0	12 0 0 0	0.2	Not significant

4	Educational level a) Primary b) Intermediate c) Graduate d) Illiterate	1 6 5 1	5 2 2 3	0.1	Not significant
5	Occupational status a) Government job b) Private job c) Jobless d) Own business	5 1 5 2	1 1 9 1	0.1	Not significant
6	Socio-economic status a) Lower class (< Rs 10,000) b) Lower middle class (Rs 11,000-50,000) c) Upper middle class (Rs 51,000-99,000) d) Upper class (> 1 lakh)	0 8 2 3	1 8 3 0	0.06	Not significant
7	Religion a) Hindu b) Muslim c) Christian d) Others	11 0 0 2	10 0 0 2	0.4	Not significant
8	Stages of cancer a) First b) Second c) Third d) Fourth	10 1 0 2	9 2 1 0	0.4	Not significant
9	Type of cancer a) Breast b) Lung c) Oral cavity d) Others	2 1 2 8	7 0 0 5	0.06	Not significant

*Level of significance at 0.05

Table 7: Fisher exact test showing association between anxiety score of patients with their selected demographic variable (post-test).

The data presented in the table-7 revealed that fisher Exact test was obtained to determine the association between the level of anxiety and selected demographic variables like age, sex, marital status, educational status, occupation, socio-economic status, religion, stage of cancer and type of cancer and it was evident from the obtained fisher test values that there was no significant association between anxiety level scores of both the groups and selected demographic variables; because the calculated values were higher than the table values at 0.05 level of significance.

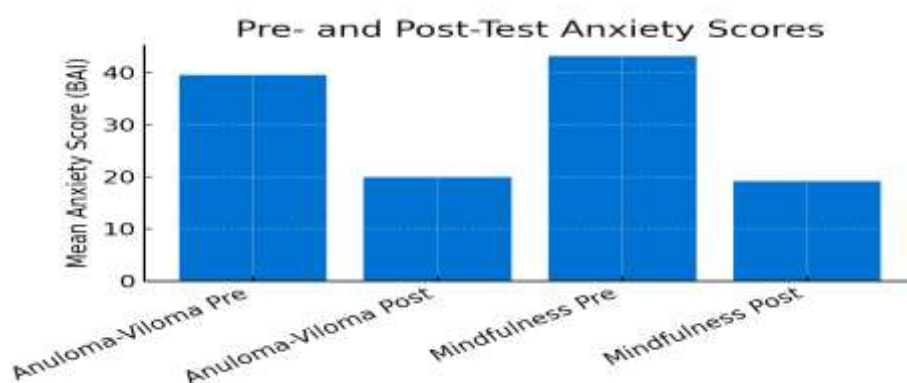


Figure 1: Comparison of pre- and post-test mean anxiety scores in both groups.

DISCUSSION

A cancer diagnosis can have a profound effect on a person's psychological and physical health in addition to their physical health. A diagnosis like this, along with the events that follow, can pose a number of challenges to psychological well-being. These challenges include stress, anxiety, and depression related to symptoms, treatment (including possible side effects), recovery (or death), and concerns about finances and family. Therefore, it should come as no surprise that anxiety and sadness are prevalent in cancer patients. While radiation therapy and chemotherapy are useful in treating the physical cause(s) of cancer, their effects on psychological health are not always evident. It is true that feelings of stress, anxiety, and despair are frequently felt both during and after therapy. In an effort to assist in managing the psychological effects of cancer, psychosocial therapies have been created. The ultimate goal of these psychological interventions, which can take many different forms, is to reduce stress, tension, and anxiety through behaviour. Additionally, there is proof that enhanced psychological health might influence treatment results and lessen pain associated with cancer.

The purpose of this study is to compare the effectiveness of Breathing exercise Anuloma-Viloma and Mindfulness meditation in reducing the level of anxiety among cancer patients who are admitted in the selected cancer hospitals of Delhi/NCR. The study was conducted among 50 cancer patients admitted in Action Cancer Hospital Paschim Vihar, Delhi. In this section the investigator discusses the result of the study. The present study findings revealed that Breathing exercise Anuloma-Viloma was effective in reducing the level of anxiety among cancer patients. The findings are consistent with findings of the study reported by Yuka Hayama and Tomoko Inoue in which they did experimental study to evaluate the effectiveness of deep breathing on 'tension-anxiety' and fatigue in cancer patients undergoing adjuvant chemotherapy. They took total 23 patients which were randomly selected. In experimental group (n=11) they provided deep breathing while in control group, they did not give any intervention. They assessed the pre and post effects of the intervention using the Profile of Mood States-Short Form (Japanese version) and the Cancer Fatigue scale. The findings revealed that deep breathing intervention is likely to reduce the 'tension-anxiety' and fatigue in patients with gynaecological cancer undergoing adjuvant chemotherapy⁴. The present study findings revealed that Mindfulness meditation was effective in reducing the level of anxiety among cancer patients. The findings are consistent with findings of the study reported by Oberoi Sapna et al which was a systematic review and meta-analysis of 28 randomized controlled trials, conducted to evaluate the effectiveness of Mindfulness based interventions with anxiety severity in adults with cancer. Two reviewers independently extracted the data and included 28 RCTs enrolling 3053 adults with cancer. Systematic searches of MEDLINE, Embase, Cochrane Central Register of Controlled Trials, CINAHL, PsycINFO, and SCOPUS were conducted from database inception to May 2019 to identify relevant citations. Analysis revealed that MBIs were associated with reduction in the level of anxiety up to 6 months post-interventions in adults with cancer⁵. The present study revealed that both the interventions i.e. Breathing exercise Anuloma-Viloma and Mindfulness meditation are effective in reducing the level of anxiety among cancer patients.

Implications and recommendations

Anxiety management techniques should be taught to the clients so that they can manage anxiety more constructively in hospitals as well as home. The study can be replicated on larger sample in different setting, so that the findings can be generalized to larger population; Similar study can be replicated using other complementary and alternative therapies; A similar interventional study can be carried out among cancer patients in community areas; Similar study can be conducted with different variables like quality of life, level of stress and depression etc.

CONCLUSION

The present study was to compare the effectiveness of breathing exercise Anuloma Viloma and Mindfulness meditation in reducing the level of anxiety among cancer patients in selected cancer hospital of Delhi/ NCR". After giving the respective interventions, the level of anxiety was reduced as evident by pre-test and post-test anxiety score. All 50 samples were showing reduction in the level of anxiety. There was no significant association between post-test anxiety scores with selected demographic variables in both the groups at 0.05 level of significance. This means demographic variables and post-test anxiety scores are independent of each other and did not have any association. Further research concerning use of other alternatives therapies can be used in the reduction of level of anxiety, stress etc.

Financial support and sponsorship

Self.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Yoga for people with cancer (Online) (Cited 2022 Jun 14) Available at URL: <https://www.webmd.com/cancer/yoga-cancer>
2. Dhruva A, Miaskowski C, Abrams D, Acree M, Cooper B, Goodman S, Hecht FM. Yoga breathing for cancer chemotherapy-associated symptoms and quality of life: results of a pilot randomized controlled trial. *J Altern Complement Med.* 2012 May;18(5):473-9. doi: 10.1089/acm.2011.0555. Epub 2012 Apr 23. PMID: 22525009; PMCID: PMC3353818. (Online) (Cited 2012 May 18) Available at URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3353818/>
3. Curran, L., Sharpe, L., & Butow, P. (2017). Anxiety in the context of cancer: A systematic review and development of an integrated model. *Clinical Psychology Review, 56*, 40–54. <https://doi.org/10.1016/j.cpr.2017.06.003> (Online) (cited:2013 Jul 14) Available at URL: <https://pubmed.ncbi.nlm.nih.gov/23759376/>
4. Effectiveness of Mindfulness-based Therapy for Reducing Anxiety and Depression in Patients with Cancer - PMC (nih.gov) (Online) (Cited: 2020 Aug) Available at URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7414391/>
5. Association of Mindfulness-Based Interventions with Anxiety Severity in Adults with Cancer - PMC (nih.gov) (Online) (Cited: 2020 Aug) Available at URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7414391/>