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EFFECT OF PRANAYAM ON DEPRESSION AND ANXIETY AMONG ELDERLY

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ABSTRACT

An endeavor to study the effect of pranayama on depression and anxiety among the elderly was made. Yoga brings physical and mental strengths, which helps to cope with problems relating to body and mind. The peacefulness of body and mind helps to manage depression and anxiety. The study was undertaken on 100 elderly males and females between the ages of 60 to 80. Beck's depression inventory and Beck's anxiety inventory scales were used in measuring the participants' depression and anxiety levels before and after the intervention. Subjects were selected through a purposive sampling method, and an experimental design was used for the study. An analysis of the results shows that pranayama significantly decreased the level of depression and anxiety among the elderly.

KEYWORDS: Pranayama, Depression, Anxiety, Elderly.

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INTRODUCTION

ELDERLY

The ageing of the population is attracting significant attention at the beginning of the 21st century due to the sharp increase in the aged population. This has emerged as a recent phenomenon globally. The decline in fertility rates, advancement in physical, advancement in medical sciences, economic development, rapid expansion of public health services, social welfare, social security measures have increased the population's life expectancy. It has resulted in a higher proportion of the elderly population worldwide (Shettar and Azim, 2011; Trivedi and Sandilya, 2007).

In India, we define 'elderly' as a person of age 60 years or above. Psychologically, ageing is characterized by the diminishing of one's bodily functions. The elderly population is continuously increasing all over the world. The elderly population in India is the second-largest in the world, next to China. The elderly population was 77 million according to the 2001 census, and the population projections also show that by the year 2050, the elderly population in India will exceed the population of children below 14 years.

DEPRESSION

Depression is the most common mental health disorder of later life that challenges a person's ability to perform even the most straightforward task of daily living. The elderly in India face multiple psychological, social and physical health problems. As age advances, there is increased mobility and functional losses and the presence of a variety of depressive factors like migration, changes in the family structure and economic insecurity results in losing the position of the elderly in their own house and increase the feeling of loneliness. There are also varying life events that significantly impact one's psychological status, making one more prone to depression (Jariwala et al., 2010; Pilania et al., 2013). Old age factors are associated with the psychological problems of the elderly (Moussavi et al., 2007).

ANXIETY

Anxiety means a mental state characterized by apprehension, uncertainty and fear. General anxiety is measured as state and trait anxiety. State anxiety is subjective feelings of tension, apprehension, nervousness and worry. Trait anxiety is a personality trait that indicates relatively stable individual differences in anxiety-proneness (Spielberger et al. 1983). Kierkegaard (1944) considered dread (anxiety) to be a natural emotion that pervades man's feelings and thoughts and

indicates to him when he is in an untenable position concerning God. It is the emotion that precedes and accompanies his desire to leap to a higher state of existence.

PRANAYAMA

Pranayama is the practice of breath regulation. By regular practice of pranayama, prana shakti is distributed through the body and invigorates all the seven chakras, purifies the mind and streamlines all the body systems, thereby increasing longevity. There are various types of pranayama to be performed as per the basis of need & season. Long & deep breathing, bhastrika, kapalbhati, agnisar, anulom-vilom, bhrumri, ujjayi, sheetli, nadishodhan are pretty prominent. Pranayama improves blood circulation and the lymphatic system, helping to eliminate toxins and strengthen the immune system. Pranayama offers many anti-ageing benefits beyond just the physical. It also provides emotional, spiritual and social advantages. It also reduces stress and depression as the additional advantage of accessibility it can be practiced any time, any place, without special equipment or clothing.

RATIONALE OF THE STUDY

This study aims to assess the effect of pranayama on depression and anxiety among the elderly. Depression and anxiety in the elderly are pretty standard as ageing brings its bundle of challenges. Many elderly have to fight with few complex problems whereas some health situations could be taking a toll on the person, poor health or death of a life partner could alleviate heavily to depression and anxiety in the elderly. The corona virus disease (COVID-19) pandemic has brought unprecedented fear and uncertainty, especially among the elderly. With India practicing a nationwide lockdown and social distancing, vulnerable elderly could be feeling more alone than usual. There are several reasons why the elderly are somewhat more vulnerable and they have more chronic conditions than younger people. Their ageing immune system makes it harder to fight off diseases, infections, and viruses. Recoveries are usually slower and more complicated. They could also have undiagnosed or poorly managed depression and anxiety. For millions of elderly, COVID-19 has amplified their already-existing worries. For the elderly, the lockdowns due to COVID-19 have been like an obstacle course for survival. The study of depression and anxiety among the elderly has not received much attention from the researchers. The scarcity of research in this area, especially in Punjab and the impact of Covid -19 on depression and anxiety

provides a convincing rationale for the researcher's plan to study "Effect of Pranayama on Depression and Anxiety Among Elderly" Hence research on this topic is very well justified.

REVIEW OF THE LITERATURE

A review of the literature was undertaken to understand and evaluate the research work done in the past in the same area is as under:-

Janakiramaiah et al. (2000) conducted the study on 15 mild and 9 melancholic elderly depressed patients to 15 normal control individuals. Study showed that pranayama was effective in treating mild and melancholic depression.

Pilnkington et al (2005) National Institute of Mental Health and Neuroscience in India conducted a study on pranayama technique, this method, also referred to as "The Healing Breath Technique", involves breathing with a natural breath through the nose, mouth closed. Study examined the effects of pranayama on depressive symptoms in 60 elderly men.

David et al. (2008) conducted study on pranayama (Hatha yoga) for depressed patients are taking anti-depressant medications but are only in partial remission. All participants were diagnosed with unipolar major depression in partial remission. Significant reductions were shown for depression, anger, anxiety, neurotic symptoms and low frequency heart rate variability in the 17 completers. Moods improved from before to after the yoga classes. Yoga appears to be a promising intervention for depression; it is cost-effective and easy to implement.

Gupta Pranay Kumar et al (2012) An experimental study was conducted among senior citizens living in the rural community of Muzzaffarpur to determine the effectiveness of anuloma viloma pranayama on anxiety among age group of 60-70 years. The result on anxiety scale showed a change from 35.53 percentages to 23.57 percentages after one month. The researcher found that pranayama had an important role to play on the perceived mental health of the elderly.

Jain Vandana and Sharma (2017) An attempt was made to study the effect of Yoga: Pranayama on Anxiety & Depression. A purposive sample of 120 persons (60 males & 60 females) was selected and a pre and post control group was used. An analysis of results shows that the yoga pranayama had positive effect in the management of Anxiety & Depression as well as in creating positive image about

oneself in the experimental group while control group didn't show any significant difference.

Ramanathan Meena et al (2017) In the study forty elderly women were randomly divided into yoga and wait-listed control group. A yoga therapy program of 60 min was given twice a week for 12 weeks. Data were assessed for normality, and appropriate parametric and nonparametric statistical methods were applied for intra- and inter-group comparisons. The influence of yoga in the reduction of depression and anxiety scores and improvement in self-esteem scores in elderly women subjects is evident from this study.

Shah Mayuri Rajesh and Kothari Parita Hardik (2019) The study was experimental and was carried out in Cardiovascular and Thoracic Surgery Intensive Care Unit of Dr. D Y Patil Hospital and Research Centre, Pune. Conventional exercises along with nadi-shodhana pranayama were given for total duration of 30min. Paired t test was applied to compare pre and post intervention on DASS-21 scale and Peak expiratory flow rate. The p value was <0.05 which was considered to be statistically significant. The study concludes that Nadi- shodhana pranayama along with conventional physiotherapy is effective in improving lung function and reducing depression, stress and anxiety in population undergone CABG.

After the literature review it was found that only few studies were undertaken on this topic in Punjab.

RESEARCH METHODOLOGY

TOPIC OF THE STUDY

The topic of the present study is “Effect of Pranayama on Depression and Anxiety among Elderly”

OBJECTIVES

1. To assess the effect of pranayama on depression among male elderly by comparing the pre-test and post-test level of depression.
2. To assess the effect of pranayama on depression among female elderly by comparing the pre-test and post-test level of depression.
3. To assess the effect of pranayama on anxiety among male elderly by comparing the pre- test and post-test level of anxiety.
4. To assess the effect of pranayama on anxiety among female elderly by

comparing the pre-test and post-test level of anxiety.

HYPOTHESES

1. There will be no significant effect of pranayama on depression level among male elderly.
2. There will be no significant effect of pranayama on depression level among female elderly.
3. There will be no significant effect of pranayama on anxiety level among male elderly.
4. There will be no significant effect of pranayama on anxiety level among female elderly.

OPERATIONAL DEFINITION OF THE VARIABLES

PRANAYAMA: Its etymology is as prana (prāṇa), breath, + āyāma and defines it as the suspension of breath (Macdonell).

DEPRESSION: An illness that involves the body, mood, and thoughts affect the way a person eats, sleep, feels about him or herself, and thinks about things. (William C. Shiel Jr).

ANXIETY is the symptomatic expression of the inner emotional conflict caused when a person suppresses (from conscious awareness) experiences, feelings, or impulses that are too threatening or disturbing to live with (Sigmund Freud).

TOOLS

Beck's Depression Inventory (Beck et al. 1996) was developed, consisting of 21 items. These items assess the pressure and intensity of depressive symptoms, and the items were scored from 1 to 3. This inventory has a test-retest reliability coefficient ranging from 0.74 to 0.83 on different time intervals.

Beck Anxiety Inventory (Beck et al., 1988) is a 21- question multiple-choice self-report inventory used to measure the severity of anxiety in children and adults. The questions asked about common symptoms of anxiety that the subject had during the past week. The inventory contains 21 items rated from 0-3, with a maximum possible score of 63.

SAMPLE

According to the sole aim of the present study, a total of 100 elderly (50 male and

50 female) with the age range from 60 to 80 were taken from phase 3 of Mohali (Punjab) by purposive sampling method.

SAMPLING CRITERIA: INCLUSION CRITERIA

The study includes the elderly who: -

- A. Are residing in and around phase 3 Mohali
- B. Can speak and understand Hindi, Punjabi or English.
- C. Are willing to participate in the study
- D. Are between the age range of 60-80 years

EXCLUSION CRITERIA

The study excludes elderly who are: -

1. With Respiratory and Cardiac problems.
2. Having cognitive disturbances.
3. With sensory deficits like blindness, hearing loss etc.
4. Already practicing pranayama.
5. Are under treatment of severe diseases.

RESEARCH DESIGN

One group pre-test and post-test experimental design was applied for research.

VARIABLES

INDEPENDENT VARIABLE: In this study, it refers pranayam.

DEPENDENT VARIABLE: In this study, it refers to the depression and anxiety among elderly.

PRANAYAMA INTERVENTIONS: one hour daily six days a week for two months.

TABLE 1 INTERVENTIONS ADMINSTRATED ON SUBJECTS

S. NO.	INTERVENTIONS	TIME
1	Sukhsham Vyamas (Neck movements, Shoulder movements, Trunk movement, Knee movements and Ankle movements.	5 Minutes
2	Om Chanting Pranayama	5 Minutes
3	Bhastrika Pranayama	10 Minutes
4	Anulom-Vilom Pranayama	15 Minutes
5	Bharamari Pranayama	15 Minutes
6	Cool down (Shavasan)	10 Minutes
7	Total	1 Hour

DELIMITATIONS

1. The study was delimited to the elderly residing in phase 3, Mohali and the

surrounding area.

2. The study was delimited to the age group of 60 to 80 years of both sexes, i.e., male and female.
3. The psychological variables were delimited to depression and anxiety.
4. The interventional variable delimited was pranayama.
5. The study was limited to selected breathing exercises under the category of pranayama.
6. Assessments were delimited to before and after the practice of the pranayama intervention period, i.e. two months.

LIMITATIONS

1. The study was limited to 100 elderly males and females residing in the surrounding area of phase 3 of Mohali.
2. The study was limited to selected breathing exercises under the category of pranayama,
3. The Trial study for the impact of breathing exercises was for two months, six days a week- one hour daily in the morning.
4. Only those elderly were included who could sit on chairs or the floor.

ETHICAL CONSIDERATIONS

The subjects selected for the study were informed about the purpose of the study, and then participants were made comfortable, and a rapport was established by simply asking few questions. The confidentiality of the participants was maintained during the study.

RESULTS AND DISCUSSION

The purpose of the present study was to investigate the effect of Yogic Intervention: Pranayama on anxiety and depression among the elderly. The present study comprises one independent variable called pranayama and the other dependent variables- anxiety & depression.

Pranayama was administered to the subjects six days a week in the morning before breakfast for eight weeks for one hour daily. The level of depression and anxiety was assessed by using Beck's Depression Inventory and Beck's Anxiety Inventory before starting and after completing the Pranayama interventions.

TABLE 2: EFFECT OF PRANAYAMA ON DEPRESSION AMONG ELDERLY

Gender	N	Pre-test mean	Post-test mean	t-test	Significant level
Male	50	27.3	20.98	8.3639	0.01
Female	50	28.42	20.9	8.7966	0.01

Table 2 shows that the total depression scores of 50 male were decreased from 1365 to 1049, and the score mean also decreased from 27.3 to 20.98. This change depicts that after the practice of pranayama for two months by the participants, their depression level has been decreased. Total Depression scores of 50 females were also decreased from 1421 to 1045, and the score mean decreased from 28.42 to 20.90. This change depicts that after the practice of pranayama for two months by the participants, their depression level has been decreased.

TABLE 3: EFFECT OF PRANAYAMA ON ANXIETY AMONG ELDERLY

Gender	N	Pre-test mean	Post-test mean	t-test	Significant level
Male	50	25.9	15.4	7.0986	0.01
Female	50	29.52	14.12	11.824	0.01

Table 3 shows that total anxiety scores of 50 males were decreased from 1295 to 770, and the score mean also decreased from 25.90 to 15.40. This change depicts that after the practice of pranayama for two months by the participants, their depression level has been decreased. Total anxiety scores of 50 females were decreased from 1476 to 706, and the score mean also decreased from 29.52 to 14.12. This change depicts that after the practice of pranayama for two months by the participants, their depression level has been decreased.

Hypotheses were tested to observe the effect of pranayama on depression and anxiety among the elderly with the help of a t-test. To test the significance of the effect of pranayama on depression, the mean of pre-test scores of male elderly was compared with the mean of Post-test scores ($27.3-20.98=6.32$) and a t-test was applied. Since the calculated t-value is more than the table value and p-value <0.0001 , the hypothesis is accepted, i.e. pranayama has a significant effect on the depression level of elderly males as it helps substantially reduce the depression levels.

To test the significance of the effect of pranayama on depression, the mean of pre-test scores of female elderly were compared with the mean of Post-test scores ($28.42-20.90=7.52$) and a t-test was applied. The hypothesis is rejected since the calculated t-value is more than the table value and p-value <0.0001 . It is concluded

that pranayama has a significant effect on the depression level of elderly females as it helps substantially reduce depression levels.

To test the significance of the effect of pranayama on anxiety, the mean of pre-test scores of male elderly were compared with the mean of Post-test scores ($25.90-15.40=10.50$) and a t-test was applied. The hypothesis is rejected since the calculated t-value is more than the table value and p-value <0.01 . It is concluded that pranayama has a significant effect on the anxiety level of elderly males as it helps substantially reduce anxiety levels.

To test the significance of the effect of pranayama on anxiety, the mean of pre-test scores of female elderly were compared with the mean of Post-test scores ($29.52-14.12=15.40$) and a t-test was applied. Since the calculated t-value is more than the table value and p-value <0.0001 , the hypothesis is accepted, i.e. pranayama has a significant effect on the anxiety level of elderly females as it helps in substantially reducing the anxiety level.

CONCLUSION

Pranayama reduces depression and anxiety among the elderly better than other exercises. Regular practice helps in the relaxation of the mind. Elderly faces varied problems like unstable health conditions, lack of adequate care and concern by the family members, negligence by the caregivers, and a busy life schedule due to urbanization, which makes the elderly feel neglected. The present study confirms that practicing pranayama relieves depression and anxiety entirely and thus improves mental health. Pranayama is one of the best forms of relaxation techniques in yoga practices. The score of Beck's depression inventory scale Beck's anxiety scale denotes the range of levels of depression and anxiety in individuals. The practice of pranayama reduces the score of depression and anxiety, which reduces depression and anxiety levels in individuals. Through assessing these parameters among the study participants/subjects over two months (8 weeks) showed significant improvement, thus exhibiting the effectiveness of practicing pranayama. Regular practice of pranayama helps in the relaxation of the mind.

IMPLICATIONS

The findings of the study revealed that the pranayama is an effective treatment for depression and anxiety among elderly and recommend the application of pranayam on elderly in the homes, old age homes, elderly day care

centers and geriatric centre in the hospitals for treatment of depression and anxiety problems.

REFERENCES

1. Atlanta (GA) et al. Centers for Disease Control and Prevention. Physical guidelines for everyone: guidelines -how much physical activity do older adults need? February 16, 2013.
2. David, P. et al. (2008). Yoga as a complementary treatment of Depression. Journal of Indian academy of applied psychology, 4 (4), 493-502. Freud, S. (1926), Inhibitions, Symptoms and Anxiety. Standard Edition, 20: 174. Hogarth Press, London.
3. Gupta Pranay Kumar, Manoj Kumar, RitiKumari and J.M. Deo. Anuloma-Viloma Pranayama and Anxiety and Depression among the Aged. [Internet]. 2011[updated Feb 2011; cited march 2011]. Available at: <http://medind.nic.in/jak/t10/i1/jakt10i1p159.pdf>
4. Jain Vandana and Sharma Jyotsna. Effect of Yogic Intervention: Pranayama on Anxiety & Depression The International Journal of Indian Psychology, Volume 4, Issue 3, page 124-36.
5. Janakiamiah, K. et al. (2000). Antidepressant efficiency of pranayama in melancholia, Journal of Affective disorders 57 (3), 255 – 259. Jariwala, et al. (2010). A Study of depression among the aged in Surat city. National Journal of Community Medicine, 1, 47-49.
6. Joshi et al. Effect of short term 'Pranayama' practice on breathing rate and ventilatory functions of lung. Indian J Physiol Pharmacol 1992; 36(2): 105-108.
7. Kate Holcombe et al. Breathe easy relax with Pranayama, Yoga journal, June 15 2012.
8. Lamothe CJ, Stins JF, Pont M, Kerckhoff F, Beek PJ et al. Effects of attention on the control of locomotion in individuals with chronic low back pain. J Neuroeng Rehabil. 2008; 5: 13.2.
9. Macdonell, Arthur Anthony (1996). A Practical Sanskrit Dictionary. 185, Munshiram Monohar Lal Publishers.
10. Moussavi, S., Chatterji, S., Verdes, E., Tandon, A., Patel, V. and Ustun, B. (2007). Depression, chronic diseases, and decrements in health: results from the World Health Surveys, Lancet. 370, 851-8.
11. Pilania, M, Bairwa, M, Kumar, N., Khanna, P. and Khurana, H. (2013).

12. Ramanathan M, Bhavanani AB, Trakroo M. Effect of a 12-week yoga therapy program on mental health status in elderly women inmates of a hospice. *Int J Yoga*. 2017 Jan-Apr;10(1):24-28.
13. Shah Mayuri Rajesh and Kothari ParitaHardik. Effects of Nadi- Shodhana Pranayama on Depression, Anxiety, Stress and Peak Expiratory Flow Rate in Post CABG Patients: Experimental Study. *International Journal of Health Sciences & Research* Vol.9; Issue: 10; October 2019 page 40-45
14. Shettar, S.C. and Azim, S. (2011). Care of elderly in changing Indian family. *Social Welfare*, 58, 21-23.
15. Spielberger, C. D., Gorsuch, R. L., Lushene, R. E., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alta: Consulting Psychologists Press.
16. Trivedi, K. and Sandilya, V. (2007). Successful ageing; A study on adjustment and perception of social support of the aged, *Excellence in Home Science*, p 291-297.
17. William C. Shiel Jr. *Depression, Symptoms, Types, Test, and Treatment*.
18. Williams MA, Stewart KJ et al. Impact of strength and resistance training on cardiovascular disease risk factors and outcomes in older adults. *Clin Geriatr Med* 2009; 25(4):703-14.6.
19. World Health Organization (WHO) (2012). *World Health Day 2012 - Ageing and Health*.

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