

A COMPARATIVE STUDY OF THE EFFECT OF *ANULOM VILOM PRĀNĀYAM* AND *ĀNĀPĀNSATI* MEDITATION ON DEPRESSION IN GERIATRIC POPULATION: RCT

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Abstract:

Depressive disorder (also known as depression) is a common mental disorder. It involves a depressed mood or loss of pleasure or interest in activities for long periods of time.

Depression is different from regular mood changes and feelings about everyday life. It can affect all aspects of life, including relationships with family, friends and community. It can result from or lead to problems at school and at work.

Depression can happen to anyone. People who have lived through abuse, severe losses or other stressful events are more likely to develop depression. Women are more likely to have depression than men.

An estimated 3.8% of the population experience depression, including 5% of adults (4% among men and 6% among women), and 5.7% of adults older than 60 years. Approximately 280 million people in the world have depression. Depression is about 50% more common among women than among men. Worldwide, more than 10% of pregnant women and women who have just given birth experience depression. More than 700 000 people die due to suicide every year. Suicide is the fourth leading cause of death in 15–29-year-olds.

Although there are known, effective treatments for mental disorders, more than 75% of people in low- and middle-income countries receive no treatment. Barriers to effective care include a lack of investment in mental health care, lack of trained health-care providers and social stigma associated with mental disorders.

Hence the present study is carried out to know the effect of *AnulomvilomPranayam* and *Ānāpānasati* meditation on depression in geriatric population.

Aim

The aim of this study is to find out the effect of *AnulomevilomPrāṇāyāma* and *ĀnāpānasatiMeditation* on primary depression in geriatric population over a period of 8 weeks and compare it.

Objectives of the Research

1. To analyze and compare that the effect of *AnulomevilomPrāṇāyāma* and *ĀnāpānasatiMeditation* on reduction primary depression in geriatric population”
2. To analyze Yoga as a Science.
3. To study the Research Methodology in Yoga Therapy.
4. To establish the cause and effect in the field of yoga

Hypothesis of Research

AnulomevilomPrāṇāyāma and *Ānāpānasati Meditation* plays significant reduction in primary depression in geriatric population.

Null Hypothesis of Research

No significant reduction in primary depression in geriatric population by *AnulomevilomPrāṇāyāma* and *ĀnāpānasatiMeditation*.

Scope of the study

The researcher needs to clarify and demarcate the scope of the study. This ensures greater focus, specificity and clarity of the study. What is the value and use of the problem under investigation? Is it anyway going to help the pupil in future education? These are the questions to be answered.

MATERIAL AND METHOD:

The study of the assessment of Geriatric Depression Scale before and after 30 days of *ĀnāpānasatiMeditation* and *AnulomvilomPranayam* by Primary Depression patients were conducted through physically.

SELECTION OF SUBJECTS:

Forty-five patients among three group of Primary Depression in the age group of 55-75 years were selected. The diagnosis of Primary depression patients was done according to the WHO criteria. The informed consent was taken from all participants.

The scope and objectives of the present study was explained to all the subjects.

METHODOLOGY:

In this case study had been conducted to understand effect of *AnulomevilomPranayama* and *ĀnāpānasatiMeditation* in reduction Primary depression. The study is conducted on geriatric population Jalgaon. Forty-five patients with primary depression were divided into three separate groups. Group I (n1 = 15) patients belonged to the *Anapana Sati* meditation group were put through *ĀnāpānasatiMeditation* for 30 days, together with diet plus Brahmi Vati. Group II and n2=15 patients belong to the *Anulomvilompranayam* together with diet plus Brahmi Vati for 30 days and Group III and n3 = 15) patients or the control group patients, were retained on diet plus *Brahmi Vati* Tab. The controls were matched with respect to age, gender and Geriatric depression scale.

INCLUSION CRITERIA:

1. Age between 55-75 years physically healthy geriatric age group.
2. Both male and female are included.
3. Mild and Moderate depressive Population was included in the study.

EXCLUSION CRITERIA:

The study excludes the

1. Patients with serious illness.
2. Patients >75 and < 55 age group.
3. Alcoholic
4. Patients already doing any kind of yogic exercise
5. Geriatric people having any neurological (spinal cord injury etc.) or psychological disorder (OCD, mentally retarded etc.).
6. Geriatric people having musculoskeletal conditions like back pain, OA etc.

7. Patients who are not willing to participate in the study.

15 number of primary depression subjects in the *Ānāpānasati* Meditation group(n1) were kept on a prescribed diet and oral *Brahmi vati* medicines and they performed specific *Ānāpānasati* Meditation for 30 days under the guidance of me. The important parameters before the commencement of the *Ānāpānasati* Meditation(GDS baseline values) and after the *Ānāpānasati* Meditation were recorded.

15 number of primary depression subjects in the *AnulomvilomPrāṇayām*(n2) were kept on a prescribed diet and oral *Brahmi vati* medicines and they performed specific *AnulomvilomPrāṇayām* for 30 days under the guidance of me. The important parameters before the commencement of the *AnulomvilomPrāṇayām*(GDS baseline values) and after the *AnulomvilomPrāṇayām* were recorded.

15 number of primary depression subjects in the control group (n3) were kept on a prescribed diet and oral *Brahmi vati* medicines and they not performed any specific *AnulomvilomPrāṇayām* or *Ānāpānasati* meditation for 30 days under the guidance of me. The important parameters before the commencement (GDS baseline values) and after were recorded. The observations and results are enumerated in the succeeding paragraphs.

PROTOCOL:

All the subjects with in the three groups were taught *Ānāpānasati* Meditation, Yoga asana and *Anulomvilompranayama*. The duration of practice was 30 minutes from 7A.M. to 7.30A.M. *Ānāpānasati* meditation duration was 15 minutes daily. The informed consent was taken from all participants.

It was advised to keep bowel and bladder emptied prior to yogic practice. The duration of asana was 15 minutes approximately, that of *pranayama* was 12 minutes approximately. The practitioner was to perform *shavasana* in between two *asanas* to normalize the breathing. Taking mental awareness particularly the parts of the body being activated in an asana is very important. This relaxes the mind during the yoga session. While care was taken regarding individual body make up and limitations, they were advised not to strain too much in order to attain the correct posture. The body gets gradually tuned, with regular practice.

Three groups Percentile Mean and SD

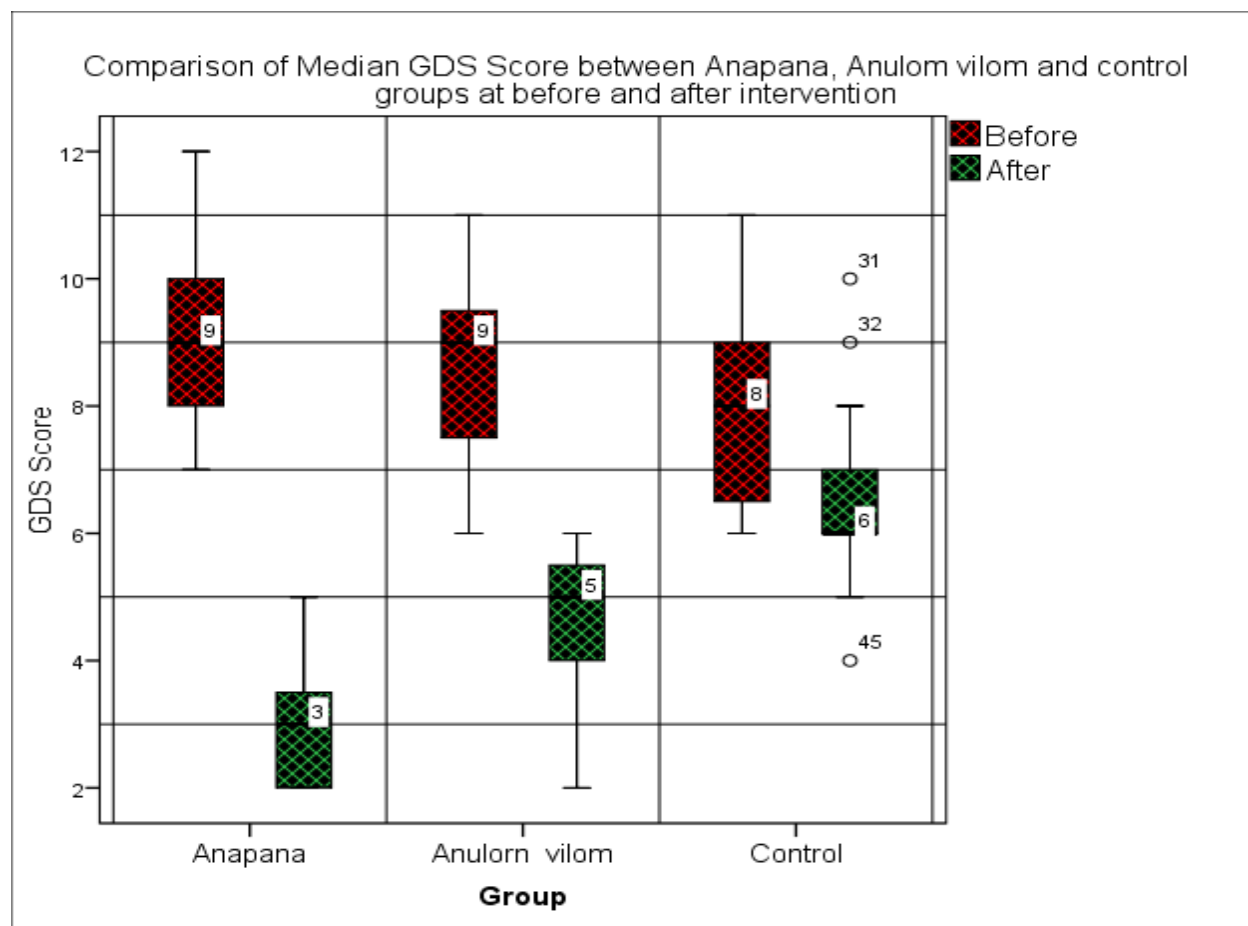
			Count	Minimum	Maximum	Percentile 25	Median	Percentile 75	Mean	Standard Deviation
Group	Anapana	Before	15	7.00	12.00	8.00	9.00	10.00	9.20	1.32
		After	15	2.00	5.00	2.00	3.00	4.00	2.93	.96
	Anulornvilom	Before	15	6.00	11.00	7.00	9.00	10.00	8.47	1.51
		After	15	2.00	6.00	4.00	5.00	6.00	4.53	1.25
	Control	Before	15	6.00	11.00	6.00	8.00	9.00	7.93	1.67
		After	15	4.00	10.00	6.00	6.00	7.00	6.53	1.55

Table shows effect of *Anapan sati meditation* and *AnulomvilomPrāṇayām* Therapy on depression Levels after applying Kruskal Test.

Kruskal-Wallis Test

Ranks				Test Statistics
	Group	N	Mean Rank	
Before	Ānāpānasati	15	28.10	Chi square = 4.350 DF=2 P value = 0.114
	Anulornvilom	15	22.60	
	Control	15	18.30	
	Total	45		
After	Ānāpānasati	15	10.70	Chi square = 27.509 DF=2 P value = 0.000
	Anulornvilom	15	22.80	
	Control	15	35.50	
	Total	45		

Graph shows comparison of Median GDS score between *Ānāpānasatī* Meditation, Anulomvilom *Prāṇayāma* and control groups at before and after interventions.



Discussion:

The present study is “Effect of Anulomevilom *Prāṇayāma* and *Ānāpānasatī* Meditation on reduction primary depression in geriatric population”. The basal parameters included GDS Scale score.

From the statistical analysis of the results obtained in the present study and their comparison with other published reports, it may be concluded that yoga helps in decreasing depression level and keep the depression in control.

Depression of geriatric population between age group of 55-75 years old both male and female age group of 45 samples was analyzed, which are divided into three groups A, B and C. Group A consist of 15 samples, 7 males and 8 females and Group B consist of 15 samples, 5 males and 10 females which are in experimental group and *Ānāpānasatī* meditation and *Anulomvilom Prāṇayāma* were taught to them. Group C consist of 15 samples, 7 males and 8 females which are in control group they were on their routine activity.

In present study, 08 weeks protocol of regular *Ānāpānasatī* Meditation and *Pranayama* were done. Depression scores got reduced after post intervention treatment indicating *Ānāpānasatī* Meditation and *Anulomvilom Prāṇayāma* reduces depression. Usually, breathing is not a conscious event and is regulated automatically by the nervous system through the respiratory centers located in the medulla oblongata and Pons. These are the dorsal and ventral group of neurons located in medulla, the pneumotaxic center and the apneustic center located in the Pons. Regular practice of slow and deep breathing exercises improves muscle strength and flexibility due to work hypertrophy. *Anulomvilom Prāṇayāma* cleanses the airways

secretion acts as a major physiological stimulus for the release of lung surfactant and prostaglandins into alveolar spaces which increases lung compliance.

AnulomvilomPrāṇayāma practices for short term increases maximum expiratory pressure and flow rate. It decreases reaction time indicating improvement of neuromuscular system. Deep and controlled breathing desensitizes the sensory nerve ending and reduces the allergic conditions of the environment. *Prāṇayāma* delays the onset of fatigue.

In the present study there was a significant fall in the depression score levels in the *Ānāpānasati* Meditation group as compare to *AnulomvilomPrāṇayāma*.

Ānāpānasati group GDS score is significantly lower than *AnulomVilomPrāṇayāma* and control group Score After intervention. *Ānāpānasati* according to Buddhism is a way of bringing nature's truths to contemplation in every moment of mindfulness in breathing in and out.

By modifying the state of anxiety, yoga reduces the stress induced sympathetic activity, thus maintain a better balance between the sympathetic and parasympathetic system. Thus, a decrease in sympathetic discharge and better ability to overcome stress can be taken as possible mechanisms for the improvement. Meditation also influences metabolic activity by reducing adrenocortical activity, long term decreased secretion of cortisol and decreased thyroid stimulating hormone.

All the patients in the *Ānāpānasati* Meditation and *AnulomvilomPrāṇayāma* group develop a sense of wellbeing without any side effect. So, they are self-motivated to continue the *Ānāpānasati* meditation and *AnulomvilomPrāṇayāma* practice as a daily routine in their life.

Conclusion

1. The *Ānāpānasati* Meditation and *AnulomvilomPrāṇayāma* practices which have mentioned above can be used effectively to control Depression.
2. *Ānāpānasati* group GDS score is significantly lower than *AnulomVilomPrāṇayāma* and control group Score After intervention
3. Longer practices of these yogic techniques will help for the betterment of the total health.

After analysis and intervention, the above conclusion was drawn. So *Ānāpānasati* Meditation and *AnulomvilomPrāṇayāma* practices have a role in both Mild and Moderate prevention in Depression. Therefore, *Ānāpānasati* Meditation and *AnulomvilomPrāṇayāma* practices therapy may be considered as a beneficial adjuvant for management of Depression.

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