



ADDED EFFECT OF YOGA ON DEPRESSION IN ELDERLY USING GERIATRIC DEPRESSION SCALE

Physiotherapy

Dr Sumitra Sakhawalkar*

Assistant Professor, Neurophysiotherapy Department / Maeers Physiotherapy college , Talegaon Dabhade pune Maharashtra.India . *Corresponding Author

Dr Swaroopa Ingle Intern Maeers Physiotherapy college , Talegaon Dabhade pune Maharashtra.India.

Dr Snehal Ghodey Principal ,Maeers Physiotherapy college , Talegaon Dabhade pune Maharashtra.India

ABSTRACT

The Objective of this study was to see the Added effect of yoga on depression in elderly by using geriatric depression scale . a sample of 45 geriatric participants were screened and 30 meeting the inclusion criteria were selected for the study. participants were then assessed using geriatric depression scale before and after the study . The geriatric participants were then given yoga and conventional exercises including warm up and a session of meditation comprising of a 45 min protocol including shavasana for relaxation for 4 weeks 4 days per week .Our study showed significant difference in the geriatric depression scale.

KEYWORDS

Yoga , Geriatric depression scale (GDP), Berg Balance Scale (BBS),

0Aging is an inevitable physiologic fact and a natural process causing physical, mental and social deterioration¹.The world health organisation (WHO) has defined old age as being 65 years old and older.

Epidemiological studies have reported high prevalence of psychiatric disorders such as depression and dementia in elderly ranging from 9% to 35%. Further increasing age as well as the presence of multiple chronic medical illness especially diabetes, vascular risk factors, physical frailty and chronic distress increase the risk of mild cognitive impairment (MCI). MCI is a transitional state between normal ageing and dementia.

Depression is an important mental health issue which needs to be addressed in a primary care setting in order to provide optimal health services and an improved quality of life for the elderly, health professionals need to become more aware of depression and its effects on lives of the elderly ^{5,6} Pennix et al reported that chronic depression significantly decrease physical performance for community dwelling older people(>70 years)⁷.

The word 'yoga' comes from a Sanskrit root "yuj" which means union, or yoke, to join, and to direct and concentrate one's attention.¹¹Regular practice of yoga promotes strength, endurance flexibility and facilitates the Characteristics of friendliness, compassion, and greater self-control, while cultivating a sense of calmness and well being.The practice of yoga produces a physiological state opposite to that of the flight-or-fight stress response and with that interruption in the stress response, a sense of balance and union between the mind and body can be achieved.

Yoga is a form of mind-body fitness that involves a combination of muscular activity and an internally directed mindful focus on awareness of the self, the breath and energy. Yoga encourages one to relax, slow the breath and focus on the present, shifting the balance from sympathetic nervous system to the parasympathetic system and the relaxation response.¹⁰Yoga leads to an inhibition of the posterior or sympathetic area of the hypothalamus. This inhibition optimizes the body's sympathetic response to stressful stimuli and restores autonomic regulatory reflex mechanisms associated with stress.^{9s}

The aim of the study was :

·To study the added effect of yoga on depression in elderly by using geriatric depression scale.

Objectives: .

•To determine the added effect of yoga on depression in elderly by

using geriatric depression scale

Criteria for study:

Inclusion criteria:

- Individuals>60
- Both male and females
- BBS>40
- GDP : only mild to moderate depression subjects .

Exclusion criteria:

- Subjects not willing to participate in study.
- Subjects having neurological and cardiovascular impairments.
- Acute musculoskeletal conditions like fractures.

Material used: Pen

- Paper
- Floor mats
- Geriatric depression scale questionnaire
- Stop watch

Outcome measure:

Geriatric depression scale:¹²

it is 30 item self- report assessment used to identify depression in the elderly. The geriatric depression scale questions are answered 'Yes' or 'No' instead of a five category response set.. The test has well established reliability and validity.

Procedure

With the permission of principal madam, and guidance of the guide, project was started. Written consent was taken from subjects.The sample 45 was screened, of which 30 meeting the inclusion criteria were selected.Selected 30 subjects were assessed with Geriatric depression scale before and after 4 weeks of intervention.

Protocol was as follows:

Warm up 10 minute ..Warm up included ankle plantar flexion and dorsiflexion, ankle rotations, capsular stretch for shoulders, forward bending, side bending, heel raises, free active movements of upper limb, lower limb and trunk, active stretches for hamstring and TA, spot marching, forward and side lunges.^{13,14}

The yoga protocol was as follows: some yoga asanas given were

In standing position: 1 .TADASANA-

in this asana subject was asked to stand erect with feet together. Then asked to take deep breath in and raise both arms together in upward direction and hand clasp together. Asked to hold breath and slowly lift heels, stretch all body upward as much as. Legs and arms should straight (no bending). Maintain this position for 15 seconds. Then asked to breath out and slowly bring down hands, heels on floor..



1.MOUNTAIN POSE:

subject were instructed to stand erect with feet slightly apart , keeping the arms parallel and the palm facing each other. Then asked to take deep breath and raise the arms out in front of you up to shoulder height and then up alongside the ears. Hold this position for 30 seconds. repeat this position for three times.

2.In sitting position: PADMASANA:

Subject were asked to sit on the floor legs should be straight in front. Asked to hold the right leg in both hands and fold the leg slowly and place it on your left thigh. Your feet should touch the navel then hold the left leg and out it on right thigh. . Spine should be straight. Knees should touch the floor and foot should face upwardly and hands facing upward thumb must touch index and other fingers must face upward. Then subject instructed for slowly relaxed breathing. They should concentrate on breathing. Maintain this position for 3 min.

In lying position

BRIDGE POSITION (SETU BANDHASANA):

Subject is asked to lie flat on the ground be keeping the arms at the sides. Then asked to lift lower body and asked to breath deeply in this position for 30 seconds. Then asked to relax by bringing down lower body as in starting position. Repeat this cycle for five times

SHAVASANA (CORPSE POSE):

Subject were instructed to lie on their back with face up, feet at corner of mat and point outward. Arms should by their sides palm facing upward. Then subject instructed to close their eyes and let the bod relax and release all tension from every muscle. Maintain this position for three minutes.

MEDITATION

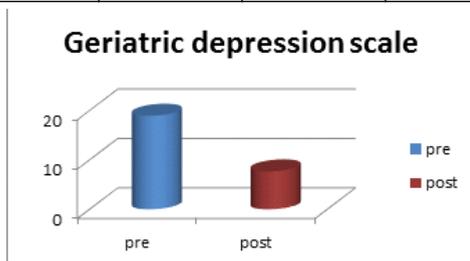
Asked the subject to sit straight so that they can breath easily. Place one hand on chest and other should be on lower stomach. Then subject were instructed to breath such a way that the hand on stomach rises while the one on their chest remain still.

RESULTS

Descriptive statistics including p value, standard deviation, mean calculated. Comparison of depression pre and post intervention was done using ,geriatric depression scale. Statistics done by using paired T test, by using INSTAT software.

Table 1- shows the statistical analysis of Geriatric Depression Scale in older adults from baseline to 4 week post intervention

	Pre score	Post score	Difference
Mean	18.9	7.666	11.233
Standard deviation	2.771	1.605	3.785



DISCUSSION

The study was conducted to determine the added effect of yoga on depression in elderly. 30 subjects with mild and moderate depression score with the age group of above 60 were selected. These subjects were then assessed using GDS before and after four weeks

intervention. The result of our study shows that was significant improvement in the physical health, emotional well-being, social functioning, reduced role limitation due to physical health and emotional problems, pain, from baseline to 4 week intervention. This statistical significance in our study was assessed using life and geriatric depression scale for Depression .The above noted improvement can be attributed to effect of Yoga intervention along conventional exercises given to older adults.

In our study sitting asanas included padmasana , this asana is in sitting position, where spine is in erect position maintaining its all curves. In this position body is in perfect, stable steady posture. This asana activates core muscles and back muscles which helps to maintain erect posture. Padmasana helps keeps joints and ligaments flexible, it stimulates spine, pelvis, abdomen and bladder. This asana helps to restores energy levels. It increase awareness and attentiveness, calms brain.

Javanbakht M, et al complement Ther Clin Pract 2009: did study in which 64 subjects participated . participants were randomly assigned into experimental and control group. The experimental group participated in twice weekly yoga classes of 90 min for two months and control group was assigned to a wait-list and did not receive yoga both group were evaluated again after 2 months study period. He found in his study there is significant reduction in anxiety and depression in women. This study can be considered as a comolementary therapy or an alternative method for medical therapy in the treatment of anxiety and depression.

Another sitting asana included BALASANA also called as child position, it relieves tension in the back, shoulders and chest, reduce fatigue this asana can be performed in between other asanas to avoid fatigue. These asanas have maximum effect on mental relaxatation, through mind body concept as regulation of thoughts regulates the body, thereby improving stress coping mechanism.it improve physical as well as social health. this asana flexes the body's internal organs and keeps them supple. It relieves neck and lower back pain when performed with the head and torso supported. It encourages strong and steady breathing.

In our study lying positions included bridging also called setu bandhasana. In this asana many muscles have to lengthen: extensors of the spine, gluteus maximus, piriformis and other rotators, hamstrings, tibialis anterior, extensor digitorum longus and brevis and extensor hallucis longus and brevis in feet. This asana includes widening of knees(hip abduction) which can create more neutral extension in the spine and make room for the belly. It helps to stretches the chest, neck and spine, helps to calm the brain and helps alleviate stress and mild depression.

Mengucek Gazi Training and Research Hospital, Erzincan, Turkey ,, Department of Nursing, Erzincan, University, School of Health, Erzincan, Turkey: in this study there were 450 individuals above the age of 65 and older participated, were assessed with GDS, World Health Organisation Quality Of Life Instrument-Older adult module(WHOQOLOLD) and Europe Health Impact Scale. Conclusion of this study is depression risk score decreased significantly. And improvement in quality of life scale. Which support our study also.

Meditation: the greatest spiritual life is meditation. It is mastery over attention. It is the seventh step of the Ashtangyoga ladder. It is a state of emotional stability and quietening of mind the primary requirement. It provides muscular relaxation, autogenic training and biofeedback. Meditation strengthens interpersonal and intrapersonal relationships.. a calm relaxed mind conserves energy, developing positive health and harmony. Meditation leads to powerful heart, supple spine, strong and soft abdomen, sensual control and a state of bliss which is different from happiness or pleasure.

Conclusion and clinical significance

Following the 4 weeks of yoga practice, participants in the yoga intervention showed significantly improved performance on the executive function measures of working memory capacity and efficiency of mental set shifting and flexibility .It can be concluded that yoga is valuable in helping to diminish depression, pain, fatigue to perform daily living activities and increases the quality of life in elderly population.

References :

1. Bilir N, Erbaydar N, P Aging problems. (Guler, G. Edit). Public health basic information. Volume III. Broaden Second Edition, Hacettepe University Publications. 2012.
2. WHO (1984)- the uses of epidemiology in the study of the elderly. Technical Reports series706 Geneva: 8-9
3. World Health Organisation (2014)Aging and life-course. Facts about aging.
4. Borglin G, Jakobsson U, Edberg AK, Hallberg IR. Self-reported health complaints and their prediction of overall and health-related quality of life among elderly people Int J Nurs Stud.2005;42:147-58.
5. Petersen RC, Smith GE, Waring SC, Ivnik RJ, Tangalos EG, Kokmen E. Mild cognitive impairment: clinical characterization and outcome. Arch Neural. 1999;56:303-8
6. Javanbakht M, Hejazi Kenari R, Ghasemi Effects of yoga on depression and anxiety of women Complement ther clin pract 2009;15:102-4
7. Penninx BW, Deeg DJ, van Eijk JT, Beekman AT, Guralnik JM (2000) Changes in depression and physical decline in older adults: a longitudinal perspective. J Affect Disord 61: 1-1.
8. Wada T, Ishine, M, Sakagami T, Okumiya K, Fujisawa M, et al.(2004) depression in japanese community- dwelling elderly- prevalence and association with ADL and QOL. Arch GerontolGeriatric 39: 15-23.
9. McCall T. Yoga as medicine. New York; Bantam Dell a division of Random House Inc;2007.
10. Geriatric physical therapy: ANDREW A. GUCCIONE, RITA A. WONG, DALE AVERS: Third Edition
11. McHorney CA, Ware JE, Lu JFR, Sherbourne CD. The MOS 36- Item Short Form Health Survey (SF-36): III. Tests of data quality, scaling assumptions and reliability across diverse patient groups. Med Care 1994;32(4):40-66
12. Yesavage J.A., Brink T.L. et al. Development and validation of a geriatric depression screening scale: a preliminary report. J. Psychiatr. Res. 1983; 17:37-49