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RESEARCH ARTICLE

EFFECT OF YOGA BASED EXERCISE PROGRAM ON PATIENTS WITH SURVIVED HEMI PARESIS

[1]Dr. Siddhi S. Tendulkar, [2]Anagha S. Kale, [3]Dr. Ujwal L. Yeole and [4]Dr. Rajiv K Singhamoney

[1]Assistant professor, Dept of Physiotherapy, Tilak Maharashtra Vidyapeeth, Pune
[2]Intern, Dept of Physiotherapy, Tilak Maharashtra Vidyapeeth, Pune
[3]Asso Prof & Principal, Dept of Physiotherapy, Tilak Maharashtra Vidyapeeth, Pune
[4]Asso professor, Dept of Physiotherapy, Tilak Maharashtra Vidyapeeth, Pune

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ABSTRACT

Background: Many people who have had a stroke report an impaired health status because of a reduced level of activity. Components of yoga therapy offer a gentle alternative exercise program that can be easily adapted for people who have had a stroke.
Aim and objective: To examine the effect of yoga based exercise program on patients with survived hemi paresis.
Methodology: The study was aimed to see the effect of yoga based exercise programme on patients with survived hemi paresis. Both males and females were included between age group of 30 to 65 years. Out of 30 there were 19 males and 11 females. The maximum no. of patients werein the age group of 46-50 years with 33%. Two outcome measures were used to find out improvement in the balance (berg balance scale) and quality of life (stroke impact scale)
Results: The pre measures of berg balance scale was 23.36±7.70, post mean was 35.83±7.05 and P value was <0.0001 which was considered extremely significant. The pre measures of stroke impact scale was 169.57±20.67, post mean was 229.57±13.25. And P value was <0.0001 which was considered extremely significant
Conclusion: From the above study it is proved that yoga based exercises are helpful in improving balance and quality of life in patients with hemi paresis.

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INTRODUCTION

Hemi paresis, or unilateral paresis, is weakness of one entire side of the body (hemi- means "half"). Hemiplegia is, in its most severe form, complete paralysis of half of the body. Hemi paresis and hemiplegia can be caused by different medical conditions, including congenital causes, trauma, tumors, or stroke. Stroke is the leading causes of adult disability in the United States, with more than 4.7 million people who have had a stroke alive in the United States today (www. americanheart.org/ presenter.jhtml?identifier=4725. Accessed August 27). Stroke is one of the leading causes of death and disability in India. The estimated adjusted prevalence rate of stroke range, 84-262/100,000 in rural and 334-424/100,000 in urban areas. Decreased range of motion and muscle weakness has been observed in people following a stroke. The majority of people who have had strokes have mild to moderate neurologic deficits (Jorgensen et al., 1995).

***Corresponding author*: Dr. Siddhi S. Tendulkar,**
Assistant professor, Dept of Physiotherapy, Tilak Maharashtra Vidyapeeth, Pune.

Many are physically deconditioned and have a high prevalence of cardiovascular risk factors that are potentially modifiable with exercise. Many people who have had strokes experience adverse health events that can be attributed to a reduced level of activity (Roth, 1993). Stroke is a condition associated with increased risk for falls (Forster, 1995). With the rising number of people surviving strokes today, there is a vital need for exercise programs designed to improve and maintain the physical fitness and quality of life of this population. Even the fittest people who have had a stroke tend to have an impaired health status compared with age-matched control subjects (Duncan, 1997). Yoga as a defined as Yoga is a type of exercise in which you move your body into various positions in order to become more fit or flexible, to improve your breathing, and to relax your mind. *Yoga therapeutics* is defined by International Association of Yoga Therapists as the application of yoga for health benefits (Feuerstein, 2003). Traditional yoga practice is primarily concerned with personal enlightenment of people without pathology; yoga therapy focuses on a holistic treatment for people with various somatic or psychological dysfunctions.

According to Feuerstein (Feuerstein, 2000), the goals of yoga therapy are to promote health benefits and to promote self-awareness for the purpose of enlightenment. Now a day's Practitioners of yoga therapy has integrated yoga concepts with Western medical and psychological knowledge (Feuerstein et al., 2003). For example, by using body awareness, breathing activities, physical postures, and meditation with an understanding of pathological conditions such as back pain or depression. Yoga therapy offers an alternative approach to conventional exercise training, and it also can be adapted to meet the needs of people with physical limitations (Ross, 2001). Although there have been no studies available that have investigated the effects of yoga on people who have had a stroke or hemi paresis, have described adaptations of yoga postures likes Pranayam, Mud ras, Chanting, Meditation, Savasana, Tadasana, Bhujasana breathing, Shalabasana breathing (Ekapada), Urdhava Hasta Dandasana, BaddhaKonasana, Rocking that can be applied to people with neurologic conditions such as multiple sclerosis and stroke. Stroke can affect balance in several ways. A stroke victim's fear of falling because one side may be significantly weaker. The muscles on the weaker side may be paralyzed or too weak to hold the persons body weight.

Aim and Objectives

Aim

To examine the effect of yoga based exercise program on patients with survived hemi paresis.

Objective

- To evaluate the effect of yoga based exercise program on patients with survived hemi paresis to increase balance.
- To evaluate the effect of yoga based exercise program on patients with survived hemi paresis to improve quality of life.

MATERIALS AND METHODS

The study design was an experimental study with target population of patients with survived hemi paresis for more than 91 days. Data collection was conducted on OPD bases in which total 30 samples were included who were able to stand for more than 1 minute independently and the patients who were taking other palliative therapy, with known psychotic disease, medically contra indicated were exclude.All patients were assessed in Berg Balance Scale and Stroke Impact Scale before starting with intervention.

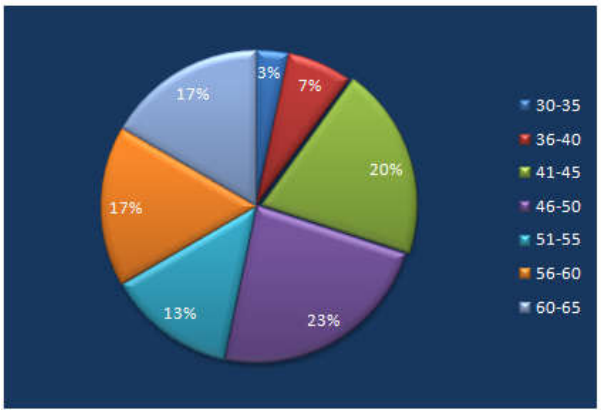
Procedure: The study design was a randomized control trial. Ethical committee approval was designed from the institute. The patients in hospital were selected according to inclusion criteria.Consent form was given to the patients and procedure was explained.The assured and responsibility was taken that the identity is preserved.Berg balance scale and stroke impact scale will be taken pre and post intervention.

RESULTS

Table 1. Age Wise distribution of samples

Age	No. of people
30 to 35	1
36 to 40	2
41 to 45	6
46 to 50	7
51 to 55	4
56 to 60	5
61 to 65	5

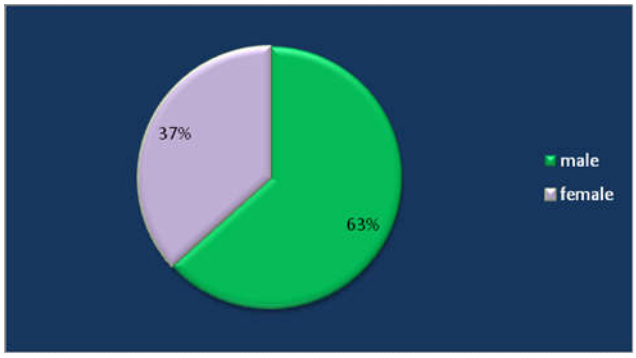
Activity	Description
Education (5-10 min)	Subjects were given a brief description of basic anatomical structures (musculoskeletal, nervous, and circulatory structures) and explanations of yoga concepts related to the week's theme. The goal was to facilitate a greater understanding of one's physical body and thought processes.
Body awareness (10-15 min)	The instructor verbally led the subject through bringing conscious awareness to various parts of the body and to notice one's thoughts. The goal was to promote awareness of body sensation, position, and awareness of the activity of the mind.
Pranayama (breathing) (5 min)	Voluntary breathing activities were taught and practiced such as diaphragmatic breathing, 3- part complete breath, ujjayi (breathing with the throat partially closed to create a snoring sound), and nadhishodhana (alternate nostril breathing). The goals were to promote awareness of the sensations of the breath in the body and awareness of how the breath can facilitate movement of body segments and to promote concentration.
Asana (physical poses) (30-40 min)	The subjects were instructed and assisted as necessary in performing a variety of modified yoga poses related to the week's theme. The goal was to improve in flexibility, muscle force, endurance, balance, and coordination of body segments.
Guided imagery/relaxation (10-15 min)	The subjects were read a guided imagery script incorporating visualization and then allowed to rest in silence. The goal was to elicit a relaxation response.
Seated silent meditation (5 min)	The subjects were asked to return to a seated position on the floor, in a chair, or at bedside and to remain in this position in silence, focusing on the sound of the breath. The goal was to promote mental clarity (clear one's mind of extraneous thoughts).
Weekly Themes	Focus
Week 1 Establishing a solid foundation	Ankle flexibility
Week 2 Activating the power of the legs	Strengthening the thighs Hip
Week 3 Opening the hips	Flexibility
Week 4 Aligning the spine	Postural alignment and spinal flexibility
Week 5 The flow of life	Circulatory system and emotions
Week 6 Integrating the senses	Energy pathways/prana-vayus (yoga philosophy of main pathways of energy flow through the body)
Week 7 Creating better balance	Postural stability/mind-body connection
Week8 Creating peace of mind	Week8 Creating peace of mind



Graph 1. Age wise distribution of samples

Table 2. Gender wise distribution of samples

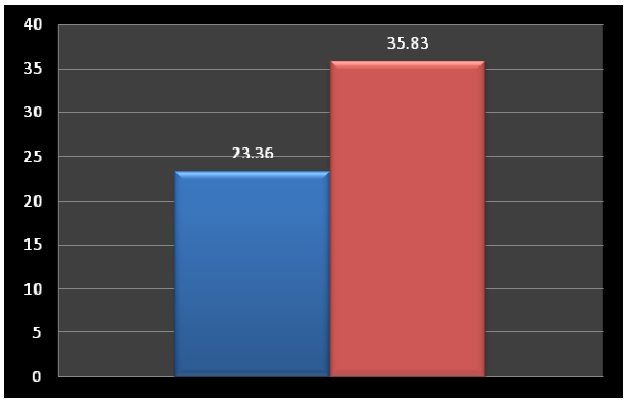
Male	19
Female	11



Graph 2. Gender Wise Distribution of Samples

Table 3. EFFECT OF YOGA BASED EXERCISES ON berg balance scale

BBS	MEAN	SD	P- Value
PRE	23.36	7.70	<0.0001
POST	35.83	7.05	

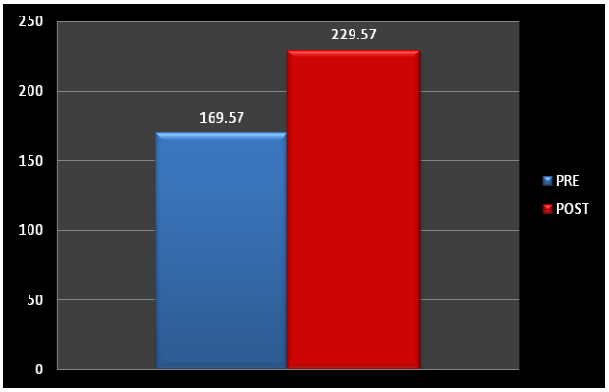


Graph 3. Effect of Yoga Based Exercises on Berg Balance Scale

Interpretation: In table 3. The p-value is <0.0001 with pre mean value 23.36(7.70) and post mean value 35.83(7.05)

Table 4. EFFECT OF YOGA BASED EXERCISES ON Stroke impact scale

SIS	Mean	SD	P-value
PRE	169.57	20.67	<0.0001
POST	229.57	13.25	



Graph 4. Effect of Yoga Based Exercises on Stroke Impact Scale

Interpretation: In table 4. The p-value is <0.0001 with pre mean value 169.57(20.67) and post mean value 229.57(13.25)**.**

DISCUSSION

The effects of yoga on people who have had a stroke or hemi paresis, have described adaptations of yoga postures likes Pranayam, Mudras, Chanting, Meditation, Savasana, Tadasana, Bhujasana breathing, Shalabasana breathing (Ekapada), Urdhava Hasta Dandasana, BaddhaKonasana, Rocking that can be applied to people with neurologic conditions such as multiple sclerosis and stroke. Stroke can affect balance in several ways. A stroke victim's have fear of fall because one side may be significantly weaker. Sample size of current study was 30, of age group 30-65years. Both males and females were included in the study out of which 19 were males and 11were females respectively. When statistical analysis was done, the maximum no. of patients werein the age group of 46-50 years that is 33%. Two outcome measures were used to check the balance and quality of life in patients with survived hemi paresis. Patients were assessed onberg balance scale and stroke impact scale before starting with the intervention. After the intervention of 8 weeks again same subjects were assessed for both scale berg balance scale and stroke impact scale. According to the objectives of the same study the calculated pre mean and SD of berg balance scale was 23.36(7.70), post mean was 35.83(7.05) and P value was <0.0001 which was considered extremely significant. Hence we can say that there is significant improvement in the balance of survived hemi paretic patients. When assessment was done on stroke impact scale the pre mean and SD of stroke impact scale was 169.57(20.67), post mean was 229.57(13.25.) and P value was <0.0001 which was considered extremely significant. In berg balance scale there was improvement in all the domains of the scale, same on the stroke impact scale there was improvement in all the domains hence we can say that yoga therapy is beneficial for all patients with hemiparesis. Our recommendation for the future investigations is to include subjects of the same age group with additional impairments.

Limitation

Small sample size.
Limited period time.
Did not consider side of dominance.
No equal distribution of males and females

Scope

Same study can be done with Comparison between genders.

Comparison with Dominant and Non dominant side.

REFERENCES

American Heart Association. 2003. Heart & Stroke Encyclopedia. Stroke statistics. Available at: www.americanheart.org/presenter.jhtml?identifier=4725. Accessed August 27.

Duncan PW, Samsa GP, Weinberger M, et al. 1997. Health status of individuals with mild stroke. Stroke. 28:740–745.

Feuerstein G. 2000. Toward a definition of yoga therapy.International Journal of Yoga Therapy.;10:5–10.

Feuerstein G. Yoga and Yoga Therapy. 2003. Available at: www.iayt.org/ yogatherapy.html. Accessed September 24.

Feuerstein G. Yoga and Yoga Therapy. 2003. Available at: www.iayt.org/ yogatherapy.html. Accessed September 24.

Forster A, Young J. 1995. Incidence and consequences of falls due to stroke: a systematic inquiry. *BMJ.,* 311:83–86.Google ScholarCrossRefPubMed

Health- related quality of life in stroke patients. Maharatta March 2017 ISSN- 0076-2571

Jorgensen HS, Nakayama H, Raaschou HO, et al. 1995. Outcome and time course of recovery in stroke, part I: outcomes. The Copenhagen Study. *Arch Phys Med Rehabil.* 76:399–405.

Modified Chair Yoga in Older Adults with Osteoarthritis Knee. Rasika P et al / Int. J. of Allied Med. Sci. and Clin. Research Vol-5(1) 2017 [109-113] ISSN:2347-6567

Ross, R. 2001. Yoga as a therapeutic modality. In: Weintraub MI, ed. Alternative and Complimentary Treatment in Neurological Illness. Philadel- phia, Pa: Churchill Livingstone Inc;75–92.

Roth EJ. 1993. Heart disease in patients with stroke: incidence, impact, and implications for rehabilitation, part 1: classification and prevalence. *Arch Phys Med Rehabil* 74:752–760.Google ScholarCrossRefPubMed

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