

Effect of Yogic Asanas on Range of Motion at Selected Joints

H. S. Papola* Dr. Shankar Jyoti Basumatary**Dr. Gopal Chandra Saha

* Assistant Director Physical Education G.B.Pant University of Agriculture and Technology,
Pantnagar, U.S. Nagar -2613145 (Uttarakhand)

**Asst. Professor, IGIPSS, University of Delhi

***Asso. Professor, Dept. of Physical Education, Jadavpur University, Kolkata
(Received 15 March 2015 – Accepted & Published 25 March 2015)

Abstract

Background: The purpose of study was to find out the effect of Yogic Asanas training on range of movement at hip joints. To achieve this purpose of study, forty

Methods: (40) male students were studying in GB. Pant University of Agriculture and Technology Pantnagar, Uttarakhand, for the year 2004-05, were selected as subjects at random for the present study. The ages of these subjects ranged between 18 to 25 years. The selected subjects were divided into two equal groups. Group “A” acted as experimental group and Group “B” acted as Control group. Both groups consist of twenty subjects each. The yogic asanas training was given to Experimental group for three days i.e. Monday, Wednesday, and Friday for six weeks. The range of movement was selected as criterion variable and it was measured by sit and reach test. Analysis of co-variance (Ancova) was used to find out the significant differences if any between the experimental group and control group. The level of significance was set at 0.05 level.

Results: The results of the study showed that there was a significance difference. A significance improvement in range of movement due to the Yogic Asanas training was observed.

Key words- Range of movement, Yogic asanas.

INTRODUCTION

Flexibility may have been defined as the range of movement around joint.

Yoga is a complete science of life that originated thousands of years ago. It is the oldest system of personal development in the world encompassing the entire body, mind and spirit. It is the union between a person's own consciousness and the universal consciousness. The Ancient Yogis had a profound understanding of man's essential nature and of what he needs to live in harmony with himself and his environment. They perceived the physical body as a vehicle, with the mind as driver, the soul as man's true identity, and action, emotion and intelligence as the three forces which pull the body-vehicle. In order for these to be integrated, these three forces must be in balance. Taking into account the interrelationship between body and mind, the yogis formulated a unique method for maintaining this balance - a method that combines all the movements you need for physical health with the breathing and meditation techniques that ensure peace of mind.

Asanas are physical exercises enabling the body to be physically fit. These exercises in physical education play an important part in helping the pupils to maintain a slim and youthful body. Several tests and experiments have been conducted to know the values and importance of asanas. The most important point to realize before starting the

practice of Yoga is that, the asanas are not just simple exercise but sustained scientific pattern of postures. (Sharma, S.P. and Sharma, K. 1973)

Asana is a posture held steady and in comfort according to Patanjali, the traditional authority on yoga. (Taimi, J.K. 1975)

MATERIALS AND METHODS

The purpose of study was to find out the effect of Yogic Asanas training on range of movement at hip joints. To achieve this purpose of study, forty (40) male students were studying in GB. Pant University of Agriculture and Technology Pantnagar, Uttarakhand, for the year 2004-05, were selected as subjects at random for the present study. The ages of these subjects ranged between 18 to 25 years. The selected subjects were divided into two equal groups. Group "A" acted as experimental group and Group "B" acted as Control group. Both groups consist of twenty subjects each. The yogic asanas training was given to Experimental group for three days i.e. Monday, Wednesday, and Friday for six weeks.

Variable

The range of movement was selected as criterion variable and it was measured by sit and reach test.

Training Programme

For experimental group, training was given for three alternate days in a week for six weeks. Training was given for one session in the morning only. The investigator prepared a suitable training programme for the subjects with the help of yoga expert. During experimental period, the control group did not participate in any special programme apart from their regular activities.

Schedule for Ist & IInd Week for Experimental Group

Name of asana	Duration (Sec.)	Set
Janu Shirasana	10-20	2
Pashchimottanasana	10-20	2
Ardha Vakrasana	10-20	2
Pavanamuktasana	10-20	2
Bhujangasana	10-20	2

Schedule for IIIrd & IVth Week for Experimental Group

Name of asana	Duration (Sec.)	Set
Janu Shirasana	20-30	3
Pashchimottanasana	20-30	3
Ardha Vakrasana	20-30	3
Pavanamuktasana	20-30	3
Bhujangasana	20-30	3

Schedule for 5th & 6th week for Experimental Group

Name of asana	Duration (Sec.)	Set
Janu Shirasana	30-60	3-5
Pashchimottanasana	30-60	3-5
Ardha Vakrasana	30-60	3-5
Pavanamuktasana	30-60	3-5
Bhujangasana	30-60	3-5

Statistical Analysis

Analysis of co-variance (Ancova) was used to find out the significant differences if any between the experimental group and control group. The level of significance was set at 0.05 level.

RESULTS AND DISCUSSION

Table – 1: Analysis of Covariance of the Means of the Experimental and Control Group for Cardiovascular Endurance

S. No.	Test	Groups		df		Sum of Squares	Mean Sum of Squares	F Ratio
		Exp. A	Control B	A	W			
1.	Pre Test Means	12.3825	12.103	A	1	.781	.781	.110
				W	38	270.945	7.130	
2.	Post Test Means	4.23	12.416	A	1	670.106	670.106	128.81*
				W	38	197.680	5.202	
3.	Adjusted Post Test Means	4.162	12.484	A	1	690.461	690.461	190.47*
				W	37	134.127	3.625	

*Significant at .05 level

F_{.05} (1, 38) 4.10 (1, 37) 4.10, N=40, A= Among the groups, W=Within the groups.

The Table 1 shows that the pre-test means of Yogic Asanas training group and control group on range of movement at hip joints were 12.3825 and 12.103 respectively. The obtained F-ratio of .110 for pre-test is less than the table value of 4.10 for df 1 and 38 required for significant at .05 level of confidence. The post-test means of Yogic Asanas training group and control group on range of movement at hip joint were 4.23 and 12.416 respectively. The obtained F-ratio of 128.814* for post-test is greater than the table value of 4.10 for df 1 and 38 required for significant at .05 level of confidence. The adjusted post-test means of Yogic Asana training group and control group on range of movement at hip joints were 4.162 and 12.484 respectively. The obtained F-ratio of 190.47* for adjusted post-test is greater than the table value of 4.10 for df 1 and 37 required for significant at .05 level of confidence.

Yogic Asanas help and develop the muscle to stretch as far as possible. Asanas helps to loosen the tight muscle. It is recommended by sports professionals to practice yogic Asanas after heavy workout for relaxation and loosening the stiff muscles. Asanas is mostly to stretch the muscles and hold it to adapt.

CONCLUSION

On the basis of above discussion, it is concluded that the range of movement (Flexibility) at hip joints was significantly improved due to the training of Yogic Asana.

References:

- Bains, J., Gill, J.S., Brar, R.S., Rathee, N.K, and Singh, Ajmer. (2004), *Essentials of Physical education*, Kalyani Publishers, Ludhiana, p 538.
 Engene S. Rawles, (1967). *Yoga For Beauty and Health*, Parker Publishing Co., Inc., New York, p. 10-19.
 Ganguly, S.K., Gharoti, M.L. and Jolly K. (1981) “*Immediate Effect of Kapalabhaati on Cardio Respiratory endurance*” *Yoga Mimansa* , 28:1, pp. 1-7.

- Gharote, M.L. & Ganguly, S.K. (1973) “*Effect of Yogic Training on Physical Fitness*” *Yoga Mimansa*, XV, pp 31-35.
- Gore, M.M. (1984), *Anatomy and Physiology of Yogic Practices*, Kanchan Prakashan, Pune, p. 1-2.
- Iyengar, B.K.S. (2001), *Yoga*, Dorling Kindersley, Great Britain, p14-32
- Kansal, D.K. (1996). *Test and Measurement in Sports and Physical Education*, DVS Publications, New Delhi, p. 140.
- Kuvalayanda Swami, (1956), “*Pranayama is Bhargavad Gita*” *Yoga Mimansa* VI, pp. 65.
- Nandhi and Adhikari, H. (1999), “The Effects of Selected Yogic Practices on Cardio Respiratory Endurance of School Boys” *Abstracts 3rd International Conference Yoga Research and Tradition*, pp 14.
- Sharma.P.D. (2000), *Yogasana and Pranayama for Health*, Navneet Publications, Mumbai, pp.120.
- Wenger and Bagchi, B. K. (1996) “*Studies of Autonomic Functions is Practitioners of Yoga in India*,” *Behavioral Science* 6, pp 312 – 313.