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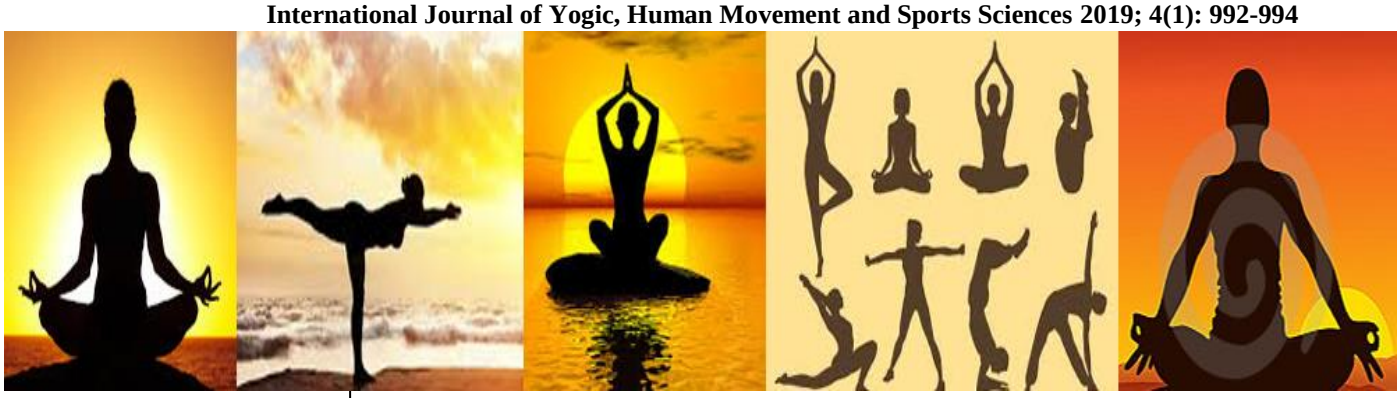

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Dr. G Radhakrishnan
Director of Physical Education, Sir Theagaraya College, Chennai Affiliated to the University of Madras, Tamil Nadu, India

Correspondence
Dr. G Radhakrishnan
Director of Physical Education, Sir Theagaraya College, Chennai Affiliated to the University of Madras, Tamil Nadu, India

Effect of static asanas practices on core strength and balance among college students

Dr. G Radhakrishnan

Abstract
The purpose of the study was to find out the effect of static asanas practices on core strength and balance among college students. To achieve the purpose of the study thirty college students were selected from Sir Theagaraya College, Tamil Nadu, Chennai. The age of the subjects were ranged from 18 to 25 years. The subjects were further classified at random into two equal groups of 15 (n=15) subjects each. Group - I underwent static asanas practices (SAP) for thrice in a week for six weeks each section lasted 30 minutes and the group - II acted as a control group (CG) did not participate in any kind of training programme apart from the daily activities. The selected variables such as core strength and balance were measured by using plank and Stork Balance Stand Test. The collected data were analysed statistically through analyze of covariance (ANCOVA) to find the significance difference. The results of the study showed that core strength and balance were significantly improved due to static asana practices among college students.

Keywords: Static asana, core strength and balance

Introduction
Yoga is very popular now a days and it is now well known to the whole world. It is not a mere exercise but yoga in real sense is union with God. All mystic practices and discipline that lead to this Divine union are dealt under the word yoga (Suman Krishan Kumar, 2015) [3] The prime aim of asanas is to help us tread the path to higher consciousness so we can begin to understand and know our relationship with existence (Swami Satyaananda Saraswati, 2013) [4]. Yoga is a mind and body practice that teaches us methods of coping with stress, finding presence, and becoming more self-aware. These are all things that are so important for every college student. The main component of asana practice is stretch of muscles. Muscle physiology has much to offer in terms of understanding benefits of muscle stretch. Here again, the stretch could be either slow or fast; further, the stretch could be maintained for a short period or not. Static here means maintaining the final position of asanas for a period of time. Static practise have a more subtle and powerful effect on the pranic and mental bodies. They are performed with little or no movement, the body ofter remaining in one position for a few minutes. These asanas are intended to gently massage the internal organs, glands and muscles as well as to relax the nerves throughout the body. They are specifically concerned with bringing tranquillity to the mind and preparing the practitioner for the higher practices of yoga, such as meditation. Some of them are particularly useful for inducing the state of sense withdrawal, pratyhara (Swami Satyananda Saraswati, 2008) [2].

Methods
To achieve the purpose of the study thirty college students were selected from Sir Theagaraya College, Tamil Nadu, Chennai. The age of the subjects were ranged from 18 to 25 years. The subjects were further classified at random into two equal groups of 15 (n=15) subjects each. Experimental Group - I underwent static asanas practices (SAP) for thrice in a week for six weeks each section lasted 30minutes and the group - II acted as a control group (CG) did not participate in any kind of training programme apart from the daily activities. The selected variables such as core strength and balance were measured by using plank and Stork Balance Stand Test.

Training Programme

During the training period the experimental group underwent six weeks of Static Asanas programmes (SAP). The duration of training were planned for 30 minutes that is from after the college hour 5.00pm to 5.30pm on Mondays, Wednesdays and Fridays. After completion of six weeks of experimental period, the participants were retested as the pre-test. All the subjects involved in this study were carefully monitored throughout the experimental period. Each session 30 minutes consist of opening prayer and warm up 5 min exercise followed by Tadasana (Palm Tree Pose), Tiryaka Tadasana (Swaying Palm Tree Pose), Yogamudrasana (Psychic Union Pose), Matsyasana (Fish Pose), Gupta Pamasana (Hidden Lotus Pose), Lolasana (Swinging Pose), Bhujangasana (Cobra Pose), Sarpasana (Snae Pose), Dhanurasana (Bow Pose), Ardha Chandrasana (Half Moon Pose), Setu Asana (Bridge Pose), Saithalyasana (Animal Relaxation Pose) finally session closed with savasana and closing prayer.

Statistical Technique

The collected data were analysed statistically through analyze of covariance (ANCOVA) to find the significance difference.

Analysis of the data

The data collected prior and after the experimental periods on core strength and balance of Experimental Group and Control Group were analysed and presented in table – I & II. The level of significance was fixed at 0.05 level of confidence to test the 'F' ratio obtained by analysis of covariance.

Table 1: Ianalysis of covariance for pre and post data on core strength

Test	Experimental Group (SAP)	Control Group (CG)	Source of variance	Sum of Squares	df	Mean square	F
Pre-test mean	1.16	1.20	Between	0.011	1	.011	1.42
			Within	0.222	28	.008	
Post-test mean	1.26	1.19	Between	0.41	1	0.41	4.70*
			Within	0.24	28	0.09	
Adjusted mean	1.28	1.17	Between	0.91	1	0.91	131.67*
			Within	0.01	27	0.01	

* Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level of confidence with df 2 and 28 and 2 and 27 were 3.34 and 3.35 respectively).

Discussion on findings of core strength

The obtained F value on pre-test scores 1.42 was lesser than the required F value of 3.34 to be significant at 0.05 level. This proved that there was no significant difference between the groups at initial stage and the randomization at the initial stage was equal. The post test scores analysis proved that there was significant difference between the groups as the obtained F value at 4.70 was greater than the required F value at 3.34. This proved that the differences between the post-test mean at the subjects were significant. Taking into consideration the pre and post test scores among the groups, adjusted mean scores were calculated and subjected to statistical treatment. The obtained F value at 131.67 was greater than the required F value at 3.35. This proved that there was Significant differences among the means due to six weeks of static asana practise on core strength.

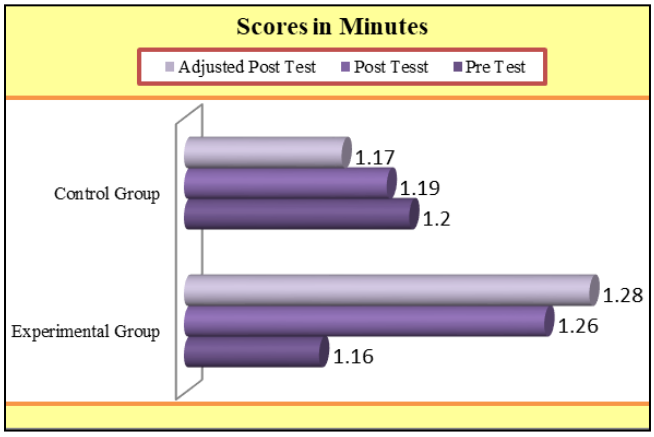

Fig 1: Bar Diagram showing Pre, Post and Adjusted Means on Core Strength

Table 2: Analysis of covariance for pre and post data on balance

Test	Experimental Group (SAG)	Control Group (CG)	Source of variance	Sum of Squares	df	Mean square	F
Pre-test mean	13.87	14.47	Between	2.7	1	2.7	0.45
			Within	129.46	28	4.62	
Post-test mean	20.33	14.53	Between	252.3	1	252.30	89.34
			Within	79.06	28	2.82	
Adjusted mean	20.49	14.36	Between	275.95	1	275.95	185.32
			Within	40.20	27	1.48	

* Significant at 0.05 level of confidence. (The table value required for significance at 0.05 level of confidence with df 2 and 28 and 2 and 27 were 3.34 and 3.35 respectively).

Discussion on findings of balance

The obtained F value on pre-test scores 0.45 was lesser than the required F value of 3.34 to be significant at 0.05 level. This proved that there was no significant difference between the groups at initial stage and the randomization at the initial stage was equal. The post test scores analysis proved that there was significant difference between the groups as the obtained F value at 89.34 was greater than the required F value at 3.34. This proved that the differences between the post-test mean at the subjects were significant. Taking into consideration the pre and post test scores among the groups, adjusted mean scores were calculated and subjected to statistical treatment. The obtained F value at 185.32 was greater than the required F value at 3.35. This proved that there was Significant differences among the means due to six weeks of static asanas practices on balance.

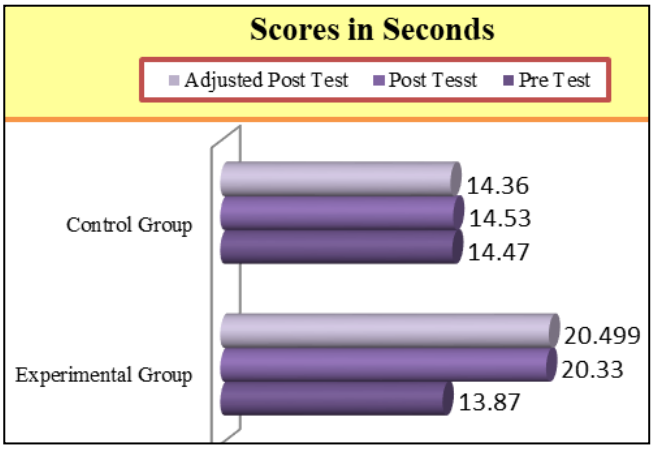

Fig 2: Bar Diagram showing Pre, Post and Adjusted Means on Balance

Conclusion

Yoga is an interesting application of asana, pranayama, and meditation practices that could bring much needed homeostasis to the body-mind complex. The study it was concluded that selected criterion variable core strength was significantly increased due to six weeks of static yoga practices among college students while comparing to the control group. Further it was concluded that selected criterion variable balance was significantly increased due to six weeks of static yoga practices among college students while comparing to the control group.

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