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## Effect of asana on agility, abdominal strength and leg power of college students

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### Abstract

The purpose of the present study was to find out the effect of asana on agility, abdominal strength and leg power of college students. For the purpose of the study college male students were selected at random from Colleges, Amravati (Maharashtra) India. They were studying in the college around Amravati and their age ranges from 18 to 25 years. They are divided into two groups namely the experimental group and control group. For the present study researcher had collected data from 50 students with the help of purposive sampling method total 50 students were selected, twenty five boys were assigned as experimental group and another twenty five boys were assigned as control group during the academic year 2013-2014. Six weeks of yoga asanas training were given to the experimental group. The control group was not allowed to participate in any of the training programs, except their routine physical education classes. Measurements for the variables were taken at the beginning (pre - test) and at the end of the experimental period, after six weeks (post - test) the data were collected for all the variables from both control and experimental groups, for six days. During this period the subject were not allowed to participate in any training. Agility was measured by administering 4×10 yard Shuttle run, abdominal strength was by administering bent-knee sit-ups and leg power measured by administering standing broad jump. The data thus collected were put to statistical treatment computing independent 't' test to find out the differences, if any between the pre and post test. Further the level of significance was set at 0.05. Result: There was significant difference in agility, abdominal strength and leg power between pre and post test experimental group. There was insignificant difference in agility, abdominal strength and leg power between pre and post test control group.

**Keywords:** Asana, agility, abdominal strength, leg explosive strength, students

### Introduction

The first physical aspect and third stage in Ashtanga yoga is asana. Any posture that is performed steadily with ease is called asana. Asanas are for the control of body and mind, purification of our mind, veins and nerves and promotion of general health of the body. Asana tone up the internal and external organs of the body and give energy, vigor and vitality. There are several types of Asanas which include standing, sitting, prone, supine and advanced Asanas<sup>[1]</sup>.

In Patanjali's yoga, Asana does not mean a specific posture. It means mainly sitting for meditation. Asana means a meditative seat. Asana is maintaining a long time of paramount importance to facilitate proper meditation. The whole science of yoga is only to prepare the person for meditation physically, vitally and mentally. Patanjali's yoga defines asana as namely "Sthiram Sukham Asanam". Therefore asana in Raja yoga does not imply the different postures of the Hatha yoga. They say that there are 84 Lakhs of different postures. The beloved and worshipful Gurudev Swami Sivanandaji has made it clear that out of these 84 lakhs postures, only 84 are the most important Asanas<sup>[2]</sup>.

### Methodology

#### Selection of Subjects

For the purpose of the study college male students were selected at random from Colleges, Amravati (Maharashtra) India. They were studying in the college around Amravati and their age ranges from 18 to 25 years. They are divided into two groups namely the experimental group and control group.

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**Method of Sampling**

For the present study researcher had collected data from 50 students with the help of purposive sampling method total 50 students were selected, twenty five boys were assigned as experimental group and another twenty five boys were assigned as control group during the academic year 2013-2014.

**Training Programme**

Six weeks of yoga asanas training were given to the experimental group. The control group was not allowed to

participate in any of the training programmes, except their routine physical education classes. Measurements for the variables were taken at the beginning (pre - test) and at the end of the experimental period, after six weeks (post - test) the data were collected for all the variables from both control and experimental groups, for six days. During this period the subject were not allowed to participate in any training.

**Practice Schedule**

Sr. No.	Asana	W-1	W-2	W-3	W-4	W-5	W-6
		Time					
1	Surya – Namaskar	30 m	35 m	40 m	45m	50m	55m
2	Tada – asana						
3	Trikona – asana						
4	Padma – asana						
5	Vira – asana						
6	Parivritta – parshvakona						
7	Ushtra – asana						
8	Pavana mukta asana						
9	Sarvanga – asana						
10	Matsya - asana						
11	Dhanur – asana						
12	Shava – asana						

**Criterion measures**

The criterion measures adopted for the study measuring the agility, abdominal strength and leg power are given below.

- **Agility:** Agility was measured by administering 4×10 yard Shuttle run.
- **Abdominal strength:** abdominal strength was by administering bent-knee sit-ups.
- **Leg power:** leg power measured by administering standing broad jump.

**Analysis of the Data**

**Result and Discussion**

The data thus collected were put to statistical treatment computing independent ‘t’ test to find out the differences, if any between the pre and posttest. Further the level of significance was set at 0.05.

The findings of the study have been presented in table- I

**Table I:** Comparison of agility between pre and posttest of experimental and control groups

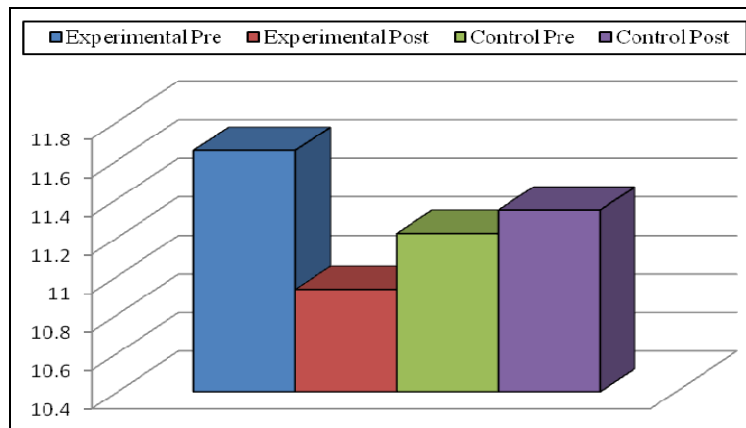
Variable	Group	Test	Mean	SD	SE	MD	Ot	df	Tt
Agility	Experimental	Pre	11.65	1.03	0.28	0.72	2.53*	48	2.01
		Post	10.93	0.98					
	Control	Pre	11.22	1.2	0.34	0.12			
		Post	11.34	1.19					

\*Significant at 0.05 level of confidence,  $t_{.05} (48) = 2.01$ .

Table-I reveals that there is significant difference in agility of experimental group between pre and posttest. The obtained t-value of 2.53 is more than the table value of 2.01.

Table-I reveals that there is insignificant difference in agility

of control group between pre and posttest. The obtained t-value of 0.36 is less than the table value of 2.01.



**Fig I:** the graph showing the mean value of agility between experimental and control groups of pre and post test

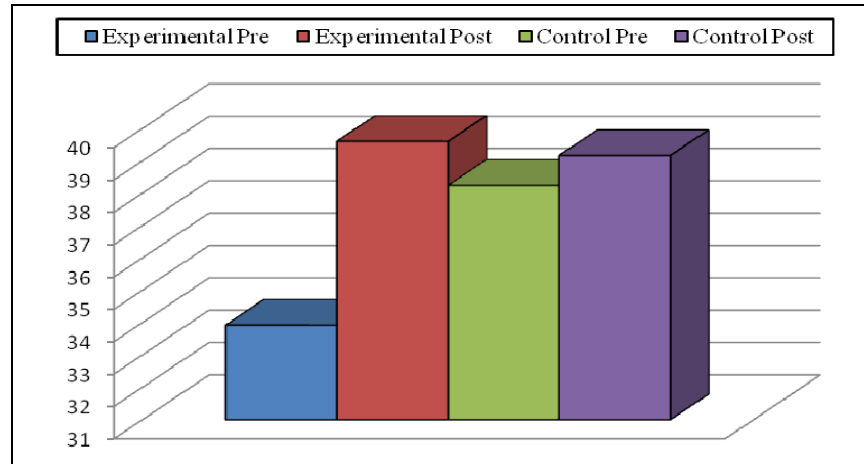
**Table II:** Comparison of abdominal strength between pre and post test of experimental and control groups

Variable	Group	Test	Mean	SD	SE	MD	Ot	df	Tt
Abdominal Strength	Experimental	Pre	33.92	11.75	2.66	5.68	2.13*	48	2.01
		Post	39.6	6.24					
	Control	Pre	38.24	11.93	3.41	0.92	0.27	48	2.01
		Post	39.16	12.18					

\*Significant at 0.05 level of confidence,  $t_{.05} (48) = 2.01$ .

Table-II reveals that there is significant difference in abdominal strength of experimental group between pre and post test. The obtained t-value of 2.13 is more than the table value of 2.01.

Table-II reveals that there is insignificant difference in abdominal strength of control group between pre and post test. The obtained t-value of 0.27 is less than the table value of 2.01.



**Fig II:** the graph showing the mean value of abdominal strength between experimental and control groups of pre and post test

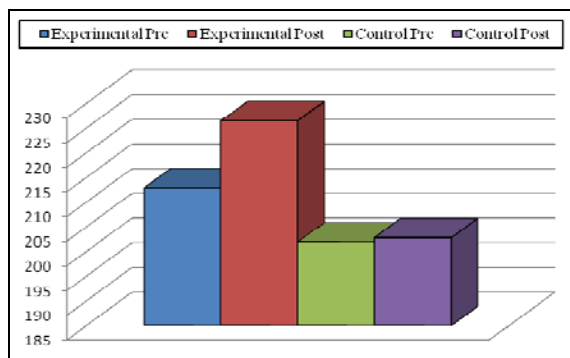
**Table III:** Comparison of leg power between pre and posttest of experimental and control groups

Variable	Group	Test	Mean	SD	SE	MD	Ot	df	Tt
Leg Power	Experimental	Pre	212.88	26.4202	6.7175	13.6	2.02*	48	2.01
		Post	226.48	20.7387					
	Control	Pre	201.88	16.82	4.77	0.92	0.19	48	2.01
		Post	202.8	16.93					

\*Significant at 0.05 level of confidence,  $t_{.05} (48) = 2.01$ .

Table-III reveals that there is significant difference in leg power of experimental group between pre and posttest. The obtained t-value of 2.02 is more than the table value of 2.01. Table-III reveals that there is insignificant difference in leg power of control group between pre and posttest. The obtained t-value of 0.19 is less than the table value of 2.01.

1. There was significant difference in agility, abdominal strength and leg power between pre and posttest experimental group.
2. There was insignificant difference in agility, abdominal strength and leg power between pre and posttest control group.



**Fig III:** the graph showing the mean value of leg power between experimental and control groups of pre and post test

**Conclusion**

On the basis of the result drawn with the mentioned methodology the following conclusion were sort out:

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