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## Effect of yogic exercises on physical fitness of senior citizens of Anantnag city

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### Abstract

The purpose of study was to find out the "Effect of yogic exercises on physical fitness of the senior citizens of Anantnag City". For this study the subjects were selected from the Anantnag city of J&K.. Thirty (30) male senior citizens of the Anantnag city were selected. The simple random sampling method was adopted to select the subjects. The following criteria measures were chosen for testing the hypothesis. Agility was measured with the help of shuttle run. Time of shuttle run was recorded to the nearest one tenth of the second and was the final score in agility. Flexibility was measured with the help of Sit and Reach method. The best trial was used as the final score of the test. Before collection of data the subject was given a chance to practice the prescribed tests so that they should become familiar with the test and know exactly what is to be done to ensure uniform testing conditions. To test the hypothesis, the level of significance was set at 0.05 level of significance which was considered adequate and reliable for the purpose of this study. The data was collected before and after six week training programs on the agility and flexibility and was analyzed by comparing the means of controlled and experimental groups and was again statistically analyzed by applying T-test to check the significant difference among the selected items.

**Keywords:** Yogic exercises, agility, flexibility

### Introduction

#### Yoga

The term Yoga is commonly used in India to indicate various aspects of a single entity. The word is derived from the Sanskrit root "Yuj" to yoke i.e. to integrate or to combine, or to join. The ultimate desire or aim being the integration of the individual soul (Jeevatma) with the universal soul (Paramatma or God).

One emerges refreshed and rejuvenated after a yoga session. Yoga also helps in releasing tension generated from repetitive activities the make daily tasks unbearable.

Yoga is divided into eight steps. The first is Yama: it consists of five moral codes of conduct i.e. Non-violence, Satya, Asteya, Bramacharya, and Aparigraha. Next is Niyama: meaning cleanliness, contentment, austerity, self-study and surrender to God. Then comes asana or posture, Pranayama or control of prana, Prathyahara or restraint of senses from the objects. Dharama or fixing the mind on a spot. Dhyana or meditation and Samadhi or super consciousness. Yogasanas are very effective in throwing out all our body wastes and bring control over the body and organs. It increases the elasticity of our body and makes the body more active and flexible. The blood circulation takes place more smoothly and properly and the body becomes capable of more work.

#### Physical Fitness

It is generally agreed that physical fitness is an important part of the normal growth and development of a child. Physical fitness is probably the most frequently and popularly used term in physical education. "Physical fitness is the ability to carry out daily tasks with vigor and alertness, without undue fatigue, with ample energy to enjoy leisure time pursuits and to meet unforeseen emergencies".

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#### Agility

The ability of the body to perform the movement with perfection and efficiency is known as agility.

## Flexibility

Flexibility is the quality of muscles, ligaments and tendons that enables the joints of the body to move easily through a complete range of movement. Flexibility is the capacity of a muscle to extend without any damage. Flexibility is measured by determining the range movement at a joint”.

## Methodology

**Source of data:** The data pertaining to the study was collected from the senior citizens of Anantnag city.

**Selection of subject:** 30 male senior citizens of Anantnag city of Kashmir division were selected.

**Sampling method:** The simple random sampling method was applied to select the subjects for the study.

## Criterion Measures

The following criterion measures were chosen for testing the hypothesis. Agility was measured with the help of shuttle run. Flexibility was measured with the help of sit and reach test.

### Scoring:

Each subject is given three trials and the highest score to an inch/cm was recorded to obtain the best result for the study.

## Collection of data

The data was collected before and after six week training programs on the agility and flexibility and was analyzed by comparing the means of controlled and experimental groups and was again statistically analyzed by applying T-test to check the significant difference among the selected items. Before collection of data the subject was given a chance to practice the prescribed tests so that they should become familiar with the test and know exactly what is to be done to ensure uniform testing conditions

## Level of significance

To test the hypothesis, the level of significance was set at 0.05 level of Significance which was considered adequate and reliable for the purpose of this study.

## Findings

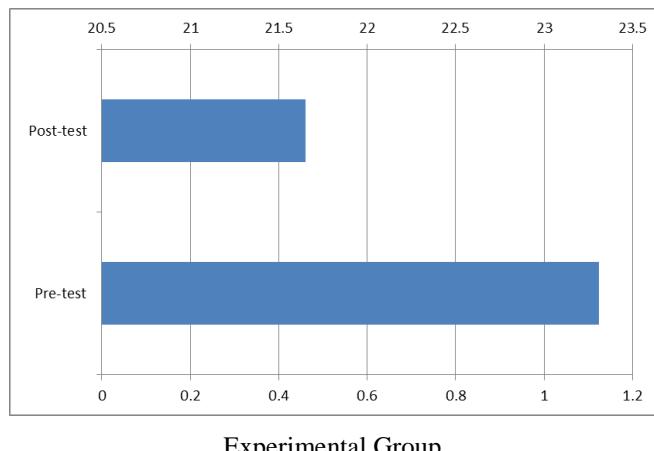
The data collected on 30 male subjects before and after six week training program on Agility and Flexibility was analyzed by comparing the means of control and experimental groups and was again statistically analyzed by applying T-test to check the significant difference among selected items. Therefore separate tables and figures have been presented to each item.

**Table 1:** Summary of the mean standard deviation and T-ratio for the data on shuttle run for

Experimental group	Mean	Standard deviation	Mean deviation	S.E	T-ratio
Pre-test	23.31	1.94	1.66	0.621	2.660
Post-test	21.65	1.43			

Table 1 shows that the pre-test of experimental group is 23.31 and post-test is 21.65 and mean difference is 1.66. The standard deviation is 1.94 and 1.43. The standard error between pre and post-test is 0.621. The obtained  $t=2.660$ , which is greater than tabulated  $t$ -value of 2.13 at 0.05 level of significance. Hence there is significant difference between pre-test and post-test of experiment of shuttle run.

Mean difference between pre-test and post-test of experimental group is shown in figure 1  
MEAN

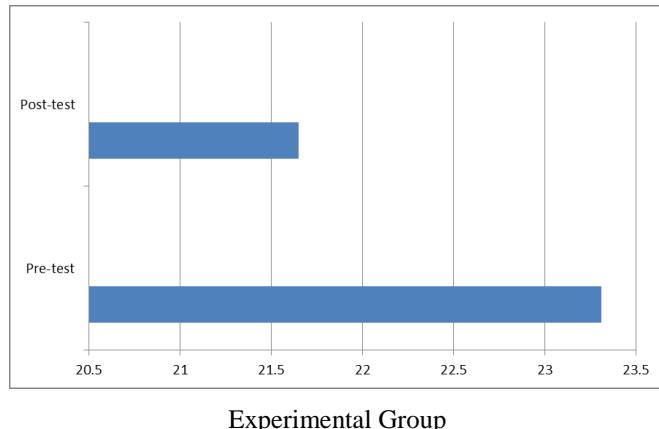


**Table 2:** Mean difference between the pre-test and post-test of experimental group for the data on flexibility

Experimental Group	Mean	Standard deviation	Mean deviation	S.E	T-ratio
Pre-test	16.80	3.43	2.73	1.203	2.271
Post-test	19.53	3.16			

Table 2 shows that the pre-test of experimental group is 16.80 and post-test is 19.53 and mean difference is 2.73. The obtained  $t = 2.271$ , which is greater than tabulated  $t$ -value of 2.13 at 0.05 level of significance. Hence there is significant difference between pre-test and post-test of experiment of flexibility.

Mean difference between the pre-test and post-test of experimental group is shown in figure 2  
MEAN



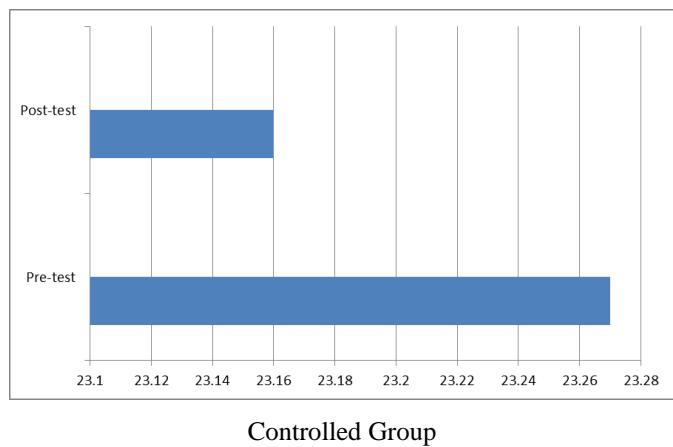
**Table 3:** Summary of the mean standard deviation and T-ratio for the data on shuttle run for agility between pre and post-test of control group

Control Group	Mean	Standard deviation	Mean deviation	S.E	T-ratio
Pre-test	23.27	2.25	0.11	0.823	0.134
Post-test	23.16	2.26			

Table 3 shows that the pre-test of control group is 23.27 and post-test is 23.16 and mean difference is 0.11. The obtained  $t = 0.134$ , which is less than tabulated  $t$ -value of 2.13 at 0.05 level of significance. Hence there is no significant difference

between pre-test and post-test of experiment of control group on shuttle run.

Mean difference between pre-test and post-test of experimental group is shown in figure 3 Mean

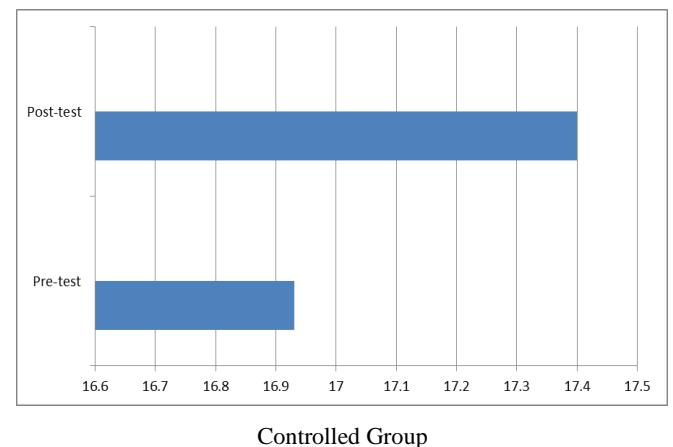


**Table 4:** Summary of the mean standard deviation and T-ratio for the data on Flexibility between pre and post-test of control group.

Control group	Mean	Standard Deviation	Mean deviation	S.E	T-ratio
Pre-test	16.93	1.91			
Post-test	17.40	2.29	0.47	0.770	0.606

Table 4 shows that the pre-test of control group is 16.93 and post-test is 17.40 and mean difference is 0.47. The obtained  $t=0.606$ , which is less than tabulated  $t$ -value of 2.13 at 0.05 level of significance. Hence there is no significant difference between pre-test and post-test of control group on flexibility.

Mean difference between pre-test and post-test of control group is shown in figure 4 Mean



### Discussion on findings

After statistical analysis pre-test and post-test of experimental group in shuttle run  $t = 2.660$ , flexibility  $t = 2.271$  which is greater than the tabulated ' $t$ ' 0.05(14)= 2.13. hence there is significant difference found between them.

Pre-test and post-test of control group in shuttle run  $t = 0.134$ , flexibility  $t = 0.606$  which is less than the tabulated ' $t$ ' 0.05 (14)= 2.13. hence there is no significant difference found between them.

### Conclusion

Within the limitations of the study and from statistical analysis, the following conclusion was drawn:

- There was no significant difference in pre-test and post-

test of control group.

- There existed significant difference in pre-test and post-test of experimental group. Yogic exercises show positive effect on the physical fitness variables like agility and flexibility of selected citizens of Anantnag city.

### Recommendations

On the basis of findings and conclusions the following recommendations have been made

- The study can be repeated on more subjects for better results
- The study may be repeated with various age groups
- The study may be repeated with female subjects also
- The study can be repeated with the game players or professionals etc.

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