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## Effect of asana on physical fitness variables among government residential school students

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### Abstract

The present study was an attempt to evaluate the Effect of Asana on Physical Fitness variables among Government Residential School Students "Has selected. The age limit of players was ranged between 14 to 17 years. The samples were taken from the Vijayapur district, Karnataka. Asanas and Muscular Endurance and Flexibility were used to measure the Physical fitness variables. To assess the significance of differences between the means in case of significant t-values test was applied.

**Keywords:** Asana, physical fitness variables, government residential school students

### Introduction

The meaning of the Sanskrit word asana is 'a study and comfortable posture'. The postures performed in all yoga practices (Hatha Yoga and Astanaga Yoga) are called asana. Although many people believe that they are physical exercises, it does not convey their full significance. 'Asana aim at influencing the body, mind and consciousness, molding and yoking them into one harmonious whole'. The practice of asanas requires active involvement of one's entire being as fully as possible. In other words, try not to think about work or friends or food while performing them. The prime aim of asana is to help us tread the path to higher consciousness so we can begin to understand and know our relationship with existence. We cannot even consider attaining higher awareness if we are ill with disease, aches and pains or mental depression. Therefore, the initial purpose of practicing asana is to eliminate these disturbances and afflictions. A regular practice of asana makes us acquainted with the way our body is, and we then begin to understand the importance of breathing and staying still. The opening up of the body that results after a regular practice gives us a sense of freedom not only in the body, but more importantly in the mind driving us to come to terms with whatever is happening in our mind.

### Yoga

Yoga aims at bringing the different bodily function in to perfect co-ordination so that they work for the good of the whole body. Swami Satyananda Saraswathi (2002) Suriya namaskar integrate and harmonize all aspects of the physical, intellectual, and spiritual body. Positions are related to energize pituitary, pineal and thyroid gland, liver solar pineal, blood flow to organ and glands efficacious for the neck, chest, abdomen and sexual gland. The regular performance of Suriya namaskar is intended to raise one's state of conscious to higher level of realization. Suriya namaskar are mostly more popular in older men than young wrestlers. They strengthen body without strain in bones and organs of the body. Suriya namaskar are not vigorous, but they are practiced to maintain physique.

### Flexibility

If you ask people why they exercise, most will stay to stay healthy, keep fit, or because it makes them feel good. Not a lot will mention flexibility as a goal, but it's a key part of maintaining your health and avoiding injury, especially as you age. The stretching you do in yoga is a great way to improve your flexibility. It's a commonly held misconception that you have to already be flexible to do yoga. In fact, the opposite is true: doing yoga regularly is a sure way to become more flexible.

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The ten poses below target the three major muscles groups where most people are lacking flexibility: hamstrings, hips, and shoulders. These three areas tend to get even tighter from sitting for long periods or even from other types of exercise, like running.

Don't be in a rush to get through these poses. Many times you can feel several different phases of opening as you stay in a pose for longer. Don't expect overnight changes, however. For best results, do your stretches daily. The following poses are intended to give you some options to fit your current level of flexibility.

### **Muscular endurance**

Muscular endurance is the ability of a muscle or muscle group to exert force to overcome a resistance many times. Often the resistance is the body itself. The measurement of muscular endurance is based on the number of repetitions performed. Muscular endurance is specific to the assessment. The ability to perform upper-body exercises many times is separate from the ability to perform lower-body or abdominal exercises many times. Muscular endurance tests include push-ups, pull-ups and dips for the upper body, and sit-ups for the abdominals. Lower-body endurance can be assessed with squats. Consult a personal trainer to get help assessing your strength, power and muscular endurance. A trainer can also help you set reasonable goals and provide you with a training plan for reaching them. Always consult your healthcare provider before beginning a new exercise program. Your doctor or other medical provider can assess your general health and tell you if the program is right for you.

### **Statement of the problem**

The purpose of the study is to assess the "Effect of Asana on Physical Fitness variables among Government Residential School Students.

### **Significance of the study**

1. 6 weeks of yoga exercise training may be useful for improvement on physical, fitness of high school students.
2. The study be May useful for teachers and students to know physical performance.
3. The study may be useful to know the performance of the high school students.
4. The study helps to know the effect of yogasana on high school students.
5. The findings of this study will helpful to the students and Teacher to improve their level of physical fitness.

### **Objectives of the study**

- To find out the effects of yogasanas on physical fitness of high school students
- To find out the effects of yogasanas of high school students.
- To know influence of yogasanas on physical variables.
- To prove the intimation between on among yogasanas and physical variables.
- To find out the difference between pre yogasanas and post yogasanas on physical fitness
- To find out the physical components gain such as flexibility muscular endurance.

### **Hypothesis**

- There is significant difference between pre test and post test group of high school students with respect to muscular endurance.

- There is a significant difference between pre test and post test group of High school students with Respect to flexibility scores.
- It was hypothesized that training may effect on flexibility and muscular endurance of the Individual.
- It was hypothesized that effect of yogasanas may improve the flexibility and muscular endurance.

### **Limitations**

- Measuring sophisticated equipments will be considered as limitation for this study.
- No motivational techniques applied while testing and training of the subjects.
- The daily routine work of the subjects might influence results, this is considered as limitation.
- Day to day activities, rest period, food habits and life style could not be controlled as it is considered as limitation of the study.
- The study is limited to the measuring the level of flexibility muscular endurance of government residential school students

### **Delimitations**

- The study is an Experimental. yogasanas conducting pre test and post test.
- This study was confined to Residential a high school students only.
- The study was delimited to the age group of 15 to 16 years girls.
- This study is delimited to selected yoga asana only.
- This study is delimited to flexibility, and muscular endurance, of high school students only.
- The study will be delimited to Vijayapur district only.
- The study was limited to 30 control group and 30 experimental groups.

### **Surya Namaskara**

(Sanskrit Sūrya Namaskāra), or Sun Salutation, is a Yoga warm up routine based on a sequence of gracefully linked asana. The nomenclature refers to the symbolism of Sun as the soul and the source of all life.

### **Vrksasana**

vrksasana is a standing asana that improves balance, focus and mental clarity. The name comes from the Sanskrit vrksa, meaning "tree," and asana, meaning "pose." This asana requires the practitioner to stand on one leg with the other leg bent so the foot rests on the inside of the thigh. The hands are extended overhead with palms touching.

### **Ardhakati chakrasana**

"Ardhakati Chakrasana" is famous as half waist wheel pose as well. The bend from the waist sideways in this asana resembles the wheel. The name of the Asana is derived from the words Ardha, meaning half, Kati, meaning waist and Chakra, which means wheel. It is one of the most common Asana that are used for general body toning on a day to day basis".

### **Vajrasana**

Vajrasana comes from the Sanskrit words vajra, meaning "thunderbolt," "diamond-like," or "adamant/firmness," and asana, meaning posture.

**Simhasana**

Simhasana is a strong seated asana, which incorporates a powerful breathing technique with a forceful exhalation. The name comes from the Sanskrit simha, meaning "lion," and asana, meaning "pose." This name refers to the fierce lion-like expression of the yogi's face as well as the roaring sound of the breath made while in this posture.

**Avanamuktasana**

Pavanamuktasana is a healing pose that is effective in helping release gas in the abdomen while massaging the entire back and spine. The name is derived from the Sanskrit pavana, meaning "wind," mukta, meaning "to release," and asana, meaning "pose."

**Naukasana**

There are many poses in yoga which are very effective; Naukasana or the boat pose is one among them. Naukasana comes from the two Sanskrit words 'nauka' which means 'boat' and 'asana' meaning 'posture' or 'seat'. It is a posture in which our body takes the shape of a boat.

**Makarasana**

Makarasana is a reclined yoga asana that relaxes the body, stimulates the sacral chakra, and can even be used for meditation or pranayama. The name comes from the Sanskrit makar, meaning "crocodile," and asana, meaning "pose."

**Bhujangasana**

Bhujangasana is the final stage when the cobra is ready to

attack its prey by raising its hood; hence the name is cobra pose. Cobra pose is one of the most important back bending yoga asana, which has numerous health benefits ranges from head to feet.

**Physical variables**

**Flexibility**

Flexibility or limberness refers to the absolute range of movement in a joint or series of joints, and length in muscles that cross the joints to induce a bending movement or motion. Flexibility varies between individuals, particularly in terms of differences in muscle length of multi-joint muscles. Flexibility in some joints can be increased to a certain degree by exercise, with stretching a common exercise component to maintain or improve flexibility.

**Muscular endurance**

Muscular strength is the highest amount of effort exerted by the muscles of the body in order to overcome the most resistance in a single effort. A large part of muscle strength is endurance, which is the muscles' ability to repeat the contraction for a longer period of time before it becomes exhale.

**Selection of subject**

The present study was an attempt to evaluate the degree of Asanas on Physical Fitness of Government Residential School Students was ranged between 14 to 17 years. The sample was collected from Vijayapur district in Karnataka.

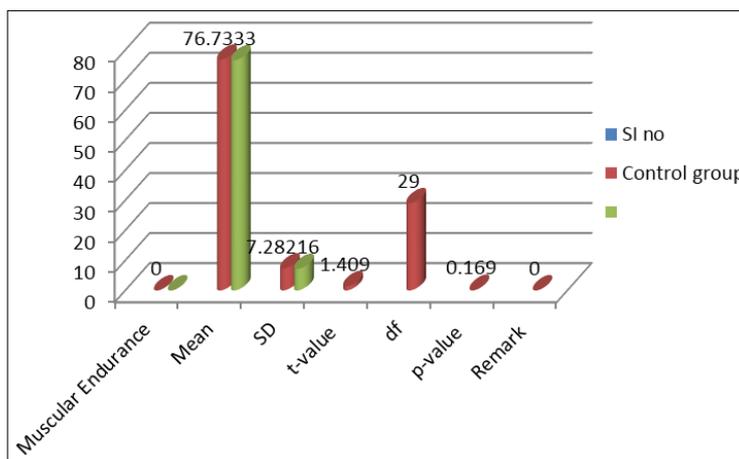
**Table 1:** Showing the Mean, SD and t-value of Muscular Endurance control group collected at Pre-Post condition during the study

SI no	Muscular Endurance	Mean	SD	t-value	DF	p-value	Remark
Control group	Pre test	76.7333	7.28216	1.409	29	.169	N S
	Post test	76.5667	7.11813				

The level of significant is 0.05

The mean and SD score of control group at pre-and post test is 76.7333 and 76.5667 respectively and calculated value is 1.409, it is lesser than table value i.e.0.005 level of significant, hence as per the formulated hypothesis there

would be no significant difference between control group variables of Muscular Endurance at both pre and post test, the hypotheses was rejected, and alternative hypothesis that null hypothesis is accepted.



**Graph 1:** The Graph showing the Muscular Endurance means and t value of pre-post impact of control group

The above table and graph clearly express that the interval session did not influence and not effected on Muscular Endurance variables of the control group, when it was tested at pre-post-test. It is assumed that because the control group was not made to expose to any kind of training at pre and post-test; hence six week training gap given to control group

also does not make any significant influence on their Muscular Endurance factors. The constant and similar life style condition and environment and sample nature has maintained previous status in their physical and yogasana qualities

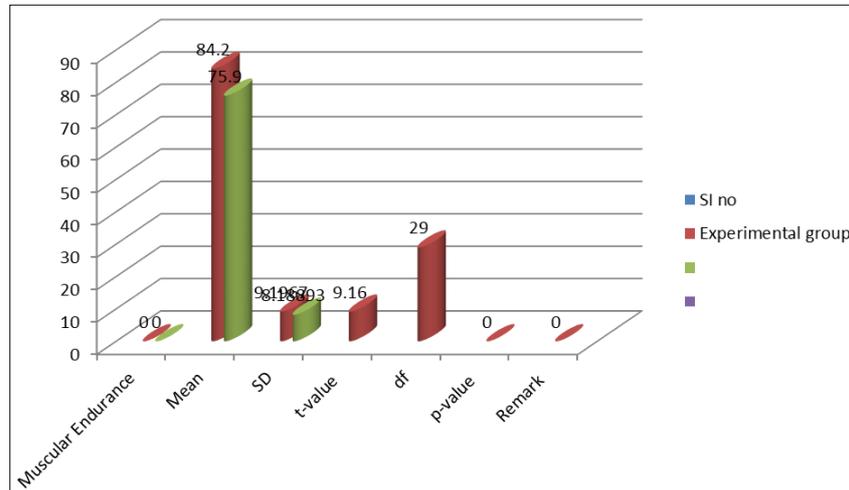
**Table 2:** Showing the Mean, SD and t-value of Muscular Endurance Experimental group collected at Pre-Post condition during the study

SI no	Muscular Endurance	Mean	SD	t-value	df	p-value	Remark
Experimental group	Pre test	84.2000	9.19670	9.160	29	.000	S
	Post test	75.9000	8.18893				

The level of significant is 0.05

The mean and SD score of Experimental group at pre-and post test is 84.200 and 75.9000 respectively and calculated value is 9.160, it is lesser than table value i.e.0.005 level of

significant, hence it indicates that there is a significant development of Muscular Endurance component. Thus the hypothesis is accepted.



**Graph 2:** The Graph showing the Muscular Endurance means and t value of pre-post impact of Experimental group

The above figure clearly indicates that six weeks yogasana training and (muscular endurance) for the training performance is statistically improved the of the nature of

Harvard step test for flexibility has shown the significant difference in the Muscular Endurance. Hence the hypothesis was accepted.

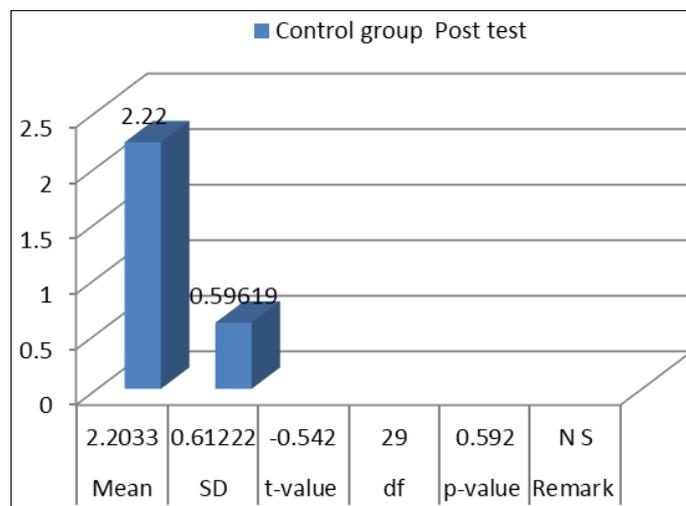
**Table 3:** Showing the Mean, SD and t-value of Sit and Reach flexibility control group collected at Pre-Post condition during the study

SI no	flexibility	Mean	SD	t-value	df	p-value	Remark
Control group	Pre test	2.2033	.61222	-.542	29	.592	N S
	Post test	2.2200	.59619				

The level of significant is 0.05

The mean and SD score of control group at pre-and post test is 2.2033 and 2.2200 respectively and calculated value is -542, it is lesser than table value i.e.0.005 level of significant, hence as per the formulated hypothesis there would be no

significant difference between control group variables of Flexibility at both pre and post test, the hypotheses was rejected, and alternative hypothesis that null hypothesis is accepted.



**Graph 3:** The Graph showing the flexibility means and t value of pre-post impact of control group

The above table and graph clearly express that the interval session did not influence and not effected on flexibility

variables of the control group, when it was tested at pre-post-test. It is assumed that because the control group was not

made to expose to any kind of training at pre and post-test; hence six week training gap given to control group also does not make any significant influence on their flexibility factors.

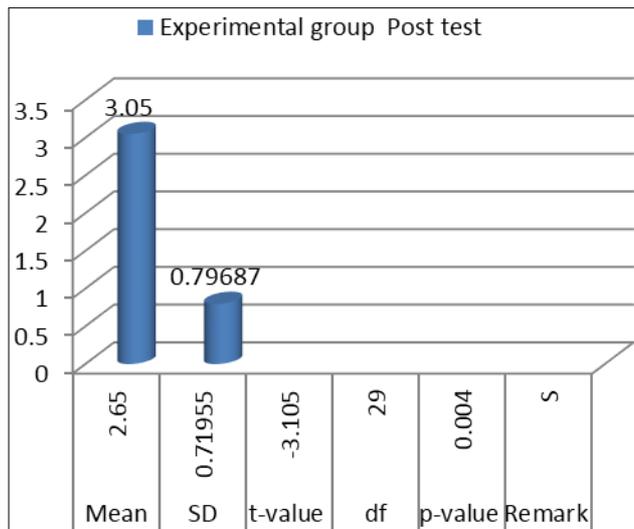
The constant and similar life style condition and environment and sample nature has maintained previous status in their motor qualities.

**Table 4:** Showing the Mean, SD and t-value of Sit and Reach flexibility Experimental group collected at Pre-Post condition during the study

Sl no	flexibility	Mean	SD	t-value	df	p-value	Remark
Experimental group	Pre test	2.6500	.71955	-3.105	29	.004	S
	Post test	3.0500	.79687				

The level of significant is 0.05

The mean and SD score of Experimental group at pre-and post test is 2.6500 and 3.0500 respectively and calculated' t value is -3.105, it is lesser than table value i.e.0.005 level of significant, Hence it indicates that there is a significant development of flexibility component. Thus the hypothesis is accepted



**Graph 4:** The Graph showing the flexibility means and t value of pre-post impact Of Experimental group

The above figure clearly indicates that six weeks physical variable (flexibility) for the game of (yoga), training performance is statistically improved the Flexibility of girls. The nature of sit and reach test for flexibility has shown the significant difference in the flexibility. Hence the hypothesis was accepted.

**Conclusions**

Based on the findings the following conclusions were drawn from the present study.

- Six weeks yogasanas training has shown significant improvement on physical performance variables of the subject.
- Six weeks of yogasanas training has shown improvement in muscular endurance and flexibility of the subjects

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