



**EFFECT OF SURYANAMASKAR ON THE HEALTH OF PRE SERVICE  
TEACHERS**

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**Abstract**

*In the present era of modernization we are trying to achieve our goal with the help of Education. As a part and parcel of teacher Education researchers found that, due to the nature of B.Ed. course, busy academic schedule and fast routine life, the pre service teachers are not aware about the health and overall fitness. They are suffering from health problems. So researchers focused on the concern problem. In present study the researchers have studied the effects of Suryanamaskar on Flexibility and Fat percent of Pre service Teacher.*

*The Objective of the study was to determine the effects of suryanamaskar on the Flexibility and Fat percent of Pre service Teacher. In this study Single group of 136 pre service teacher out of which 32 are male and 104 females were selected for experiment.*

*Initially Fat percent and Flexibility of all the subjects were measured, and then treatment of Suryanamaskar was administered by equal intervals for three weeks.*

*To determine the effect of Suryanamaskar on flexibility and Fat percent of Pre service Teachers, Suryanamaskar was considered the independent variable and Flexibility and Fat percent were considered dependent variable. t test was used at .01 levels of significance. In relation to flexibility and Fat percent, a significant effect of Suryanamaskar was found on flexibility but not found on Fat percent.*

**Key words:** - Suryanamaskar, Health, Flexibility, Fat percent, Pre Service Teacher

**Introduction:-** This is the modern era and the society has become very dynamic, as well as materialistic. There are some advantages and disadvantages of the modernization, as well as some drawbacks. But the drawbacks are very much and long term. Luxury and pleasure have deteriorated the physical and mental health of human being. As the environment is polluted, the food we eat is also not nutritious, that is why and these things affect the life of human being.

Some people do take care of themselves by doing some exercises such as walking, jogging or join gym for cardio or body building. But one has to pay heavily for these facilities and has to travel from home to gym. These ways are expensive and time consuming as well as inconsistent, which lead to the discontinuation of the exercise. Also they are having some side effects. The country like India should depend upon some easy ways for the fitness.

Surya Namaskar is one of the ancient way of exercise and more than that it was the lifestyle of the ancient India. (Patanjali) The term Surya Namaskar is coined from the two words viz Surya+ Namaskar. The meaning of Surya is “The Sun” and Namaskar is the way of “worshiping God”.

India receives full sunlight throughout the year and it is the country which lies on the eastern part of the Globe. Thus the sun is also treated as the God from ancient time.(Veda)

The life style of Indian people is about the religion. Most of the acts are told in the religious books (Vedas, Puranas) and by the prophet.

Suryanamaskar is the type of exercise for endurance, flexibility and strengthening the muscles of whole body, done on the floor without any machine or weights.

1. Thus it is an exercise for increasing the stamina i.e. endurance
2. It gives flexibility to the muscles.
3. It requires comparatively small space i.e. 7ft long 3ft broad and 10 ft tall space.
4. It is the sequence of some postures.
5. Breathing is also step by step i.e. inhalation, exhalation and holding air in the lungs.
6. It is the combination of breathing and postures.
7. It does not require any exercise machine.
8. It is a type of floor exercise
9. It requires little bit warming up.

### **Statement of Problem**

To Study of the effect of Suryanamaskar on Flexibility and Fat percent of Pre-service Teacher.

### **Operational Definitions**

- **Effect of Suryanamaskar**

Difference between pre situation and post situation of Fat percent and Flexibility of Teacher Educators due to the treatment of Suryanamaskar.

- **Health**

Means Flexibility and fat percentage, as well as after seating the front of seat and reach stand how much distance covered (lap) by the teacher educator to touch the stand target is flexibility.

- **Pre service Teacher**

Students of B.Ed.

Fat percent

## **Introduction**

Suryanamaskar application and versatility make it one of the most useful and complete methods to bring about health and vigor while at the same time preparing an adept for the deeper processes of yoga. It is based on three elements: rhythm, energy and form. Form is evident in the twelve postures which are always performed in the same sequence. Such steady and continuous performance of postures which are coordinated with the breath activates the subtle energy called prana. This steady and rhythmic flow reflects the rhythm of the universe, such as biorhythms of the body, which were expressed in the past by the science of the twelve zodiac phases. The rhythmic superimposition of the form and energy of suryanamaskar on our psychosomatic organism is a transforming force since it activates the psychic body in a completely different way than what any modern sport or game can do.

In the present era of Knowledge, Science and technology we are trying to achieve our goal with the help of Education. As a part of teacher Education researchers found that, due to the nature of B.Ed. course, busy academic schedule and fast routine life, teacher Educators are not aware about the health and overall fitness. They are suffering from health problems. So researchers focused on the concern problem. Researchers think that suryanamaskar is the best solution of this problem. The benefits of a suryanamaskar practice are so wonderful! Shrimant Bhavanrao Pant Pratinidhi (1868-1951; Raja of Aundh 1909-1947) made suryanamaskar a compulsory as a part of the physical training program in his kingdom's schools. He helped to popularize suryanamaskar as a simple physical exercise for the all-round development of an individual. Similarly, the director of the Department of physical education at Shri Aurobindo Ashram, says in his booklet that "a complete cycle of suryanamaskar consists of ten or twelve movements through which one gets a good stretch and thorough exercise of the whole body. The body thus becomes strong, supple, agile and healthy. Suryanamaskar is a system of exercise for a common man".

In present study the researchers have studied the effects of Dynamic suryanamaskar on flexibility and BMI of Teacher Educators.

## **Objectives of research**

1. To measure the flexibility and Fat percent of Pre service Teacher.
2. To give the treatment of Suryanamaskar to Pre service Teacher.
3. To find out the effect of Suryanamaskar on Flexibility and Fat percent of Pre service Teacher

## **Hypothesis**

- **Research Hypothesis**

1. There will be change on flexibility of Pre Service Teachers by the treatment of Suryanamaskar.
2. There will be change on Fat percent of Pre Service Teacher by the treatment of Suryanamaskar.

- **Null Hypothesis**

1. After giving the treatment of Suryanamaskar to Pre Service Teacher, there will be no significant change takes place on Flexibility.
2. After giving the treatment of Suryanamaskar to Pre Service Teacher, there will be no significant change takes place on Fat percent.

### **Assumptions**

1. The Pre Service Teachers are suffering from fitness problem.
2. The Pre Service Teachers have problems with their Fat percent and Flexibility.
3. Suryanamaskar is the traditional way of exercise.

### **Scope and Limitations of the Study**

- **Scope**

1. Present research study is related to geographical area under the University of Pune .
2. Present research is related to all the Pre Service Teachers of B.Ed. Courses in geographical area under the University of Pune.
3. Present research is related to Physical fitness of Pre Service Teacher .

- **Limitations**

1. Present research is limited to treatment of suryanamaskar.
2. Present research is related to Flexibility and Fat percent of Pre service Teacher.
3. There is no control on external variables like Pre service teachers work, diet, other activities, day schedule, working hours etc.

### **Method of the Study**

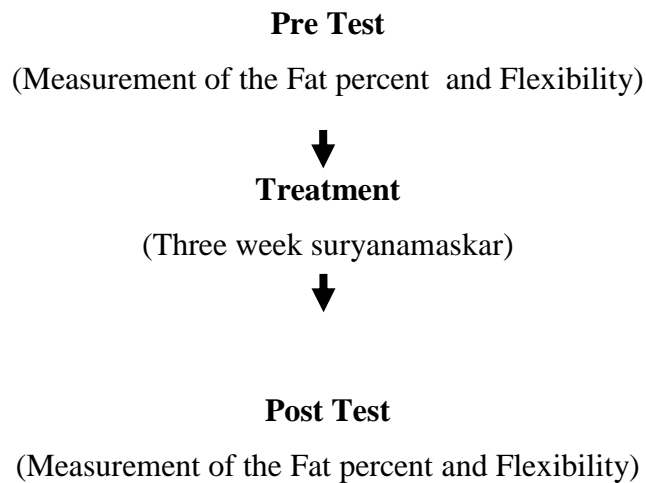
For present study researchers administered the treatment of Dynamic Suryanamaskar on Pre service Teacher and check its effect on Fat percent and Flexibility of Pre service Teacher. For this process researchers use the Experimental Method of Research.

- **Variables**

suryanamaskar (sun salutations) was considered as independent variable and Flexibility and Fat percent was considered as dependent variable.

### **Experimental Design**

For this research study researchers selected a single group experimental design. The structure of the design was as follow.



### **Sampling**

- **Population**

All the teachers of Maharashtra state, who teach the M.Ed., B.Ed. Courses are the population of the present study.

- **Sample**

Out of all the Pre service Teacher of Maharashtra state, who teach the M.Ed., B.Ed. Courses, 15 teachers are selected as a sample. Sample was selected by Non Probability base accidental sampling method.

### **Tool for data collection**

For present research researchers used the Observation technique for measuring the flexibility and Fat percent scores. For measuring the flexibility seat and reach technique was used and for measuring the Fat percent, Fat percent machine was used.

- **Test for flexibility**

Flexibility of back and leg muscles was measured by the Sit and Reach test. The subject was asked to remove shoes and put the feet against the testing box, while sitting on the floor with straight knees. Then the subject was asked to place one hand on the top of the other so that the middle fingers of both hands were together at the same length. Bending of the knees was not allowed. The subject was asked to lean forward and place his hands without bouncing over the measuring scale lying on the top of the box for at least one second. The score was expressed in number of centimeters. Three trials were given and the highest score was recorded.

- **Test of Fat percent**

Initially height and weight of Pre service Teacher were measured and then with the help of Fat percent machine Fat percent was measured.

- **Administer the Program and Data collection**

- ◆ Initially Fat percent and flexibility of all the 150 Pre service teachers were measured.
- ◆ Treatment of suryanamaskar was administered by equal interval for three week. (From 3-10-2010 to 23-10-2010, Between 7:00AM to 7:30AM)
- ◆ After the treatment Fat percent and flexibility were measured.

**Tool for data analysis**

To find out the effect of Suryanamaskar on flexibility and Fat percent of Pre service teacher, researchers compared the pre-test and post-test mean difference of Fat percent and Flexibility. To check the mean difference Mean, Standard Deviation, Co-relation and t test was used as a data analysis tool.

- **Hypothesis testing**

**Table 1 Statistical Data for t test (Flexibility and Fat percent )**

Sr. no.	Content	Flexibility		Fat percent	
		Pre-test	Post-test	Pre-test	Post-test
1	Pre service Teacher	15			
2	Mean	17	20	28	27.5
3	S. D. ( $\sigma$ )	2.66	2.87	2.7	2.8
4	Co-relation	.4		.2	

- **Observation**

After observing the statistical data of flexibility, post test mean is greater than pre test mean was found. Post test Standard deviation was also increased by pre-test Standard deviation. Co-relation is good between pre-test and post- test scores.

In statistical data of BMI, post test mean was greater than pre test mean . Post test standard deviation was also increased as compared to pre-test standard deviation. Co-relation is quiet good between pre-test and post-test scores.

**Table 2 t testing of Flexibility and Fat percent of Pre service Teacher**

Sr. no.	Content	Flexibility		Fat percent	
		Pre-test	Post-test	Pre-test	Post-test
1	$\Sigma m$	.48	.55	.49	.53
2	$\sigma D$	1.02		1.01	
3	$ M_1 - M_2 $	3		.5	
4	$t_{cal}$	2.94		.50	
5	Significant level	.01		.01	

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6	Degree of freedom	14	14
7	$t_{table}$	2.69	2.69

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**Observation**

1. Flexibility-

$$t_{cal} = 2.94 \text{-----I}$$

At .01 significant level and for df = 14

$$t_{cal} = 2.69 \text{-----II}$$

From I&II

$$t_{table} < t_{cal}$$

2. Fat percent -

$$t_{cal} = .5 \text{-----I}$$

At .01 significant level and for df = 14

$$t_{cal} = 2.69 \text{-----II}$$

From I & II

$$t_{table} > t_{cal}$$

• **Interpretation**

1. Calculated t value of Flexibility is greater than table t value of Flexibility. That shows the research hypothesis was accepted. Research Hypothesis was:

There will be significant change on flexibility of Pre service Teacher by the treatment of Dynamic Suryanamaskar.

2. Calculated t value of Fat percent is smaller than table t value of Fat percent. That shows the research hypothesis was rejected and null hypothesis was accepted.

Null hypothesis was:

After giving the treatment of Suryanamaskar to Pre service Teacher there will be no significant change takes place on Fat percent

• **Results**

1. Fat percent and flexibility of Pre service Teacher is not good to compare of Standard flexibility and Fat percent.
2. After suryanamaskar treatment there was a significant positive change in flexibility of Pre service Teacher .
3. suryanamaskar was effective to increase the flexibility of Pre service Teacher .
4. suryanamaskar was not effective to reduce the Fat percent of Pre service Teacher .

## **Discussion**

The mean values and standard deviations of different trials are shown in Table 1. It appears from Table 2 that the computed value of t in relation to the flexibility is greater than the required t to be significant at 0.01 level of significance.

**Suryanamaskar is useful exercise to increase the Flexibility of Pre service Teacher but not to reduce the Fat percent .**

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