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ROLE OF SURYA-NAMASKAR IN ENHANCING THE SPEED COMPONENT OF PUNJAB ENGINEERING COLLEGE ATHLETES

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ABSTRACT

The objective of study was to determine the effect of *Suryanamaskar* Yogic training on the component of Physical fitness i.e. Speed. The subjects for this study were selected from Punjab Engineering College (Deemed to be University), Chandigarh. A total of fifteen students were randomly selected for the study. *Yoga* play a vital role as the ancient Indian healing art while dealing with the physical, mental, emotional, moral and spiritual well-being. *Yoga* education is a process that helps in the all round development of a human being. *Suryanamaskar* is a major part of *Yogic* training that concentrates on physical health, mental health as well as spiritual health also. It is a sequential combination of 12 *Yogic* postures made up of a variety of spinal column forward and backward bending performed dynamically in synchrony with the breath. *Suryanamaskar* was considered the independent variable and speed component of physical fitness was considered the dependent variable. Speed was measured by the flying 30 meters test in time seconds. Repeated measure design was used for this study. The test was started four weeks prior to the treatment and thereafter every two weeks observations were taken up to the end of six weeks of training. To determine the effect of *Suryanamaskar* on Speed component, and level of significance was set at 0.05 levels. In relation of Speed component, a significant ($p < 0.05$) role of *Suryanamaskar* was found at the end of six weeks of training in the performances of Punjab engineering college (Deemed to be University) athletes.

KEYWORDS: Suryanamaskar, Speed

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INTRODUCTION

Suryanamaskar is a graceful combined sequence of twelve postures along with regulated breathing and relaxation. It relieves stiffness, revitalizes the body, refreshes the mind and purifies subtle energy channels. There are number of study have been conducted on *Suryanamaskar* and found significant improvement in flexibility (*Choudhary and Krzytof, 2010*). *Suryanamaskar* is an ancient indian method of offering prayers to the rising Sun in the morning along with a series of physical postures with regulated breathing aiming at range of physical, mental and spiritual benefits(*Parag and Manjunath, 2012*).

Physical fitness, generally, is a state of health and well- being. Moreover, Physical Fitness has been measure through their five basic components i.e. Strength, Speed, Endurance, Flexibility and Coordination. Although, there is no single way to measure a physical fit person and no single way to get achieve it. Therefore we need to know and understand every dimension of the components of physical fitness. The foremost component of physical fitness is strength. Strength is a maximal force that can be applied against a resistance. The second component Speed is the ability to move from one place to another in the shortest possible time. Endurance is a capability of a person's ability to repeatedly apply maximal force over a period of time. Flexibility can be defined as the ability to execute movements with greeter amplitude of range. One of the most important benefits of a flexibility program is the potential of relaxation. Physiologically, relaxation is the cessation of muscular tension. Undesirably high level of muscular tension has several negative side effects, such as decreasing sensory awareness and raising blood presser. It also wastes energy, a contracting muscles requires more energy than relaxed muscle. Furthermore, habitually tens muscles tend to cut off their own circulation. Reduced blood supply result in a lack of oxygen and essential nutrients and causes toxic waste products to accumulate in the cells. This process predisposes one to fatigue, aches and even pain. (*Michael, 2004*).

Practice of *Yogāsanas* is the best way to improve the fitness components specially flexibility. There are plenty of study have been done to see the effect of *Yogic āsanas* on flexibility and *Suryanamaskar* is itself combination of seven *āsanas*. (*Shankar and Pancholi, 2011*).Going through many research paper this query has been rise to find in which trend(pattern)speed component improve and how much time need for significant improvement in speed component of physical

fitness. The objective of the study was to determine the role of *Suryanamaskar* on Speed components in the performances of the Athletes.

OBJECTIVE OF THE STUDY

FOLLOWING OBJECTIVE IS TAKEN IN THIS STUDY

- 1 To study the effect of *Suryanamaskar* training on speed component of athletes.

METHODOLOGY

SAMPLE

The sample for this study were selected from the Punjab Engineering College (Deemed to be University), Chandigarh. Fifteen Athletes in the age group of 18 – 23 years were selected randomly for this study.

VARIABLES

Suryanamaskar was considered as an independent variable and speed component were considered as dependent variable.

TESTING OF SPEED COMPONENT

TESTING OF SPEED

Speed of the subject was measured by flying 30 meters test. Initially, the Subject was asked to relax and calm down which was followed by 10 minutes warm-up. The examiner marked 3 points with existing of cons from point A to Point C covering 60 meters straight Whereas point A to point B cover the distance i.e. Mid-Point. The subjects started the race with the commands of “Go” and the examiner noted down the reading of the time taken to cover the distance Point A to Point B, Point B to Point C from each individual athlete. The reading of the score and time was taken two times and the best score was recorded.

INTERVENTION

The repeated measures design was used for this study. Only one group of 15 boys was created. Total treatment duration was six weeks. Tests were administered in equal interval of two weeks. The tests were started four weeks prior to the *Suryanamaskar* treatment and took place every two weeks, for three times. Thereafter, test took place every two weeks during the treatment.

WEEK	1	2	3	4	5	6
NUMBER OF ROUNDS	10	10	10	15	15	15
TIME (SECONDS)	10	10	10	10	10	10

All participants were briefed introduced about the general objectives and requirements of *Suryanamaskar*.

Suryanamaskar training was carried for a period of six weeks, five days per week. The scheduled time of practice lasted for 30-40 minutes. Each day of the first

week, *Suryanamaskar* practice was demonstrated to the group by the expert and most important points were reviewed several times. Afterward, a review of the most important and common mistakes was conducted once per week.

The pace of *Suryanamaskar* was 2 minutes for each round. Each step took around 10 seconds.

RESULT

TABLE 1: MEAN VALUES AND STANDARD DEVIATION OF SPEED COMPONENT

TRAIL(WEEK)	MEAN-SPEED	STANDARD DEVIATION	N
1	4.274	0.140	15
2	4.245	0.147	15
3	4.158	0.108	15
4	4.053	0.082	15
5	3.929	0.071	15
6	3.763	0.071	15

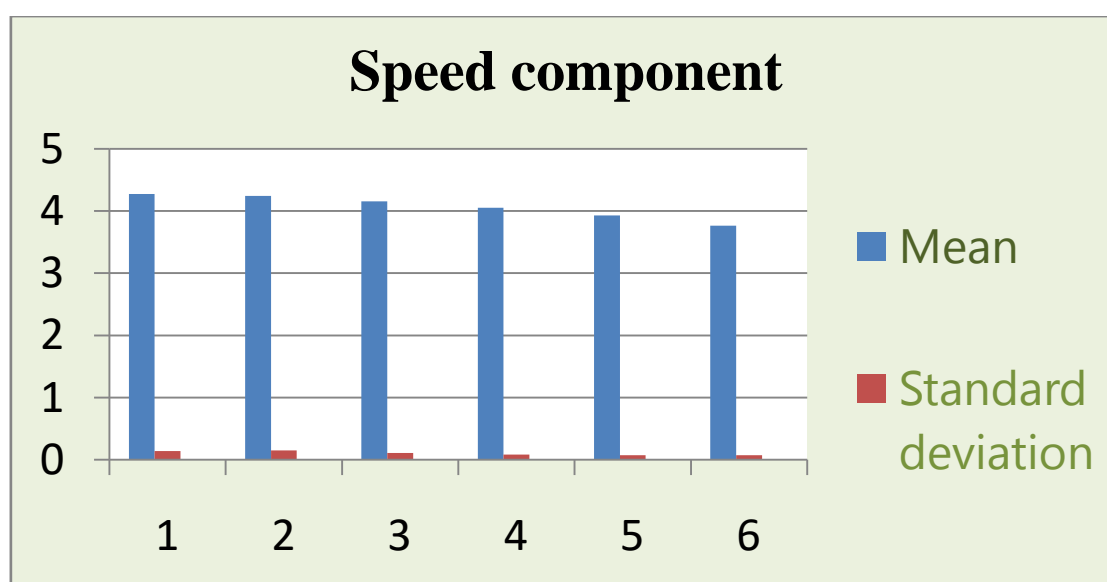


FIGURE 1: MEAN VALUES AND STANDARD DEVIATION OF SPEED COMPONENT

In the table 1 and figure 1, shows that there is significant difference in the mean score of first week trail i.e. 4.274, in second week shows slightly decline i.e. 4.245 with 0.147 deviation and in the sixth week, the mean score is 3.763 with 0.071 deviation, its implies that formal training *Suryanamaskar* in have significantly increase the speed of athletes as compared to those who did not have any type of *Yogāsana*'s training.

DISCUSSION

The purpose of the study was to determine the effect of *Suryanamaskar* on speed component on Punjab Engineering College (Deemed to be University) athletes. The finding of the study revealed that there was a significant improvement

found in the speed component of physical fitness due to the regular practice of *Suryanamaskar*. The finding is in agreement with the results of (Choudhary and Krzytof, 2010) and (Shankar and Pancholi, 2011)).

From *Asanas* point of view, muscle length which can be modified and stretching is the primary method by which muscle lengthening can occur. A muscle has both an origin and an insertion point, basically the two ends of a muscle. At each end of the muscle, a tendon attaches that muscle to the bone. Stretching involves taking these two ends of the muscle further apart to lengthen the muscle and tendons and maintain this length of the muscle in the long term. Muscle has a visco-elastic property. Basically this means that it is not perfectly elastic, like a rubber band. When a rubber band is stretched it returns to its normal length. Over time, however, when muscles are stretched they experience creep, that is, they gradually get longer, thus increasing the performance of all components of physical fitness.

In the study, a pair wise comparison shows that the duration of six weeks of treatments was sufficient to bring out significant difference (improvement) in speed component and also shows that the short duration of only two weeks of the treatment was not effective enough to bring about any significant difference, while a significant difference was noted after at least four weeks of treatment. In this way present study confirmed that practices of *Suryanamaskar* have a significant improvement found in the performance of Athletes.

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