

Vol 4 Issue 4 Jan 2015

ISSN No : 2249-894X

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*Monthly Multidisciplinary  
Research Journal*

*Review Of  
Research Journal*

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**RNI MAHMUL/2011/38595**

**ISSN No.2249-894X**

Review Of Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

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## EFFECT OF SIX WEEKS TRAINING OF SURYANAMASKAR ON FLEXIBILITY AND AGILITY

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**Abstract:- Purpose:** The Purpose of the study was to find out the effect of Suryanamaskar training on selected physiological variables. **Selection of Subject:** For the present study twenty male students of 10 +2 standard from K.V. No. 1 Binnaguri Cantt., Jalpaiguri, West Bengal were selected randomly as the subjects for the study. The age of the subjects were ranging from 14 - 16 years. **Selection of Variable:** The variables selected for the present study were Suryanamaskar training (independent variable), flexibility and agility (dependent variables). **Methodology:** The data was collected through the pre and post test. For the study single group design was used in which the pre test was taken prior to the Suryanamaskar training and post test was taken after six weeks of Suryanamaskar training. **Statistical Technique:** For comparing pre and post test means of flexibility and agility, descriptive analysis and paired t-test were applied at 0.05 level of significant. **Result:** The result of the study showed that there was significant difference between pre and post test of flexibility and agility. **Conclusion:** On the basis of the findings it was concluded that the Suryanamaskar training may be responsible for the improvement of flexibility and agility

**Keywords:** Suryanamaskar, flexibility and agility.

### INTRODUCTION

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). Suryanamaskar's 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 a complete meditative technique in itself as it includes various asanas like- Pranamasan, hasta utthanasan, padahastasan, ashwasanchalanasan, ashtanaga namasakar, bhujangasan, and parvatasan.

Increasing flexibility through stretching is one of the basic tenets of physical fitness. Flexibility is the ability of muscle to perform movement with large amplitude (range of motion). It also refers to functional capacity of a joint to move through a normal range of motion.

Agility is a motor fitness variable, Physical ability enables an individual to rapidly change the body position and direction in a precise time. "Agility is the ability of the body or parts of the body to change directions rapidly and accurately" Barrow and Rojema megee (1973).

### Objectives of the study

- To find out the significant difference between pre and post test of flexibility
- To find out the significant difference between pre and post test of agility.

METHODOLOGY

Selection of Subjects

For the present study total 20 male students with age ranging between 14-16 years and studying in 10+2 standard were randomly selected as subject from K.V. No. 1 Binnaguri Cantt, Jalpaiguri, West Bengal.

Selection of Variables

Keeping the feasibility criterion in mind, the researcher selected the following variables for the present study:

- ❖ **Independent variables:-**
  - Suryanamaskar training
- ❖ **Dependent variables:**
  - Agility
  - Flexibility

Criterion Measures

- Flexibility was measured by sit and reach test and recorded in centimeter.
- Agility was measured by shuttle run test (4x10 meter) and recorded in seconds.

Experiment Design

For the study single group design was used in which the pre test was taken prior to the Suryanamskar training and post test was taken after six weeks of Suryanamskar. Suryanamskar were given to subjects on Six days i.e. (Monday to Saturday) sessions per week. Each training session consisted of 30 minutes of slow and fast Suryanamskar training.

Statistical Procedure

The data were analyzed by applying descriptive statistical and paired t-test. The level of significance were set at 0.05

RESULT AND FINDINGS OF THE STUDY

Table -1: Descriptive and comparative statistics of pre and post test of flexibility and agility

Variables	Test	N	Mean	Std. Deviation	Std. Error Mean	t-value	sig.
Flexibility	Pre	20	34.1500	4.49473	1.00505	7.176*	.000
	Post	20	37.4800	3.44973	.77138		
Agility	Pre	20	10.1215	.70542	.15774	6.054*	.000
	Post	20	9.3765	.69589	.15561		

\*significant at 0.05 level, t-value at 19 df =2.09

Table 1 reveals that the mean and SD of pre & post test of flexibility and agility are 34.15±4.494 & 37.48±3.449 and 10.12±0.705 & 9.37±0.695 respectively. The obtained t-value for flexibility and agility 7.176 and 6.054 are more than the tabulated t-value 2.09 for 19 degree of freedom at 0.05 level of significance. This confirms that significant difference exists between the means of pre and post test in relation to flexibility and agility.

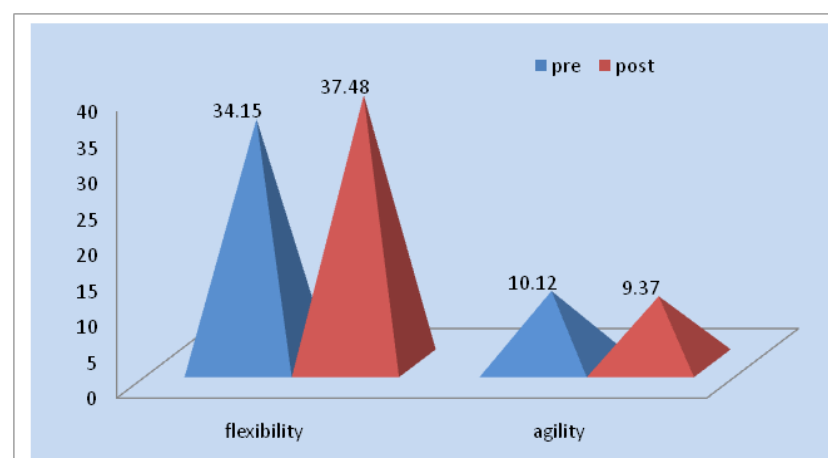
**Fig. 1: Graphical presentation of mean values of pre and post test in relation to flexibility and agility**

Fig. 1 shows that the mean score of flexibility post test (37.48) is higher than the mean score of pre test (34.15) and mean score of agility pre test (10.12) is higher than the mean score of post test (9.37).

## DISCUSSION

The purpose of the study was to determine the effect of Suryanamaskar training on flexibility of school children. The finding of the study revealed that there was a significant improvement found in flexibility and agility due to practice of Suryanamaskar. Finding is in agreement with the result of Choudhary and Krzytof, (2010) and Sankar and Pancholi, (2011). Yoga asana were also shown to improve flexibility and health perception (Cowen and Adams, 2005).

The aim of the study is to assess the effects of 6-weeks yogasanas training on agility and muscular strength in sportsmen. A group thirty randomly selected male players of department of physical education, Guru Nanak Dev University, Amritsar (Punjab, India) aged 18 - 24 years, volunteered to participate in the study. They were randomly assigned into two groups: Y (experimental N=15) and C (control N=15). The subjects from Group Y were subjected to a 6-weeks yogasanas training programme. Student's t test for independent data was used to assess the between-group differences for dependent data to assess the Post-Pre differences. The level of  $p \leq 0.01$  was considered significant. The agility and muscular strength significantly improved in Group Y compared with the control one. The yoga asana training may be recommended to improve agility and muscular strength. and may contribute to enhance sports performance (Singh, Amandeep; Singh, Sukhdev; Gaurav, Vishaw, 2011)

## CONCLUSIONS

On the basis of findings of the study, the following conclusions may be drawn :

- The results of the study indicate that the significant difference was found in pre and post test of flexibility.
- The results of the study indicate that the significant difference was found in pre and post test of agility.

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