



Research article

STUDY OF SURYANAMASKAR ON SELECTED PHYSICAL FITNESS COMPONENTS AND SKILL PERFORMANCE VARIABLES AMONG VOLLEYBALL PLAYERS

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Abstract

Human beings are the unique product of their creation in contrast to other forms of animal. They communicate and record their observations, experiences and ideas. In order to activate effectively, Physical education plays vital role and contributes much in the development of one's behavior. Physical education is an integral part of total education process, is a field of Endeavour that has as its aim, the improvement of human performance through the medium of physical activities that have been selected with a view to realizing this outcomes. For this study, totally 40 male subjects were selected for this study. 20 boys were under 14 year old school boys and 20 were under 17 year old boys from Dindigul district. It is concluded that yoga training was given and the improvement of Muscular strength, Speed, Explosive strength and Flexibility are studied for the volley ball students Muscular Strength, Explosive Power, Speed, and Flexibility were selected as dependent variables.

Key Words: Muscular Strength, Explosive Power, Speed, Flexibility, Suryanamaskar.

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INTRODUCTION

Physical education programme gives many opportunities for development in a group with a common task learning and being stimulated by one another. The basic philosophy of Physical education is one putting to use the natural urge of playing in a group setting for self-realization and social development.

Aristotle stated that the quality of life is determined by its activities. According to Williams, Physical Education should aim to provide skilled leadership and adequate facilities which will offer an opportunity for the individual or group to act in situations which are physically wholesome, mentally stimulating and satisfying and socially sound.

Yoga is a unique Indian tradition of ancient origin for health and happiness. It imparts both sound body and sound mind to the practitioner. Sun is the basis of life on our earth. This is the axis of our solar system around which all the planets revolve. Almost in all religions the sun is worshiped in one form or the other. Suryanamaskar is one of the most effective yogic practices to maintain the fitness. Suryanamaskar is a set of 12 body postures which are performed serially without any pause. When all the 12 postures are completed, makes one round.

Volleyball is a most popular and vigorous as well as strenuous game all over the world. The volleyball players need a

very good physical fitness to play the game without any physical hurdle. Every individual player can maintain his fitness level to with stand in the field during the full time play. If any one cannot maintain his core strength, he / she cannot be play efficiently at the core regions. Hence the investigator had taken an attempt to develop the core strength.

METHODS AND MATERIALS

Selection of Subjects: Total 40 male subjects were selected for this study. 20 boys were under 14 year old school boys and 20 were under 17 year old boys from Dindigul district.

Selection of Variables:

- Muscular Strength
- Explosive Power
- Speed
- Flexibility

All the data were collected and analysis of the data was done (Anurodh, 2017), (Shruti, 2018), (Tabussum, 2017). The detail analysis of the entire process is given in part 3 of this paper.

RESULT AND DISCUSSION

The data obtained from experimental and control group on the suryanamaskar and core strength training were statistically analyzed and presented (Chutia, 2016), (Mahato, 2016), (Rao, 2015).

RESULTS OF STRENGTH**TABLE - I****ANALYSIS OF VARIANCE ON PRE-TEST, POST-TEST AND ANALYSIS OF COVARIANCE ON POST-TEST MEANS OF SURYANAMASKAR FOR STRENGTH**

Test	Exp group	Control group	SOV	SS	df	MS	F
pre test	27.73333	27.60	Between	0.27	1	0.267	0.08
			Within	184.57	58	3.18	
post test	33.58	27.82	Between	498.82	1	498.82	49.90*
			Within	579.78	58	10.00	
adjusted	33.52	27.88	Between	477.54	1	477.54	63.35*
			Within	429.642	57	7.54	

An examination of table - I indicated that the results of ANOVA for pre-test scores of the suryanamaskar and core strength training programme and control group. The obtained F-ratio for the pre-test was 0.08. It was found to be lesser than the required 'F' ratio of **4.006**. By this, it was inferred that the mean difference among the three groups at pre-test on strength was statistically insignificant. Thus the insignificant F- ratio found in the pre-test mean differences provided a confidence that the samples hailed from same population and devoid of sampling bias.

In the post-test data analysis, the F-test was applied to test the significance of mean difference if any among the

suryanamaskar and core strength training programme and control group on strength. The obtained F- ratio for the post-test was 49.90. The F-ratio needed for significant differences on the mean, for degrees of freedom 1, 58 was **4.006** at 0.05 level of confidence. Since the observed F-ratio on this variable was found to be higher than the F- ratio needed for significance, it was inferred that the mean differences among the two groups on the strength used in the study at the end of the treatment period was statistically significant.

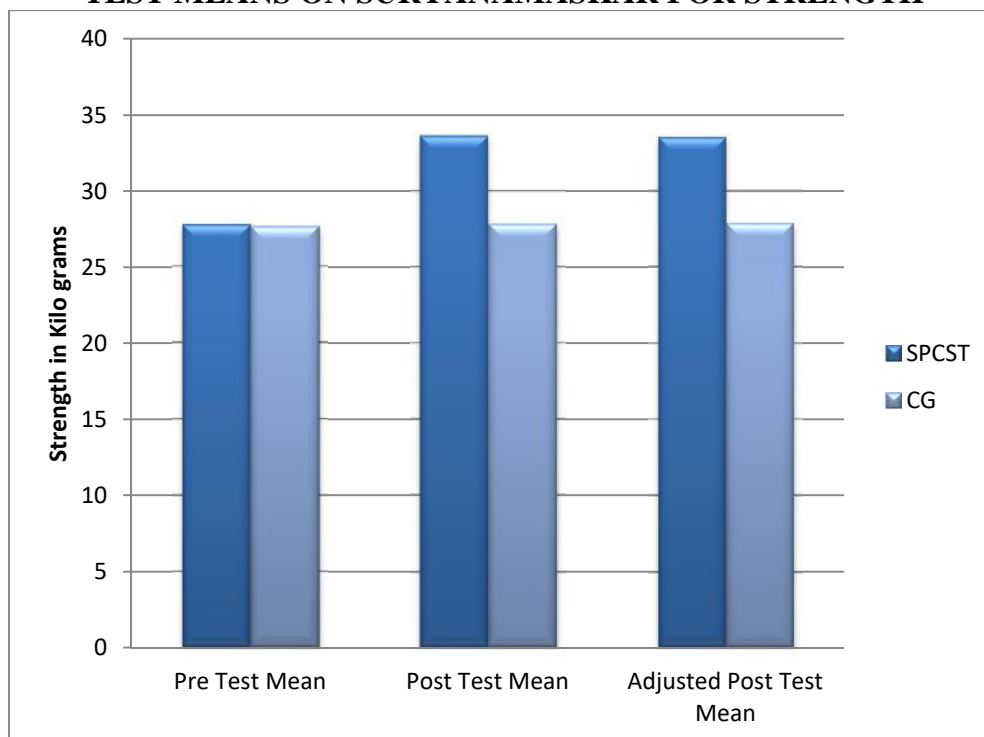
The preliminary aim of the analysis of covariance is adjusting the post-test means for the differences in the pre-test means, and adjusted means were tested for significance. The F-ratio obtained from the testing the adjusted post-test means among the two groups' namely suryanamaskar and core strength training programme and control group on strength was 63.35.

The obtained F- ratio on strength among the two groups was statistically

significant since they exceeded the needed F- ratio (**4.009**) for degree of freedom 1 and 57, at 0.05 level of confidence. From this, it was concluded that the strength was significantly influenced by the treatments used in this study. Thus the formulated hypothesis No.1 was accepted.

Comparison of the treatment effects of suryanamaskar and core strength training programme and control group on strength is presented in Figure - 1.

FIGURE - 1
BAR DIAGRAM SHOWING THE PER TEST, POST TEST AND ADJUSTED POST TEST MEANS ON SURYANAMASKAR FOR STRENGTH



Results of Explosive Power

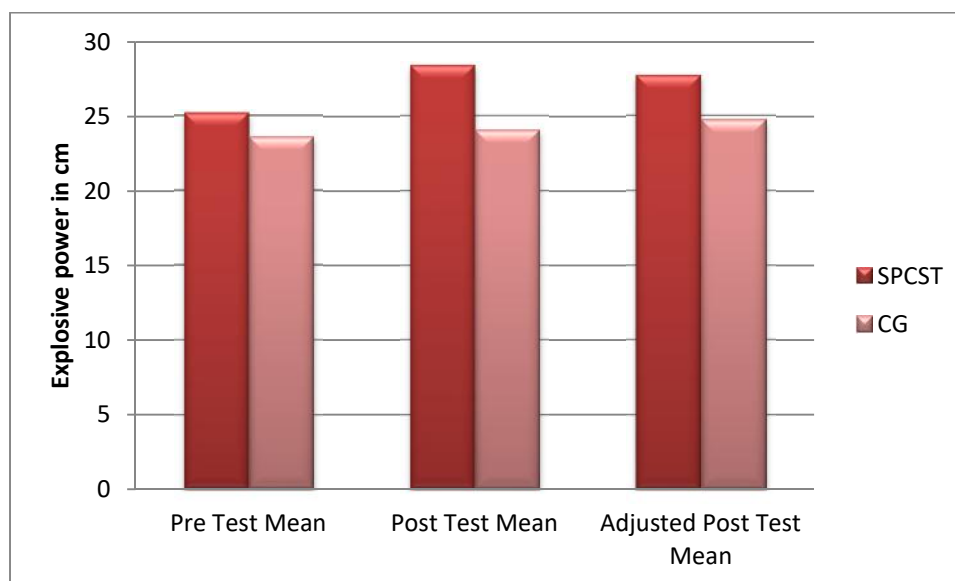
TABLE - II
ANALYSIS OF VARIANCE ON PRE-TEST, POST-TEST AND ANALYSIS OF
COVARIANCE ON POST-TEST MEANS OF SURYANAMASKAR ON
EXPLOSIVE POWER

Test	Exp Group	Control Group	SOV	SS	df	MS	F
Pre Test	25.16667	23.57	Between	38.40	1	38.400	2.34
			Within	953.53	58	16.44	
Post Test	28.37	24.03	Between	281.67	1	281.67	19.40*
			Within	841.93	58	14.52	
Adjusted	27.68	24.72	Between	126.03	1	126.03	52.92*
			Within	135.734	57	2.38	

Comparison of the treatment effects of suryanamaskar and core strength training programme and control group on explosive power is presented in Figure 2.

FIGURE - 2

BAR DIAGRAM SHOWING THE PER TEST, POST TEST AND ADJUSTED
POST TEST MEANS ON SURYANAMASKAR ON EXPLOSIVE POWER



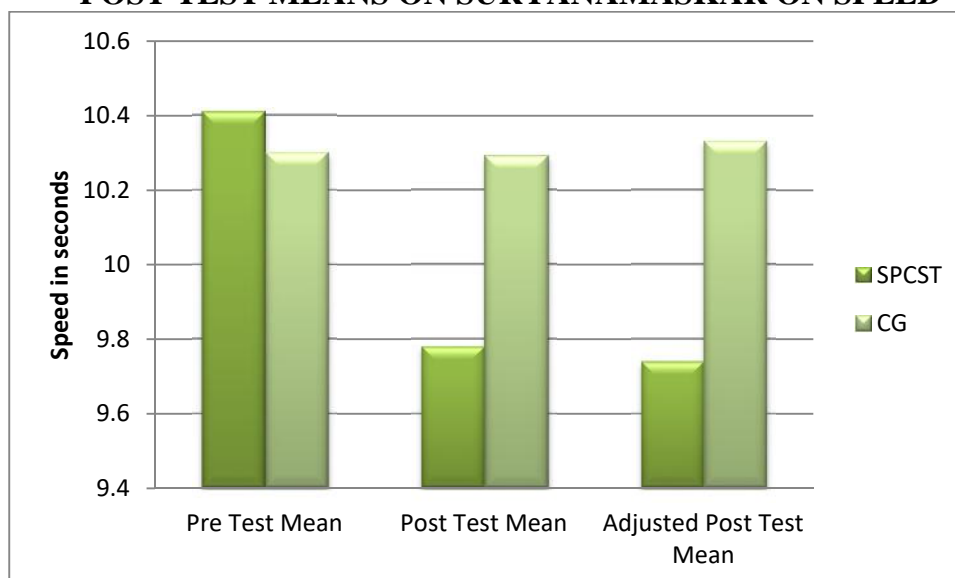
RESULTS OF SPEED

TABLE – III
ANALYSIS OF VARIANCE ON PRE-TEST, POST-TEST AND ANALYSIS OF COVARIANCE ON POST-TEST MEANS OF SURYANAMASKAR ON SPEED

Test	Exp Group	Control Group	SOV	SS	df	MS	F
Pre Test	10.41	10.30	Between	0.18	1	0.176	0.15
			Within	66.76	58	1.15	
Post Test	9.78	10.29	Between	3.83	1	3.83	4.33*
			Within	51.22	58	0.88	
Adjusted	9.74	10.33	Between	5.31	1	5.31	69.16*
			Within	4.376	57	0.08	

Comparison of the treatment effects of suryanamaskar and core strength training programme and control group on speed is presented in Figure - 3.

FIGURE - 3
BAR DIAGRAM SHOWING THE PER TEST, POST TEST AND ADJUSTED POST TEST MEANS ON SURYANAMASKAR ON SPEED



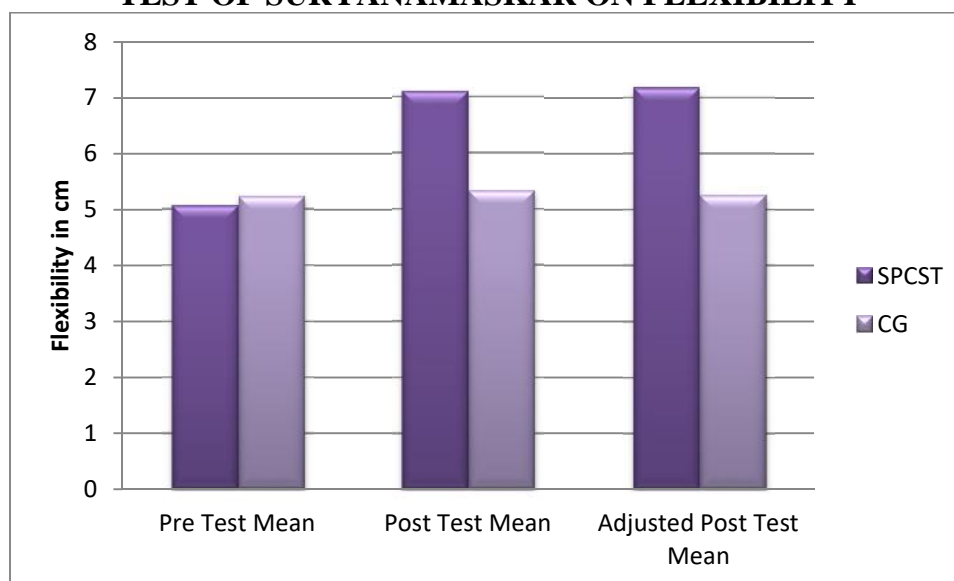
RESULTS OF FLEXIBILITY

TABLE - IV
ANALYSIS OF VARIANCE ON PRE-TEST, POST-TEST AND ANALYSIS OF
COVARIANCE ON POST-TEST MEANS OF SURYANAMASKAR ON
FLEXIBILITY

Test	Exp Group	Control Group	SOV	SS	df	MS	F
Pre Test	5.066667	5.23	Between	0.42	1	0.417	0.25
			Within	95.23	58	1.64	
Post Test	7.10	5.33	Between	46.82	1	46.82	26.79*
			Within	101.37	58	1.75	
Adjusted	7.18	5.26	Between	55.04	1	55.04	149.16*
			Within	21.033	57	0.37	

Comparison of the treatment effects of suryanamaskar and core strength training programme and control group on flexibility is present in Figure - 4.

FIGURE - 4
BAR DIAGRAM SHOWING THE PER TEST, POST TEST AND ADJUST POST
TEST OF SURYANAMASKAR ON FLEXIBILITY

**CONCLUSION**

Yoga training was given and the improvement of Muscular strength, Speed, Explosive strength and Flexibility are studied for the volley ball students

(Singh, 2010). This paper elaborates an extensive analysis of effect of the Yoga training. It is proved that the performance is better when students continuously perform yoga

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