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Effect of asana with Surya Namaskar practices on back strength among school volleyball players

Dr. C Durai and G Anantharaj

Abstract

The purpose of the study was to find out the effect of Asana with Surya namaskar practices on back strength among men volleyball player. To achieve the purpose of this study, 20 men volleyball players were randomly selected as subjects from the A.D.W Higher secondary school, Nallammalpuram, Tirunelveli, Tamilnadu, India. Their age ranged from 11 to 18 years. The selected participants were randomly divided into two groups such as group 'A' Asana with Surya namaskar practices (n=10) and group 'B' acted as control group (n=10). Group 'A' underwent Asana with Surya namaskar practices for alternative three days and each session lasted for an hour for eight week. Control group was not exposed to any specific training but they were participated in regular activities. The "isometric back strength" (in seconds) was used to measure back strength were selected as variables. The pre and post tests data were collected on selected criterion variables prior and immediately after the training program. The pre and post-test scores were statistically examined by the dependent 't' test and Analysis of co-variance (ANCOVA). The level of significant was fixed at 0.05 level. It was concluded that the Asana with Surya Namaskar practices group had shown significantly improved in back strength. However the control group had not shown any significant improvement on back strength.

Keywords: Asana, Surya Namaskar, back strength, volleyball players

1. Introduction

Asana means a steady and pleasant posture of the body. When the mind is not in a pleasant state the individual cannot feel or even think properly. The human body is so harmoniously arranged that if even any minutest part of it were hurt a little, the whole system become disturbed. So to comprehend a thing, i.e. to feel a thing by the heart clearly, the practice of Asana, the steady and pleasant posture, is necessary [1].

Surya Namaskar is an ideal way to relax the mind as it uses the whole body and produces sweating. This can lead to great burn off anger and allow to calmly dealing the situation with full of awareness [2]. Surya Namaskar has a deep effect in detoxifying the organs through copious oxygenation and has a deeper relaxing effect. It is a series of 12 physical postures [3].

Surya Namaskar is an ancient method yogic method to worship Sun. In Sanskrit literature surya means sun, and the word namaskar means salutation. Therefore, this practice is known as the Surya Namaskar or 'salutation to the sun'. This specific Postural and breathing protocols was developed in Indian subcontinent thousands of years ago by a great sage Patanjali and their disciples [4].

They advised all human beings to practice these yogic methods in front of the sun in their daily life for good health, illumination, mental and physical stability. Surya Namaskar is a series of asanas with strict breathing pattern. Its revitalizes each and every cell of the body, gives physical strength, flexibility, and mental calmness. Surya Namaskar includes a series of asanas (Specific posture of the body) which are- Pranamasana, hasta utthanasana, padahastana, ashwasanchalanasana, ashtanaga namasakar, bhujangasana, and parvatasan [5].

The obvious advantage of Surya Namaskar is the workout it provides for the muscles, but it also benefits joints, ligaments and the skeletal system by improving posture, flexibility and balance. In addition to these physical benefits, Surya Namaskar practice stimulates and conditions virtually every system in the body. It is good for the heart and stimulates the cardiovascular system.

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It oxygenates the blood and helps strengthen the heart. Surya Namaskar is good for the digestive system and the nervous system. It stimulates the lymphatic system and supports respiratory system health, as well [6]. There is a need of high level of physical and physiological fitness to participate at the elite level [7].

2. Purpose of the Study

The purpose of the study was to find the effect of asana with Surya Namaskar practices on back strength among men volleyball player.

3. Methodology

To achieve the purpose of this study, 20 men volleyball players were randomly selected as subjects from the A.D.W Higher secondary school, Nallampuram, Tirunelveli, Tamilnadu, India. Their age ranged from 11 to 18 years. The selected participants were randomly divided into two groups such as group ‘A’ ‘Asana with Surya Namaskar practices’ (n=10) and group ‘B’ acted as control group (n=10). Group ‘A’ underwent Asana with Surya Namaskar practices for alternative three days and each session lasted for an hour for eight week. However, control group was not exposed to any specific training but they participated in their regular schedule. The “isometric back strength” (in seconds) were selected as criterion variables. The pre and post tests data were collected on selected criterion variables prior and immediately after the training program. The pre and post-test selected criterion variable scores were statistically examined by the dependent ‘t’ test and Analysis of Covariance

(ANCOVA). The level of significance was fixed at .05 level of confidence, which was considered as appropriate.

4. Analysis of Data

Table 1: Means and Dependent ‘T’ Test for the Pre and Post Tests on Back Strength of Experimental and Control Groups

Criterion variables	Test	Experimental Group Mean	Control Group Mean
Isometric back strength test (in seconds)	Pre test	95.41	94.38
	Post test	108.32	95.89
	‘t’ test	9.11*	1.88

*Significant at .05 level. (Table value required for significance at .05 level for ‘t’-test with df 9 is 2.26)

The table-1 shows that the pre-test mean value of experimental and control groups on back strength are 95.41 and 94.38 respectively and the post test means are 108.32 and 95.89 respectively. The obtained dependent t-ratio values between the pre and posttest means of Asana with Surya Namaskar practices and control groups are 9.11 and 1.88 respectively. The table value required for significant difference with df 9 at 0.05 level is 2.26. From the above table the dependent ‘t’-test value of back strength between pre and post tests means of experimental group was greater than the table value 2.26 with df 9 at .05 level of confidence, it was concluded that the experimental group had significant improvement in the back strength when compared to control group.

Table 2: Computation of mean and analysis of covariance back strength of experimental and control groups

	Experimental Group	Control Group	Source of Variance	Sum of Squares	Df	Mean Square	F
Isometric back strength test (Adjusted Post Mean)	108.43	95.91	BG	629.21	1	629.21	58.11*
			WG	186.57	17	10.98	

* Significant at 0.05 level. Table value for df 1, 17 was 4.45

Table-2 shows that the adjusted post test means values on back strength of experimental and control groups 108.43 & 95.91 respectively. The obtained f- ratio of 58.11 for adjusted post test mean is greater than the table value 4.45 with df 1 and 17 required for significance at 0.05 level of confidence. The results of the study indicated that there was a significant

mean difference exist between the adjusted post test means of asana with Surya Namaskar practices and control groups on back strength.

The bar diagram figure-1 shows that the mean values of pre, post and adjusted post tests on back strength of asana with Surya Namaskar practices and control groups.

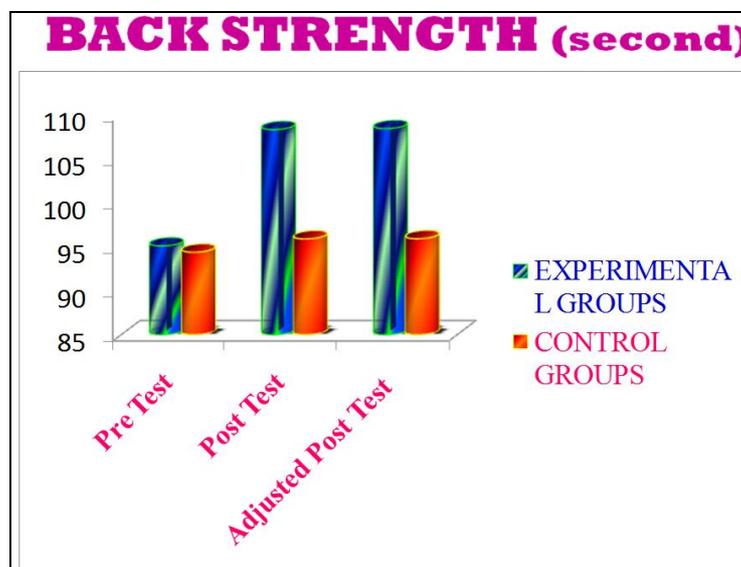


Fig 1: Pre, Post and adjusted post tests mean values of experimental and control groups on back strength (In Seconds).

6. Conclusions

1. There was significant improvement on back strength due to the effect of asana with Surya Namaskar practices among Volleyball players.
2. However the control group had not shown any significant improvement on any of the selected variables.

7. References

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