

“The Effect of Dynamic Sun Salutation on Shoulder Strength and Trunk Flexibility”

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Abstract

Background-The objective of the study was to determine the effect of dynamic Sun Salutation On trunk flexibility and shoulder strength of H I K H S school Sidhpur, Gujarat Under – 19 year Volleyball players. Method – 20 male volleyball players from H I K H S school Sidhpur were selected as subjects for this study. The age of the subjects is U- 19 years. Sit and reach and push-ups (1 minute) were use to test the trunk flexibility and shoulder strength of volleyball players respectively. Randomize group design which consist of one control group and one experimental group, pre test and post test were taken on both groups were used for the study. Equal numbers of subjects (n-10) were assigned randomly to the groups. The data were collected two times first at the start of practice and second at the end of six weeks, practice of dynamic sun salutation. In order to find out effect of dynamic sun salutation on trunk flexibility and shoulder strength of volleyball players descriptive statistics and analysis of co-variance (ANCOVA) was used. The level of significance was set at 0.05. Result – The result revels that there was significant ($P < 0.05$) effect of dynamic sun salutation on trunk flexibility and shoulder strength of volleyball players.

Key Words – Dynamic Sun Salutation, Trunk Flexibility, Shoulder Strength

Introduction – Dynamic sun salutation make it one of the most useful and complete exercise to bring about health vigor while at the same time preparing and adept for the deeper process of Yoga. It is based on three elements: Rhythm, energy and form, form is evident in the twelve posters which are co ordinate with the breath activities the subtle energy called prana. This study and rhythm flow reflects the rhythm of universe, such of biorhythms of the body, which were expressed in the past by the science of the twelve zodiac phase the rhythmic suprim position of the form and energy of sun salutation on our psychosomatic organism is a transforming future since activate psyiobody in a completely different way then what any modern sports or game can do.

Most of the steps in the procedure themselves have been documented in old literature "Shastang Dandvat" which is the central step of sun salutations was practiced in India, from the immemorial, as a form of showing respect and complete surrender of god.

Sun salutation is yogic practice, which is dynamic in nature and gives benefits at a level of fitness (Physical, mental, and Spiritual). It is proved a very effective method for develop trunk flexibility and shoulder strength.

Objectives of the Study – The objective of the study was to determined the effect of dynamic sun salutation practice on trunk flexibility and shoulder strength of volleyball players.

Methodology -:

Subjects – Twenty male volleyball players from H I K H S school Sidhpur were selected as subjects for this study. The age limit of the subject is under – 19 years.

The subjects were divided in two equal groups i.e. one experimental (Sun Salutation Practice) group and one control group.

Variables -: Trunk flexibility and shoulder strength were selected as a dependent variable and sit and reach and push-ups (1 minute) was consider as independent variable.

Criterion measure -: Sit and reach for trunk flexibility and push-ups for shoulder strength of volleyball players.

Collection of data -: The data was collected two times one at the start of practice and another at the end of six weeks practice of sun salutation.

Administration of practice -: The practice for experimental group was administrate at the volleyball ground of H I K H S School Sidhpur, Gujarat, India. The experimental group met five times in a week or the period of six weeks. Each experimental session was of the 30 – 45 minutes duration.

Experimental design -: Pre test, post test, randomize group design, which is consist of one experimental group and ne control group, was used for the study. Equal No of subjects (n=10) were assigned randomly to the groups. One group served as

experimental group (Sun Salutation group) on which treatment was assigned and second group served as control group.

Experimental group - O₁ TO₂

Control group - O₁ O₂

O₁ = Pre test, O₂ = Post test, T = Treatment

Statistical analysis -: In order to final out the effect of dynamic sun salutation practice on trunk flexibility and shoulder strength of volleyball players, descriptive statistics and analysis of Co- variance (ANCOVA) was used. The level of significance was set at 0.05.

Findings -: The findings are given below:

Table1: Analysis of Co-Variance of the means of experimental group and control group in relation to trunk flexibility.

Table 1

Test	Experimental Group		Control Group		Anova				
	Mean	SD	Mean	SD		SS	dF	MS	F
Pre-Test	3.61	0.19692074	3.69	0.228278582	A	0.032	1	0.032	0.704156
					W	0.818	18	0.045444	
Post Test	4.21	0.321282154	3.75	0.290029238	A	1.058	1	1.058	15.1866
					W	1.254	18	0.069667	
Adjusted	0.60	0.124361414	0.06	0.061750656	A	1.026	0	1.016	14.382444
					W	0.436	0	0.024123	

Significant at 0.05, A = among means variance, W = Within group variance,

The analysis of Co - variance for trunk flexibility was significant in case of pre – test means from which it is clear that the pre – test means quit differ significantly and that the random assignment of subject to the experimental group and control group was more differ than control group. The post test means of two groups yielded an F ratio of 2.858461538 which was also significant at 0.05. The different between the adjusted post –test means was found significant as the obtained 0.60.

Table 2: Analysis of Co – variance of the mean of experimental group and control group in relation to shoulder strength.

Table 2

Test	Experimental Group		Control Group		Anova				
	Mean	SD	Mean	SD		SS	dF	MS	F
Pre-Test	28.6	2.366432	28	2.538591	A	1.8	1	1.8	0.298893
					W	108.4	18	6.22222	
Post Test	33.4	2.36432	28.5	2.27303	A	120.05	1	120.05	22.30031
					W	96.9	18	5.383333	
Adjusted	4.8	0	0.5	0.265561	A	118.25	0	118.25	21.001427
					W	-11.5	0	- 0.638889	

Significant at 0.05, A = Among mean variance, W = Within group variance.

The analysis of Co – Variance for shoulder strength was insignificant in case of pre- test means from which it is clear that the pre- test mean was quit differ significant and that the random assignment of subjects to the experimental group and control group was more differ than control group. The pre – test mean of all the two groups yields an F = ratio of 1.083870968 which was significant at 0.05. The difference between the adjusted post – test mean of experimental group was found significant as the obtained mean was 4.8.

Discussion :- After collection of data appropriate statistical analysis was completed. The research scholar examined the effect of sun salutation on trunk flexibility and shoulder strength. The result was support the sun salutation improves trunk flexibility and shoulder strength of volleyball players. It was found that the experimental group improved significantly.

Conclusion :- Based on result it is concluded that practice of dynamic sun salutation helped to improve trunk flexibility and shoulder strength of volleyball players.

References:-

Howell Reet, Howell Maxwell and A K Uppal, “**Foundation of Physical education**” Friend publication India Pg No.35 – 40

Jain Rachna “ Physical Education (A hand book for teachers), Sports publication New Delhi. Pg No 2,4 & 9

<http://www.momsteam.com/successful-parenting/sports-benefit-girls-in-many-ways#ixzz420J3DCy0>, Retrived on 23/7/2016

<http://www.artofliving.org/in-en/yoga/yoga-poses/sun-salutation>, Retrived on 10/8 2016