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Effect of yogic practices on selected motor fitness components of college girls

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Abstract

The purpose of the present study was to find out the effect of yogic practices on selected motor fitness components of college girls. For the purpose of the study 40 girls were selected randomly from Indirabai Meghe Mahila Mahavidyalaya, Amravati (Maharashtra) India as subjects. Age of the subjects ranged from 18 to 20 years. Twenty girls were assigned as experimental group and another 20 girls were assigned as control group during the academic year 2014-2015. Six weeks of yoga sanas training were given to the experimental group. The control group was not allowed to participate in any of the training programes, except their routine physical education classes. Measurements for the variables were taken at the beginning (pre - test) and at the end of the experimental period, after six weeks (post - test) the data were collected for all the variables from both control and experimental groups, for five days. During this period the subject were not allowed to participate in any training. The criterion measures adopted for the study measuring the motor fitness components are given below: Shoulder flexibility was measured by administering shoulder and wrist elevation test and Muscular endurance was by administering bent-knee sit-ups. The data collected on 40 subjects beginning (pre - test) and at the end of the experimental period, after six weeks (post - test) the data were collected for all the variables from both control and experimental groups on shoulder flexibility and muscular endurance variables were analyzed by using the 't' test. Result: There was significant difference in shoulder flexibility and muscular flexibility between pre and post-test experimental group. There was insignificant difference in shoulder flexibility and muscular flexibility between pre and post-test control group. There was insignificant difference in shoulder flexibility and muscular flexibility between experimental and control group pre test. There was significant difference in shoulder flexibility and muscular flexibility between experimental and control group post-test. Shoulder flexibility and muscular endurance was significantly improved by the yogic practices group when compared with control group.

Keywords: yoga, motor fitness, girls

Introduction

Yoga is a systematic and methodical process to control and develop the mind and body to attain good health, balance of mind and self-realization. Thought yoga has the potential power to make us healthy added to our vigor, still most people lack the knowledge of systematic practice of yoga? They perform yogic exercises for a short period and when their health improves, they discontinue the yoga practice. For this reason, the effective results of yogic practices cannot be determined perfectly. Many scientists, doctors, psychologists etc, all over the world are extensively studying the beneficial aspects of yoga which encourages us to attain positive health through yoga [1].

If one practices the Asanas and Pranayama regularly and systematically for long period, it is sure to find that they act as curatives of and preventives for various kinds of mental and physical ailments. The body will become light, and intellect will turn sharp and clear, memory will grow strong, will-power assumes firmness and rigidity, body fat and heart rate will be reduced, the belly will no longer project, the face will look serene, the eyes will grow bright and lustrous, the voice will turn sweet, an improve in static motor performance, personality development, lung capacity and respiratory, brain functions and physical fitness [2].

Material and Methods

For the purpose of the study 40 girls were selected randomly from Indirabai Meghe Mahila Mahavidyalaya, Amravati (Maharashtra) India as subjects. Age of the subjects ranged from 18 to 20 years. Twenty girls were assigned as experimental group and another 20 girls were assigned as control group during the academic year 2014-2015. Six weeks of yoga sanas training were given to the experimental group. The control group was not allowed to participate in any of the training programes, except their routine physical education classes. Measurements for the variables were taken at the beginning (pre - test) and at the end of the experimental period, after six weeks (post - test) the data were collected for all the variables from both control and experimental groups, for five days. During this period the subject were not allowed to participate in any training.

Practice Schedule

Sr. No.	Name of the practice	Duration		
		1 to 2 Weeks	3 to 4 Weeks	5 to 6 Weeks
		35 minutes	45 minutes	50 minutes
1	Surya – Namaskar	2	2	2
2	Akarna – Dhanur – asana	3	3	2
3	Ardha Chandra – asana	3	3	4
4	Ardha – Matsyendra – asana	2	3	4
5	Baddha Kona Asana	2	3	4
6	Chakra Asana	2	2	3
7	Dhanur – asana	2	4	4
8	Garuda – asana	2	4	4
9	Gomukha – asana	2	2	3
10	Hala – sana	2	2	3
11	Matsya – asana	2	4	4
12	Sarvanga – asana	2	3	3
13	Shalabha – asana	2	3	3
14	Shava – asana	7	7	7

Criterion measures

The criterion measures adopted for the study measuring the motor fitness components are given below.

1. **Shoulder Flexibility**: Shoulder flexibility was measured by administering shoulder and wrist elevation test.
2. **Muscular endurance**: Muscular endurance was by administering bent-knee sit-ups.

Statistical Analysis

Findings

The data collected on 40 subjects beginning (pre - test) and at the end of the experimental period, after six weeks (post - test) the data were collected for all the variables from both control and experimental groups on shoulder flexibility and muscular endurance variables were analyzed by using the 't' test. Therefore the separate tables and graphs have been presented for each variable as follows.

Table 1: Comparison of shoulder flexibility between pre and post-test of experimental and control groups

Variable	Group	Test	Mean	SD	SE	MD	Ot	df	Tt
Shoulder Flexibility	Experimental	Pre	52.20	16.26	5.19	12.10	2.33*	38	2.02
		Post	64.30	16.55					
	Control	Pre	50.59	14.12	4.66	0.20	0.04	38	2.02
		Post	50.39	15.35					

Table-1 shows that the significant difference in shoulder flexibility between pre and post-test experimental group. The obtained 't' value of 2.33 is more than the table value of 2.02 with 38 degree of freedom.

Table-1 shows that the insignificant difference in shoulder flexibility between pre and post-test control group. The obtained 't' value of 0.04 is less than the table value of 2.02 with 38 degree of freedom.

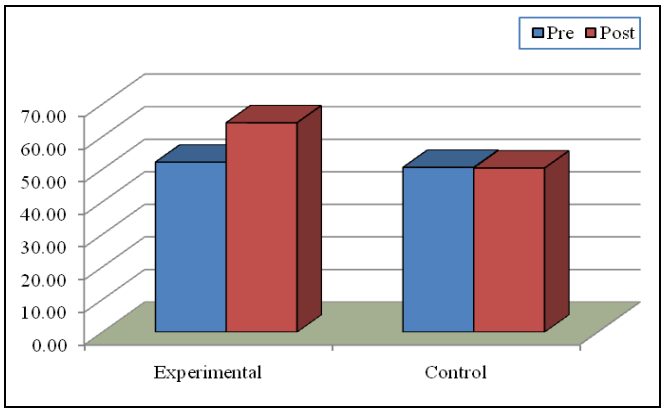

Fig 1: the graph showing the mean value of shoulder flexibility between pre and post-test of experimental and control groups

Table 2: Comparison of muscular endurance between pre and post-test of experimental and control groups

Variable	Group	Test	Mean	SD	SE	MD	Ot	df	Tt
Muscular Endurance	Experimental	Pre	33.25	4.54	1.44	4.00	2.79*	38	2.02
		Post	37.25	4.54					
	Control	Pre	33.55	4.76	1.57	0.40	0.25	38	2.02
		Post	33.95	5.18					

Table-2 shows that the significant difference in muscular flexibility between pre and post-test experimental group. The obtained 't' value of 2.79 is more than the table value of 2.02 with 38 degree of freedom.

Table-2 shows that the insignificant difference in muscular flexibility between pre and post-test control group. The obtained 't' value of 0.25 is less than the table value of 2.02 with 38 degree of freedom.

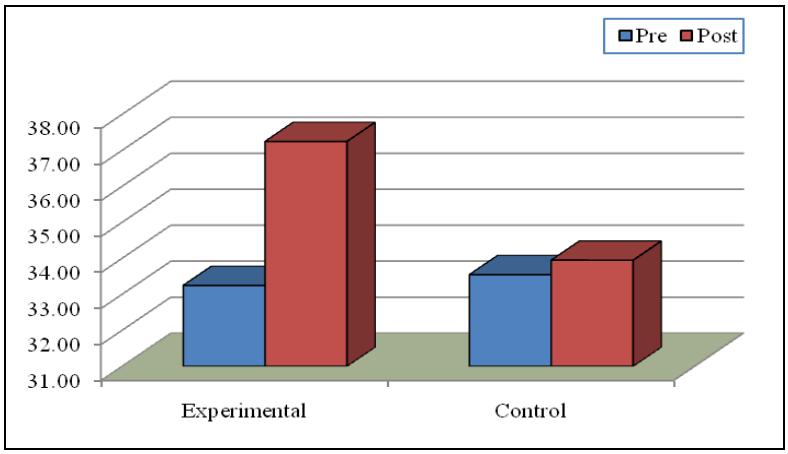

Fig 2: the graph showing the mean value of muscular endurance between pre and post-test of experimental and control groups

Table 3: Comparison of shoulder flexibility between experimental and control groups of pre and post-test.

Variable	Test	Group	Mean	SD	SE	MD	Ot	df	Tt
Shoulder Flexibility	Pre	Experimental	52.20	16.26	4.81	1.61	0.33	38	2.02
		Control	50.59	14.12					
	Post	Experimental	64.30	16.55	5.05	13.91	2.76*	38	2.02
		Control	50.39	15.35					

Table-3 shows that the insignificant difference in shoulder flexibility of pre-test between experimental and control group. The obtained 't' value of 0.33 is less than the table value of 2.02 with 38 degree of freedom.

Table-3 shows that the significant difference in shoulder flexibility of post-test between experimental and control group. The obtained 't' value of 2.76 is more than the table value of 2.02 with 38 degree of freedom.

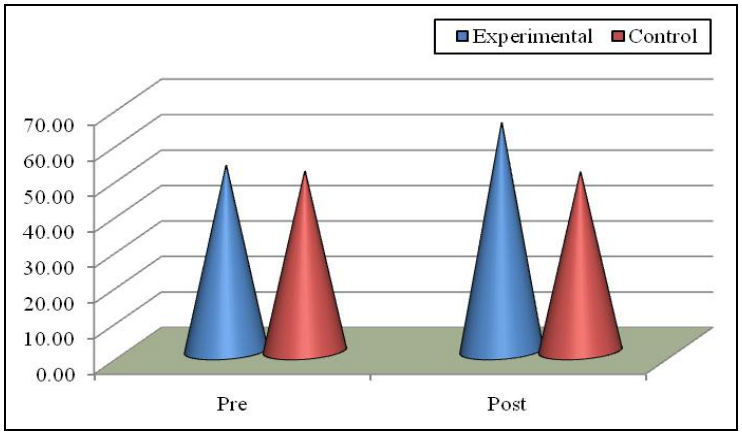

Fig 3: the graph showing the mean value of shoulder flexibility between experimental and control groups of pre and post-test

Table 4: Comparison of muscular endurance between experimental and control groups of pre and post-test.

Variable	Test	Group	Mean	SD	SE	MD	Ot	df	Tt
Muscular Endurance	Pre	Experimental	33.25	4.54	1.47	0.30	0.20	38	2.02
		Control	33.55	4.76					
	Post	Experimental	37.25	4.54	1.54	3.30	2.14*	38	2.02
		Control	33.95	5.18					

Table-4 shows that the insignificant difference in muscular endurance of pre-test between experimental and control group. The obtained 't' value of 0.20 is less than the table value of 2.02 with 38 degree of freedom.

Table-4 shows that the significant difference in muscular endurance of post-test between experimental and control group. The obtained 't' value of 2.14 is more than the table value of 2.02 with 38 degree of freedom.

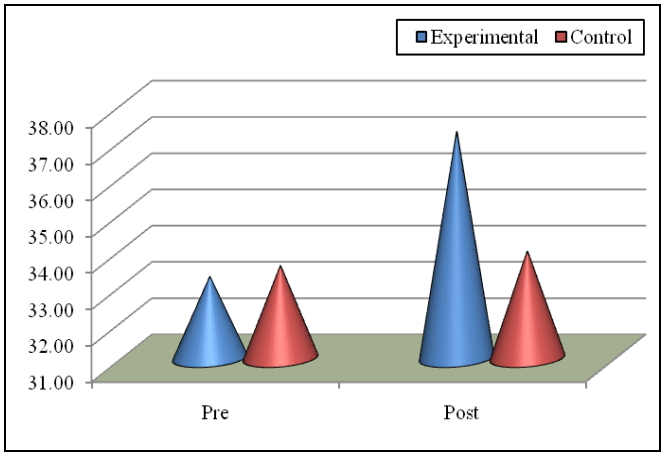

Fig 4: the graph showing the mean value of muscular endurance between experimental and control groups of pre and post-test

Conclusions

Within the limitations of the present study and on the basis of the findings the following conclusions were drawn.

1. There was significant difference in shoulder flexibility and muscular flexibility between pre and post-test experimental group.
2. There was insignificant difference in shoulder flexibility and muscular flexibility between pre and post-test control group.
3. There was insignificant difference in shoulder flexibility and muscular flexibility between experimental and control group pre-test.
4. There was significant difference in shoulder flexibility and muscular flexibility between experimental and control group post-test.
5. Shoulder flexibility and muscular endurance was significantly improved by the yogic practices group when compared with control group.

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