



ISSN: 2456-0057

IJPNPE 2019; 4(2): 309-311

© 2019 IJPNPE

www.journalofsports.com

Received: 12-05-2019

Accepted: 16-06-2019

A Kasirajan

Ph.D. Scholar, Manonmaniam
Sundaranar University,
Tirunelveli, Tamil Nadu, India

Dr. S Mariappan

Research Supervisor & Director
of Physical Education, Sri
K.G.S. Arts College,
Srivaikuntam, Thoothukudi,
Tamil Nadu, India

Effects of yogic practices on physical variable among school level handball players

A Kasirajan and Dr. S Mariappan

Abstract

The purpose of the study was to find out Effects of yogic practices on physical variable among school level handball players. To achieve the purpose of this study 30 school boys inter school players of Govt. Boys Hr. Sec. School, Udumalpet, were selected as subject. The selected subjects were divided into two groups namely yogic practice group and control group. Group A underwent yogic practice for eight weeks of six days per weeks. The duration of training session was between one hour to one and half hour approximately, which included warm-up and warm-down. Group B acted as control group, who were not engaged in any special activities other than their daily routine. The following yoga were given during training period as Suryanamaskar, Makarasana, Pavana Muktasana (Alternate leg), Paschimottanasana, Ardha Matsyendrasana, Bhujangasana, Ardha Shalabhasana, Shalabhasana, Dhanurasana, Eka Padasana, Uttanapadasana, Naukasana, Jathara Parivarthanasana, Halasana and Shavasana. The Selected as criterion variable namely Flexibility, Explosive Power and Cardio Respiratory Endurance were measured by Sit and reach box, Standing broad jump and 12 minutes cooper test. The data were collected from each subject before and after the training period and statistically analyzed by dependent 't' test which is used to find out the significant improvement on selected criterion variables and Analysis of Covariance (ANCOVA) was used to find out the significant difference between the experimental and control groups on each variables separately. All the cases 0.05 level of confidence was fixed as a level of confidence to test the hypotheses.

Keywords: Yogic practices, flexibility, explosive power, cardio respiratory, endurance & handball players

Introduction

Yoga is an ancient form of relaxation and exercise that has many health benefits, including lowering cholesterol. Pranayama also helps to connect the body to its battery, the solar plexus, where tremendous potential energy is stored. When tapped through specific techniques this vital energy, or Prana, is released for physical, mental and spiritual rejuvenation. Regular practice removes obstructions, which impede the flow of vital energy. When the cells work in unison, they bring back harmony and health to the system. 20 to 25 minutes (every morning or evening) of pranayama practice increases lung capacity, breathing efficiency, circulation, cardiovascular efficiency, helps to normalize blood pressure, strengthens and tones the nervous system, combats anxiety and depression, improves sleep, digestion and excretory functions, provides massage to the internal organs, stimulates the glands, enhances endocrine functions, normalizes body weight, provides great conditioning for weight loss, improves skin tone and complexion. (Sugumar C and Raghavan G, 2010) [3].

Yogic exercises and techniques have significant, direct effects on the physical, psychological, theoretical preparation and on the regeneration of the strength process. Yogasanas can be used for warm-up, cool-down, regeneration, synthesis of mind and body, activation or deactivation of the body and as supplemental exercises, (Aladar Kogler, 2003) [1].

Yoga helps to decrease the pain in lower and upper extremities. It involves stretching and strengthening the different parts of the spine, the backbone of our structure and the whole body becomes agile. It promotes the health of the endocrine glands which is associated with nervous system and maintains the overall functional efficiency of the different systems of the body. It puts certain groups of muscle tone which is closely related to one's own emotional behaviour, (Andre Van Lysebeth, 1987) [2].

Correspondence

A Kasirajan

Ph.D. Scholar, Manonmaniam
Sundaranar University,
Tirunelveli, Tamil Nadu, India

Purpose of the study

The purpose of the study was to find out the effects of yogic practices on physical variable among handball players

Hypothesis

1. There would be a significant improvement on physical variable due to yogic practices among handball players.

There would be a significance difference between yogic practices group and control group on physical variable among handball players.

Methodology**Selection of subjects**

Thirty intermediate handball players of school boys from

Govt. Boys Hr. Sec. School, Udumalpet, Tiruppur Dist., player who represented their inter school competition were selected randomly as subjects. The age of the subjects ranged from 12 to 15 years.

Selection of variables**Independent variables**

- Yogic practices

Dependent variables

The following variables was selected as dependent variables and to assessed the following standardized tests was used were presented in the Table I.

Table 1: Variables & tests

S. No	Variables	Tests items	Unity of Measurement
Physical Variable			
1.	Flexibility	Sit and reach box	Centimetre
2.	Explosive Power	Standing broad jump	Centimetre
3.	Cardio Respiratory Endurance	12 minutes cooper test	Meter

Experimental design

Thirty handball players from Govt. Boys Hr. Sec. School, Udumalpet, were selected randomly as subjects. The age of the students ranged from 12 to 15 years. The selected subjects were divided into two groups namely yogic practice group and control group, Group A underwent yogic practice for eight weeks of six days per weeks. The duration of training session was between one hour to one and half hour approximately, which included warm-up and warm-down. Group B acted as control group, who were not engaged in any special activities other than their daily routine. The following yoga were given during training period as Suryanamaskar, Makarasana, Pavana Muktasana (Alternate leg), Paschimottanasana, Ardha Matsyendrasana, Bhujangasana, Ardha Shalabhasana, Shalabhasana, Dhanurasana, Eka Padasana, Uttanapadasana, Naukasana, Jathara Parivarthanasana, Halasana and Shavasana. The Selected as

criterion variable namely Flexibility, Explosive Power and Cardio Respiratory Endurance were measured by Sit and reach box, Standing broad jump and 12 minutes cooper test. The data were collected from each subject before and after the training period and statistically analyzed by dependent 't' test which is used to find out the significant improvement on selected criterion variables and Analysis of Covariance (ANCOVA) was used to find out the significant difference between the experimental and control groups on each variables separately. All the cases 0.05 level of confidence was fixed as a level of confidence to test the hypotheses.

Analysis of the data

The analysis of dependent 't' test on the data obtained for Flexibility, Explosive Power and Cardio Respiratory Endurance were of the pre-test and post-test means of yogic practice and control groups have been presented in table II.

Table 2: Summary of mean and dependent 't' test for the pre and post test on flexibility, explosive power and cardio respiratory endurance of yogic practice and control groups

S. No	Variable	Test	Yogic Practice group	Control group
1.	Flexibility	Pre test mean	15.67	17.6
		Post test mean	18.13	17.73
		't' test	7.67*	0.49
2	Explosive Power	Pre test mean	1.99	1.891
		Post test mean	2.21	1.886
		't' test	7.02*	0.7
3	Cardio Respiratory Endurance	Pre test mean	1924.67	2004.67
		Post test mean	2044.67	2004.33
		't' test	5.22*	0.03

* The table value required for .05 level of significance with df 14 is 2.145.

The Table II show that the pre-test mean and post test means value on Flexibility, Explosive Power and Cardio Respiratory Endurance of Yogic Practice group and control group. The obtained dependent t-ratio values on Flexibility, Explosive Power and Cardio Respiratory Endurance of Yogic Practice group are 7.67, 7.02 and 5.22. The obtained dependent t-ratio values of Flexibility, Explosive Power and Cardio Respiratory Endurance in control group are 0.49, 0.7 and 0.03 respectively. The table value required for significant difference with df 14 at 0.05 level is 2.145. Since, the

obtained 't' ratio value of Yogic Practice group is greater than the table value, it is understood that Yogic Practice group had significantly improved the Flexibility, Explosive Power and Cardio Respiratory Endurance. However, the control group has not improved significantly because the obtained 't' value is less than the table value, as they were not subjected to any specific training. The analysis of covariance on Flexibility, Explosive Power and Cardio Respiratory Endurance of Yogic Practice and control groups have been analysed and presented in Table III.

Table 3: Analysis of covariance of yogic practice and control groups on flexibility, explosive power and cardio respiratory endurance

S. No	Variable	Adjusted post-test mean		Source	SS	df	MS	F
		Yogic Practice	CON					
1.	Flexibility	19.03	16.84	SSB	34.1	1	34.1	26.49*
				SSW	34.75	27	1.29	
2.	Explosive Power	2.16	1.94	SSB	0.35	1	0.35	46.13*
				SSW	0.2	27	0.01	
3.	Cardio Respiratory Endurance	2086.01	1962.99	SSB	112154.97	1	112154.97	22.8*
				SSW	132815.59	27	4919.1	

*Significant at 0.05 level of confidence, (The table values required for significance at 0.05 level of confidence with df 1 and 27 is 4.21)

The table III shows that the adjusted post test means on Flexibility, Explosive Power and Cardio Respiratory Endurance of Yogic Practice and control groups are 19.03 & 16.84; 2.16 & 1.94 and 2086.01 & 1962.99 respectively. The obtained 'F' ratio value of Flexibility, Explosive Power and Cardio Respiratory Endurance are 26.49, 46.13 and 22.8 which are higher than the table value of 4.21 with df 1 and 27 required for significance at 0.05 level. Since the obtained

value of F- ratio is higher than the table value, it indicates that there is significant difference among the adjusted post test means of Yogic Practice and control groups on Flexibility, Explosive Power and Cardio Respiratory Endurance.

The pre test and post tests mean values of yoga practices and control groups on Flexibility, Explosive Power and Cardio Respiratory Endurance were graphically represented in the figure I.

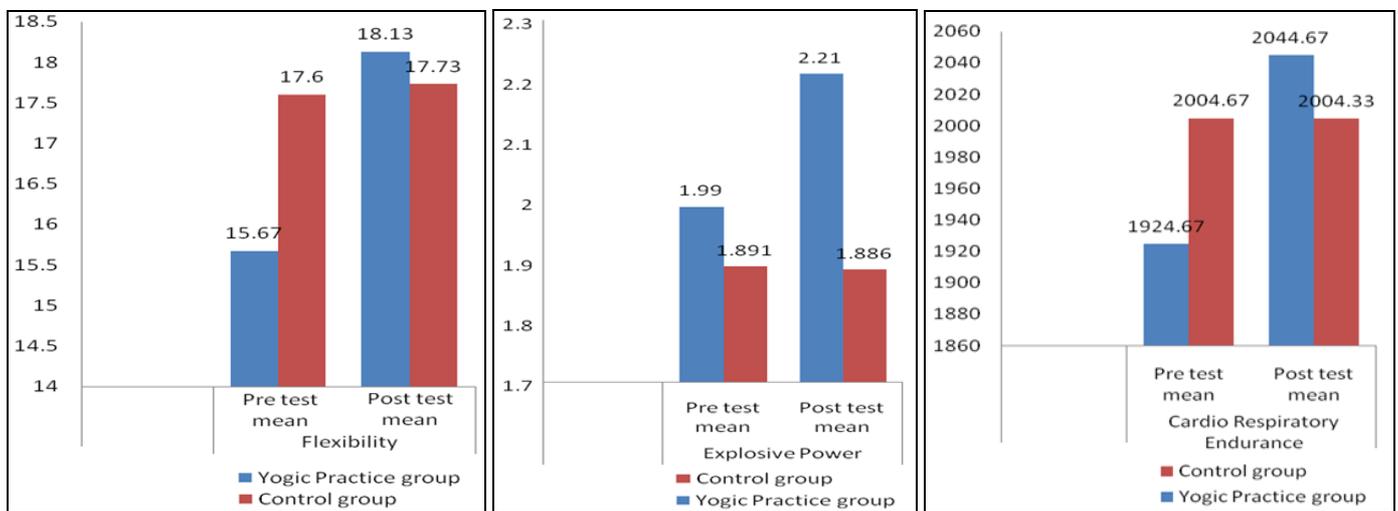


Fig 1: The pre test and post tests mean values of yoga practices and control groups on flexibility, explosive power and cardio respiratory endurance were graphically

Discussion on hypotheses

It was hypothesized at the beginning of the study that there would be significant improvement on Flexibility, Explosive Power and Cardio Respiratory Endurance due to the effect of Yogic Practice as compared to the control group. The result of the study produced similar to this hypothesis. Therefore the first research hypothesis was accepted.

In the second hypothesis, it was mentioned that there would be significant difference between Yogic Practice group and control group on Flexibility, Explosive Power and Cardio Respiratory Endurance. The findings of the study were similar to this hypothesis. Therefore the second research hypothesis was also accepted.

Conclusion

1. There was a significant improvement on Flexibility, Explosive Power and Cardio Respiratory Endurance due to Yogic Practice among Handball players
2. There was a significance difference between Yogic Practice group and control group on Flexibility, Explosive Power and Cardio Respiratory Endurance among Handball players

References

1. Aladar Kogler. Yoga for Every Athlete, (Jaico Publishing House, Mumbai), 2003, 2.
2. Andre Van Lysebeth. Yoga Self – Taught (Delhi: Tarage Paper Back), 1987, 17.
3. Sugumar C, Raghavan G. Effect of Pranayama Practice on Selected Variables, Yoga Mimamsa. 2010; XLII(2):103-108.