



Estimation of Tamil Nadu School Physical Education Programme on Selected Physical Fitness Components among Urban School Boys

Dr.C.Arumugam

Assistant Professor, Dept of Advanced Training & Coaching, Tamilnadu Physical Education and Sports University, Chennai, Tamilnadu, India.

Received 1st September 2014, Accepted 29th September 2014

Abstract

The purpose of the present study was to find out the estimation of Physical Education programme on physical fitness among urban school boys. The study was conducted with 90 subjects and they were randomly selected from urban Schools from Kanchipuram district in Tamilnadu. Their age was ranging from 15 to 17 years. Based on their initial performance they were divided into four equal groups. The Experimental group 1 underwent Calisthenics exercise, Experimental group 2 underwent Yogasana practice, and group 3 control group did not undergo any specific training program. Pre and post test were conducted on selected variables. Analysis of covariance was used as statistical technique to analysis the data. The results revealed that the Yoga practices improved Physical fitness of urban school boys.

Keywords: Calisthenics exercise, Yogic practices, Speed, Agility.

© Copy Right, IJRRAS, 2014. All Rights Reserved.

Introduction

The School Educational programmes every subject has its own way of enriching the knowledge and well being among students community. The Tamilnadu physical education school curriculum programme has been designed to develop the basic motor qualities and physiological adaptations for the well being. This programme includes the following activities such as callisthenic exercise, light apparatus activities, yoga practices, fundamental skills of some major games and track filed activities. Apart from the above programme, the Sports Development Authority of Tamilnadu a competent body which has been implementing different developmental sports schemes throughout the state, has developed a test battery named as "world beaters test" to monitor the students physical fitness. This test has been conducted periodically and reports are being submitted to concerned department for further course of action. The intention of my research was to investigate the effect of isolated yogic, callisthenic exercises as scheduled in the physical education programme and also it's combined practices on selected motor fitness components of rural high school boys.

Methodology

The subjects were selected at randomly and were divided in to three equal groups. Each group consists of 30 subjects each. The Experimental group 1

practiced Calisthenics exercises, Experimental group 2 underwent Yogasana practices, and control group did not undergo any specific training program. Set of yogic exercises and callisthenic exercises which are in the regular programme were selected as dependent variables. Set of ten yogic exercises with five repetitions were performed for the first three weeks and was increased to ten exercises with four repetitions for the next three weeks. The duration of rest was also given as 30 seconds and 45 seconds in between each repetition respectively. The same way five callisthenic exercises with five repetitions were performed in the first three weeks and were increased to ten exercises with four repetitions in the next three weeks. The training was given for six weeks for three groups namely yoga training group, Calisthenics exercise group. To measure the speed 50m run test was conducted. 4.5 m shuttle run was conducted to measure the agility the scores were recorded accordingly. Statistical tool Analysis of Covariance (ANCOVA) was used to determine the significance of the means for each variable. Post hoc analysis was made using Scheffe's test when obtained F value was significant. In all cases 0.05 level was fixed to test the hypothesis of this study.

Analysis of Speed

The results of analysis of covariance on speed from the data collected prior to and after the experimental period among the yoga group, Calisthenics group, and control group was given in table-I.

Correspondence

Dr.C.Arumugam,
E-mail:coacharumugam@gmail.com, Ph. +9198425 70742

Table I. Analysis of covariance on speed among yoga group, calisthenics group and control group

Test	Yoga	Calisthenics	Control Group	Sum Variance of	SS	df	MS	F
Pre test	7.24	7.25	7.23	BG	0.081	2	0.006	0.01
				WG	8.16	86	0.107	
Post test	7.21	7.16	7.23	BG	0.22	2	0.07	0.66
				WG	8.34	86	0.11	
Adjust to Post mean	7.21	7.16	7.24	BG	0.22	2	0.073	4.88*
				WG	1.127	85	0.015	

Table value for Significance at 0.05 levels is 2.72

From the table I it was observed that the pre test showed no differences in speed among the groups initially, even there was no significant difference in the post test also. However there was a significant change in

speed among the groups in the adjusted post test. Further to determine which of the paired means had a significant difference scheffe's post hoc test was used.

Table II. The schefee's post hoc test for the differences between paired means on speed

Yoga Group	Calisthenics group	Control Group	M.D	C.I
7.18	7.21		0.03	0.10
7.18		7.24	0.06	0.10
	7.21	7.24	0.03	0.10

* Significant at 0.05 level of confidence

The multiple mean comparisons shown in table proved that there existed significant difference between the adjusted mean of Calisthenics' group and Yoga group. Yoga group improved better than the Calisthenics'

training group in speed of the urban school boys. The mean value of yoga, Callisthenic and control group on speed were graphically represented in the figure I.

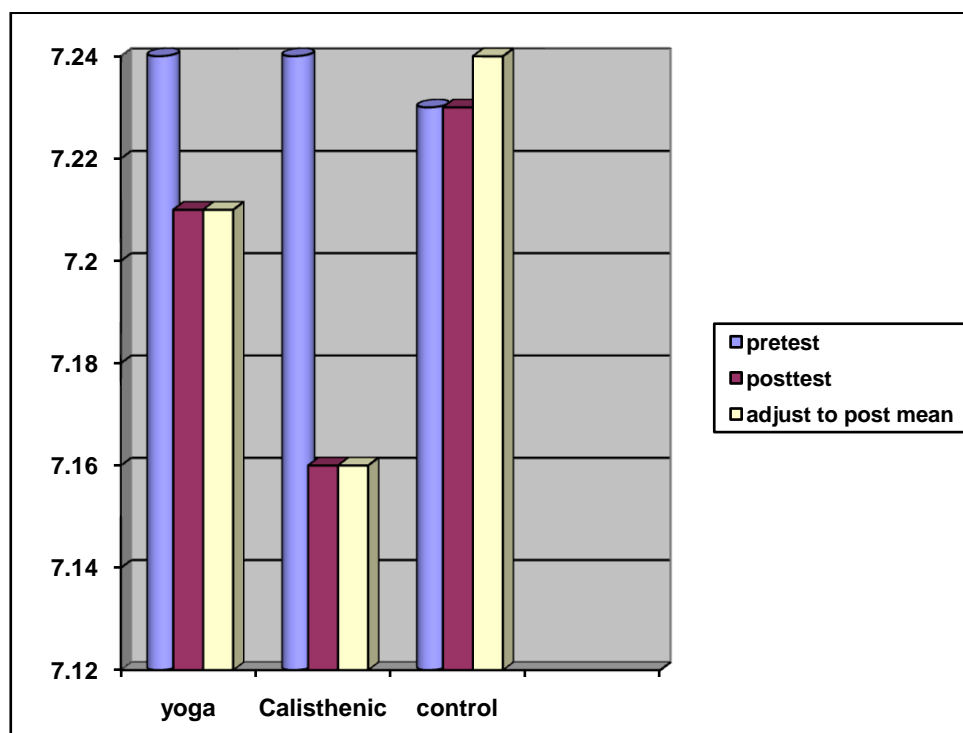
Figure 1. Graphical representation on pretest, post test and adjust to post mean on speed of yoga, Callisthenic, and control group

Table III. Analysis of covariance on agility among yoga group, calisthenics group and control group

Test	Yoga	Calisthenics	Control Group	Sum of Variance	Sum of Squares	df	Mean & Square	F
Pre test	17.50	17.51	17.51	BG	0.0048	2	0.0016	0.004
				WG	33.453	86	.440	
Post test	17.46	17.26	17.51	BG	1.34	2	0.447	1.117
				WG	30.42	86	42.08	
Adjust to Post	17.37	17.27	17.51	BG	1.37	2	0.46	15.07*
				WG	2.28	85	0.030	

Table value for Significance at 0.05 levels is 2.72

From the above table it was observed that initially all the groups were equal insignificant in the pre test and the post test also indicated that there was no significant change in speed among all the groups. However in the

adjusted post test there was a statistically significant change in speed among the groups, so to determine which of the paired means had a significant difference the scheffe's post hoc test was used.

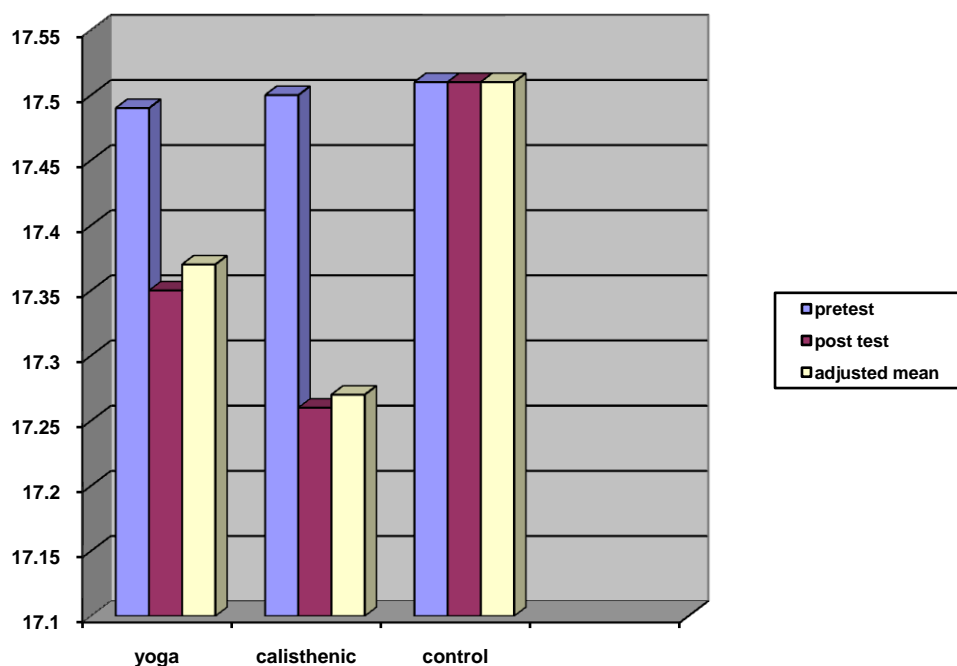
Table IV. The scheffe's post hoc test for the differences between paired means on agility

Yoga Group	Calisthenics group	Control Group	M.D	C.I
17.27	17.37		0.10	0.16
17.27		17.51	0.24*	0.16
	17.37	17.51	0.14	0.16

*Significant at 0.05 level of confidence

The multiple mean comparisons shown in the table proved that there existed significant difference between yoga and control group, Calisthenics' and control group yoga and control group. The yoga group

had better improvement that calisthenics group in agility of the urban school boys. The mean value of yoga, Calisthenics' and control group on agility were graphically represented in the figure II.

Figure II. Graphical representation on pretest, post test and adjust to post mean on agility of yoga, Calisthenics', and control group

Discussion and Findings

The purpose of the present study was to find out the effect of Tamil Nadu State Physical Education programme on physical fitness among urban school boys. The statistical analysis of data collected on ninety subjects indicated that there were significant improvement in selected variables of speed and agility. This study showed that 6 weeks of yoga practice, a tradition that has existed for at least 4500 years and is now becoming increasingly popular in the United States; (Hewitt; 1978, Schell et al; 1994) can have significant benefits in improving the physical fitness. Furthermore, the positive results of this study indicated that the yoga and callisthenic exercises are a form of physical activity that would meet the objectives of current recommendations to improve physical fitness and health (Surgeon; 1996). Yogasanas training programme showed significant improvement in agility level. The findings is supported by the study conducted by Galantino et al. (2004) Recommendations with Use Yoga and callisthenic exercises because of its clear and positive impact on improving the physical fitness variables.

The selected dependent variables namely speed and agility when compared to the control group and also improved better range of movements in joints and increase resistance power of the body to certain illness and awareness our cultural heritage, self discipline and

concentration, knowledge of yoga exercise and understanding its influence on human body. The correct breathing habit and desirable posture the application of yoga exercises to the health needs of the individual. The results of the study indicated that the experimental group namely yoga group had significantly improved the dependent variables of speed and agility better than the other groups.

Conclusion

The results of the study indicated that the yoga and callisthenic group had significantly improved in speed and agility among the rural high school boys.

References

1. Ajmer Sing et.al. Physical Education Health and Sport Part-I, Ludhiana Kalyani Publication, 2001
2. Chatterjee C.C., Human Physiology, 6th Edition, Kolkata, Book and Allied Pvt. Ltd. 1966
3. Clarke H. David, Exercise Physiology, New Jersey. Prentice Hall, 1975
4. Fabricious Helen, Effect of Calisthenics on Physical Fitness of Fourth grade Boys and Girls,
5. Research Quarterly for Exercise and Sports, 1966.
6. Gharote M.L., Physical Fitness in relation to the Practice of selected Yogic Exercises, Yoga Mimansa, 1976.