ISSN: 2349 - 4891

International
Journal of Recent Research and Applied Studies
(Multidisciplinary Open Access Refereed e-Journal)

Impact of Yoga and Aerobic Training on Endurance Factor among Inter Collegiate Football Players

P. Pounkumar[1] & Dr.A.Kalebrajan[2]

[1]*Ph.D., Research Scholar, Department of Physical Education, Karunya University, Coimbatore, Tamilnadu, India.*
[2]*Director, Department of Physical Education, Karunya University, Coimbatore, Tamilnadu, India.*

Received 15th May 2016, Accepted 25th June 2016

Abstract

The Purpose of this study was to find out the effects of Yoga and Aerobic training on endurance factor among intercollegiate football players. The study was conducted on forty five intercollegiate football players from Coimbatore region who served as subjects. They were randomly assigned equally into three groups, Group –I underwent Yoga Training (n = 15), Group II underwent Aerobic Training (n=15) and Group-III acted as a control Group (n=15). Endurance was selected as dependent variable which was assessed by 1500 meters run in the standard track. The data collected prior and immediately after the training period was assessed by Analysis of covariance (ANCOVA). The statistical analysis revealed a significant difference between pre and post training scores.

Keywords: Yoga Training, Aerobic training, 1500 meter Run.

Introduction

Yogic exercise can be used to strengthen the mind, body and spirit by people of all ages and levels of physical health. It doesn't matter if we are in good shape or not, we can reap huge benefits from practicing yoga. Yoga makes one, more aware of the strengths and weaknesses while exploring the new horizons in fast paced life. Yoga asanas which strengthen the abdominal muscles are good for reducing common women's problems related to lower abdomen, Swami Satyananda Saraswathi(1993). Yoga has been around for over 3,000 years, and still remains one of the most popular forms of exercise in the world. In fact, yoga popularity has increased tremendously over the past few years, and is rapidly becoming one of the most popular forms of exercise among young people. There are actually several types of yoga, ranging from the high speed and high intensity level to a gentle, free flowing style of yoga and everything in between. Regardless of which form or style of yoga exercise that you choose, there are some major benefits that you can expect to achieve from yoga, Iyangar B.K.S (2001).

Aerobic exercise refers to exercise that involves or improves oxygen consumption by the body. Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic or energy-generating process. Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time. To obtain the best results, an aerobic exercise session involves a warming up period, followed by at least 20 minutes of moderate to intense exercise involving large muscle groups, and a cooling down period at the end. Aerobic workout innovations from the 1980s to the early 2000s included such equipment as steps, weights, and elastic bands; cross-training programs, which involve two or more types of exercise; aerobic dances that combine yoga, martial arts, and other forms of movement with music including African, Caribbean, salsa, hip-hop, rock, and jazz; and adaptations of such traditional activities as bicycling and boxing into aerobic routines such as spinning and kickboxing.

Correspondence
Sangeetha,K.
E-mail: poun.kumar487@gmail.com, Ph. +9194878 46509

Methodology

The study was conducted on forty five intercollegiate football players from Coimbatore region and served as subjects. They were randomly assigned equally into three groups, Group –I underwent Yoga Training (n = 15), Group II underwent Aerobic Training (n=15) and Group-III acted as a control Group (n=15). Endurance was selected as dependent variable which was assessed by 1500 meters run in the standard track. The data collected prior and immediately after the training period was assessed by Analysis of covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, the Scheffe's test was applied as post-hoc test to determine the paired mean differences. The level of confidence was fixed at .05 level for all the cases.

Results and Discussion

The Analysis of covariance (ANCOVA) on 1500 meters run performance of experimental groups and control group have been analyzed and presented in Table –I.

Table I. Analysis of Covariance on 1500 Mts runs Performance of Experimental groups and Control groups

Adjusted Post - Test			SOV	SS	Df	MSQ	"F" ratio
Group-I	Group-II	Group-III					
4.39	4.33	4.47	**Between**	0.07	2	0.07	**14.22***
			Within	0.20	41	0.005	

** Significant at.05 level of confidence / *1500 Meters Run Scores in Minutes*
**The table value required for Significance at .05 level with df 2 and 41 is 3.23*

Table I shows that the adjusted post test mean value of 1500 meters run performance for Yoga Training, Aerobic training group and Control group were 4.39, 4.33 and 4.47 respectively. The obtained F-ratio of 14.22 for the adjusted post test mean is more than the table value of 3.23 for df 2 and 41 required for significance at .05 level of confidence. The results of the study indicate that there are significant differences among the adjusted post test means of Yoga training, Aerobic training and group on the development of 1500 meters run performance. To determine which of the paired means had a significant difference, Scheffe's test was applied as Post hoc test and the results are presented in Table II.

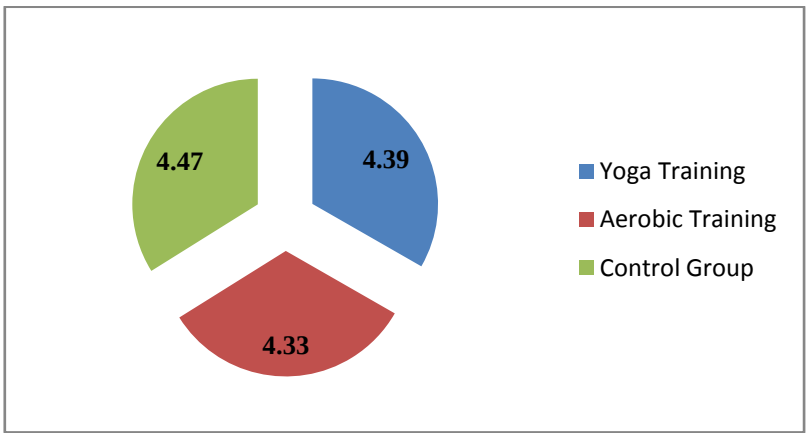
Table II. Scheffee's Test for the difference between the Adjusted Post-Test paired means on 1500 Mts run Performance

Adjusted Post – Test Means			MD	Conf. Interval
Group-I	Group-II	Group-III		
4.39	4.33		0.06*	0.06
4.39		4.47	0.08*	0.06
	4.33	4.47	0.14*	0.06

** Significant at.05 level of confidence*

Table II shows that the adjusted post test mean difference on yoga training group and aerobic training group, yoga training group and control group, aerobic training group and control group are 0.06, 0.08 and 0.14 respectively. The values are greater than the confidence interval value 0.06, which shows significant differences at .05 level of confidence. It may be concluded from the results of the study that there is a significant difference in 1500 meters run performance between the adjusted post test means of yoga training group, aerobic training group, yoga training group and control group, aerobic training group and control group. However, the improvement in 1500 meters run performance was significantly higher for aerobic training group than yoga training group and control group. The adjusted post test mean values of Yoga training, Aerobic training group and Control group on 1500 meters run performance are graphically represented in the Figure -1.

Figure I. Adjusted Post- tests values of Yoga training, Aerobic training on Experimental and Control group on 1500 meters run performance



Conclusions

The results of the study showed that there is a significant difference among the groups. It was concluded that Aerobic Training group is better than the Yoga training and Control Group in improving 1500 meters Run performance.

References

1. Barrow, M. Harold and McGhee Rosemary, "A Practical Approach to Measurement in Physical Education" (Philadelphia: lea and Fibiger), Edition-3. (1979).
2. Karfs Carl E. and Aruheim Daniel.,"Modern Principles of Athletes Training" (St.Louis's Mosby Company, 1969), p.117.
3. Neilson N.P and Johnson C.R.,"measurement and Statistic in Physical education", (Belmont California: Wars worth Publishing company inc., 1970), p.245
4. Singh Hardayal,"Science of Sports Training "New Delhi:DVS Publications,1993),p.175.
5. Wilmore Jack H., "Athletic Training and Physical Fitness: Physiological Principles and Practices of the Conditioning process."P, 87.