EFFECT OF YOGIC PRACTICE AEROBIC EXERCISE AND SKILL PRESSURE TRAINING ON SELECTED SKILL PERFORMANCE VARIABLES AMONG MEN FOOTBALL PLAYERS

Dr.S.Adhavan

Director of Physical Education, Perunthalaivar Kamarajar Arts College (Affiliated to Pondicherry University) Puducherry, India.

ABSTRACT

The present study was designed to the effect of yogic practice aerobic exercise and skill pressure training on selected skill performance variables (Dribbling, Passing and Shooting) among men football players. Yogic practice, aerobic exercise and skill pressure training were selected as independent variables for this study. To achieve the purpose of the study, 80 football players studying in the Perunthalaivar Kamarajar Arts College, Puducherry were randomly selected as subjects. The age of the subjects ranged from 18 to 23 years. The selected subjects were randomly assigned to three experimental groups and one control group of twenty (n=20) each for experimental group I (Yogic Practice), experimental group II (Aerobic Exercise), experimental group III (Skill Pressure Training) and group IV (Control). Experimental groups underwent practice for duration of 12 weeks. The control group was asked to refrain from any special training except their regular practice and playing schedule. All the subjects of four groups were tested on selected skill performance variables before and after the treatment. The analyses were carried out through various statistical techniques such as the dependent t-test, the analysis of covariance (one-way ANCOVA). Whenever the 'F' ratio for adjusted test was found to be significant, the Scheffe's test was applied as post-hoc test to find out paired mean difference. In all the cases 0.05 level was fixed as significant level.

***Keywords**: Aerobics, Dribbling, Shooting, Skill Pressure, Training, Passing and Yoga*

1. Introduction

1.1 Yoga

Yoga is universally benefiting all people of all ages. The study of Yoga is fascinating to those with a philosophical mind and is defined as the silencing of the mind's activities which lead to complete realization of the intrinsic nature of the Supreme Being. It is a practical holistic philosophy designed to bring about profound state as well is an integral subject, which takes into consideration man as a whole. The aim of Yoga is to devise ways and means of helping the better emotional and intellectual concentration.

"Yoga is a timeless practice since over thousands of year dealing with physical, mental, and spiritual well being or human society as whole". 'Stilling the minds movements in Yoga'. (**B.K.S. Iyangar, 1983**)

"Yoga is a systematic physical practice to improve awareness to develop will power and to realize self to join traditional consciousness (jeevathma) to super consciousness (parmathma).Yoga is the inhabitation of the modification of the mind. This means that it prevents to contents of the mind from taking different forms. (**Swami Satyananda Saraswathi, 1981**).

1.2 Asana

In Sanskrit, Asana means 'sitting down', 'to sit down' is a body position, typically associated with the practice of Yoga, originally identified as a mastery of sitting still, with the spine as a conduit of biodynamic union. In the context of Yoga practice, asana refers to two things: the place where a practitioner (or yogin, in general usage), yogi (male), or yogini (female) sits and the manner (posture) in which he/she sits.

1.3 Aerobics

Aerobic refers to a variety of exercises that stimulate heart and lung activity for a time period sufficiently long to produce beneficial changes in the body (**Cooper, 1970**).

"Aerobics" basically means living or working with oxygen. Aerobics or endurance exercises are those in which large muscle groups are used in rhythmic repetitive fashion for prolonged periods of time. Aerobic is a system of exercises designed to promote the supply and use of oxygen in the body. Some of these exercises include running, dancing, rowing, skating and walking. Aerobic exercise increases cardio respiratory fitness, which is the heart's ability to pump blood and deliver oxygen throughout the body. Some benefits of cardio respiratory fitness are increased endurance 13 and energy. Weight control decreased blood pressure, decreased heart rate, decreased cholesterol levels, and an increased ability to manage stress.

The word "aerobics" is relatively old in the context of sport and exercise. Cooper has developed an aerobics exercises programme in the spirit of preventive medicine with a view that aerobic types of exercises would be useful to develop cardio respiratory health and fitness.

1.4 Training

The major objective in training is to cause biological adaptations in order to improve performance in a specific task to enhance physiological improvement effectively and to bring about a change, specific exercise and over load must be followed. By exercising at a level above normal a variety of training.

In general physical training imposes stress on the body tissues, in particular, the muscles. Chronic muscular activities which occur during training can be considered a positive form of stress because it stimulates growth and improves muscular performance. The most of the changes that occur in the muscle as a result of training are gradual and occur over several weeks or months. The magnitude of this muscular adaptation is somewhat proportional to the amount of exercise performed during training.

There is now a much broader base of knowledge regarding these special human beings and athletes and this is directly reflected in the methodology of training. New methods are surfacing which are often found to be useful in daily training. (**Jack, 1988**)

The information collected from the training process includes physiological, biochemical, psychological, social and methodological information. Although this information is diverse it comes from the same source namely the athlete, and is produced by the same process, the training process. Training program needs to also include periods of regeneration and recovery between training lessons, which is a necessary factor to ensure continuous improvement in the athlete's performance. (**Tuder, 1994**)

2. Statement of the Problem

The purpose of the study was to find out the effects of yogic practice, aerobic exercise and skill pressure training on selected skill performance variables among men football players

3. Hypotheses

It was hypothesized that there would be significant improvement to the twelve weeks of yogic practice on dribbling among men football players.

It was hypothesized that there would be significant improvement to the twelve weeks of aerobic exercise on passing among men football players.

It was hypothesized that there would be significant improvement to the twelve weeks of skill pressure training on shooting among men football players.

4. Experimental Design

The selected eighty subjects were randomly divided into four equal groups consist of 20 each such an experimental groups and control group. Pre-test was conducted on dribbling, passing and shooting for the four groups and the reading were carefully recorded in their respective unit as pre-test score. After pretest, experimental groups were treated with specific yogic practice, aerobic exercise and skill pressure training for duration of 45 minutes, six days per week for a period of twelve weeks. The control group was not treated with any special training. After twelve weeks of training post test was conducted and the reading were carefully recorded in their respective units as post test score. The pre and posttest were taken for analysis.

5. Training Program

The training program is design for 60 minutes per session in a day, six days in week for a period of twelve weeks duration these 60 minutes included 10 minutes warm up and 10 minutes warm down remaining 40 minutes allotted for training program.

5.1Training Schedule

Experimental Group I: Yogic Practice / 60 minutes (6.00 to 7.00 am)
Experimental Group II: Aerobic Exercise / 60 minutes (6.00 to 7.00 am)
Experimental Group III: Skill Pressure Training / 60 minutes (6.00 to 7.00 am)
Group III: Control Group (No Training).

6. Methodology

The purpose of the study was to find out the effects of yogic practice aerobic exercise and skill pressure training on selected skill performance variables among men football players. For the purpose of this study, eighty football players were chosen from Perunthalaivar Kamarajar Arts College, Pondicherry. Their age group ranges from 18 to 23.

The subjects were divided into four groups of twenty. The experimental group I would undergo yogic practice, the experimental group II undergo aerobic exercise, the experimental group III undergo skill pressure training and group IV consider as control group not attend any practices, and the pretest and posttest would be conducted before and after the training. Training would be given for twelve weeks. The collected data were statistically analyzed by using analysis of covariance (ANCOVA).

Table- I
Computation of Mean and Analysis of Covariance of Dribbling of Experimental and Control Groups

Means	Exp I	Exp II	Exp III	CG	Source of Variance	Sum of Square	Df	Mean Square	'F' ratio
Pre Test	24.27	24.13	24.20	24.12	Between	0.18	3	0.06	0.22
					Within	20.80	76	0.27	
Post Test	23.93	21.33	23.20	23.93	Between	67.80	3	22.60	79.52*
					Within	21.60	76	0.28	
Adjusted Post Test	23.88	21.37	23.19	23.97	Between	65.36	3	21.79	136.20*
					Within	12.00	75	0.16	

Significant
Required table value for significance at 0.05 level of confidence for df 3 and 76 is 2.728.

The table I show that the pre-test mean values on dribbling of yogic practice, aerobic exercise, skill pressure training and control groups were 24.27, 24.13, 24.20, and 24.12 respectively. The obtained 'F' ratio of 0.22 for pre-test scores is less than the table value of 2.728 for df 3 and 76 required for significance at 0.05 level of confidence on dribbling. The post-test mean values on dribbling of yogic practice, aerobic exercise, skill pressure training and control groups 23.93, 21.33, 23.20 and 23.93 respectively. The obtained "F" ratio of 79.52 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on dribbling.

The adjusted post-test means on dribbling of yogic practice, aerobic exercise, skill pressure training and control groups 23.88, 21.37, 23.19 and 23.97 respectively. The obtained "F" ratio of 136.20 for adjusted post-test means was greater than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on dribbling.

The results of the study indicated that there was a significant difference between the adjusted post-test means of yogic practice, aerobic exercise, skill pressure training and control groups on dribbling.

Since, four groups were compared, whenever they obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in table II.

Table – II
Scheffe's' Test for Difference between the Adjusted Post- Test Mean of Dribbling

Adjusted Post -Test Mean					
Exp I	**Exp II**	**Exp III**	**CG**	**Mean Difference**	**Required C.I**
23.88	21.37	-	-	2.51*	0.52
23.88	-	23.19	-	0.69*	0.52
23.88	-	-	23.97	0.09	0.52
-	21.37	23.19	-	1.82*	0.52
-	21.37	-	23.97	2.60*	0.52
-	-	23.19	23.97	0.78*	0.52

Significant at 0.05 level of confidence

The table II shows that the mean difference values between yogic practice and aerobic exercise, yogic practice and skill pressure training, aerobic exercise and skill pressure training, aerobic exercise and control group, skill pressure training and control group 2.51, 0.69, 1.82, 2.60 and 0.78 respectively on dribbling which were greater than required confidence interval value 0.52 at .05 level of confidence. Hence, the above comparisons were significant and also it shows that the mean difference values between yogic practice and control group, 0.09 on dribbling which were lesser than required confidence interval value 0.52 at .05 level of confidence. Hence, the above comparison was not significant. The adjusted post-test mean values of yogic practice, aerobic exercise, skill pressure training and control groups on dribbling were graphically represented in figure 1.

Figure - 1
The Adjusted Post-Test Mean Values of Experimental and Control Groups on Dribbling

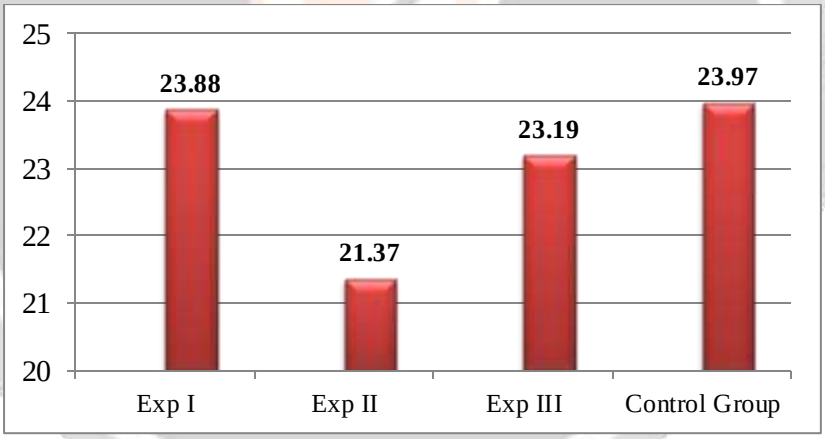


Table- III
Computation of Mean and Analysis of Covariance of Passing of Experimental and Control Groups

Means	**Exp I**	**Exp II**	**Exp III**	**CG**	**Source of Variance**	**Sum of Square**	**Df**	**Mean Square**	**'F' ratio**
Pre Test	5.42	5.40	5.37	5.38	Between	0.02	3	0.0063	0.49
					Within	0.98	76	0.0128	
Post Test	5.47	5.51	5.57	5.40	Between	0.23	3	0.0769	6.33*
					Within	0.92	76	0.0122	
Adjusted Post Test	5.45	5.50	5.59	5.41	Between	0.27	3	0.0896	23.66*
					Within	0.28	75	0.0038	

Significant

Required table value for significance at 0.05 level of confidence for df 3 and 76 is 2.728.

The table III shows that the pre-test mean values on passing of yogic practice, aerobic exercise, skill pressure training and control groups were 5.42, 5.40, 5.37 and 5.38 respectively. The obtained 'F' ratio of 0.49 for pre-test scores is less than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence

on passing. The post-test mean values on passing of yogic practice, aerobic exercise, skill pressure training and control groups were 5.47, 5.51, 5.57 and 5.40 respectively. The obtained "F" ratio of 6.33 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on passing. The adjusted post-test means on passing of yogic practice, aerobic exercise, skill pressure training and control groups were 5.45, 5.50, 5.59 and 5.41 respectively. The obtained "F" ratio of 23.66 for adjusted post-test means was greater than the table value of 2.77 for df 3 and 75 required for significance at .05 level of confidence on passing. The results of the study indicated that there was a significant difference between the adjusted post-test means of yogic practice, aerobic exercise, skill pressure training and control groups on passing. Since, four groups were compared, whenever they obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in table IV.

Table – IV

Scheffe's' Test for Difference between the Adjusted Post- Test Mean of Passing

Adjusted Post -Test Mean					
Exp I	**Exp II**	**Exp III**	**CG**	**Mean Difference**	**Required C.I**
5.45	5.50	-	-	0.05*	0.08
5.45	-	5.59	-	0.14*	0.08
5.45	-	-	5.41	0.04	0.08
-	5.50	5.59	-	0.09*	0.08
-	5.50	-	5.41	0.09*	0.08
-	-	5.59	5.41	0.18*	0.08

Significant at 0.05 level of confidence

The table IV shows that the mean difference values between yogic practice and aerobic exercise, yogic practice and skill pressure training, aerobic exercise and skill pressure training, aerobic exercise and control group, skill pressure training and control group 0.05, 0.14, 0.09, 0.09 and 0.18 respectively on passing which were greater than required confidence interval value 0.08 at .05 level of confidence. Hence, the above comparisons were significant and also it shows that the mean difference values between yogic practice and control group, 0.04 on passing which were lesser than required confidence interval value 0.08 at .05 level of confidence. Hence, the above comparison was not significant. The adjusted post-test mean values of yogic practice, aerobic exercise, skill pressure training and control groups on passing were graphically represented in figure 2.

Figure - 2

The Adjusted Post-Test Mean Values of Experimental and Control Groups on Passing

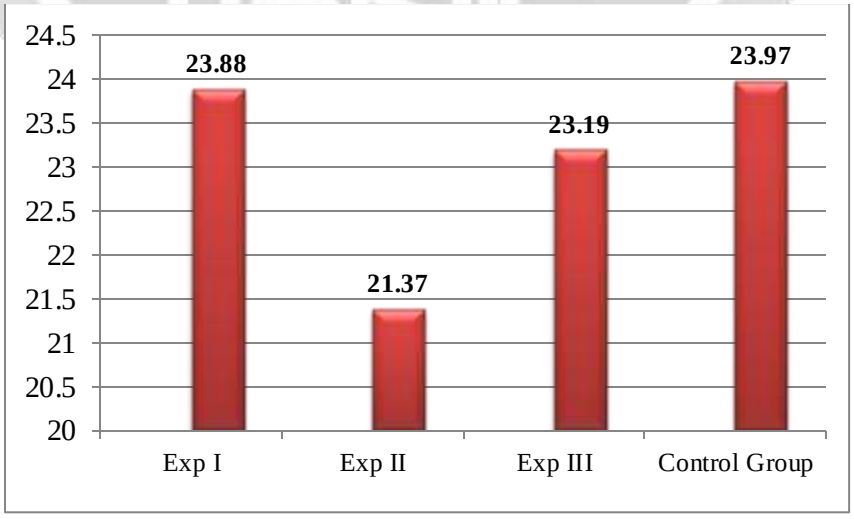


Table - V
Computation of Mean and Analysis of Covariance of Shooting of Experimental and Control Groups

Means	Exp I	Exp II	Exp III	CG	Source of Variance	Sum of Square	Df	Mean Square	'F' ratio
Pre Test	26.73	26.60	26.93	26.80	Between	0.87	3	0.29	
					Within	57.87	76	0.76	0.38
Post Test	27.53	28.67	31.40	27.07	Between	169.73	3	56.58	
					Within	41.60	76	0.55	103.36*
Adjusted Post Test	27.56	28.79	31.28	27.04	Between	159.85	3	53.28	
					Within	10.04	75	0.13	397.95*

Significant

Required table value for significance at 0.05 level of confidence for df 3 and 76 is 2.728.

The table V shows that the pre-test mean values on shooting of yogic practice, aerobic exercise, skill pressure training and control groups were 26.73, 26.60, 26.93 and 26.80 respectively. The obtained 'F' ratio of 0.38 for pre-test scores was lesser than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on shooting. The post-test mean values on shooting of yogic practice, aerobic exercise, skill pressure training and control groups were 27.53, 28.67, 31.40 and 27.07 respectively. The obtained "F" ratio of 103.36 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on shooting. The adjusted post-test means on shooting of yogic practice, aerobic exercise, skill pressure training and control groups were 27.56, 28.79, 31.28 and 27.04 respectively. The obtained "F" ratio of 397.95 for adjusted post-test means was greater than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on shooting. The results of the study indicated that there was a significant difference between the adjusted post-test means of yogic practice, aerobic exercise, skill pressure training and control groups on shooting. Since, four groups were compared, whenever they obtained 'F' ratio for adjusted post-test was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in table VI.

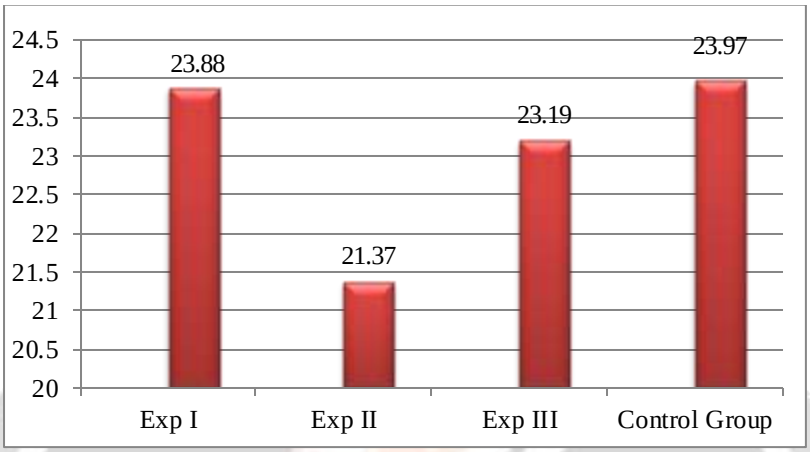
Table -VI
Scheffe's' Test for Difference between the Adjusted Post- Test Mean of Shooting

Adjusted Post -Test Mean					
Exp I	**Exp II**	**Exp III**	**CG**	**Mean Difference**	**Required C.I**
27.56	28.79	-	-	1.23*	0.47
27.56	-	31.28	-	3.72*	0.47
27.56	-	-	27.04	0.52*	0.47
-	28.79	31.28	-	2.49*	0.47
-	28.79	-	27.04	1.75*	0.47
-	-	31.28	27.04	4.23*	0.47

Significant at 0.05 level of confidence

The table VI shows that the mean difference values between yogic practice and aerobic exercise, yogic practice and skill pressure training, yogic practice and control group, aerobic exercise and skill pressure training, aerobic exercise and control group, skill pressure training and control group 1.23, 3.72, 0.52, 2.49, 1.75 and 4.23 respectively on shooting which were greater than required confidence interval value 0.47 at .05 level of confidence. Hence, the above comparisons were significant. The adjusted post-test mean values of yogic practice, aerobic exercise, skill pressure training and control groups on shooting were graphically represented in figure 3.

Figure - 3
The Adjusted Post-Test Mean Values of Experimental and Control Groups on Shooting



7. Discussion and Findings

Ray U.S et al (*2001*) studied the effect of yoga practice for 5 and 10 months, on randomly selected (54) trainees. ***Kanwaljeet Singh et.al*** (*2010)* assessed the effects of selected meditative asanas on kinesthetic perception and movement speed and found the improvements on selected criterion variables due to yogasanas practices. Due to this fact, game-based conditioning using small side game has become a popular method of developing specific aerobic fitness for soccer players (***Impellizzeri et al***, *2006*, ***Navarro*** *2008*) studied that the constraint to keep the ball in possession the most time as possible increase the ball contacts by players at the small-sided soccer game. At the same time, this instruction increase the short distances passes. Consequently, the number of technical events can be influenced by different task constraints. Further, the planned programme ladder training after small said games might have influenced the dribbling ability, kicking ability and overall playing ability of the subjects involved in this study. The improvement over dribbling and kicking may the direct cause for over all playing ability improvement.

8. Conclusion

There was a significant difference among yogic practice, aerobic exercise, skill pressure training and control groups on selected skill performance variables namely dribbling, passing and shooting. Further the result of the study indicated there was a significant improvement on skill performance variables namely dribbling, passing and shooting due to aerobic exercise and skill pressure training.

The results of the study showed that there was no significant improvement on selected skill performance variables namely passing and dribbling due to yogic practice. There was a significant improvement on shooting due to yogic practice.

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