Acute Effects of Continuous Running and Intermittent Training Programmes on Selected Athletic Performance Factors of Professional College Men Athletes

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ABSTRACT *The Purpose of this study was to find out the acute effects of continuous running and intermittent training programmes on athletic performance of professional college men athletes. The study was conducted on forty five men (N=45) engineering students from Pavendar Bharathidasan Institute of Engineering and Technology, Tiruchirappalli were randomly selected as subjects. They were randomly assigned equally into three groups, Group –I underwent Continuous Running Group (n = 15), Group II underwent Intermittent Training Group (n=15) and Group-III acted as control Group (n=15). 1500 meters running performance were selected as creation variables and it was assessed by 1500 meters run test. The training period was limited to 12 weeks. The experimental groups underwent their respective training period for 12 weeks and the control group was acted as control. The pre and post test data were collected period and immediately after the training period of 12 weeks duration. The data was collected from the Experimental and Control Groups were statically examined with Analysis of covariance (ANCOVA). To determine the paired means significant difference, the Scheffe's test was applied as Post hoc test. In all cases 0.05 level of confidence was fixed to test the significant differences. 1500 meters running performance showed significant difference among the groups. The results of the study showed Intermittent training group is better than continuous running group and control group.*

INTRODUCTION

Sports performance is the product of the personality of the sports person. It is highly erroneous to think that spots performance is determined exclusively by the physique and physical qualities. Sports performance is a psychomotor performance and for its improvement through training as well as for achieving it in a competition the sports person depends heavily on his qualities of head and heart. Beliefs, values, motives, interest, attitudes, emotional abilities, personality traits of these qualities and abilities enable the sports person to compete successfully in a competition. The sports training aims at improving these qualities through proper selection and implementation of various means and methods of training. In other words, sports training is an educational process. Without this aspect of sports training a sports person has a very low chance of achieving high sports performance (Thomas et al, 1985).

Completive sports, makes a tremendous demands on the physical condition, endurance and mental powers of the participant. Only athletes in the finest condition can withstand the wear and tear of a competitive season; only the fittest can play to the best of their ability. The athlete who is properly trained and conditioned will sustain a lower incidence and Severity of injures and a higher level of performance.

Continuous training means the person training uses 60-80% of their maximum heart rate for at least 30-60 minutes at least four or five times a week. This method suits long distance runners as well as tennis players etc, because it means that their endurance levels will increase, and it is the way which they would normally compete. Continuous training is a good way for an athlete to build up their cardio-vascular endurance levels. Continuous forms the basis for all other training methods both anaerobic and aerobic.

Continuous training is when an athlete exercises in a steady aerobic way and interval training is characterized by repetitions of work with a recovery period following each repetition (Continuous training ,wikipedia.org)

Interval training has been the basis for athletic training for several years. The first form of interval training, called "Fartlek" involved alternating short, fast bursts of intensive exercise with slow, easy activity. Fartlek was casual, unstructured training that perfectly fitted its English translation: "speed play."

METHODOLOGY

The study was conducted on forty five men (N=45) engineering students from Pavendar Bharathidasan Institute of Engineering and Technology, Tiruchirappalli were randomly selected as subjects. They were randomly assigned equally into three groups, Group –I underwent Continuous Running Group (n = 15), Group II underwent Intermittent Training Group (n=15) and Group-III acted as Control Group (n=15). Among various performances variables only 1500 meters was selected as creation variables and it was assessed by 1500 meters run test in a track. The training period was limited to 12 weeks. The experimental groups underwent their respective training period for 12 weeks and the control group was acted as control. The pre and post test data were collected period and immediately after the training period of 12 weeks duration.

RESULTS AND DISCUSSION

The data collected from the experimental group and control group prior and after experimentation on selected variables were statistically examined by analysis of covariance (ANCOVA) was used to determine differences, if any among the adjusted post test means on selected criterion variables separately. The Scheffe's test was applied as Post hoc test. The level of significance was fixed at 0.05 level of confidence to test the 'f' ratio obtained by analysis of covariance.

1500 Meters Running Performance

The Analysis of covariance (ANCOVA) on 1500 meters performances of Continuous Running Group, Intermittent Training Group and Control Group, have been analyzed and presented in Table -I.

Table – I Analysis of Covariance on 1500 meters performances for Continuous Running Group, Intermittent Training Group and Control Group

Adjusted Post-test Means							
Continuous Running Group	Intermittent Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
4.33	4.39	4.47	Between With in	0.15 0.20	2 41	0.07 0.005	14.00*

* Significant at.05 level of confidence
(1500 meters performances Scores in Seconds)
(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 performances for Continuous Running Group, Intermittent Training Group and Control Group are 4.33, 4.39 and 4.47 respectively. The obtained F-ratio of 14.00 for adjusted post test mean is more than the table value of 3.23 for df 2 and 41 required for significant at .05 level of confidence.

The results of the study indicate that there are significant differences among the adjusted post test means of Continuous Running Group, Intermittent Training Group and Control Group on the development of 1500 meters performances.

To determine which of the paired means had a significant difference, the Scheffe's test was applied as Post hoc test and the results are presented in Table II.

Table – II
The Scheffe's test for the Differences between the Adjusted Post test Paired means on 1500 meters performances

Adjusted Post-test means			Mean Difference	Confidence Interval
Continuous Running Group	Intermittent Training Group	Control Group		
4.33	4.39		0.06	0.18
4.33		4.47	0.14	0.18
	4.39	4.47	0.08	0.18

* Significant at.05 level of confidence

Table II shows that the adjusted post test mean difference on Continuous Running Group and Intermittent Training Group, Continuous Running Group and Control Group and Intermittent Training Group and Control group were 0.06, 0.14 and 0.08 respectively. The values are lesser than the confidence interval value 0.18, which shows insignificant differences at .05 level of confidence.

CONCLUSIONS:
1. The results of the study showed that there is a significant difference among the groups.
2. It may be concluded that continuous running group is better than Intermittent Training group and Control Group in improving 1500 meters running performance.

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