



ORIGINAL RESEARCH PAPER

Physical Education

AN IMPACT OF CONTINUOUS RUNNING AND INTERMITTENT TRAINING PROGRAMMES ON LEG EXPLOSIVE POWER AMONG UNIVERSITY MEN PLAYERS

KEY WORDS: Continuous Running, Intermittent Training, Leg Explosive Power, Sargent Jump

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ABSTRACT

The purpose of the study was to find out an impact of continuous running and intermittent training programmes on Leg Explosive Power among University men players. The study was conducted on fifteen men players who were participated Alagappa University Inter collegiate tournaments during the year 2017-2018 were randomly selected as subjects. They were randomly assigned equally into three groups, Group-I underwent Continuous Running (n = 15), Group II underwent Intermittent Training (n=15) and Group-III acted as control Group (n=15). Leg Explosive Power was selected as creation variables and it was assessed through Sargent Jump test. The pre and post test data was collected from the experimental and control groups and it were statically examined with Analysis of covariance (ANCOVA). To determine the paired means difference the Scheffe's test post hoc test was applied. Leg Explosive Power showed significant difference among the groups.

INTRODUCTION

Sports' training in its typical and most effective form is a pedagogically organized process characterized by all the main traits of a strictly directed process of teaching, upbringing and self-education. The system of exercises, also so arranged as to reach a maximum developing effect in the condition of full control of the process of perfection constitutes the methodological foundation of sports training. The athlete's training is a multi-sided process of the expedient use of aggregate factors (means, methods and conditions), which influences the development of an athlete and ensures the necessary level of preparedness (*Matveyev, 1981*).

Continuous training is when low- to mid-intensity exercises are performed for more than 20 minutes without resting intervals. Generally, this type of training is used to prepare the body for sustained workouts such as marathons and triathlons, but can also be effective for more casual athletes. It allows the body to work from its aerobic energy stores to improve overall fitness and endurance. Chief benefits of continuous training include fat burning, muscle building, and increasing maximum aerobic potential.

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 (*Reid and Thomson, 2003*).

Intermittent exercise is a phrase used to describe a variety of different physical training types. The terms "intermittent," which means to stop and start at intervals, and "interval," as in interval training, is used somewhat interchangeably. In most circumstances, interval training will be conducted as a high intensity exercise activity.

By its nature, exercise is not aimless; it involves physical exertion that is directed to the development, increase, or maintenance of physical fitness. Intermittent exercise is both a description of the intensity of the activity as well as its nature.

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 (N=45) men players who were participated Alagappa University Inter collegiate tournaments during the year 2017-2018 were randomly selected as subjects. They were randomly assigned equally into three

groups, Group-I underwent Continuous Running (n=15), Group II underwent Intermittent Training (n=15) and Group-III acted as control Group (n=15). Leg Explosive Power was selected as creation variable and it was assessed through Sargent Jump test. The pre and post test data was collected from the experimental and control groups and it were statically examined with Analysis of covariance (ANCOVA). To determine the paired means difference the Scheffe's test post hoc test was applied.

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 level of significance was fixed at .05 level of confidence to test the 'f' ratio obtained by analysis of covariance.

The Analysis of covariance (ANCOVA) on Leg Explosive Power of Continuous running group, Intermittent Training Group and Control Group, have been analyzed and presented in Table -I.

TABLE -I
ANALYSIS OF COVARIANCE ON LEG EXPLOSIVE POWER OF CONTINUOUS RUNNING GROUP, INTERMITTENT TRAINING GROUP AND CONTROL GROUP

Adjusted Post-test Means			Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Continuous Running Group	Intermittent Training Group	Control Group					
41.89	43.27	39.87	Between Within	87.45 43.83	2 41	43.73 1.07	40.90*

* Significant at .05 level of confidence
(Leg Explosive Power Scores in Centimeters)
(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 Leg Explosive Power for Continuous running group, Intermittent Training Group and Control Group are 41.89, 43.27 and 39.87 respectively. The obtained F-ratio of 40.90 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 Leg Explosive Power.

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 LEG EXPLOSIVE POWER**

Adjusted Post-test means			Mean Difference	Confidence Interval
Continuous Running Group	Intermittent Training Group	Control Group		
41.89	43.27		1.38*	0.96
41.89		39.87	2.02*	0.96
	43.27	39.87	3.40*	0.96

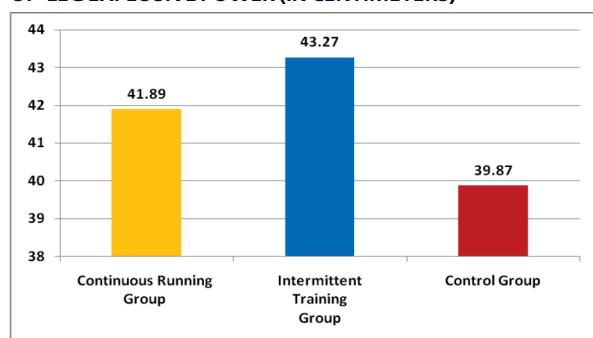
* Significant at .05 level of confidence

Table-II shows that the adjusted post test mean difference on Continuous running group and Intermittent Training Group, Continuous running group and Control Group, Intermittent Training Group and control groups are 1.38, 2.02 and 3.40 respectively. The values are greater than the confidence interval value 0.96, 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 Explosive power between the adjusted post test means of Continuous running group and Intermittent Training Group, Continuous running group and Control Group, Intermittent Training Group and control groups. However, the improvements of Leg Explosive Power were significantly higher for Intermittent Training Group than Continuous running group and Control Group.

The adjusted post test means values of experimental groups and control group on Leg Explosive Power are graphically represented in the Figure -I.

FIGURE –I BAR DIAGRAM ON ORDERED ADJUSTED MEANS OF LEG EXPLOSIVE POWER (IN CENTIMETERS)



CONCLUSIONS:

1. The results of the study showed that there is a significant difference among the groups.
2. It may be concluded that Intermittent Training Group is better than Continuous running Group and Control Group in improving Leg Explosive Power

REFERENCES:

1. Matveyev L., (1981), Fundamentals of Sports Training, Progress Publishers, Moscow.
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