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AN IMPACT OF CONTINUOUS RUNNING AND INTERMITTENT TRAINING PROGRAMMES ON SPEED PERFORMANCE AMONG ALAGAPPA UNIVERSITY MEN SOCCER PLAYERS

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ABSTRACT Aim of this study was to find out an impact of continuous running and intermittent training programmes on speed performance among Alagappa university men soccer players. The study was conducted on sixty men soccer players who were participated Alagappa University Inter collegiate Soccer tournament during the year 2016-2017 were randomly selected as subjects. They were randomly assigned equally into three groups, Group –I underwent Continuous Running (n = 20), Group II underwent Intermittent Training (n=20) and Group-III acted as control Group (n=20). Among the Bio-motor Components speed was selected as creation variables and it was assessed through 50 meters run 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. Speed showed significant difference among the groups.

KEYWORDS : Continuous running, intermittent training, Speed.

INTRODUCTION

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.

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."

Intermittent exercises of various types are best known where they have been employed as components to endurance sports. Disciplines such as distance running, road cycling racing, and mountain biking require the body to produce the energy necessary for physical performance through the aerobic energy system, which primarily utilizes stores of carbohydrate products, in the form of glycogen, reduced as energy is required, to the sugar glucose. To generate energy, the body—through the cardiovascular system—transports oxygen and other nutrients essential to muscle function. The greater the ability of the heart to power blood volume to the muscles, the likely more efficient the production of energy and the removal of wastes such as carbon dioxide will be.

METHODOLOGY

The study was conducted on sixty men soccer players who were participated Alagappa University Inter collegiate Soccer tournament during the year 2016-2017 were randomly selected as subjects. They were randomly assigned equally into three groups, Group –I underwent Continuous Running (n = 20), Group II underwent Intermittent Training (n=20) and Group-III acted as control Group (n=20). Among the Bio-motor Components speed was selected as creation variables and it was assessed through 50 meters run 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. Speed showed significant difference among the groups.

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 Speed of Continuous running group, Intermittent Training Group and Control Group, have been analyzed and presented in Table -I.

TABLE – I ANALYSIS OF COVARIANCE ON SPEED 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					
7.30	6.81	7.63	Between With in	6.11 2.21	2 56	3.06 0.04	76.50*

* *Significant at.05 level of confidence*

(**Speed** Scores in **Seconds**)

(The table value required for Significance at .05 level with df 2 and 56 is 3.16)

Table I shows that the adjusted post test mean value of Speed for Continuous running group, Intermittent Training Group and Control Group are 7.30, 6.81 and 7.63 respectively. The obtained F-ratio of 76.50 for adjusted post test mean is more than the table value of 3.16

for df 2 and 56 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 Speed.

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 SPEED

Adjusted Post-test means			Mean Difference	Confidence Interval
Continuous Running Group	Intermittent Training Group	Control Group		
7.30	6.81		0.49*	0.10
7.30		7.63	0.33*	0.10
	6.81	7.63	0.82*	0.10

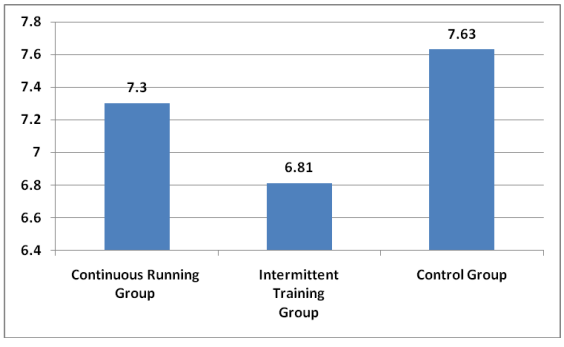
**** Significant at.05 level of confidence***

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 0.49, 0.33 and 0.82 respectively. The values are greater than the confidence interval value 0.10, 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 speed 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 Speed are graphically represented in the Figure -I.

FIGURE –I BAR DIAGRAM ON ORDERED ADJUSTED MEANS OF SPEED (IN SECONDS)



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 Speed.

REFERENCES:

1. Burgomaster KA, Heigenhauser GJ, Gibala MJ, "Effect of short-term sprint interval training on human skeletal muscle carbohydrate metabolism during exercise and time-trial performance", Journal of Applied Physiology, 2006 Jun;100(6):2041-7.
2. Continuous running, Retrieved on 12th February 2013, brainmac.co.uk/speed.htm.
3. Fox Edward L. and Donald K. Mathews, The Physiological Basic of Physical Education and Athletics (3rd ed), Philadelphia: Mosby College Publishing, 1981.
4. Neil E. B., Psychology Today and Tomorrow, New York: Hoper and Brothers, 1987.