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Effect of continuous running fartlek training and interval training on selected skill related performance variables among male football players

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Abstract

The present study was undertaken to analyze the Effect of Continuous Running, Fartlek and Interval Training on Selected Skill Related Performance Variables (Throw in for distance) of Male Football Players. The investigator has selected sixty inter collegiate football men players at random, their age ranged from 18-25 years. The subjects chosen for the study were divided into four equal groups and designated as experimental group 'A' experimental group 'B' experimental group 'C' and control group 'D'. Continuous running were given to group 'A' Fartlek training group 'B' Interval training given to group 'C' and the control group 'D' were restricted to participate in any activities. The trainings were given for a period of twelve weeks. The data were collected before and after the training. The obtained data's were analyzed by Analysis of Covariance (ANCOVA). The level of significant was fixed at 0.05 levels. Where ever the 'F' ratio was found significant scheffe's posttest was used for find out the significant differences among the paired mean. The results of the study showed that continuous running, fartlek training and interval training are significantly improved than control group.

Keywords: Continuous running, Fartlek Training, Interval training, Throw in for distance.

Introduction

Continuous training as the name implies, involves continuous activity, without rest intervals. This has varied from high intensity, Continuous activity of moderate duration to low-intensity activity of an extended duration, i.e. long, slow distance, or 'LSD' training. LSD training is probably the most widely used form of endurance conditioning for jogger who want to stay in condition for health-related purpose, the athlete who participate in team sports and endurance-trains for general condition, and the athlete who wants to maintain his endurance condition during the off-season. Ajmer Singh et al., (2003) [1].

Fartlek training is running with various intensity according to requirement of the athlete and dictates of the terrain. The athlete will use a terrain which undulates and makes varying demands upon him. (Ex. Hills, Woodland, Ploughed land, sand) like the alternating pace method, anaerobic period provides a strong stimulus for the improvement of VO₂ maximum. In addition, the demands of terrain stimulate strength endurance development and proprioceptive balance adjustment of ankle, knee and hip (Dick 1980).

Interval training is a form of progressive conditioning in which the intensity of the activity, the duration of each bout. The Number of bouts, the time or kind of resting period between bouts, on the order of the bouts is varied Baby (1927) [2]. According to Mathews and Fox (1974) [3], Interval training as work or exercise followed by the property of prescribed relief interval.

Skill related performance of football players

The principal technical skills are shooting, passing, ball control and dribbling (Reilly & Holmes, 1983). Reilly *et al.*, (2000) [6]. Indicated that a number of physical and anthropometric prerequisites are necessary to compete at the elite level in football. Sheppard *et al.*, (2006) [7]. Specifically, players are expected to possess well developed aerobic fitness and anaerobic power, coupled with good agility to be capable of maintaining high power during fast movements over the entire match (Mohr *et al.*, 2005) [10].

Russel & Kingsley, M. (2011) [5]. Found that the quality of skill performance is dependent

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on cognitive, perceptual and motor skill, which interacts in rapidly changing environment. According to Thomas *et al.*, (2009) [8] “dribbling appears to be the single most important skill when compared to passing, first touch, and defense”. There are a number of important dribbling skills necessary to play soccer. Players need to be able to change speeds with the ball such as accelerating and stopping. Huijgen *et al.*, (2010) [9] contended, “Dribbling speed is considered critical to the outcome of the game. Dribbling in soccer can be categorized into dribble actions while accelerating and dribble actions with quick changes of directions”. Players need to be able to use the inside, outside, sole, and instep of their feet to change directions. Another important dribbling skill is shielding the ball while stationary and on the move. Players must also be able to dribble while looking up to assess the game developments. These dribbling skills are important to being an effective soccer player.

Skill related variables

The abilities of skill related fitness are not the skill associated with any particular sports, such as running, catching, tackling or kicking, but are the underlying skills which are brought to bear when participating in sports.

Statement of the problem

The purpose of the study was to find out the Effect of Continuous Running, Fartlek and Interval Training on Selected Skill Related Performance Variables (Throw in for distance) of Male Football Players.

Methodology

The purpose of this study was to find out the influence of effect of continuous running fartlek training and interval training on selected Skill Related Performance Variables, namely throw in for distance. To achieve the purpose of this study sixty inter collegiate football men players were selected at random from in and around the Guntur district Andhra Pradesh. Their age ranged from 18 to 25 years. The subjects chosen for study was divided into four groups and designated as experimental group A, experimental group B, experimental

group C and control group D. Each groups consisted of fifteen players. Continuous running was given to group A, Fartlek training given to group B, Interval training given to group C and control group C was restricted to participate in any of the training programme other than their regular activities. Training was given three days in a week for twelve weeks. The subject were tested on at the Throw in for distance beginning (Pre-test) and at the end of the experimental period (Post-test).To measure the, Throw in for distance, (Warner Test) respectively because of their simplicity and availability of necessary facilities, instrument and equipment’s.

Throwing for distance - (Warner Test)

Purpose: The purpose of the test was to measure the throw in distance performance of the football players.

Facilities and Equipment: Footballs, field marking measuring tape, score sheet and pencil.

Procedure: The subjects asked to runs and throw the ball from the starting line how much distance covered for that ball that was the performance for that individual. The ball must hold with two hands and throw the ball from behind the head, the player should not make any fouls like cross the line and raise the leg like that, the ball should land within a line which is 25 yard line the distance the ball advances in the air is measured. The three trails are given best performance were taken for the score.

Scoring: Measure the distance of the throw to the first bounce. Record the best of three kicks measure to the nearest meters (Barrow and Gee 1979).

Result and discussion

The analysis of data on Throw in for distance has been examine by ANCOVA for variables separately in order to determine the differences if any among the group at pre and posttest when the differences was found to be significant by ANCOVA, the Scheffe’s post hoc test was applied to assess the significant differences between the adjusted mean

Table 1: Analysis of Covariance of data on throw in for distance between pre and posttest of Continuous running group, Fartlek training group, Interval training group and control group

| | CRG | FTG | ITG | CG | Sources of variance | Sum of square | df | Mean Square | ‘F’ ratio |
|--------------------|-------|-------|-------|-------|---------------------|---------------|----|-------------|-----------|
| Pre -test | | | | | | | | | |
| Mean | 17.86 | 18.00 | 18.46 | 18.80 | B | 8.31 | 3 | 2.77 | 1.49 |
| SD | 1.59 | 1.13 | 1.18 | 1.47 | W | 103.86 | 56 | 1.85 | |
| Post- test | | | | | | | | | |
| Mean | 19.26 | 19.46 | 19.80 | 17.93 | B | 30.18 | 3 | 10.06 | 6.40* |
| SD | 1.43 | 0.99 | 1.20 | 1.33 | W | 88.00 | 56 | 1.57 | |
| Adjusted post-test | | | | | | | | | |
| Mean | 19.56 | 19.67 | 19.66 | 17.56 | B | 53.77 | 3 | 15.42 | 24.78* |
| | | | | | W | 46.27 | 55 | 0.622 | |

*Significant at 0.05 level of confidence

(The table value required for significant at 0.05 level with df 3 and 56 & 3 and 55 are 2.77 and 2.77 respectively)

The table I Shows that the pretest mean values on throw in for distance for Continuous running group (CRG), Fartlek training group (FTG), Interval training group (ITG) and control groups (CG) were 17.86, 18.00, 18.46 and 18.80 respectively. The obtained ‘F’ value of 1.49 for pre test scores on throw in for distance, which was lesser than the table value of 2.77 for significance with df 3 and 56 at 0.05 level of confidence. The posttest mean values on throw in for distance for Continuous running group (CRG), Fartlek training group (FTG), Interval training group (ITG) and control groups (CG)

were 19.26, 19.46, 19.80 and 17.93 respectively. The obtained ‘F’ value of 6.40 for post test scores on throw in for distance, which was greater than the table value of 2.77 for significance with df 3 and 56 at 0.05 level of confidence. The adjusted posttest mean values on throw in for distance for Continuous running group (CRG), Fartlek training group (FTG), Interval training group (ITG) and control groups (CG) were 19.56, 19.67, 19.66 and 17.56 respectively. The obtained ‘F’ value 24.78 for adjusted post test scores on throw in for distance, which was higher than the table value of 2.77 for

significance with df 3 and 55 at 0.05 level of confidence.

The result of the study showed that there was significant difference among Continuous running group (CRG), Fartlek training group (FTG), Interval training group (ITG) and control groups (CG) on throw in for distance.

Since the four groups were involved the Scheffe's post hoc test was applied to find out the paired mean differences if any, and it is presented in table II

Table 2: Scheffe's post hoc test for the differences between paired adjusted posttest means of throw in for distance

| CRG | FTG | ITG | CG | MD | CI |
|-------|-------|-------|-------|-------|------|
| 19.56 | 19.67 | - | - | 0.11 | 0.82 |
| 19.56 | - | 19.66 | - | 0.10 | |
| 19.56 | - | - | 17.56 | 2.00* | |
| - | 19.67 | 19.66 | - | 0.01 | |
| - | 19.67 | - | 17.56 | 2.11* | |
| - | - | 19.66 | 17.56 | 2.10* | |

*Significant at 0.05 level of confidence

The table II Shows that the adjusted posttest mean differences of Continuous training group (CRG) and Control group (CG), Fartlek training group (FTG) and Control group (CG) and Interval training group (ITG) and control group (CG) were 2.00, 2.11 and 2.10 respectively. They were greater than the confidence interval value 0.13 at 0.05 level, which indicate that there is a significant differences among the group of Continuous running group (CRG) and Control group (CG), Fartlek training group (FTG) and Control group (CG) and Interval training group (ITG) and control group (CG).

The adjusted mean difference of Continuous running group (CRG) and fartlek training group (FTG), Continuous running group (CRG) and Interval training group (ITG), Fartle training group (FTG) and Interval training group (ITG) were 0.11, 0.10 and 0.01 respectively. Hence it shows that they were lesser than the confidence interval value 0.82 at 0.05 levels, which indicate that there is no significant differences exist among the group of Continuous running group (CRG) and fartlek training group (FTG), Continuous running group (CRG) and Interval training group (ITG) and Fartlek training group (FTG) and Interval training group (ITG).

The Comparison of pre, post and adjusted post mean values of throw in for distance for Continuous running group (CRG), Fartlek training group (FTG), Interval training group (ITG) and control group (CG) on throw in for distance are graphically presented in figure 1.

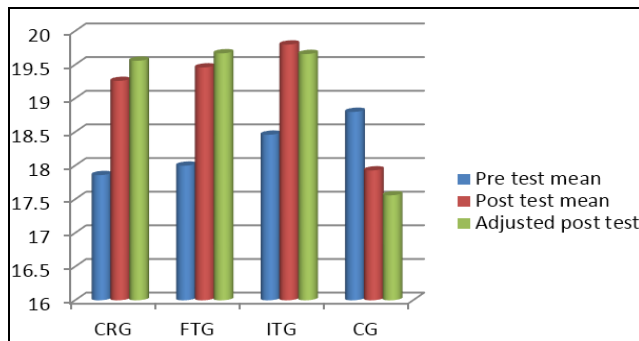


Fig 1: Bar diagram showing the pre, post and adjusted post-test mean values of Continuous running group (CRG), Fartlek training group (FTG), Interval training group (ITG) and control group (CG) on throw in for distance.

Discussing on findings

Throw in for distance

The present study showed that the throw in performance significantly improved when compared with control due to the effect of continues fartlek and interval training. The results of the study are in conformity with the Helgerud and Engen (2001) found that aerobic endurance training significantly improve soccer performance. Tiller and Marques (2009) concluded that two different training programs with the same workload significantly improve soccer overload throwing velocity

Discussion on hypotheses

In the hypothesis it was stated that the three would be significant improvement on selected skill related performance variables due to the Effect of Continuous Running, Fartlek Training and Interval Training. The result shows that due to the Effect of Continuous Running, Fartlek Training and Interval Training on selected skill related performance variables such as Throw in for distance have significantly improved. Hence it proved that the research hypothesis was accepted and null hypothesis rejected.

Conclusions

1. Throw in for distance was significantly improved by the Continuous running group, Fartlek training group and Interval training group when compared with control group.
2. There is no significant improvement in throw in for distance between Continuous running group, Fartlek training group, and Continuous running group.

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