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Impact of speed based skill training on selected Motoric parameters and skill performance of Men soccer players

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Abstract

This study was designed to investigate the impact of speed based skill training on selected motoric parameters and skill performance of men soccer players. To achieve the purpose of the study 40 Inter-Collegiate men soccer players were selected from affiliated colleges of Bharathiar University, Coimbatore. The subjects was randomly assigned to two equal groups (n=20). Group- I underwent speed based skill training (SBST) and Group - II was acted as control group (CG). The respective training was given to the experimental group for 3 days per week (Monday, Wednesday and Friday) for the period of twelve weeks. The control group was not be given any sort of training except their routine work. The motoric parameter speed were measures by 20mts sprint test and skill performance dribbling was assessed by Sir Bobby Charlton Soccer School of Australia Test. The data collected from the subjects was statistically analyzed with 't' ratio to find out significant improvement if any at 0.05 level of confidence. The result of the speed and dribbling improved significantly due to impact of speed based skill training with the limitations of (diet, climate, life style) status and previous training the result of the present study coincide findings of the investigation done by different experts in the field of sports sciences.

Keywords: Speed based skill training, football, speed and dribbling

Introduction

Football, accepted as one of the most popular game in the world consisting of ball skills and body movements with deception, anticipation as well as physical fitness ability. In general terms, fitness of football players is often referred to as being made up of strength, speed, stamina and suppleness or flexibility. Speed is the quickness of movement of a limb, whether this is the legs of a runner or the arm of the shot putter. Speed is an integral part of every sport and can be expressed as any one of, or combination of, the following: maximum speed, elastic strength (power) and speed endurance. Speed is influenced by the athlete's mobility, special strength, strength endurance and technique (Doug Lentz and Jay Dawes 2005) ^[1].

The technique of sprinting must be rehearsed at slow speeds and then transferred to runs at maximum speed. The stimulation, excitation and correct firing order of the motor units, composed of a motor nerve (neuron) and the group of muscles that it supplies, makes it possible for high frequency movements to occur. The whole process is not very clear but the complex coordination and timing of the motor units and muscles most certainly must be rehearsed at high speeds to implant the correct patten speed is highly specific and to achieve it we should ensure that: flexibility is developed and maintained all year round strength and speed are developed in parallel skill development (technique) is pre-learned, rehearsed and perfect before it is done at high speed levels speed training is performed by using high velocity for brief intervals. This will ultimately bring into play the correct neuromuscular pathways and energy sources used it is important to remember that the improvement of running speed is a complex process that is controlled by the brain and nervous system. In order for a runner to move more quickly, the leg muscles of course have to contract more quickly, but the brain and nervous system have to learn to control these faster movements efficiently. If you maintain some form of speed training throughout the year, your muscles and nervous system do not

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lose the feel of moving fast and the brain will not have to re-learn the proper control patterns at a later date. In the training week, speed work should be carried out after a period of rest or light training. In a training session, speed work should be conducted after the warm up and any other training should be of a low all speed workouts should include an appropriate warm up and cool down. The athletes start in a variety of different positions—lying face down, lying on their backs, in a push up or sit up position, kneeling or seated. The coach standing some 30 meters from the group then gives a signal for everyone to jump up and run towards him/her at slightly faster than race pace. Repeat using various starting positions and with the coach standing in different places so that the athletes have to change directions quickly once they begin to run. speed reaction drills can also be conducted whilst controlling an item (e.g. football, basketball, hockey ball) with an implement (e.g. feet, hand, hockey stick). Developing speed makes ever more frequent use of the various technical exercise carried out with a ball. This is so because the ball makes the exercise more interesting, and brings them closer to match play. This helps to maintain the player's zest for the training work (Arpad Csanadi 1965) [2].

Methods

Experimental Approach to the Problem

In order to address the hypothesis presented herein, we selected 40 Inter-Collegiate men soccer players from affiliated colleges of Bharathiar University, Coimbatore. The subjects were randomly assigned in to two equal groups, namely, speed based skill training group (n=15) and control group (n=15). The respective training was given to the experimental group the 3 days per week (alternate days) for

the training period of eight weeks. The control group was not given any sort of training except their routine.

Design

The evaluated motoric parameters were speed were measured by 20mts sprint test skill performance dribbling was assessed by Sir Bobby Charlton Soccer School of Australia Test. The parameters were measured at baseline after 8 weeks of speed based skill training were examined.

Training programme

The training programme was lasted for 60 minutes for session in a day, 3 days in a week for a period of 8 weeks duration. These 60 minutes included 5 minutes warm up, 50 minutes speed based skill training and 5 minutes warm down. Every two weeks of training 5% of intensity of load was increased from 55% to 80% of work load. The volume of speed based skill training is prescribed based on the number of sets and repetitions. The speed based skill training is the length of the time each action is held for and the number action in total 3 day per weeks (Monday, Wednesday and Friday). The selected subjects underwent regular physical exercise on other 3 days (Tuesday, Thursday, and Saturday).

Statistical Analysis

The collected data on above said variables due to the effect of plyometric training after regular physical exercise was statistically analyzed with 't' test to find out the significant Improvement between pre and post test. In all cases the criterion for statistical significance was set at 0.05 level of confidence. ($P < 0.05$).

Table I: Computation of T Ratio on Selected Motoric Parameters Male Football Players on Experimental Group and Control Group

GROUP	VARIABLE	Experimental Group					T ratio
		Mean	N	Std. Deviation	Std. Error Mean		
Experimental Group	Speed	Pre test	3.19	20	0.17	0.03	2.86*
		Post test	3.17	20	0.16	0.03	
Control Group	Speed	Pre test	3.19	20	0.17	0.03	1.45
		Post test	3.19	20	0.17	0.03	
Experimental Group	Dribbling	Pre test	14.37	20	0.97	0.21	2.87*
		Post test	14.36	20	0.98	0.22	
Control Group	Dribbling	Pre test	13.52	20	2.56	0.57	0.33
		Post test	13.52	20	2.56	0.57	

*significant level 0.05 level (degree of freedom 2.093,1 and 19)

Table reveals the computation of mean, standard deviation and 't' ratio on selected motoric parameters and skill performance, namely speed and dribbling of experimental and control group. The obtained 't' ratio on speed were 2.86* and 1.71 respectively. The obtained 't' ratio on dribbling were 2.87* and 0.33 respectively The required table value was

2.093 for the degrees of freedom 19 at the 0.05 level of significance. Since the obtained t values were greater than the table value in experimental group though it was found statistically significant and t values were less than the table value in control group though it was found statistically insignificant.

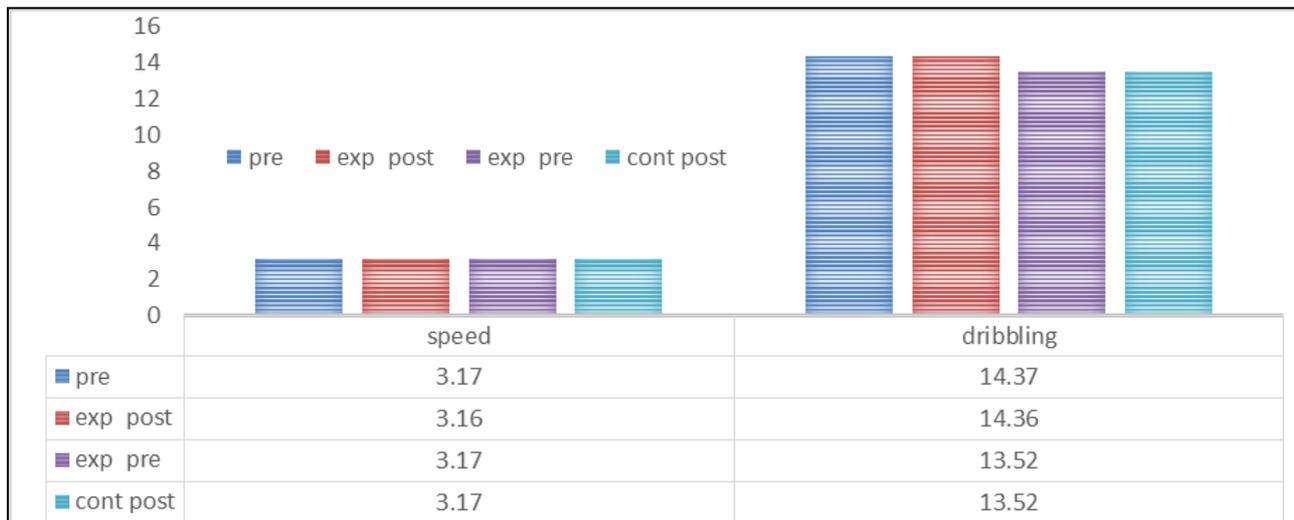


Fig 1: Bar Diagram Showing the Mean Value on Selected Motoric Parameters and Skill Performance of Male Football Players on Experimental Group and Control Group

Discussion and Findings

The present study experimented the impact of 8 weeks speed based skill training significantly improved the selected motoric parameters and skill performance of men soccer players. The results of this study indicated that speed based skill training is more efficient to bring out desirable changes over the speed of men soccer players. The finding of the present study had similarity with the findings of the investigators referred in this study. Mathisen Gunnar *et al.*, (2014) [3] examined the effect of speed training on sprint and agility performance in female youth soccer players. Jason Daniel Waggener (2014) [4] evaluated the effects of a four week primary and secondary speed training protocol on 40 yard sprint times in female college soccer players. Shalfawi *et al.*, (2012) [5] evaluated the effect of 40m repeated sprint training on physical performance in young elite male soccer players. Salonikids *et al.*, (2008) reported that, the reaction time, first-step quickness, lateral (side steps), and forward speed over short distances are important parameters for tennis performance. Moran *et al.*, (2012) speculated that the accurate knowledge of results (KR), in the form of service speed, is important in learning to serve faster, Galy *et al.*, (2010) reported that the effects of static and dynamic stretching alone and in combination on subsequent agility, sprinting, and jump performance, Scarlett *et al.*, (2001) reported that, if straight sprint training transferred to agility performance tests that involved various change-of-direction complexities and if agility training transferred to straight sprinting speed.

Conclusions

1. It was concluded that 8 weeks of speed based skill training significantly improved the speed of men soccer players.
2. It was concluded that 8 weeks of speed based skill training significantly improved the dribbling of men soccer players.
3. Further, it was conducted that eight weeks of speed based skill training program was found to be most effective training protocol to bring out desirable changes over speed and dribbling of men soccer players.

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