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Research Paper

Anaerobic Power And Skill Performance Of Football Players With Effect Of Varied Intensity Practice

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ABSTRACT

Football training is a systematic process in which players improve their fitness to meet the demands of football competition. Training is one of the several stressors that over load the trainees every day. Football training is called as the highest qualification of the Athlete. The study was conducted to see the effect of varied intensity of skill practice on anaerobic power and skill performance of football players. For this study 40 boys were selected and divided into two equal groups, consisting of 20 subjects in each group as experimental and control groups. The experimental group underwent six weeks of varied intensity training, six days (Monday to Saturday) in the week, one hour in a morning session, whereas the control group did not undergo any training. The pre test and post test were conducted for both the experimental and control group on the selected physical fitness variables of power (vertical jump and standing broad jump) and skills performance (30 meters dribbling with the ball test and kicking accuracy). The results revealed that study the selected varied intensity training exercises contributed positively towards the improvement of anaerobic power and skill performance of the football players.

KEY WORD:

anaerobic power, varied intensity, football, explosive power.

INTRODUCTION

Football is a multi-dimensional sport requiring constant changes in activity. The sport demands continuous changes in movement speed that can vary from being stationary, through walking, as well as low and high intensity running bouts (Reilly, 1996, Withers et. al., 1982). The challenging energy demands of football emerge from requirements to perform a number of high intensity activities, such as jumping, tackling, accelerating, decelerating and getting off the ground (Bangsbo and Michalsik 2002). Other game skills such as kicking and dribbling also need to be considered when determining total physical requirements for football (Reilly, 1997). For instance, the oxygen demand for dribbling the ball is greater than the demands imposed by running normally, while the energy demands of running backwards are lower than running with the ball (Kemi et. al., 2003). Therefore, the demands of unpredictable multiple movement patterns in football combine to generate the movement challenge and regularly change the demands on energy production and muscle action.

High intensity involvements with the ball will be fuelled anaerobically, no matter how brief their duration; so anaerobic actions contribute directly to the outcomes of a game.

Blood lactate can determine the proportion of energy derived anaerobically (Reilly, 1997), and is indicative of the amount of anaerobic work being completed during a soccer match (Bangsbo et al., 1991).

Despite the lower energy contribution from anaerobic sources, the majority of critical involvements in the game are performed at higher intensities, in the form of activities high intensity running, sprinting, jumping and body contact (Little and Williams 2005). Football-specific skills such as heading, striking the ball, tackling and strong static contractions when holding off an opponent also contribute significantly to the anaerobic requirements of football (Reilly, 1997). Frustrated by the limitations of existing methods for assessing kicking accuracy - clearly a vital component of football performance - Finnoff et al. (2002) set out to develop and test a sensitive, reliable and valid means of measuring kicking accuracy that was relatively inexpensive, simple to make and easy to use.

The objective of this study is to find out the effect of varied intensity of skill practice on anaerobic power (vertical jump and standing broad jump) and performance (30 meters dribbling with the ball test and kicking accuracy) of football players.

MATERIALS AND METHODS

The subjects for the study were forty male football players of 12 to 14 years had been selected from Government Higher Secondary School, Chennai during the period from October to November 2013 with view to find out the effect of varied intensity of skill practice on anaerobic power and skill performance of the football players. The main purpose of this study was to examine the short term effects. The 40 selected boys were divided into two equal groups, consisting of 20 subjects in each group as experimental and control groups. The experimental group underwent six weeks of varied intensity training, six days (Monday to Saturday) in the week, one hour in a morning session. Whereas the control group did not undergo any

training. The pre test and post test were conducted for both the experimental and control group on the anaerobic power (vertical jump and standing broad jump) and skills performance (30 meters dribbling with the ball test and kicking accuracy test).

RESULTS AND DISCUSSION

The variables explosive power of standing broad jump and vertical jump; and dribbling and kicking accuracy were assessed by standing broad jump, sargent jump, 30 meters dribbling and goal kicking test respectively shown in Table 1.

Table 1 – Selection of Tests

Variables	Test Items	Unit of Measurement
Explosive power in terms of horizontal distance	Standing broad jump	Centimeters
Explosive power in terms of vertical distance	Sargent jump	Centimeters
Dribbling	30 meters run	Seconds
Kicking accuracy	Goal kicking Test	Seconds

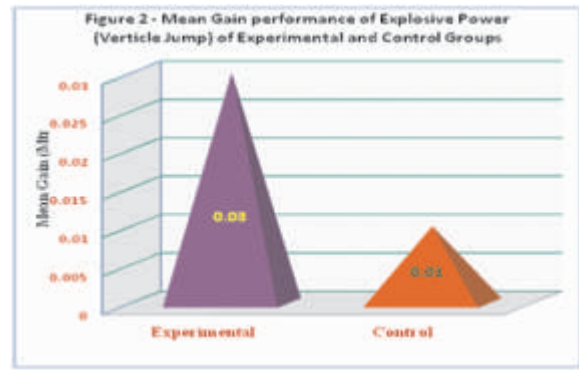
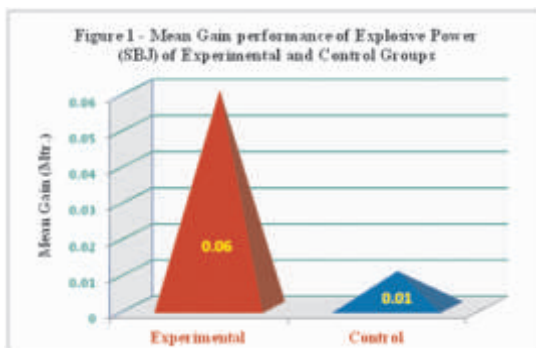
The collected data were analyzed by using independent sample t-test to compare the effect of varied intensity of skill practice on anaerobic power and skill performance of the football players.

Table 2 – Comparison of mean gain in selected variable between experimental and control groups

Variables	Group Compared	Mean Gain	Mean Difference	Standard Error Mean Gain	't' Value	Significance
Explosive power (Standing Broad Jump)	Experimental Vs Control	0.06	0.05	0.02	2.62	0.01*
		0.01				
Explosive power (Vertical Jump)	Experimental Vs Control	0.03	0.02	0.01	2.53	0.02*
		0.01				
Football skill (30 mts Dribble)	Experimental Vs Control	1.16	1.50	0.60	2.49	0.02*
		-0.34				
Football skill (Kicking Accuracy)	Experimental Vs Control	1.05	1.35	0.52	2.62	0.01*
		-0.30				

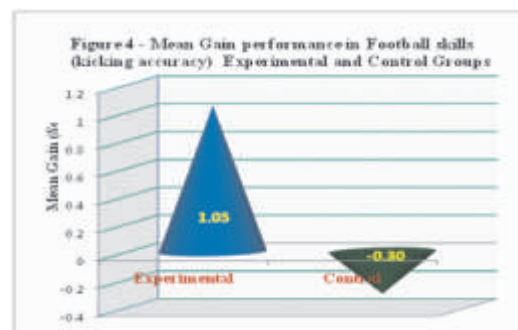
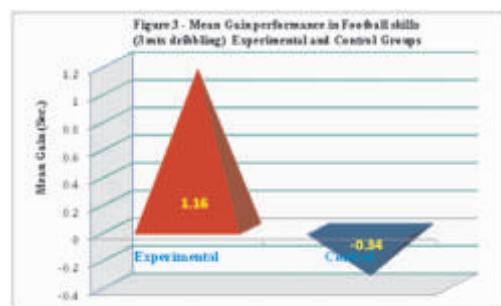
* (p<0.05)

Comparison of mean gain in the explosive power of standing broad jump between the experimental group and control group: It is seen from the Table 2 that, in explosive power of standing broad jump test, the mean gain of the experimental and controlled groups is 0.06 and 0.01 respectively, whereas the difference in the mean gain of both group is 0.05 which is in favour of experimental group whereas the 't' value of is 2.66 which is significant at 0.05 level. This reveals that varied intensity training improved the explosive power of experimental group significantly. The above results have also been represented graphically in the Figure 1.



Comparison of mean gain in the explosive power of vertical jump between experimental and control group: It is seen from the Table 2 that, in case of explosive power of vertical jump test, the mean gain of the Experimental Group and Control Group is 0.03 and 0.01 respectively, whereas the difference in the mean gain of both group is .02 which is in favour of experimental group whereas the 't' value is 2.53 which is significant at 0.05 level. This reveals that varied intensity training has improved the Explosive power of experimental group significantly. The above results have also been represented graphically in the Figure 2.

Comparison of mean gain in football skill (30 meters dribble) between the experimental and control group: It is seen from the Table 2 that, in case of skill performance, 30 meters run with the ball (dribble) test, the mean gain of the experimental group and control group is 1.16 and -0.34 respectively, whereas the difference in the mean gain of both group is 1.50 which is in favour of experimental group where as the 't' value is 2.49 which is significant at 0.05 level. This reveals that varied intensity training has improved the football skill performance of experimental group significantly. The above results have also been represented graphically in the Figure 3.



Comparison of mean gain in football skill of kicking accuracy between the experimental and control group: It is seen from the Table 2 that, in case of skill performance of kicking accuracy test, the mean gain of the experimental and control group is 1.05 and -0.30 respectively, whereas the difference in the mean gain of both group is 1.35 which is favour of experimental group where as the 't' value is 2.62 which is significant at 0.05 level. This reveals that varied intensity training has improved the football skill performance (kicking accuracy) of experimental group significantly. The above results have also been represented graphically in the Figure 4.

CONCLUSION

It is concluded that the basis of the following findings of the pre test and post test were conducted for both the experimental and control group on the selected physical fitness variables of power (vertical jump and standing broad jump) and skills performance (30 meters dribbling with the ball test and kicking accuracy test):

- The selected varied intensity training contributed positively towards the improvement of anaerobic power of standing broad jump and vertical jump of football players
- The selected varied intensity training contributed positively towards the improvement of skill performance of kicking accuracy and 30 meters dribbling of football players.

The results revealed that study the selected varied intensity training exercises contributed positively towards the improvement of anaerobic power and skill performance of the football players.

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