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A study on explosive strength and football kicking ability among adolescent and college level football players

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Abstract

The purpose of this study was to compare the leg explosive strength and kicking ability between Adolescent and College level football players of Nadia District. Forty four (N=44) subjects were selected randomly. Out of 44 players, 22 players were form Adolescents and 22 from College level and age ranged between 14-18 years adolescent, 19-22 years College level. To find out the leg explosive strength-Vertical Jump test and kicking ability for distance covered in high drive kicking the ball with prominent strong leg test were conducted. All statistical calculation was done by standard procedure. In order to analyze the data 't' test was used and observed the significant different between Adolescent College level football players. Statistical significance was tested at 0.01 levels. Adult group football players are better in football kicking ability and explosive strength than Adolescent football players. Kicking ability is directly related with explosive strength for both the age group.

Keywords: Football, explosive strength, adolescent

1. Introduction

Soccer is game played by two teams on a rectangular field with the object of driving the ball into the opponent's goal. The ball is controlled and advanced primarily by using the feet; only goal keepers are allowed to handle the ball. Strength is one of the components of physical fitness, like speed, agility, flexibility, endurance and so on. It is the important for successful performance in most types of sports. Strength is a conditional ability. It is perhaps the most important tenability to overcome resistance or act against resistance, ossification and muscle development play considerable roles in the increase of strength. Individuals use different type of strength like maximum strength, explosive strength, and strength endurance. Explosive strength is the ability to overcome resistance with high speed. Kicking is one of the essential skills in soccer. It is used not only clearance in defense. This skill also used the passing and attacking situations. Leg muscle strength is an important Factor for playing soccer and kicking the soccer ball.

2. Methodology

44 regular coaching camp football players were selected as subject of the present study. Among the students 22 were adolescent's football player from 14 -18 years of age and 22 college level football players from 19 – 22 years of age. The average training age of adolescence boys were 3-4 years and college level boys were 6-8 years. In the present study leg explosive strength and kicking ability for distance were selected as the criterion measure of this study experiment of this subjects was measured through vertical jump test and kicking ability for distance covered in high drive kicking the ball with prominent strong leg. The collected data analyzed with the help of software based statistical tools.

3. Results and Discussion

In this part of the report collected data and analysis of data using statistical techniques and results obtained have been presented in tabular form and related discussion has been stated. According to table No. 1 adolescent group the Mean and SD of age, height and weight were 16.2, 162, 51 and 0.52, 2.2, 1.2 respectively adult group Mean and SD were 20.43, 167, 55 and 0.60, 2.4, 1.6.

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Table 1: Mean and SD of Age, Height and Weight of the subjects

Parameter		Age(Yrs)	Ht(cm)	Wt(kg)
Adolescent Group	Mean	16.2	162	51
	SD	0.52	2.2	1.2
Adult Group	Mean	20.43	167	55
	SD	0.60	2.4	1.6

Table 2: Mean SD and difference between adolescent and adult football players in vertical jump facility

Vertical jump ability	Group	Mean	SD	t
	Adolescent	35.90	3.17	
	Adult	45.09	2.01	

df =44-2=42, significant value at 0.01 level = 2.02, 11.63 significant at 0.01 level

Table 3: Mean, SD and t value Adolescent and adult football player in kicking ability

Kicking ability	Group	Mean	SD	t
	Adolescent	38.61	2.37	
	Adult	50.09	2.35	

Level of significant 0.01 levels 2.02, 11.25 significant at 0.01 levels

Table 4: Coefficient of correlation between kicking ability and vertical jump of adolescent football players

Kicking ability Vs Vertical ability	Group	r
	Adolescent football player	0.97
	Adult football player	0.77

Df= 44-2=44, significant value at 0.01 level 0.393, .97 and 0.77 significant at .01 level

Table No. 2 clearly indicate that there is significant difference in between adolescent and adult football player group in vertical jump distance between two Mean (t) was calculated and found a value if 11.63 which is significant of 0.01 level. Table No. 3 clearly indicate that there is significant difference between adolescent and adult football player group in kicking distance between two Mean (t) was calculated and found a value if 11.25 which is significant of 0.01 level. Table No. 3 clearly indicate that Kicking and Vertical ability of adolescent and adult football players coefficient value with the table value found that both relationship were highly positively significant.

4. Conclusion

On basis of the result and discussion the following conclusion drawn

Adult group football players are better in football kicking ability and explosive strength than Adolescent football players. Kicking ability is directly related with explosive strength for both the age group.

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