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Inter relationship of selected motor fitness components on school level football players

Santanu Jana and Proloy Karmokar

Abstract

The purpose of the study was to examine the relationship of selected motor fitness variables on school level football players. Thirty (N=30) young male subjects were randomly selected from the Purba Medinipur district of west Bengal. The ages ranged of the subjects were 15-18 years. In this study speed was measured by 50 yards dash in seconds, agility was measured by Shuttle run (10 x 4 yards) in seconds, strength was measured by standing broad jump in meter, flexibility was measured by Sit and reach test in inch and Cardio – Respiratory Endurance was measured by 600 yards run in seconds. Collected data were statistically treated through calculation of mean, S.D. and coefficient correlation for interpretation, analysis and discussion. Level of significance was chosen at 0.05% level of confidence. For statistical calculation SPSS software 19.0 version was used. The result of the present study revealed that selected motor fitness variables are not significantly related with each other's.

Keywords: motor fitness, football, school boys.

1. Introduction

Motor fitness is a term that describes an athlete's ability to perform effectively during sports or other physical activity. An athlete's motor fitness is a combination of five different components, each of which is essential for high levels of performance. Sports scientist and allied research have made the field of sports a highly competition and specialized in nature. Today therefore every sport including football is played in very organized manner with specificity of playing and preparation of participant in various international events. The Physical and Physiological symptoms such as slowing of reaction time, loss of strains in joints, muscle etc. could be minimized through improvement in physical and motor fitness where, Strength, Speed, and Agility etc. are the more important components in football. Motor fitness is a term that describes an athlete's ability to perform effectively during sports or other physical activity. An athlete's motor fitness is a combination of five different components, each of which is essential for high levels of performance.

Motor Fitness is most often used synonymously with the physical fitness by the coaches but it is very important for the physical education students to understand the basic difference between physical fitness and motor fitness. Physical fitness is used to denote only the five basic fitness components (muscular strength, muscular endurance, cardiovascular endurance, freedom from obesity and flexibility), whereas motor fitness is a more comprehensive term which include all the ten fitness components including additional five motor performance components (power, speed, agility, balance and reaction time), which are important mainly for success in sports. In other words, motor fitness refers to the efficiency of basic movements in addition to the physical fitness.

Motor fitness is the final criterion through which all other elements of physical fitness are seen and measured in man. How continuously and efficiently he performs his daily work in industry, on the farm, in the armed forces, or in athletic performance was at one time the only criterion that man had of physical fitness.

1.1 Purpose of the study

The purpose of the study was to find out the inter relationship between selected motor fitness components on school level football players.

2. Methodology

Thirty (N=30) school level football players were randomly selected from the Purba Medinipur district of west Bengal. The ages ranged of the subjects were 15-18 years. In this study speed was measured by 50 yards dash in seconds, agility was measured by Shuttle run (10 x 4 yards) in seconds, strength was measured by standing broad jump in meter, flexibility was measured by Sit and reach test in inch and Cardio – Respiratory Endurance was measured by 600 yards run in seconds. Collected data were statistically treated through calculation of mean, S.D. and coefficient correlation for interpretation, analysis and discussion. Level of significance was chosen at 0.05% level of confidence. For statistical calculation SPSS software 19.0 version was used.

Table 1: Mean standard deviation and Correlation of coefficient of selected motor fitness components on school level football players.

Variables	Mean	S.D.	R	Remarks
50 yards dash	7.69	0.53	.236	Not significant
Shuttle run	11.25	0.74		
50 yards dash	7.69	0.53	-.331	Not significant
Standing broad jump	1.61	0.20		
50 yards dash	7.69	0.53	-.194	Not significant
Sit & reach test	2.80	1.78		
50 yards dash	7.69	0.53	.322	Not significant
600 yards run	108.37	15.14		
Shuttle run	11.25	0.74	-.229	Not significant
Standing broad jump	1.61	0.20		
Shuttle run	11.25	0.74	.051	Not significant
Sit & reach test	2.80	1.78		
Shuttle run	11.25	0.74	.136	Not significant
600 yards run	108.37	15.14		
Standing broad jump	1.61	0.20	.043	Not significant
Sit & reach test	2.80	1.78		
Standing broad jump	1.61	0.20	-.176	Not significant
600 yards run	108.37	15.14		
Sit & reach test	2.80	1.78	-.007	Not significant
600 yards run	108.37	15.14		

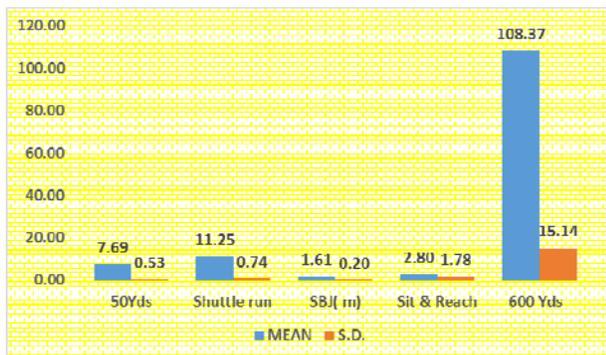


Fig 1: Graphical representation of mean and standard deviation of selected motor fitness components on school level football players.

3. Discussion of Findings

Comparing all the parameters it is to be concluded that-

- i. 50 yard dash is not significantly correlated with shuttle run and the obtained correlation value is .236.
- ii. 50 yard dash is not significantly correlated with standing broad jump and the obtained correlation value is -.331 which is inversely correlated with each other.

- iii. 50 yard dash is not significantly correlated with sit & reach test and the obtained correlation value is -.194 which is inversely correlated with each other.
- iv. 50 yard dash is not significantly correlated with 600 yard run and the obtained correlation value is .322.
- v. Shuttle run is not significantly correlated with standing broad jump and the obtained correlation value is -.229 which is inversely correlated.
- vi. Shuttle run is not significantly correlated with sit & reach test and the obtained correlation value is .051.
- vii. Shuttle run is not significantly correlated with 600 yard run and the obtained correlation value is .136.
- viii. Standing broad jump is not significantly correlated with sit & reach test and the obtained correlation value is .043
- ix. Standing broad jump is not significantly correlated with 600 yard run and the obtained correlation value is -.176 which is inversely correlated.
- x. Sit & reach is not significantly correlated with 600 yard run and the obtained correlation value is .007

4. Conclusion

Within the limitations of the present investigation the conclusions was drawn on the basis of the obtained results: 50 yard dash and standing broad jump, 50 yard dash and sit & reach test, shuttle run and standing broad jump, standing broad jump and 600 yard run is inversely correlated with each other. That means if one variables is improved by some physical activity then other effected. On the other hand rest of the variables are positively related with each other's.

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