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A comparative study of selected motor fitness components between inter-university and inter-college male volleyball players

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Abstract

The purpose of this study was to find out the significant difference of motor fitness between inter-university and inter-college Volleyball player. Researcher collected the data from 30 students (N=30) male inter-university and inter-college players between the age group of 18 to 25 years. The subjects were assigned in to two groups. Group A-inter-university (N₁=15) and group B-Inter-college (N₂=15). All the subject was informed about the objective. Motor fitness components explosive strength, speed, endurance, agility and flexibility are selected for as variables. Student's t-test for independent data was used to determine the significant difference between intercollege and interuniversity players. Unpaid t-test was employed for data analysis. To test the hypothesis, the level of significance was set at 0.05.

Keywords: motor fitness, speed, endurance, agility

Introduction

The term "motor fitness" is most often used synonymously with physical fitness by the physical educators, but it is very important for the physical education student s to know the basic difference between physical fitness and motor fitness. Physical fitness is used to denote only four basic fitness components (muscular strength, muscular endurance, cardiovascular endurance and flexibility), whereas motor fitness is a more comprehensive term which includes all the ten fitness components like four fitness, one of the health-related fitness and five motor performance components, power, speed, agility, balance and reaction time, which is important for the success in sports. In other words, motor fitness refers to the efficiency of basic movements and also to the addition of physical fitness. Sports performance is indeed an aspect of complex human performance, which has several dimensions. Hence, several disciplines of sports sciences are required to work in a coordinated manner to explore the nature and the process of improving performance In the last few decades several disciplines of sports sciences have established e.g. sports medicine, sports physiology, sports training, sports bio-mechanics, sports psychology, sports pedagogy, sports nutrition and so on. These sports sciences work as one integrated unit to give super sports performance.

Physical fitness is a basic requirement for sports achievements. In sport theory and practice, the level of motor abilities is the key factor in majority of sports achievements. Motor ability, sprinting, jumping, flexibility and throwing velocity represent physical activities that are considered as important aspects of the softball game and contribute to the high performance of the team. Fitness testing is useful for assessing and monitoring softball players and is complimentary to develop the technical skills, tactics and cognitive abilities that contribute to performance in softball. Examination of fitness profile would be great importance for optimal construction of the strength/power and endurance training programs to improve performance. Quantifying changes in kinanthropometric and motor fitness variables will also provide valuable information for talent identification and development, and assist fitness and conditioning coaches in evaluating the effectiveness of conditioning programs and prescription of training.

Physical fitness is the capacity to carry out reasonably well various forms of physical activities without being excessively tired and includes qualities importance to the individual's health and

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well-being. Regular participation in vigorous exercise increases physical fitness. A high level of physical fitness is desirable for a full, productive life. Sedentary living habits and poor physical fitness have a negative impact on both health and daily living.

Selection of variables

The following motor fitness components were selected for the purpose of the study.

Motor fitness components

- Explosive power
- Speed
- Endurance
- Agility
- Flexibility

Findings of the study

Table 1: shows the Mean, Standard Deviation and t-value of inter-university and inter-college Male Volleyball Players on selected Motor Fitness Components

Variables	No. of Subjects	Group	Mean	Standard Deviation	't' value
Explosive Power	15	Int. Uni.	238.00	20.60	2.094*
	15	Int. Col.	221.86	21.57	
Speed	15	Int. Uni.	6.53	0.34	3.173*
	15	Int. Col.	6.97	0.41	
Endurance	15	Int. Uni.	2.46	0.32	0.777
	15	Int. Col.	2.57	0.45	
Agility	15	Int. Uni.	10.28	0.58	3.217*
	15	Int. Col.	11.08	0.76	
Flexibility	15	Int. Uni.	12.30	2.94	3.110*
	15	Int. Col.	9.78	1.11	

*significant at 0.05 level $t_{.05} = 1.70$

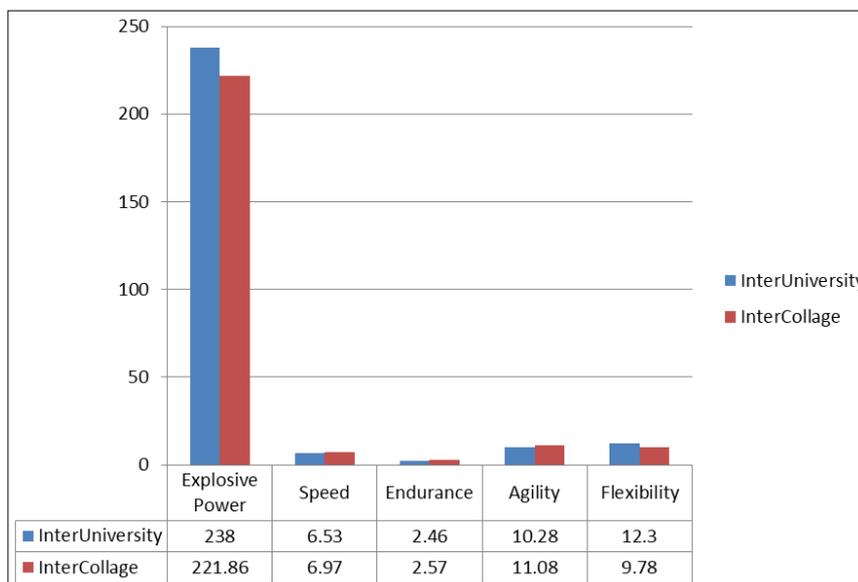


Fig 1: Shows the Mean, Standard Deviation and t-value of inter-university and inter-college Male Volleyball Players on selected Motor Fitness Components.

Conclusion

Explosive Power

Mean and SD values of inter-university the sub –variable explosive power as 238.00 and 20.60. However inter-college had Mean and SD values as 221.86 and 21.57 respectively. The (t) value 2.094 as shown in the table above was found statistically significant, but while comparing the mean values of both the groups it has been observed that inter-university have demonstrate better explosive power than the inter-college players.

Speed

The Mean and SD values of inter-university the sub –variable speed as 6.53 and 0.34 respectively. However inter-college had Mean and SD values as 6.97 and 0.41 respectively. The (t) value 3.173 as shown in the table above was found statistically significant, but while comparing the mean values of both the groups it has been observed that inter-university

have demonstrate better Speed then the inter-college players.

Endurance

The Mean and SD values of inter-university the sub –variable endurance as 2.46 and 0.32 respectively. However inter-college had Mean and SD values as 2.57 and 0.45 respectively. The (t) value 0.777 as shown in the table above was found statistically insignificant, but while comparing the mean values of both the groups it has been observed that inter-university have demonstrate better Endurance then the inter-college players.

Agility

The Mean and SD values of inter-university the sub –variable Agility as 10.28 and 0.58 respectively. However inter-college had Mean and SD values as 11.08 an 0.76 respectively. The (t) value 3.217 as shown in the table above was found statistically significant, but while comparing the mean values

of both the groups it has been observed that inter-university have demonstrate better Agility then the inter-college players.

Flexibility

The Mean and SD values of inter-university the sub –variable flexibility as 12.30 and 2.94 respectively. However inter-college had Mean and SD values as 9.78 and 1.11 respectively. The (t) value 3.110 as shown in the table above was found statistically significant, but while comparing the mean values of both the groups it has been observed that inter-university have demonstrate better Flexibility then the inter-college players.

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