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COMPARISON OF SPEED AMONG SCHOOL LEVEL HOCKEY FOOTBALL AND CRICKET PLAYERS

Dr. A. Manoj Kumar
Assistant Professor, Department of Physical Education, AMET University, Chennai, Tamilnadu

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Abstract:

The purpose of the study was to find out the comparison of speed among school level hockey, football and cricket players. Twenty hockey, football and cricket players were randomly selected from SMRV Higher Secondary School, Nagercoil, Kaniya Kumari District. They were selected as the subjects for this study and they already have experience by participating through interschool tournaments. The range of their age was between 15 to 17 years. The subjects were tested on Speed (50 meters run). The collected data were statistically analyzed by using Analysis of Covariance followed by Scheffe's Post Hoc Test. After the statistical treatment, It was concluded that the hockey players were better in speed than cricket and football players at school level. Based on the results and conclusion it is recommended that the same research may be conduct for the school girl with different sports.

Key Words: Soccer, Speed, Cricket, Football & Hockey

Introduction:

Speed is used in sports for such muscle reaction that are characterized by maximally quick alteration of muscle. It is also the ability to execute motor actions, under given conditions in minimum possible time**.** When the muscle contracts them burn glucose brought to them by the blood initially without the help of oxygen. This gives a by-product called lactic acid, which gathers the muscles and then tip out over in to the blood. Endurance is the product of all psyche and physical organism and system. It is directly or indirectly connected with high performance, accuracy, precision, rhythm, consistency etc, where largely established by the endurance level of the athlete.

Football is a unpredictable game and need to change direction frequently and demand acute alertness of the fellow players and capacity to make quick decisions and act upon them without delay (Belly 1972). In a global society divided by physical and ideological barriers, Soccer popularity is not restricted by age, sex, political, religious, cultural or ethnic boundaries. The fluid, controlled movements of each player express his or her individuality with team game; speed, strength endurance, skill and tactical knowledge are all important aspects of performance. The variety of challenges confronting players may be the primary reason for the games universal appeal**.** (Luxbacher 1996)

Physical size and quickness are perhaps the two most important physiological traits needed by a potential players, strength, power (explosive force), endurance local muscular and cardio-vascular, respiratory stamina and flexibility are essential physiological traits for basket ball players. These traits can be improved greatly through proper training or similar overload efforts. Power is developed by increasing strength through the range of movement while using proper body mechanics. Endurance can be developed by expanding considerable effort with continues repetitions of the desired movements.

Statement of the Problem:

The purpose of the study was to compare the speed level among hockey, football and cricket players of school boys.

Hypothesis:

It was hypothesized that there would be significant difference in speed among school hockey, football and cricket players.

Related Literature:

Ioannis Gissis, et al., (2006) examined a study on Strength and speed characteristics of elite, sub elite, and recreational young soccer players. In this study the elite group presented significantly ($p < 0.05$) higher maximal isometric force, vertical jump height, and pedaling rate, and lower 10 m sprint time in comparison with the sub elite and recreational groups. Also the findings of the present study suggest that the elite young soccer players can be distinguished from sub elite and recreational young soccer players in strength and speed characteristics. Another study investigated by Davis DS, and Barnette BJ (2004) on a Physical characteristics that predict functional performance in Division I college football players. In which the results shows that will help strength and conditioning specialists better understand the variables that predict athletic performance in Division I college football players.

Materials and Methods:

Twenty hockey, football and cricket players were randomly selected from SMRV Higher Secondary School, Nagercoil, Kaniya Kmari District. The age of the players was between 15 to 17 years. The subjects selected had already participated in interschool tournaments. They were healthy and voluntarily participated in this study for assessment of the motor ability components.

Dependent Variables:

Motor Ability Component: Speed

Procedure:

All the Subjects were test on Speed: 50 meters run and scores were recorded as per seconds

Statistical Analysis:

Table 1: Showing the Analysis of Variance on the Means obtained from Cricket, Hockey and Football Players in Speed (Scores in seconds)

	School Players			Source of Variance	Sum of Squares	Df	Mean Squares	F
	Cricket	Hockey	Football					
Means	8.37	7.92	8.42	Between	5.14	2	2.57	4.40*
				Within	59.62	102	0.58	

Table F-ratio at 0.05 level of confidence for 2 and 57 (df) =3.16.

* Significant at 0.05 level

The obtained F value of 4.4 was greater than the required F value of 3.16. Hence, it was proved that there were significant differences between the means in motor ability component speed. Since there were significant differences among cricket, hockey and football players Scheffe's post hoc analysis was made through computation of Scheffe's confidence interval, which is presented in Table II.

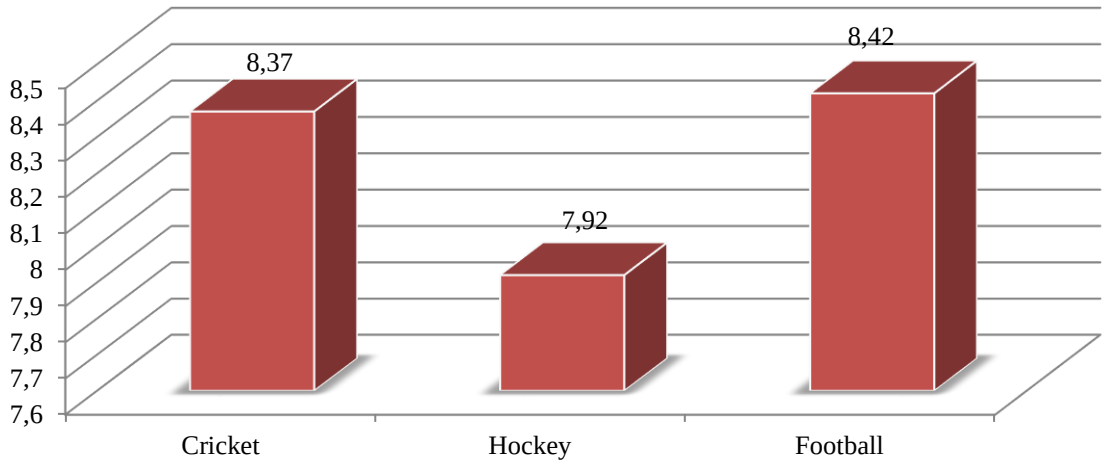
Table 2: Showing Means, Mean Differences and the Required Value of Scheffe's Confidence Interval in Speed (Scores in seconds)

School players			Mean Difference	C. I.
Cricket	Hockey	Football		
8.37	7.92		0.44	0.45
8.37		8.42	-0.05	0.45
	7.92	8.42	-0.49*	0.45

* Significant at 0.05 level.

Table II proved that there was no significant difference between cricket and hockey players and cricket and football players. However there was significant difference between hockey and football players. And the hockey players were significantly better than football players in speed.

Figure 1: Bar Diagram Showing Mean Values of among Cricket, Hockey and Football Players in Speed. (Scores in Seconds)



Discussion on the Results of Speed:

The table-1 reveals the one way analysis of variance of speed among cricket, Hockey and Football players. The calculate F-ratio was 4.40 and the table f-ratio value was 3.16 at 0.05 level of confidence for the degree of freedom 2 to 57. As the calculated of F-ratio was greater than the table F-ratio the study was significant. The table –II showed that Scheffe's confidence interval values of speed among Cricket, Hockey and Football players. From the table-I it is clear that the mean values of Cricket, Hockey and Football players were 8.42, 7.92 and 8.37 respectively.

The Mean difference between Cricket and Hockey, Cricket and Football, Hockey and Football 0.05, 0.49 and 0.44 respectively. The Scheffe's confidence interval was 0.45

Hence there was no significant different among Cricket and Hockey, and Cricket and Football. However there was significant different between Hockey and Football players

Conclusion:

It can be concluded that the results of the study confirm that the hockey players were better in speed than cricket and football players at school level. Based on the results and conclusion it is recommended that the same research may be conduct for the school girl with different sports.

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