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A study of speed ability among football and hockey male players of Bilaspur Chhattisgarh

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Abstract

The aim of the present study is to compare the speed ability among male Football and male Hockey Players of Bilaspur (C.G). For the present study 38 male players were selected during the state championship. Between the age group of 14-16 years i.e. 19 male Football and 19 male Hockey Players of Chhattisgarh who have taken part in the District sports and games during the year 2013-14 were taken for the study. The 50 meter run test was used to assess the speed among Football and Hockey Players. The results of the study show that the Football is having very good speed compare to the Hockey Players. It is recommended that Football and Hockey players must be given good speed training to enhance the performance.

Keywords: Football, speed, hockey players etc.

Introduction

Physical fitness of a player depends on the nature of his game and also external conditions. Various physical fitness elements such as speed, endurance, agility and strength mature with the continuity of training load and game's nature. Court and field games like handball, football, volleyball, basketball and hockey help in developing strength and speed of the players while other games like boxing, gymnastics, wrestling etc. develop agility and power of its players better. Physical fitness of a player depends on the nature of his game and also external conditions. Various physical fitness elements such as speed, endurance, agility and strength mature with the continuity of training load and game's nature. Court and field games like handball, football, volleyball, basketball and hockey help in developing strength and speed of the players while other games like boxing, gymnastics, wrestling etc. develop agility and power of its players better.

Speed is the ability to move quickly across the ground or move limbs rapidly to grab or throw. Speed is not just how fast someone can run (or cycle, swim etc.), but is dependent on their acceleration (how quickly they can accelerate from a stationary position), maximal speed of movement, and also speed maintenance (minimizing deceleration). Movement speed requires good strength and power, but also too much body weight and air resistance can act to slow the person down. In addition to a high proportion of fast twitch muscle fibers, it is vital to have efficient mechanics of movement to optimize the muscle power for the most economical movement technique.

Research has shown that speed can be enhanced by strengthening the muscles (Akgün 1996)^[2]. One of the most significant bio motor abilities required in sports is speed, or capacity to travel or move very quickly. From a mechanical point of view, speed is expressed through a ratio between space and time. The term speed incorporates three elements: (i) reaction time; (ii) frequency of movement per time unit & (iii) speed of travel over a given distance (Bompa 1994)^[6]. Research Studies have revealed that reaction time is independent of speed. Although it is also known that physical training has positive effects on both reaction time (Davranche *et al.* 2006)^[10] and speed (Little & Williams 2005)^[14], the relationship between reaction time and speed has not been extensively investigated in the literature. In the physical education field some sports activities like field games (football and hockey) and long distance running need aerobic capacity to perform the activity in a better manner. The vertical jumping ability and flexibility is important for the basketball and volleyball players to show a better playing performance. Agility also relatively helps the players in leading the game smoothly.

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The games football and hockey are most popular sports in the world in terms of spectator sports. It is fast, quick and aggressive. They are considered as strenuous games because the games demands a high degree of fitness as well as intelligence and alertness of mind, speed, agility, jumping ability which are the basic qualities for the players. To achieve the best possible performance, the training has to be formulated according to the principles of periodization (Bompa 1999) [7]. The training induced changes observed in body composition,

Objective of Study

To find out the speed ability among Football and Hockey Players (male) under 16 years in Distt. Bilaspur, Chhattisgarh.

Methodology

Sampling procedure

The samples for the present study consists of 38 male Football players and 38 male Hockey Players between the age group Of 14 to 16 years who have taken part in the District Bilaspur sports and games during the year 2013-14

Tools

50 meter run is used to collect the data for speed.

Procedure of data collection

The Football and Hockey Players are made to run 50 metre in each batch of two members. The timing was taken by researcher.

Administration of 50 m. dash

The test involves running a single maximum sprint over 50 meters by the time recorded. A thorough warm up should be given, including some practice starts and acceleration. Start from a stationary standard position (hands cannot touch the ground) with one foot in front of the other. The front foot must be behind the starting line. Once the subject is ready and motionless, the starter gives the instructions ‘Set’ then ‘go’. The tester should provide hints for maximizing speed (such as keeping low, driving hard with the arms and legs, and the participant should be encouraged not to slow down before crossing the finish line.

Scoring

Two trials were allowed and the best time is recorded to the nearest 2 decimal places. The timing starts from the first movement (if using a stopwatch) or when the timing system was triggered and finishes when the torso crossed the finish line and /or the finishing time gate was triggered.

Analysis and interpretation of the data

The following statistical procedures were used to analyze the obtained data. To find out whether there was any significant difference between male Football and male Hockey Players, the independent ‘t’ ratio was used. To test the level of significance of difference between the means 0.05 level of confidence was fixed.

Result and Findings of the Study

Table 1: Showing the speed between Male Football and Male Hockey Players of Bilaspur District

Test Item	Group	No.	Mean	S.D.	Mean Difference	t value	Df	sig (2-tailed)
50 m Run	Football	38	6.6535	.38817	.34600	2.773*	38	.009
	Hockey Players	38	6.9995	.40079				

Significant at 0.05 levels, t (0.5) 38 = 2.021

Table 1 indicates that the mean value of the speed of Football player is 6.6535 and Hockey players are 6.9995. There is a difference of 0.346 seconds. The result shows that Football players are having good speed compare to the Hockey players. S.D. of Football and hockey players is 0.388 and 0.400 respectively, whereas the obtained t - value is 2.773 and tabulated value is 2.021 on degree of freedom 38. The Obtained value is greater than tabulated value, so there is a significant difference between the speed of football and hockey players significant at 0.05 levels.

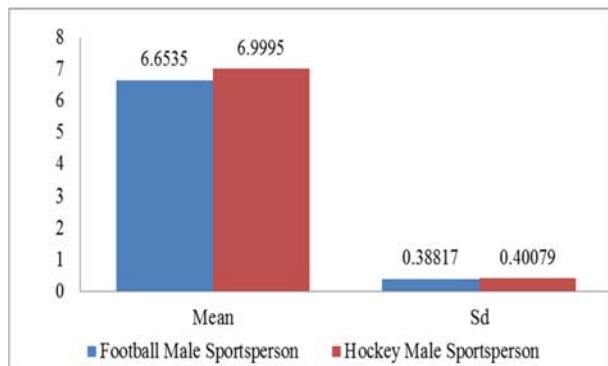


Fig 1: Graphical presentation of Mean and S.D of Male Football and Male Hockey Players of Bilaspur District

Discussion and Conclusion

On the basis of the result of the study, it can be concluded that there was a significant difference between the Football and Hockey of Male Players in relation to speed ability. Football players have speedier in comparison to Hockey players due to the nature of the game, training schedule, ground length and flat running according to game demand. Sorabh Trikha (2014) [17]. Has conducted a study on Comparative Status of Strength and Speed between Different Team Games, he found significant difference between Football and Hockey players in relation to speed ability. Some other studies conducted by Natraj H.V. & Chandrakumar, M. (2006) [16], Uppal and Roy (1986) [18] and Angyan (1989) [3] were support the result of the present study.

Recommendations

It is recommended that Football (male) and Hockey (male) players must be given better training for speed to enhance the performance. Similar studies can be conducted in different sports and games.

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