

A Comparative Study of Motor Fitness Components of Hockey and Football Players

^aYogesh Madanrao Patil, ^bVirendra K. Jumde

^aResearch Scholar, R.T.M Nagpur University Nagpur, MS, India

^bPrincipal, Dr.Haribhau Admane Arts and Commerce College Saoner Nagpur

Abstract

For hockey and football players Speed, Agility, Endurance and Power are the important variables according to the sports sciences. Keeping in view the concept, this study was taken to compare the levels of motor fitness between hockey and football players. Total number of 40 Intercollegiate Hockey and Football Players (20 Hockey and 20 Football players) were selected randomly from R.T.M. Nagpur University, Nagpur. The criterion measures adopted for this study were Speed, Agility, Endurance and power. The data collection tools used in the study were 50 Yard Dash, Shuttle Run, 600mt. Run Walk and Standing Broad Jump. Data of Motors Fitness Components between Hockey and Football players was compared by using independent Sample t test. The level of significance was kept at 0.05 level of significant. It was found that in Motor Fitness components like, Agility, Endurance and Power there was significant difference between Hockey and Football players. But no significant difference was found in Speed between hockey and football players. Mean scores showed that Football Players were better in Speed, Endurance and Power as compare to Hockey Players. While as Hockey Players were better in Agility as compare to Football Players. Based on the results it was concluded that Football Players are good in Speed, Endurance and Power, while as Hockey Players are better in Agility.

KEYWORDS: Motor Fitness, Hockey Players and Football Players.

Introduction

Football and Hockey are games that require skill and speed. Speed is the ability to perform a movement within a short period of time (Neiman, 1995). Speed training is an important football and Hockey related skill related component of physical fitness which enables a player to move from one point to another with faster response time. It has been shown that to improve speed each athlete needs to work on acceleration, starting ability, stride rate, speed endurance, and stride length(Mackenzie, 2001).

Football and Hockey are the most popular games in the world in general. Football and Hockey being most competitive sport, a player who is Physically fit does not only enjoy more but he is also capable of using all the skills attained and mastered by him throughout, right from beginning to end of the game. The twin combination of both skill and physical fitness is indispensable for a player without either of which he will not be able to achieve much, specifically in order to play any ball game competently (Nabhendra Singh, 2010).

However, the word physical fitness and motor fitness are often used interchangeably. The term motor fitness was developed to describe a broad concept than physical fitness. This extensive term means the ability to perform basic motor. A Comparative Study of Motor Performance Level 409 skills efficiently and effectively. Power,

balance, agility, speed, reaction time and kinesthetic perception are the traits of motor performance, and these traits plays major role in enhancing the performance of any game's skills. With a good and well efficient combination of all these motor performance traits a player can give all his/her utmost throughout the most strenuous of competitive matches. (Nabhendra Singh, 2010) Muscular power, often referred to as explosive power, is a combination of speed and strength an important in vigorous performance because it determines how hard a person can hit, jump and push etc. There are various means and method to increase power by increasing strength without sacrificing speed, by increasing speed of movement without sacrificing strength and by increasing both can be stressed by applying strong force through rapid motion. (Nabhendra Singh, 2010)

Agility is the ability to change the direction of body or its parts rapidly' is dependent on strength, reaction time, speed of movement and muscular coordination. Quick start and stops and quick changes in direction are fundamental to good performance in Football and Hockey (Nabhendra Singh, 2010). For hockey and football players Speed, Agility, Endurance and Power are the important variables according to the sports sciences. Keeping in view the concept, this study was taken to compare the levels of motor fitness between hockey and football players.

Materials and Methods

Total number of 40 Intercollegiate Hockey and Football Players (20 Hockey and 20 Football players) were selected randomly from R.T.M. Nagpur University, Nagpur. The data collection tools used in the study were 50 Yard Dash, Shuttle Run, 600mt. Run Walk and Standing Broad Jump. The criterion measures adopted for this study were Speed, Agility, Endurance and power. Data of Motors Fitness Components between Hockey and Football players was compared by using independent Sample t test. The level of significance was kept at 0.05 level of significant.

Results

Descriptive statistical of Speed, Agility, Endurance and power between Hockey Players Football Players

Motor fitness components	Hockey Players			Football Players		
	N	Mean	Standard Deviation	N	Mean	Standard Deviation
Speed	20	8.02	0.60	20	7.02	0.42
Agility	20	10.72	0.61	20	11.58	0.6
Endurance	20	1573.20	284.09	20	1472.00	193.94
Power	20	2.19	0.16	20	3.00	0.18

Table No.2: Independent sample 't' test of Speed, Agility, Endurance and power between Hockey Players Football Players

Components	't' value	df	Sig. (2-tailed)	Mean Difference
Speed	2.04	38	0.068	1.00
Agility	3.17	38	0.042	0.86
Endurance	0.61	38	0.033	1.01
power	1.25	38	0.028	0.81

Discussion of Findings

It was found that in Motor Fitness components like, Agility, Endurance and Power there was significant difference between Hockey and Football players. But no significant difference was found in Speed between hockey and football players. Mean scores showed that Football Players were better in Speed, Endurance and Power as compare to Hockey Players. While as Hockey Players were better in Agility as compare to Football Players. This finding is supported. Berger and Paradis (2010) compared the physical fitness of children in order to compare the physical fitness in 10WA and Tokyo Japan. They recorded that Tokyo children scored better in all motor performance tests accepts on lie sit-ups. They also found that Tokyo children had more chances for activity through physical classes than the 10WA group. Choudri (2002) Studied the comparative physical fitness between students of residential and non-residential schools (aged 12-14 years) and had tested physical fitness index (PFI), BMI and anthropometry measures of 50 residential school children and 40 non-residential school children of Bijapur, Karnataka. They reported that non-residential school children had poor physical anthropometry and showed a less PFI score, as compared to residential school children.

Conclusion

In the present study it was found that in Motor Fitness components like, Agility, Endurance and Power there was significant difference between Hockey and Football players. But no significant difference was found in Speed between hockey and football players. Based on the results in the present research the researcher concluded that Football Players are good in Speed, Endurance and Power, while as Hockey Players are better in Agility.

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