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Analytical study of selected motor abilities between goal keepers and pivot handball players

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Abstract

The aim of the study was to find out the significant difference of selected Motor Abilities between goal keepers and pivot Handball Players. For present study total 80 (40 goal keepers and 40 pivot) male Handball players selected and the age of subjects. The study was confined to All India Inter University Championship and Senior National level Handball Championship participated players were selected as a subject. For this study these Motor Abilities variables are selected: Speed, Explosive leg Strength, Back Strength, Hand Grip Strength and Agility. After collecting the relevant data descriptive statistic and t test was applied. The level of significance was set at 0.05. The outcome of the study shows that significant differences of Speed, Back Strength, Hand Grip Strength and Agility between goal keepers and pivot Handball Players. In other hand study shows that insignificant differences of Explosive leg Strength between goal keepers and pivot Handball Players.

Keywords: Motor abilities, speed, explosive leg strength and back strength

Introduction

Handball is said to be very old game. Research aspect maintains that throughout the human has displayed greater skill with his hand than with his feet. In the game of handball it is all about the combination of catching, passing, dribbling, shooting and diving.

Handball is supposedly one of the Olympic disciplines like, basketball, Hockey, Volleyball, Football etc. It is an indoor game. It is a very fast game of the duration of 70 min each with two halves. In handball seven players are playing at a time. All the players plays equal role to achieve the good performance including goal keeper. In this game the movements of the players are very fast, tactful and strength full. In this game movement speed of the players, explosive strength of the players and players should be agile plays a good role. The players have to perform a number of zigzag movements and straight runs with high speed in accordance with the requirement of the game. Handball like basketball involves positional play where the role of players is very specific. The speed of the ball requires the player to be alert, quick, and agile and having well developed co-ordination, neuromuscular control and postural refers. The surface of the court calls for speed, stamina and strength. A very level of physical fitness all play an important part in providing distinct advantage for specific playing positions particularly at the highest level of performance where there is a high degree of player specialization. (Ghobadi, 2013) ^[1].

A genetically defined personal characteristic or trait, such as manual dexterity and reaction time which contributes to proficiency in a number of motor skills. Motor abilities cannot be easily modified by practice or experience (compare motor skill) (Oxford reference).

General motor ability has been considered as ones level of ability in a wide range of activities. It has been thought as an integrated composite of such individual traits as strength, endurance, power, speed, agility, balance, reaction time, and coordination traits underlying performance in many motor complexes and these traits function in a coordinated manner and in effective sequence to achieve an accurate and efficient movement" (Uppal and Roy, 1989) ^[4].

Motor abilities plays important role in achieving proficiency in games and sports. It is assumed that with participation in sports, the level of motor ability also improves. Motor ability has been defined by Singh (1991) ^[1] as "the present acquired and innate to perform motor skills of a general and fundamental nature,

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exclusive of highly specialized sports and gymnastic techniques". Motor ability status would come about relatively slowly and over a period of time.

Procedure and methodology

For achieving the purpose of the study total 80 (40 goal keepers and 40 pivot) male Handball players selected and the age of subjects. The study was confined to All India Inter University Championship and Senior National level Handball Championship participated players were selected as a subject. For this study these Motor Abilities variables are selected: Speed, Explosive leg Strength, Back Strength, Hand Grip Strength and Agility.

Statistical Analysis

For statistical analysis ‘t’ test was applied and the level of significance set at 0.05.

Results

Table 1: Display the descriptive statistic and t value of Speed between Goal keepers and Pivot Handball Players.

Group	Mean	Std. Deviation	t-value
Goal keepers	4.38	0.13	10.2298
Pivot	4.16	0.04	

t_{0.05(78)}= 1.9908

Table 1: shows the Mean and SD values of Speed between Goal keepers and Pivot male Handball Players were 4.38±0.13 and 4.16±0.04 respectively. The obtained “t” value 10.2298 (1.9908) was found statistically significant, at.05 level of significance.

Table 2: Display the descriptive statistic and t value of Explosive leg Strength between Goal keepers and Pivot Handball Players.

Group	Mean	Std. Deviation	t-value
Goal keepers	31.548	1.099	0.1341
Pivot	31.578	.891	

t_{0.05(78)}= 1.9908

Table 2: shows the Mean and SD values of Explosive leg Strength between Goal keepers and Pivot male Handball Players were 31.548±1.099 and 31.578±.891 respectively. The obtained “t” value 0.1341 (1.9908) was found statistically insignificant, at.05 level of significance.

Table 3: Display the descriptive statistic and t value of Back Strength between Goal keepers and Pivot Handball Players.

Group	Mean	Std. Deviation	t-value
Goal keepers	135.17	3.92	6.3497
Pivot	131.06	1.18	

t_{0.05(78)}= 1.9908

Table 3: shows the Mean and SD values of Back Strength between Goal keepers and Pivot male Handball Players were 135.17±3.92 and 131.06±1.18 respectively. The obtained “t” value 6.3497 (1.9908) was found statistically significant, at.05 level of significance.

Table 4: Display the descriptive statistic and t value of Hand Grip Strength between Goal keepers and Pivot Handball Players.

Group	Mean	Std. Deviation	t-value
Goal keepers	68.86	4.60	4.3669
Pivot	73.26	1.41	

t_{0.05(78)}= 1.9908

Table 4: shows the Mean and SD values of Hand Grip Strength between Goal keepers and Pivot male Handball Players were 68.86±4.60 and 73.26±1.41 respectively. The obtained “t” value 4.3669 (1.9908) was found statistically significant, at.05 level of significance.

Table 5: Display the descriptive statistic and t value of Agility between Goal keepers and Pivot Handball Players.

Group	Mean	Std. Deviation	t-value
Goal keepers	9.13	0.09	2.6667
Pivot	9.17	0.03	

t_{0.05(78)}= 1.9908

Table 5: shows the Mean and SD values of Agility between Goal keepers and Pivot male Handball Players were 9.13±0.09 and 9.17±0.03 respectively. The obtained “t” value 2.6667 (1.9908) was found statistically significant, at.05 level of significance.

Conclusion

- The results validate that, significant differences were found in Speed variable between Goal keepers and Pivot Handball Players.
- The results substantiate that, insignificant differences were observed between Goal keepers and Pivot Handball Players for their Explosive leg Strength variable.
- The result authenticated that, there were significant differences between Goal keepers and Pivot male Handball Players for their Back Strength variable.
- The results powerfully prove that, significant differences were observed between Goal keepers and Pivot male Handball Players for their Hand Grip Strength variable.
- The results validate that, significant differences were found in Agility variable between Goal keepers and Pivot male Handball Players.

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