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Comparison of selected physical fitness variables of school level hockey and cricket players

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Abstract

The purpose of the present study was to compare the selected physical fitness variables of school level Hockey and Cricket players. A total of sixty four (64) school level male Hockey and Cricket players (32 each) from Thiruvavur District were selected as to subjects. The level of performance was considered as District level. Their aged ranged between 14-18 years. The selected physical fitness components muscular strength, muscular endurance, agility, leg explosive power, speed and cardio respiratory endurance. The selected criterion variables are muscular strength was assessed with pull-ups, muscular endurance was assessed with bent knee sit-ups, agility was tested with shuttle run, leg explosive power was tested with standing broad jump, speed was assessed with 50 m dash and cardio respiratory endurance was assessed with 12 minute run/walk test. The collected data were treated with independent 't' test were used. The level of confidence was fixed at 0.05 level. The results of the study indicates that there was a significant difference occurred on agility, leg explosive strength, speed and cardio respiratory endurance on school level hockey and cricket players. But no significant difference on muscular strength and muscular endurance between the hockey and cricket players.

Keywords: Physical fitness, hockey and cricket players

Introduction

The main physical qualities considered relevant to achieve success are Strength, Endurance, Speed, Agility and Flexibility. For the Physical system of the body to be fit, they must function well enough to support the specific activity that the individual is performing. Hockey is a sport requiring high levels of physical fitness. It is one of those rare games which demands not only speed but agility, strength, power and endurance. Hockey players need a combination of technical, tactical and physical skills in order to succeed. Improving aerobic capacity and overall fitness boosts performance on the Hockey field. Cricket is a deceptively demanding sport; players spend a long day on their feet, there are periodic fast sprints when batting, chasing down a ball, and bowling, plus various dynamic movements such as leaping, throwing, and turning quickly. It really is vital that all players should increase their fitness. Fitness is important at all levels of the game, whilst being essential for top level players; it is beneficial for beginners who will improve both their effectiveness and enjoyment through good standards of fitness. Fitness enables a player to cope with the physical demands of the game as well as allowing the efficient use of his various technical and tactical competencies throughout the match. The research scholar is interested to see the difference in fitness between cricket and hockey players as the movements for both the game are similar in nature.

Methodology

A total of sixty four (64) school level male Hockey and Cricket players (32 each) from Thiruvavur District were selected as to subjects. The level of performance was considered as District level. Their aged ranged between 14-18 years. The selected physical fitness components muscular strength, muscular endurance, agility, leg explosive power, speed and cardio respiratory endurance. The selected criterion variables are muscular strength was assessed with pull-ups, muscular endurance was assessed with bent knee sit-ups, agility was tested with shuttle run, leg explosive power was tested with standing broad jump, speed was assessed with 50 m dash and cardio respiratory endurance was assessed with 12 minute run/walk test. The collected data were treated with independent 't' test were used. The level of confidence was fixed at 0.05 level.

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Results

Table 1: Computation of 't' test for physical fitness components of school level hockey and cricket players

Components	Group	Mean	S.D.	T
Muscular Strength	Hockey	7.23	3.15	0.624
	Cricket	7.84	3.23	
Muscular Endurance	Hockey	28.25	6.22	1.683
	Cricket	28.04	4.18	
Agility	Hockey	10.57	0.62	2.842*
	Cricket	10.89	0.74	
Leg Explosive Power	Hockey	192	21.76	4.365*
	Cricket	173	20.03	
Speed	Hockey	6.67	0.52	6.452*
	Cricket	7.58	0.56	
Cardio Respiratory Endurance	Hockey	2426.45	236	7.559*
	Cricket	1985.76	203	

* Significant, $t_{0.05}(62) = 1.98$

Discussion on Findings

It was clear from the Table-1 shows that mean and standard deviation values obtained 't' values are 2.842, 4.365, 6.452 and 7.559 which is greater than table value 1.98 with df 62. So there was a significant difference occurred between cricket and hockey players on agility, leg explosive power, speed and

cardio respiratory endurance. But no significant difference on muscular strength and muscular endurance obtained 't' results of 0.624 and 1.683 which is lesser than the table value 1.98 with df 62. The results conformity with other studies are also reported similar result on physical fitness variables among the selected young children (Pate 1990) [3].

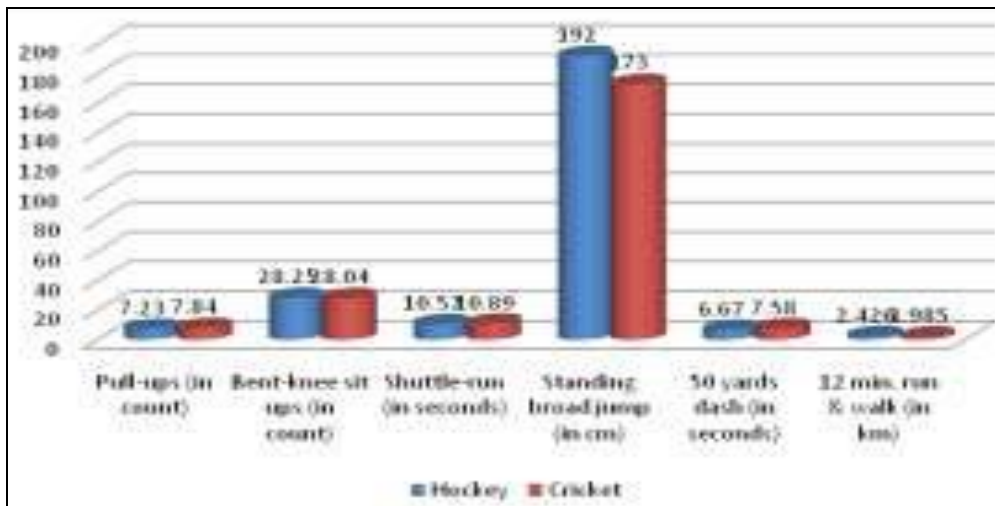


Fig 1: The mean values of selected physical fitness variables of school level hockey and cricket players

Conclusions

- Agility, Leg explosive power, speed and cardio respiratory endurance were found to be significant difference between cricket and hockey players.
- Muscular strength and muscular endurance there was no significant difference between the selected groups.
- The hockey players better in speed, agility, leg explosive power and cardio respiratory endurance compared with school level cricket players.

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