

# A Study on Selected Physical Fitness Parameters Among Hockey and Cricket players

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## Abstract

This study attempted to compare the speed and agility of players of hockey and cricket. A total of 50 hockey and cricket players participated in the study i.e. 25 players from each game. The study's statistical method was the independent t-test. Hockey and Cricket players showed no statistically significant differences in speed or agility, with p-values at 0.05 level of significance, respectively.

**Keywords: Agility, speed, hockey players , etc.**

## 1. Introduction

The essential component of schooling is physical education. The wellbeing of the populace is the country's riches. The goals of physical education include the development of motor skills, knowledge of physical activities, exercise, and the total well-being of an individual. Being physically fit is essential for wellbeing. A proper training regimen is crucial for developing motor skills and physical conditioning. An athlete needs to train properly because failing to do so could lead to a subpar performance and frequently defeat.

Hockey is a sport that calls for a lot of effort and practice. Typically played on a rectangular field, the game is regarded as an outdoor sport. The Goalkeeper is positioned close to the goal post while sporting a fully padded jersey, helmet and hockey stick. Because the ball rushes towards the goal post at a high rate of speed after being struck with a hockey stick, the Goalkeeper must wear protective garments because failure to do so could result in serious injury. Anaerobic systems are predominant in the sport of hockey. The elements of motor fitness like speed and agility are important throughout the entire game. A conditional ability, like strength and endurance, is speed. It has a complex nature because it heavily depends on the functioning of the central nervous system (CNS). Never confuse speed with mechanical speed, which is the amount of distance covered in a given amount of time. Speed is the capacity to carry out motor functions at a rapid pace. Speed is a need for performing motor activities under predetermined circumstances (movement task external factors, Individual prerequisites in the shortest amount of time.

Simply said, agility refers to the capacity for rapid and swift movements. It improves athletic achievements and provides movements elegance. Agility is the controlled capacity to quickly and precisely alter body position and direction in sports and physical education. The sportsperson exhibits a variety of talents, fundamental motions, and motor abilities when playing. When performing movements like blocking, pushing, throwing, jumping and running, a significant level of power and strength is needed in both the lower and upper extremities. Around the world, hockey is an extremely well-liked sport. Although performing these types of motions needs a great degree of balance, motor fitness, and coordination ability, speed and agility are some of the primary motor fitness components of both Hockey and Cricket. Hockey are only superficially comparable in nature, although both games are played with high levels of intensity and swifter shifts in movement direction.

## 2. Objectives of the study

1. To compare the agility of hockey and cricket players.
2. To compare the speed of hockey and cricket players.

## 3. Delimitation

1. A total of 50 female players- 25 from hockey and the remaining 25 from cricket- were included in the study.
2. Only players between the ages of 18 and 25 years were included in the study.
3. The variables to be measured were speed and agility.

## 4. Hypothesis

1. There will be a significant difference in agility between hockey and cricket players.
2. There will be a significant difference in Speed between hockey and cricket players.

## 5. Methodology

Following is an illustration of the approach and procedure that were used to conduct this study:

### Selection of the samples

The overall sample size for this study was 50; 25 players from hockey and cricket matches, respectively, were chosen as the samples. Random sampling was used to choose the samples.

### Selection of the tool

**1. Agility:** The handball and basketball players' agility was evaluated using the shuttle run test. The test is administered by marking two parallel lines 10 yards apart on the ground. The two wooden blocks are placed behind one of the lines. The individual is instructed to begin from the other line's back. On the signal for "ready to go," the timer starts the watch, and the subject runs towards the blocks, picks up one block, and then runs back behind the starting line, placing the block there before returning across the starting line with the other block. The timer stops the watch and records the time as soon as the second block is set down.

Scoring: The individuals receive two trials, separated by a short break. The final item's score is calculated to the nearest tenth of a second based on which of the two attempts had better timing.

**2. Speed:** The hockey and cricket players' speeds were assessed using a 50-meter dash

Administration: The sprints test, often known as the 50-meter dash, is used to gauge speed. Boys and girls who are 8 years old and older can take this test. Behind the restraint line, the subject is required to assume any pose. The subjects begin running as quickly as they can after receiving the order to do so until they cross the finish line. A separate helper with a stop watch is needed to keep tabs on each subject's timing from the start of the command, turn off the stopwatch and precisely report the time when the subjects reached the finish line. One successful trial is allowed. In the event that the subject begins the sprint before the command to go or does not begin promptly at the command go, they are instructed to restart it. Scoring: The subjects are scored according to the amount of time that has passed since the start of the race until the finish line was crossed.

**Statistical Technique**

To compare speed and agility among Hockey and Cricket players independent t-test was used.

**Results and discussion**

All results obtained have been presented in different Tables and Figures and interpreted subsequently.

**Table 1.1:** Comparison of Speed between the Hockey and Cricket Players.

	Levene's Test for equality of variances		t-test for equality of means			
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Equal variance assumed	1.085	.847	1.358	28	1.391	0.1867

The table1.1 clearly shows that the p-value 1.391 is greater at 0.05 level of significance, thus an insignificant difference was found in speed between the Hockey and Cricket players.

**Table 1.2: Comparison of Agility between the Hockey and Cricket Players**

	Levene's Test for equality of variances		t-test for equality of means			
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference
<b>Equal variance assumed</b>	1.039	.538	1.511	28	.324	.399

From the table1.2 it is evident that the p-value 0.324 is greater at 0.05 level of significance thus indicating an insignificant difference in agility between the Hockey and Cricket players.

**Conclusions**

Using the results, the following conclusions were made.

1. There are no appreciable differences among players of Hockey and Cricket in terms of agility.
2. There are no appreciable differences in speed between Hockey and Cricket players.

## References

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