International Journal of Research and Development
A Management Review

ISSN: 2319 - 5479

Volume 15 Issue 02 (2026) | Pages: 499-503

Speed Ability as A Key Determinant of Performance in Cricket and Hockey

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Peer Review Information

***Type**: Article*
***Received**: 10 June 2026*
***Revised**: 15 July2026*
***Accepted**: 09 Aug 2026*
***Published**: 07 Sept 2026*

Abstract

Developing speed not only enhances sports performance but also contributes to overall fitness and a healthier lifestyle. Improvement of speed is firmly identified with strength advancement; basically, to advancement of quick speed and receptive strength. To have the option to play out a given engine task (engine capacity), the competitor should apply strength as quick as could really be expected. The current examination is about the correlation of the speed capacity among cricket and hockey players in Chandrapur area. The players were arbitrarily picked for the investigation, 20 cricket and 20 hockey players having age bunch 16-18 years. The information was collected and examined with the assistance of measurable techniques. The outcome and determination were finished up having a critical contrast in speed capacity between both the games. The members were tried on 50 meters run test to evaluate the speed among cricket and hockey players. The above paper studies the speed ability between cricket and hockey players. Regular exercise and active work advance solid muscles and bones. Remaining dynamic can likewise assist you with keeping a sound weight, decrease your danger for type 2 diabetes, coronary illness, and diminish your danger for certain diseases. Response speed is a capacity to respond to a given boost as quick as could be expected.

Keywords: Speed Capacity; Hockey; Cricket; Cardiovascular Capacity; Muscular Strength

How to Cite This Article

Makkasare, G. L. (2026). Speed ability as a key determinant of performance in cricket and hockey. *International Journal of Research and Development: A Management Review, 15*(2), 499-503.

Introduction

Speed is one of the fundamental physical abilities required for effective performance in cricket and hockey. It enables athletes to reach the required position quickly, respond to opponents, execute movements efficiently, and perform sport-specific skills under pressure. Sporting speed should not be understood merely as the ability to move rapidly from one point to another. It is a multidimensional physical quality that includes acceleration, maximum movement velocity, rapid changes in pace, and the capacity to perform high-speed actions repeatedly during competition.

The assessment of speed generally involves determining the time required by an athlete to cover a predetermined distance. However, an individual's performance can be influenced by several factors, including running mechanics, muscular strength, explosive power, physical conditioning, coordination, technique, and environmental conditions. During high-speed movement, athletes commonly progress through different stages. The initial acceleration phase involves rapidly increasing velocity, followed by a phase in which high or maximum velocity is reached and maintained. The final stage involves deceleration, during which movement velocity is intentionally reduced or may decline because of fatigue. The contribution and duration of these phases depend on both individual characteristics and the specific demands of the sport.

In hockey, speed is particularly important because the game involves continuous movement and frequent changes in intensity. Players may need to accelerate suddenly, reduce their pace, change direction, or immediately respond to the movement of opponents and teammates. Therefore, effective hockey performance requires more than straight-line running speed. Players must combine acceleration, agility, balance, coordination, and rapid decision-making with technical skills such as dribbling and ball control. High-level hockey players use variations in speed strategically to create space, overcome defenders, support teammates, and generate scoring opportunities.

Cricket also places considerable demands on different forms of speed. Fast bowlers require explosive movement and high delivery velocity, while batsmen depend on rapid acceleration when running between the wickets. Fielders require quick reactions and short bursts of speed to reach the ball, prevent boundaries, complete catches, and contribute to run-outs. Consequently, speed influences several aspects of cricket performance rather than being restricted to a single playing role. Efficient movement allows players to respond rapidly to changing situations and execute skills within limited time.

Cricket has developed from its historical roots in England into one of the most widely followed team sports across the world. It has gained particular popularity in countries such as India, Pakistan, Sri Lanka, Australia, South Africa, and the West Indies. Although professional cricket is conducted according to established rules and played on specialized grounds, informal forms of the sport are also commonly played in streets, parks, beaches, and open spaces. The accessibility of the basic equipment has helped cricket become popular among people of different ages and backgrounds.

Hockey, similarly, has a long history associated with various forms of stick-and-ball games. Ancient civilizations, including the Greeks, Romans, Persians, and Arabs, participated in games involving sticks and balls that shared characteristics with later forms of hockey. Comparable traditional games also developed in other regions, while sports such as shinty and hurling reflect the broader historical development of stick-based games. Modern hockey has evolved considerably from these early activities and now requires a combination of physical fitness, technical expertise, tactical awareness, and rapid movement.

The importance of speed in hockey extends beyond running ability. Players must perform rapid stick movements, accelerate while controlling the ball, change direction efficiently, and react quickly to developing situations. These demands require well-developed muscular power, agility, coordination, balance, and cardiovascular and anaerobic fitness. The ability to combine speed with technical and tactical skills can significantly influence a player's effectiveness during competitive situations.

Participation in sports such as cricket and hockey also contributes to overall physical and psychological well-being. Regular physical activity can improve muscular strength, maintain healthy bones, support cardiovascular fitness, and reduce the risk of several lifestyle-related health conditions. An active lifestyle is also associated with positive psychological outcomes, including improved mood, reduced stress, and better emotional well-being. In contrast, insufficient physical activity and prolonged sedentary behavior may contribute to obesity, reduced physical fitness, psychological difficulties, and an increased risk of chronic diseases.

From a physiological perspective, speed is influenced by several interconnected factors. These include muscular strength, explosive power, neuromuscular coordination, body composition, technique, flexibility, reaction ability, and the capacity to tolerate repeated high-intensity efforts. External conditions, including the playing surface and environmental resistance, may also affect movement velocity. Thus, developing speed requires a comprehensive approach rather than focusing exclusively on sprinting practice.

Speed is particularly prominent in athletics, where sprint performance is directly determined by an athlete's ability to achieve and maintain high velocity. In team sports such as cricket and hockey, however, speed operates within a more complex performance environment. Players

must combine rapid movement with technical execution, tactical awareness, coordination, agility, and decision-making. Therefore, developing sport-specific speed can provide athletes with an important competitive advantage and contribute significantly to effective performance in both cricket and hockey.

Review of literature

Chinnappa, (1988) directed an examination in which he looked at somatotypes of Indian public plausible and Pakistan public hockey major parts according to their lines of play. 32 Indian and 16 Pakistani players filled in as subjects. Heath-Carter anthropometric somatotype procedure was utilized to survey the somatotypes of the body types and was analyzed between the two nations and furthermore as per the lines of play. The objective guardians and the half backs of Pakistan fell in the mesomorphic ectomorph area, while the Indians were into the endo mesomorphic area. Half lines and fonvards of India overwhelmed the endomorphic area as against meso endomorphic strength of Pakistanis. Full backs of both the nations were endomorphic mesomorph. Overall Asian hockey players were less mesomorphic when contrasted with hockey players of driving nations. Indians had thicker skinfiolds than Pakistani players showing more noteworthy mass subsequently prompting lesser portability and adaptability.

Uppal AK^^., Datta AK (1988) in their examination to distinguish engine parts which can help anticipate execution in hockey, chosen 74 male hockey players from various colleges of India. Engine parts surveyed were 50 yard run, hold strength, SBJ, evade run, dynamic equilibrium test. The standard measure was playing capacity in hockey dependent on the Strait Field Hockey rating scale. Zero request and different relationships uncovered that the playing capacity altogether identified with the joined commitment of the left grasp strength, equilibrium and speed. Different relapse examination performed to create condition from playing capacity in hockey was Xc = 0.0552X3 - 0.2345X5 - 0.8883X1 - discernment. It was inferred that it is feasible to foresee playing capacity in hockey dependent on speed, left grasp strength and equilibrium taken together.

Sorabh Trikha 2014-17, has led an examination on Comparative status of solidarity and speed between various group games, he discovered huge contrast among cricket and hockey players corresponding to speed capacity. Some other studies conducted by Natraj H.V. & Chanddrakumar, M. (2006), Uppal and Roy (1986) and Angyan (1989) were support the result of the present study.

Keogh JW^^, Weber CL, Dalton CT (2003) built up a compelling testing battery for female field hockey by utilizing anthropometric, physiological, and expertise related tests to recognize local delegate (Rep, n = 35) and neighborhood club level (Club, n = 39) female field hockey players. Rep players were fundamentally less fatty and recorded quicker occasions for the 10-m and 40-m runs just as the Illinois Agility Run (with and without spilling a hockey ball). Rep players likewise had more noteworthy vigorous and lower body strong force and were more precise in the shooting exactness test, $p < 0.05$. No huge contrasts between bunches were obvious for tallness, weight, speed decrement in 6 x 40-m rehashed runs, handgrip strength, or pushing speed. These outcomes show that %BF, running pace, spryness, spilling control, vigorous and solid force, and shooting precision can recognize female field hockey players of changing norms.

Objective of the study

To compare the speed ability among the hockey and cricket players in Nagpur District.

Methodology

The size and selection of the sample, the variable and the control employed the sources of data, the tools and the method of gathering data, the description of data gathering instruments and the statistical procedure used in the analysis are carefully described.

Sampling Procedure

The samples of the present study consists of 20 cricket and 20 hockey players in Nagpur district having age group 16-18 years.

Tools

50 meter run is done to collect the data for speed

Administration of 50 m. dash

The test includes showing a solitary most extreme run more than 50 meters to the time recorded. An exhaustive warm up ought to be given, including some training starts and increasing speed. Start from a fixed standard position (hands can't contact the ground) with one foot before the other. The front foot must be behind the beginning line. When the subject is prepared and unmoving, the starter gives the guidelines 'Set' at that point 'go'. The analyzer ought to give clues to augmenting speed, (for example, keeping low, driving hard with the arms and legs, and the member ought to be urged not to back off before intersection the end goal.

Scorings

Two preliminaries were permitted and the best time is recorded to the closest two decimal places.The timing begins from the principal development or when the planning framework was activated and completes when the middle crossed the end goal or completing get was activated.

Analyzing the data

The following statistical procedures were used to analyze the difference of the speed ability between cricket and hockey players.

Results and findings

Speed ability between cricket and hockey players

Test item	Group	No.	Mean	S.D.	T value	Df
50 m Run	Cricket	20	6.651	0.3880	2.773*	38
	Hockey	20	6.997	0.4006		

The above table shows that the mean value of a speed of cricket player is 6.651 and the mean value of speed of the hockey player is 6.997. The result shows that the cricket players have good speed value as compared to the hockey players.

Graphical presentation

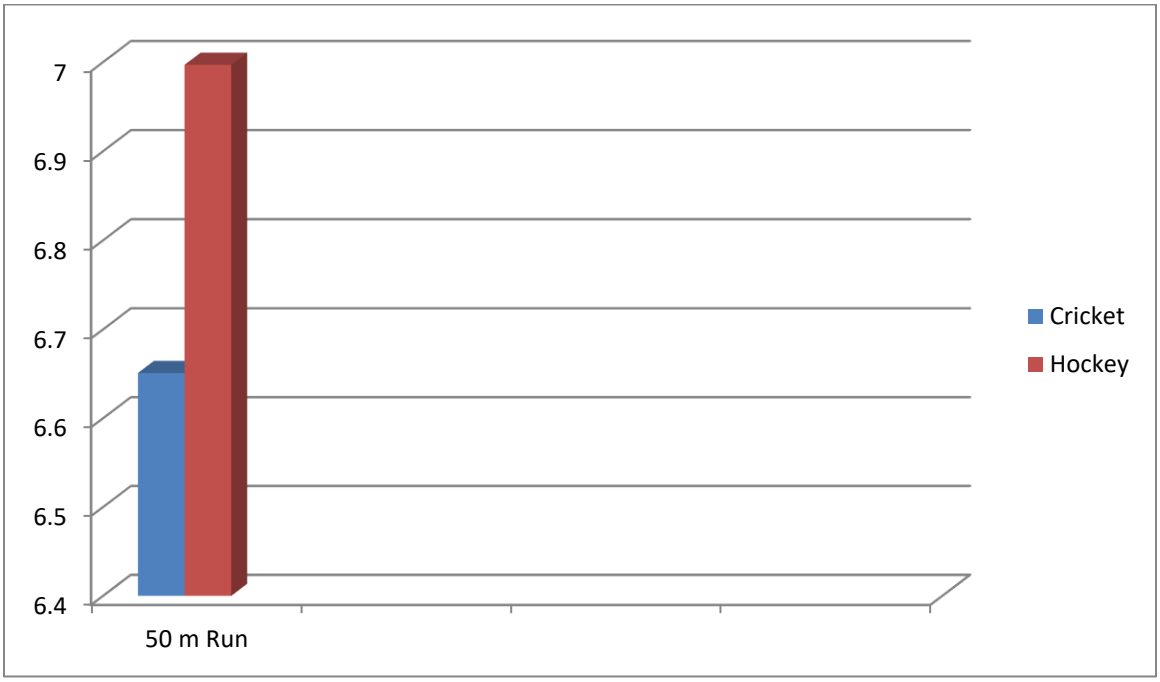

Fig. 1. *Comparison of 50 m Run Performance Between Cricket and Hockey Players*

Discussion and Conclusion

Hockey players demonstrated higher speed performance compared to their cricket counterparts. This variation can be attributed to the nature of hockey training routines, which place greater emphasis on quick bursts of speed, agility, and constant movement. Additionally, the shorter field dimensions, high-intensity gameplay, and frequent sprinting involved in hockey contribute to better development of speed capacity. In contrast, cricket involves more intermittent movement patterns, with bursts of activity followed by longer periods of rest, which may not enhance speed to the same extent. Thus, the demands and structure of each sport play a vital role in shaping the speed ability of their respective athletes.

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