E-ISSN:2319-3050

Research Article

Sports Training & Fitness

International Journal of Research Padagogy and Technology in Education and Movement Sciences

2023 Volume 12 Number 02 APR-JUN

Publisher

www.theuniversityacademics.com

COMPARATIVE ANALYSIS BETWEEN HOCKEY AND FOOTBALL MALE PLAYERS FOR THEIR SPEED AND AGILITY COMPONENTS

Singh B.[1*], kaur R.[2]

DOI: https://doi.org/10.55968/ijems.v12i02.345

[1*] Bakhsis Singh, PhD Scholar, Department of Physical Education, Punjabi University, Patiala, Punjab, India.

[2] Romanpreet kaur, M.P.ED student, Department of Physical Education, Punjabi University, Patiala, Punjab, India.

The aim of this study was to find out the comparative analysis between hockey and football male players for their speed and agility components.The main purpose of the study was to evaluate the differences between speed and agility of male hockey and football players of Punjabi university, Patiala. The data was collected on 30 male players of hockey and football (H=15 & F=15) of Punjabi university Patiala. For the purpose of data collection Semo Agility test and 50-Meters dash speed test were applied to check their Agility and Speed. After collection of relevant data, paired test was employed on the mean values of measurements of speed and agility. The level of significance was set at 0.05.Findings showedthat there was significant difference between hockey and football male players for their agility and speed components.

Keywords: Hockey, Football, Agility, Speed

Corresponding Author

Bakhsis Singh, PhD Scholar, Department of Physical Education, Punjabi University, Patiala, Punjab, India.
Email: Bakhsissingh001@gmail.com

How to Cite this Article

Bakhsis Singh, Romanpreet kaur, COMPARATIVE ANALYSIS BETWEEN HOCKEY AND FOOTBALL MALE PLAYERS FOR THEIR SPEED AND AGILITY COMPONENTS. IJEMS. 2023;12(02):226-230.
Available From
https://ijems.net/index.php/ijem/article/view/345

To Browse

Manuscript Received	Review Round 1	Review Round 2	Review Round 3	Accepted
2023-03-15	2023-03-28	2023-04-25	2023-05-09	2023-05-01

Conflict of Interest	Funding	Ethical Approval	Plagiarism X-checker	Note
NIL	NO	YES	17	

Introduction

Hockey is the most thrilling and spectacular sports in the world. It is a symbol of the ruggedness and skill, dangerous to certain extent but very exciting from start to finish. Field Hockey is a universally played game and one of the most popular team sports among the field sports included in the Summer Olympic. Other than Olympic game, important hockey tournaments include Hockey World Cup, organized by International Hockey Federation (FIH), World League, Champions Trophy, organized by International Hockey Federation (FIH) and Junior World Cup, organized by International Hockey Federation (FIH) etc. Several Nations around the world are also running extensive junior, senior, and masters club tournaments under the aegis of International Hockey Federation (FIH) otherwise called as Federation International de Hockey in French and its affiliating Hockey Association in respective countries. The world apex body responsible for establishing the Hockey Rules Board and developing the rules of the game is FIH.

Hockey players require high aerobic and anaerobic power, good agility, joint flexibility, and muscular development, and are capable of generating high torques during fast movements. A lean body is desirable for sports like field hockey. As performance this sport requires one to carry one's body weight over a distance.

The rules and principles of football is made by the International Football Association Board (IFAB). IFAB is a football body composed of the four British FAs and FIFA which is responsible for the Laws of the Game worldwide (IFAB, 2020). The International Football Association Board (IFAB)'s booklet entitled 'Laws of the Game 2020/21' (which contained football rules endorsed by FIFA) has aptly remarked that – Football is the greatest sport on earth and has been played in every National many different levels.

Speed is the rate at which a person can propel his body or parts of his body. Directional skill that combines acceleration, explosiveness, and change of direction as well as rapid movement and direction change of limbs" "Even more confusing has been the introduction of whole-body change of direction as well as rapid movement and direction change of limb. Include whole body change of direction as well as rapid movement and direction change of limbs.

Agility in sport is defined as ''a rapid whole-body movement with change of velocity or direction in response to a stimulus''.

Aim of Study

01. To compare the agility between football and hockey male players.
02. To evaluate the speed between football and hockey male players.

Material and Methods

The study was conducted on National/ Inter-University hockey and football male players and their age ranges from 18-25 years. A total thirty (N-30) 15 hockey and 15 football male players were selected as subjects for the present study. The study is entitled as "Comparative analysis between hockey and football male players for their Speed and Agility components".

Figure 1: Description of selection of subjects.

Enclosed as Annexure 01

Description of selected equipment and their measurement units

SEMO AGILITY TEST (SOUTHEAST MISSOURI)

Description of Agility Test

The SEMO Agility Test is a measure of running agility suitable for testing field sport athletes (Kirby, 1971). This test is different from many other agility tests in that it incorporates backwards and sideways movements too.

Purpose: To test the ability to manoeuvre the body in a forward, backward and sideward direction.

Equipment Required: Marker Cones, measuring tape, non-slip surface, stopwatch, pen paper, watch and whistle.

Pre-Test: Explain the test procedures to the subject. Perform screening of health risks and obtain informed consent. Prepare forms and record basic information such as age, height, body weight, gender, test conditions. Measure and mark out the course. Ensure that the participants are adequately warmed-up.

Test Layout: Set up the cones as illustrated in the diagram. Four cones are required, making a rectangle 12 x 19 feet (this is the dimensions of a standard basketball court free throw area).

For the original test description, the measurement was in feet, which converts to 3.7 x 5.8 meters, though for some reason 3.6m x 5.7m is sometimes used.

Procedure: Start with one foot behind the start line, no rocking movement is allowed. Hand timing starts from the first movement from the set position. Starting at cone 1, move to cone 2 using a side-stepping motion, then turn around the cone and run backpedal to cone 3. Once you are around cone 3, sprint forwards to cone 1, go around the cone and backwards running again to cone 4. Once around cone 4, sprint forwards to cone 2, then sidestep back to the starting cone 1. Remain facing forwards towards the baseline throughout the test. Two trials are allowed.

Scoring: The stopwatch is started with the starting command "go" and stopped when the subject returns to the start/finish line. The fastest time of two trials to the nearest one decimal place is recorded. A good score for males would be greater than 10.5 seconds, for females greater than 12.2 seconds.

50 METER DASH TEST

Description of Speed Test

Sprint or speed tests can be performed over varying distances, depending on the factors being tested and the relevance to the sport. The 50 Meter Sprint is part of the International Physical Fitness Test.

Purpose: The aim of this test is to determine acceleration and speed.

Equipment Required: Measuring Tapeor Marked track, Stopwatch, Cone, Markers, Flat and clear surface of at least 70 meters.

Pre-Test: Explain the test procedures to the subject. Perform screening of health risks and obtain informed consent. Prepare forms and record basic information such as age, height, body weight, gender, test conditions. Measure and mark out the test area. Perform an appropriate warm up.

Procedure: The test involves running a single maximum sprint over 50 meters, with the time recorded. A thorough warm up should be given, including some practice starts and accelerations. Start from a stationary standing position (hands cannot touch the ground), with one foot in front of the other. The front foot must be behind the Starting line. Once the subject is ready and motionless, the starter gives the instructions "set" then "go.". The tester should provide hints for maximizing speed (such as keeping low, driving hard with the arms and legs) and the participant should be encouraged to not slow down before crossing the finish line.

Statistical Technique

For the statistical procedure Descriptive statistics was used in which Mean and Standard Deviation was calculated. In order to find out the differences between hockey and football male players for their speed and agility variables, the Paired t-test was applied. The level of significance to test the hypothesis was set at 0.05 accordingly; online SPSS software was used.

Results

Table 1: Mean and Standard Deviation of Hockey and Football Male Players for their Speed components.

Enclosed as Annexure 02

The table 4.1 & figure 4.1 reveals that the mean and standard deviation of hockey and football male players for their speed variable was recorded as 8.11+_0.53 & 7.24+_0.73 respectively. The calculated t- value for hockey and football male players for their speed variable was 3.7223*, which is greater than the tabulated t-value at 0.05(28) =1.70 level of significance. So, it implies that there was significant difference between hockey and football male players for their speed components.

Table 2: Mean and Standard Deviation of Hockey and Football Male Players for their Agility components

Enclosed as Annexure 03

Table No 2. Reveals that the mean and standard deviation of Hockey and Football male players for their agility variable was recorded as 13.41 +_0.68 & 9.39 +_0.69 respectively. The calculated t-value of hockey and football male players for their agility variable was 16.0278*, which is greater than the tabulated t-value at 0.05(28) =1.70 level of significance. So, it indicates that there was significant difference between hockey and football male players for their agility components.

Discussion

The present study was designed to compare hockey and football male players for their speed and agility variables. Total 30 male players (15 hockey and 15 football players) between age 18-25 from Punjabi university Patiala were selected as subjects. To know the comparison or difference between hockey and football players investigator had selected following two Physical fitness components as variables.

01. Speed

02. Agility

Conclusion

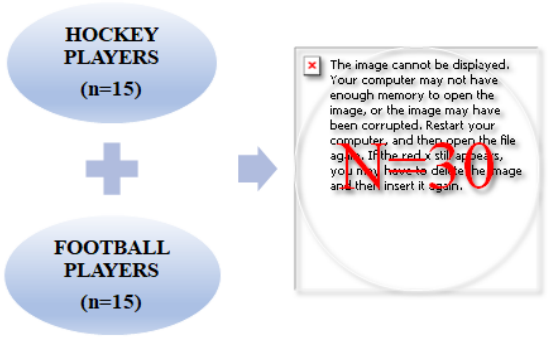
SPEED: The results show that the football male players have greater speed in comparison to Hockey male players. It could be due to the nature of the game, training schedule, ground length and flat running according to the demand of game. The study by Sorabh Trikha (2014) supports the findings of this study. Sorabh trikha (2014), conducted astudy on Comparative Status of Strength and Speed between Different Team Games. In his results he found that there exists significant difference between Football and Hockey players in relation to speed ability. Some other studies conducted by Uppal and Roy (1986) and Angyan (1989) falls in same line and supports the result of the present study.

AGILITY: The result of the study concludes that the timings of footballers for agility is less than hockey players, which indicates footballers have higher agility as compared to hockey players. The result of the study is supported by the study Titoria and Bisht (2019), which concludes that the mean agility timings of footballers is less than hockey players. So, it depicts that the football players are more agile and have good agility as compared to hockey players.

Annexure

Annexure 01

Figure 1: Description of selection of subjects.



Annexure 02

Table 1: Mean and Standard Deviation of Hockey and Football Male Players for their Speed components.

Group	N	Mean	Standard deviation	Standard error Mean	T-value	P-value
Hockey Players	15	8.11	0.53	0.13	3.7223	0.00
Football Players	15	7.24	0.73	0.18		

Annexure 03

Table 2: Mean and Standard Deviation of Hockey and Football Male Players for their Agility components

Group	N	Mean	Standard deviation	Standard error Mean	T-value	P-value
Hockey Players	15	13.41	0.68	0.17	16.0278*	0.00
Football Players	15	9.39	0.69	0.17		

Reference

Ananth S. (2018). Comparison of selected physical fitness variables of school level hockey and cricket players. International Journal of Yogic, Human Movement and Sports Sciences, 3(2): 939-940. *[Crossref][Google Scholar]*

Montgomery, D. L. (2006). Physiological profile of professional hockey players – a longitudinal study. *Applied Physiology Nutrition Metabolism, 31, 181–185 [Crossref][Google Scholar]*

The International Football Association Board (2020). Laws of the Game 2020/21. Zurich, Switzerland. *[Crossref][Google Scholar]*

Johnson & Nelson 2019. Sarthak eConnect. https://www. sarthaks. *com/ [Crossref][Google Scholar]*

Baechle, T. R. 1994. Essentials of Strength and Conditioning. *Champaign, IL: Human Kinetics [Crossref][Google Scholar]*

SINGH SIDHU, A. , & SINGH, M. (2022). KINEMATICAL ANALYSIS OF HURDLE CLEARANCE TECHNIQUE IN 110M HURDLE RACE. *International Journal of Behavioral Social and Movement Sciences, 4(2), 28–35. Retrieved from [Article] [Crossref][Google Scholar]*

Singh, A. , & Singh , D. M. (2013). *PROMOTION OF RESEARCH CULTURE –ENHANCING QUALITY IN HIGHER EDUCATION. International Journal of Behavioral Social and Movement Sciences, 2(2), 202–208. Retrieved from [Article][Crossref][Google Scholar]*

SINGH, M. , & SINGH SIDHU, A. (2016). A COMPARATIVE STUDY OF BODY COMPOSITION AND RELATIVE HEALTH STATUS AMONG RESIDENT AND NON-RESIDENT STUDENTS IN DIFFERENT SCHOOLS OF J&K. *International Journal of Behavioral Social and Movement Sciences, 5(3), 08–13. Retrieved from [Article][Crossref][Google Scholar]*

Singh Nathial, D. M. (2012). ANALYZING THE CREDIT BASED SYSTEM IN PHYSICAL EDUCATION. *International Journal of Behavioral Social and Movement Sciences, 1(3), 172–176. Retrieved from [Article][Crossref][Google Scholar]*

SHARMA, N. P. , & SINGH, M. (2014). *SENIOR AGE GROUP RELATIVE EXERCISES AND IMPACT ON THEIR LIFESTYLE. International Journal of Behavioral Social and Movement Sciences, 3(04), 78–82. Retrieved from [Article][Crossref][Google Scholar]*

CHAND PURI, P. , MISHRA, P. , JHAJHARIA, B. , & SINGH, M. *(2014). COORDINATIVE ABILITIES OF VOLLEYBALL IN DIFFERENT AGE GROUPS: A COMPARATIVE STUDY. International Journal of Behavioral Social and Movement Sciences, 3(3), 56–68. Retrieved from [Article][Crossref][Google Scholar]*

Sheppard, J. M. and Young, W. B. *2006. Agility literature review: classifications, training and testing. Journal of Sports Sciences 24(9):919-932 [Crossref][Google Scholar]*

Sorabh Trikha, (2014). Comparative status of strength and speed between different team games. Global journal for research analysis, 3(7), 253. *[Crossref][Google Scholar]*

Singh, M. , Kadhim, M. M. , Turki Jalil, A. *et al. A systematic review of the protective effects of silymarin/silibinin against doxorubicin-induced cardiotoxicity. Cancer Cell Int 23, 88 (2023). https://doi.org/10.1186/s12935-023-02936-4 https://cancerci.biomedcentral.com/articles/10.1186/s12935-023-02936-4 [Article][Crossref][Google Scholar]*

Mandeep Singh Nathial, Analysis of set shot in basketball in relation with time to perform the course and displacement of center of gravity, American Journal of Sports Science, Vol. 2 Issue. 5 pp: 122-126 (2014). Retrieved from https://www. *sciencepublishinggroup.com/journal/paperinfo.aspx?journalid=155&doi=10.11648/j.ajss.20140205.13 [Crossref][Google Scholar]*

Mandeep Singh (2010). Evaluation And Improvement Of Sports Techniques Through Biomechanical Updated Analyzing Technology, University News, Journal of Higher Education Association of Indian Universities, Association of Indian Universities, Vol:48:Issue. 05;2010 Pp45-57, 2010. *sciencepublishinggroup.com/journal/paperinfo.aspx?journalid=155&doi=10.11648/j.ajss.20140205.13 [Crossref][Google Scholar] [Crossref][Google Scholar]*

Titoria S, Bisht M. Comparative Study of Speed and Agility among Football and Hockey Female Players of LNIPE Gwalior. International Journal of Physical Education & Sports Sciences 2019;3(14):131-132. *[Crossref][Google Scholar]*