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## A comparative study of general motor abilities of handball and hockey players

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### Abstract

The purpose of the study was to determine and compare different general motor abilities of national/interuniversity level handball and hockey players of Haryana. A random sampling of 50(25 from each game) male players of these games were selected from different district of Haryana at national/interuniversity level, between the age group of 18-24 years. Only three test items named medicine ball throw, 60 yard dash and standing broad jump were tested on different team game players. The data were collected through Barrow General Motor Ability test and t-test was applied to find the result of motor abilities. After analyzed the data it observed that Handball players are better in shoulder strength and explosive power of legs. Hockey players are more speedy than handball players.

**Keywords:** Shoulder strength, Speed, Explosive power of legs, Handball and Hockey players

### Introduction

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” (Prof. Youb).

Basketball, handball, volleyball, football, hockey and netball are athletic games involving its participants in arrange of demanding motor skills. The team game contributes to the group efforts of the players. This term used to identify those games in which a group of players representing in a single unit may participate with another group or team of players equal to them. Amongst the most popular team games are handball, hockey, netball, cricket, korfbal, football, volleyball and basketball. Speed means the capacity of moving a body part or whole body with the greatest possible speed or velocity. Different games develop speed differently. All most all games require fast and explosive movements.

Speed means the capacity of moving a body part or whole body with the greatest possible speed or velocity. Different games develop speed differently. All most all games require fast and explosive movements. When a wrestler performs, he develops reaction and movement speed ability. A 800 meters runner improves his speed endurance. All motor abilities such as agility, explosive power, strength etc depends upon speed factor of fitness.

Power is indispensable for the full realization of various motor abilities i.e. strength, speed, Coordinative ability, endurance etc. Power is very important for performing the movement with high degree of skill. On the other hand power is also affected by the degree of skill. Strength-In different games, some amount of resistance has to be overcome, depending upon the magnitude and type of resistance to be tackled in various games. The players of different games develop different levels of strength. Strength is one of the most important factors of physical fitness. Different sports need the different types of strength. In every team we need physical fitness of all members of the team for the equal contribution of every member. As we know now a day a healthy mind lives in healthy body and for the team sprit we need every member is to be hale and hearty.

Laxmi Sharma (2011) took a comparative study on Kho-Kho and Kabaddi male players which falls in the age group of 17-27 years. She conducted Barrow Motor Ability Test to measure the status of both team players.

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She observed the variables of test battery like standing board jump, 60 yard dash, softball throw and Zig-Zag run and found that Kho-Kho players significant better in standing board jump, 60 yard dash, softball throw and Zig-Zag run as compare to Kabaddi players. No significant difference found in Medicine Ball Put and Wall Pass test.

### Methodology

The purpose of the study was to analyze and compare the general motor abilities variables between handball and hockey male players. To achieve the purpose of the study 25 handball and 25 hockey of Haryana were selected. The age of the selected subjects ranged from 18 to 24 years. Barrow General Motor ability test items were used to collect the data and t-test was applied to find the result of motor abilities.

### Results and discussion

**Table 1:** Medicine Ball Throw Test

Group	N	Mean(ft)	SD
Handball	25	37.21	3.742
Hockey	25	34.56	3.381

T	DF	Sig. (2-tailed)	MD	SE
2.625	48	0.012	2.648	1.009

As shown in Table-1 that the mean score of Medicine ball throw of Handball and Hockey players are 37.21 and 34.56 respectively and SD of Medicine ball throw of Handball and Hockey players are 3.742 and 3.381 and 't'-value is 2.625 for significant at 0.05 level. It means that handball players are better than hockey in shoulder strength at national/interuniversity level. In handball, players used to throw the ball in every movements of game that is the only reason, shoulder muscles became stronger then hockey players.

**Table 2:** 60 yard dash test

Group	N	Mean(sec.)	SD
Handball	25	7.55	0.479
Hockey	25	7.92	0.349

T	DF	Sig. (2-tailed)	MD	SE
-3.195	48	0.002	-0.379	0.119

As shown in Table-2 that the mean score of 60 yard dash test of Handball and Hockey players are 7.55 and 7.92 respectively and SD of 60 yard dash test of Handball and Hockey players are .479 and .349 and 't'-value is -3.195 for significant at 0.05 level. It means that hockey players better than Handball in speed at national/interuniversity level. The size of hockey field is larger than handball court and hockey players used to run in every movement of game. Long counter attack is another reason of this.

**Table 3:** Standing Broad Jump Test

Group	N	Mean(ft)	SD
Hand ball	25	7.46	0.375
Hockey	25	7.03	0.632

T	DF	Sig. (2-tailed)	MD	SE
3.156	48	0.003	0.464	0.147

As shown in Table-3 that the mean score of Standing Board

jump of Handball and Hockey players are 7.46 and 7.03 respectively and SD of Standing Board jump of Handball and Hockey players are .375 and .632 and 't'-value is 3.156 for significant at 0.05 level. It means that handball players better than Hockey in explosive power of legs at national/interuniversity level. During the game, lots of jumping skills performed by handball players.

### References

1. Adhikari CS. Comparative Relationship of Power, Agility and selected Speed characteristics of Block Jump and Three Striders Jump in Volleyball. (Unpublished master's thesis), Jiwaji University, Gwalior, 1983.
2. Angyanl. Relationship of anthropometrical, Physiological and Motor Attributes to Sports – specific skills. Journal of Sports Medicine and Physical Fitness. 1989; 29(4):369-78.
3. Mazumdar PR. Comparative study of selected Physiological Variables and Motor Ability Components of Rural and Urban students of Tripura. (Unpublished Master's Thesis) Jiwaji University. Gwalior, 2001.
4. Singh A. Comparative Study of Selected Physiological Variables in Badminton, Table tennis and Lawn tennis players. (Unpublished Master's Dissertation) Submitted to the Amravati University, 1990.
5. Srivastava Parkash GN. Advanced Research Methodology. Radha Publications. New Delhi, 1994.
6. Uppal AK, Roy P. Assessment of Motor Fitness Components as Predictors of Soccer Playing Ability. SNIPES Journal. 1989; 9(3):46-49.
7. Natraj HV, Chandrakumar M. Selected Motor Ability variables and Kabaddi performance. Journals of Sports Sciences. 2006; 291:11-16.
8. Chatopadhyay TK. A Comparative Study of Selected Physical Fitness of Soccer and Hockey Players. Unpublished Master's Thesis, Jiwaji University. Gwalior, 1982.
9. Ghosh SS. A Comparative Study on Physical Fitness among State Level Footballers and Volleyball Players. Indian Journal of Applied Research, 2013; 3(8):66-68.
10. Majumdar PR. Comparative Study of Selected Physical and Motor Ability Components of Rural and Urban Tribal Student f Tripura. A unpublished Dissertation, Jiwaji University, Gwalior, 1985.
11. Mangla RN. Comparative Study of Physical and Physiological Variables of Swimmers, Badminton Players and Gymnasts. A thesis submitted to N.S.N.I.S. Patiala, 1982.