

# COMPARISON OF FLEXIBILITY AND SPEED AMONG INTER UNIVERSITY MEN HANDBALL PLAYERS AND HOCKEY PLAYERS

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## ABSTRACT

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*The purpose of present study is to compare flexibility and speed among inter university men handball & hockey players. For the purpose of study was conducted on 100 men Handball and Hockey players of different universities of western India representing in West zone inter university Handball and Hockey championships. The subjects were divided into two age groups 18-22 years (50 samples) and 23-28 years (50 samples). For measuring flexibility forward bent and reach test was used and for measuring speed fifty yards test was used. The statistical mean, standard deviation and t-test was used to measure flexibility and speed among inter university men hand ball & hockey players. The result of the flexibility and speed study revealed that handball men players and hockey men players' age of 18-22 years found no significant difference in flexibility but significant difference found in speed. The result also revealed that handball men players and hockey men players' age group of 23-28 years found no significant difference in flexibility and speed.*

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*Key words: Physical fitness, flexibility and speed*

## 1. Introduction:

Modern sports is a competitive to the hilt, it requires on incredibly exceptional level of fitness, in fact, there can be no sport without fitness. Thus player should be engaging in a serious fitness training programmes to a sport of once choice. R.Lamb, "Physical fitness is the capacity to meet the present and potential challenges of life with success". Clarke (1978) has thus exhorted that physical fitness is a vital biological need, the neglect-

of which handicaps the total effectiveness of the individual. Carolyn Gillespie (2015) Fitness in the game of field hockey is just as important as passing and receiving, scoring, tackling, making saves and playing well. Fitness is a key to success both in short and long term in playing this sport, and importantly, it helps you maintain a healthy and active lifestyle, helping to minimize and prevent injuries.

**Flexibility:** The word flexibility has been derived from the Latin

word 'Flectere' or 'Flexibilis' means 'to bend' and is defined as the ability to bend, pliable. In physical education, sports medicine and allied health sciences perhaps the simplest definition of flexibility is the range of motion (ROM) available in a joint or group of joints. (Deveries 1986, Hebbelinck 1988, Hubley kozey 1991etal.) The ability to engage the part or parts of body in a wide range of purposeful movements at a required speed. (Gallely and Forster 1987) The ability to move joints through a normal range of motion without undue stress to the musculotendinous unit (Chandler etal. 1990). The ability to move the joints or any group of joints through an entire, normal range of motion.

**Speed:** It is the ability to execute motor movements with high speed. These movements may be cyclic or acyclic in nature. Speed is the quickness movements of limb, whether this is the legs of the runner or arms of short putter. "It is performance prerequisite to do motor actions under given conditions (movement task, external factors, individual prerequisites) in minimum of time". (Schnabel 1987) Speed is the integral part of every sport. It

is a psy-chomotor capacity and the related attributes have vital effect on handball and hockey playing performance. A player who is not sufficiently quick can't prevail at top level in modern day sports in general speed can be said as a capacity which empowers a player to move as swift as possible under circumstances at a given level of resistances.

## **2. Purpose of the Study:**

The purpose of present study is to compare the flexibility and speed among inter university men handball & hockey players.

## **3. Methodology:**

The study was conducted on 100 men Handball and Hockey players of different universities of western India representing in West zone inter university Handball and Hockey championships. The subjects were divided into two age groups 18-22 years 50 samples (25 samples handball and 25 hockey) and age group 23-28 years 50 samples. (25 samples handball and 25 samples hockey). Dependent variables 1) Flexibility 2) Speed, independent variables 1) Bend and reach test 2) fifty yards dash test and statistical methods used are Mean, Standard Deviation (SD) & t-test.

4. Results:

Table-1

Sr. No	Variable	Name of test	Handball Men N=25		Hockey Men N=25		Calculated value
			Mean	SD	Mean	SD	
1.	Flexibility	Forward bend and reach test	12.2	5.09	11.68	5.79	0.73

\*  $p < 0.05$  levels

\* Tabulated value 2.00

Table-1: Represents Mean of handball players (12.2) & hockey players is (11.68), Standard Deviation of handball players is (5.09) & hockey players is (5.79) and calculated t-value is (0.73). It is revealed that handball men players and hockey men players age group of 18-22 years found no significant difference in Flexibility.

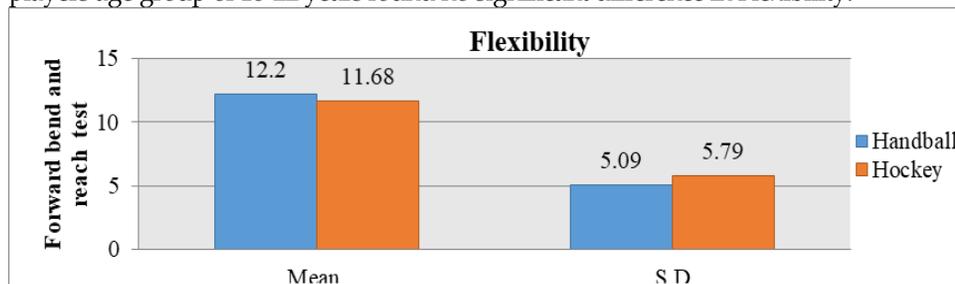


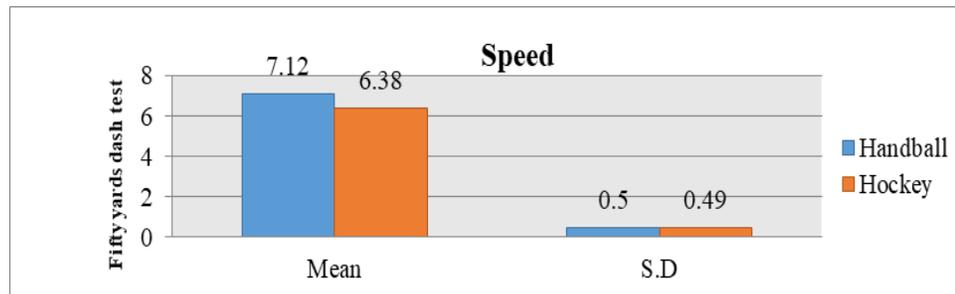
Table-2

Sr. No.	Variable	Name of test	Handball Men N=25		Hockey Men N=25		Calculated value
			Mean	SD	Mean	SD	
1.	Speed	Fifty yards dash test	7.12	0.50	6.38	0.49	2.91*

\*  $p > 0.05$  levels

\* Tabulated value 2.00

Table 2: Represents Mean of handball players is (7.12) & hockey players is (6.38), Standard Deviation of handball players is (0.50) & hockey players is (0.49) and calculated t-value is (2.91\*). It is revealed that handball men players and hockey men players age group of 18-22 years found significant difference in speed.



**Table-3:**

Sr. No	Variable	Name of test	Handball Men N=25		Hockey Men N=25		Calculated value
			Mean	SD	Mean	SD	
1.	Flexibility	Forward bend and reach test	13.32	3.14	11.8	3.48	0.11

\*  $p < 0.05$  levels

\* Tabulated value 2.00

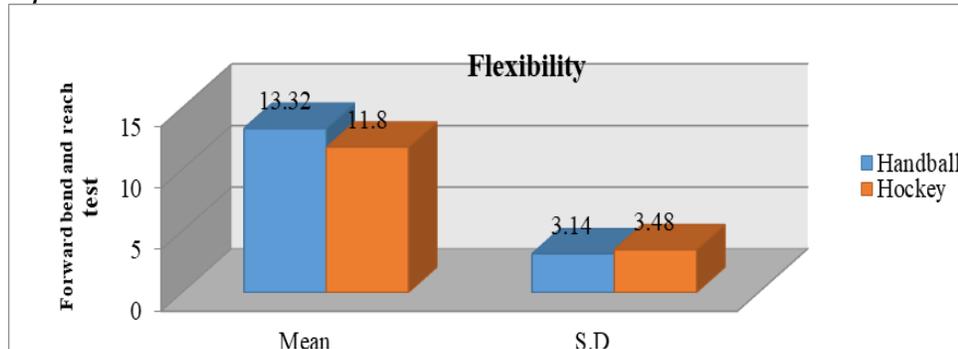


Table-3: Represents Mean of handball players is (13.32) & hockey players is (11.8), Standard Deviation of handball players is (3.14) & hockey players is (3.48) and calculated t-value is (0.11). It is revealed that handball men players and hockey men players age group of 23-28 years found no significant difference in Flexibility.

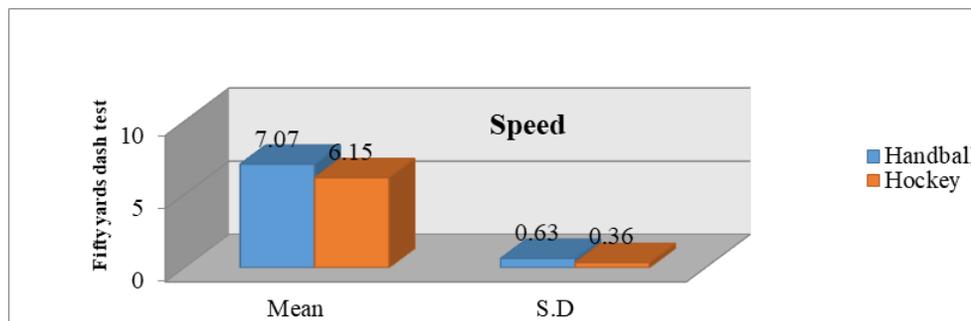
**Table-4**

Sr. No	Variable	Name of test	Handball Men N=25		Hockey Men N=25		Calculated value
			Mean	SD	Mean	SD	
1.	Speed	Fifty yards dash test	7.07	0.63	6.15	0.36	1.05

\*  $p < 0.05$  levels

\* Tabulated value 2.00

Table 4: Represents Mean of handball players (7.07) & hockey players is (6.15), Standard Deviation of handball players is (0.63) & hockey is (0.36) and calculated t-value is (1.05). It is revealed that handball men players and hockey men players' age group of 23-28 years found significant difference in speed.



## **5. Discussion:**

It is revealed in table 1 that handball men players and hockey men players' age group of 18-22 years found no significant difference in Flexibility, but mean value of handball men players found greater. The results shows that handball players where is better flexibility than handball payers. This is due to in handball, powerful throws, jumps and running involves muscles and joints at the same time, which is definitely the result of Flexibility. It is observed in table 2 that handball men players and hockey men players age group of 18-22 years found significant difference in Speed, but mean value of hockey men players found greater. Findings of the researcher as well supported by Ajay Pal Bhadu et. al. (2016)<sup>[1]</sup> Berg et. Al., (1995)<sup>[3]</sup>, and Nafih Cherappurath (2015)<sup>[4]</sup>. Hockey players perform quick muscular movements to cover maximum distance in shortest possible time. This indicates that hockey players are sprinters hence have good speed because they have to run 100 yards long play field in 60 minutes continuously. The table-3 shows that handball men players and hockey men players age group of 23-28 years found

no significant difference in Flexibility but mean value of handball men players found greater. This indicates that handball players showed greater Flexibility when compared with hockey players. This is due to long term muscular flexibility training and practices have positive effect on the total body flexibility of handball players. It is observed in table 4 that handball men players and hockey men players age group of 23-28 years found no significant difference in Speed but mean value of hockey men players found greater. This indicated that hockey players showed more sprinting ability when compared with handball players. Hockey players perform quick muscular movements to cover maximum distance in shortest possible time. This indicates that hockey players are sprinters hence have good speed because they have to run fast in play field when the opponent is not near.

## **6. Conclusion:**

To analysis the data Mean, Standard deviation & t-test was calculated. The significance level was set up at 0.05 levels. The 50 samples degree of freedom is 48 and the table value is 2.00 to

determine the significant difference. Statically no significant difference was found in flexibility among interuniversity level men handball and hockey players both 18-22 and 23-28 years age groups. Handball men players found more in flexibility as compared to hockey men players as per their mean difference in both above age groups. Statically significant differences were found in speed among interuniversity level men handball and hockey players 18-22 years age group. While as no significant difference were found in speed among interuniversity level men handball and hockey players 23-28 years age group. Hockey men players found more in speed as compared to handball men players as per their mean difference in both the above age groups.

### **References:**

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