International Journal of Yoga, Physiotherapy and Physical Education
ISSN: 2456-5067
Impact Factor: RJIF 5.24
www.sportsjournal.in
Volume 2; Issue 5; September 2017; Page No. 63-66

To find out the comparison between agility and balance of basketball and handball players: Comparative study

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Abstract
The aim of the present study is to find out the comparison between Agility and Balance of Basketball and Handball Players. For the study 30 Basketball and 30 handball players were selected for the study. School going boys of Delhi who represented state in Basketball and Handball will be considered as a part of the study. Agility was measured by "Hexagonal Jump Test'', and balance was measured by "Balance Beam Walk Test''. Mean, Standard deviation, t test was used as a statistics tools.

Keywords: agility, balance, basketball and handball

Introduction

The human body is designed for movement and strenuous physical activities exercise is not typically a part of average like style. One cannot expect the human body to function optimally and to remain healthy for extended periods if it is abused or not sued as intended. Thus, physical inactivity regularly is at greater risk of developing hypo-kinetic diseases such as coronary heart disease, hypertension, obesity and muscle skeletal disorders. The best defence against the developing risk is to put the muscles bones, joints, heart, lungs and internal organs to work on a regular basis through a systematic programme of exercises.

Primitive man recognised physical fitness as an absolute necessity for his survival. But modern man. In these electronic and computer age tends to become complacent and forget the importance of physical fitness not only for his efficiency and happiness, but also for the survival of future generation. The right kind an amount of physical exercises would develop organic and muscular power, stamina vigour and the skills involved other factors such as heredity, environment, rest diet and the influence, physical fitness. However physical activity is the sole source of the body. Power is the only known means of acquiring the ability to engage in tasks demanding sustained physical effort. There is a direct relationship between physical exercise and physical fitness.

Now a day more and more individuals particularly boys and girls are attracted by sports actives and increasing the number of nations that are represented in sports arena. As prevention and curative health measures have become more successful throughout the third world war, millions of teenagers should have a chance to enjoy sports

Handball

The sport of handball is a thrilling and exciting indoor game that can best be described as a mixture of soccer and basketball. The ball is passed in quick fine succession up the field until, near the goal then striker through it at the back of the net. The current games were evolved from several different various sports played around the world especially in Eastern Europe.

Handball was first played in 1895 in Germany. It was introduced into the Olympic Games at Berlin in 1936 as 11 aside outdoor games with Germany wining but when but when Introduced in 1972 it was an indoor game with seven a side, the standard six of the team since 1952. The international hand ball federation was formed in 1946. The first international match was held on 3rd September 1925 it did not have its own governing body and it came under the jurisdiction of the international amateur athletic federation [IAAF].

Handball originated in Germany at the end of the nineteenth century. It was introduced to the world by a gymnastic master Konard Kodi. In 1928 eleven handball nations meet in Amsterdam. In 1928 was included in the programme of the game by International Olympic Committee. Handball was included in the Olympic Games in Berlin in 1936. After the Second World War, several handball nations met at an international congress in Copenhagen to re-establish the spirit. The result of this was desolation of I.A.M.F. and the birth of international handball federation in India handball played first in the year 1970.

Handball is no contact game, played either out of doors [Field Hand Ball] or indoor, it is played by two opposing teams. There are twelve players in one team, 10 of them are court players and two are goal keepers. But at one-time players not more than seven do not enter the court. Six of them are court players and one is goal keeper. The remaining five are substitutes. A player may be included in a game or a substitute may be allowed for him. There shall be none in the goal area except the goal keeper. The playing field for field handball is similar to that of soccer, the indoor version requiring a much more limited playing area. A match is started form the centre point, the ball being passed with short or long throws from one player of a team to the other and in this way attacks are built up which culminate in attempts at scoring goal keepers.

Acquired Qualities through Basketball
Physical components of the game were athleticism, strength, quickness, agility, balance and power. The physiological components were speed abilities, explosive strength, speed endurance and strength endurance increasing steadily. In addition to Olympic Games indigenous sports have also become popular in each country. Sports have become an important social and cultural activity of the modern world which is being given the right place it deserves by the nation and societies.

Statement of the problem
The present investigation is intended to explore on the "differences in Agility and Balance between handball and Basketball players at school level".

Delimitations
- The present study was delimited to school boys of Delhi (North east region)
- The present study was delimited to school boys of Delhi who represented state in Basketball and Handball
- The investigation was delimited to Basketball and handball only.
- The age of the subjects was 14 to 16 years.
- For the purpose of the study 30 Basketball and 30 handball players were selected.
- The variables tested were agility and balances.

Limitations
- Heredity, day to day activities, rest period, food habits, life style and family factors could not be controlled.
- The general mood of the subjects while have affected the performance and was recognized as a limitation.
- All efforts made by the research scholar to motivate the students to put up their optimal performances in various test items. But there were no objective measures available to make sure that each performed their optimum.

Definition of the Terms
Agility: Agility is the ability to move quickly and charger directions while maintaining control and balance. Agility is a combination of speed, balance, power and co-ordination.

Balance: Balance is the ability to maintain a position. Balance depends on the interaction of multiple body organs and systems including the eyes, ears, brain and nervous system, cardiovascular system, and muscles. Tests or examination of any or these organs or systems may be necessary to determine the cause of loss of balance, dizziness, or the inability to coordinate movement or activities.

Methodology
In this chapter, selection of the subjects, selection of variables, reliability of the data and the statistical technique for the data has been explained in detail.

Selection of Subjects
The purpose of the study was to compare the Agility and Balance of Basketball and Handball players. For this purpose, the subjects, 30 from each category were selected from the teams

Selection of Variables
The speed, endurance, agility and balance performance of the subjects were measured as the dependent variables.

Selection of Tests
The selected criterion variables were tested by using the standardized tests and are presented in Table -1.

Table 1: Tests Selection

S. No	Variables	Test/Tools
1	Agility	Hexagonal Jump Test
2	Balance	Balance Beam Walk Test

Reliability of Tests
The test used to assess the motor performance, balance beam walk test are all standard tests. However, to establish the reliability test-rested was conducted and calculated co-efficient of correlations between the test and retest of the selected variables were higher than the table value for significance at .05 level. The co-efficient of correlations for the selected variables have been presented in table-II.

Table 2: Intra Class Co-Efficient Correlation Values on Selected Criterion Variables

Sl. No.	Tests	'r' Value
1	Agility	0.93*
2	Balance	0.90*

Hexagonal Jump Test
Purpose: To asses' Agility

Equipment: Stop watch

Marking: A 26 inch per side hexagon on the firm floor. The borders of the hexagon are marked with distinct colour and the six sides were name A to F.

Procedure: The subject stands in the middle of the hexagon facing side 'F' on the command 'go' the subject begin jumping with both feet over side 'A' and immediately back into the Hexagon. Then continuing to face sie 'F' jumping over 'B' and back into the hexagon, side 'C' and back into hexagon side 'D' and back in, side 'E' and back in one side 'F' and back in for one completed revaluations. Similarly, continuously the subject jumps for three revaluations. The elapsed time between the commands go and when the feet enter hexagon after jumping side 'F' for the third time was recorded as the score of the subject.

Scoring: Best of the three trails were conducted and time was recorded in seconds.

Beam Walk Balance Test
Purpose: To assess active balance

Equipment: Stop Watch and an elevated beam approximately 4 inches wide and 20 feet long.

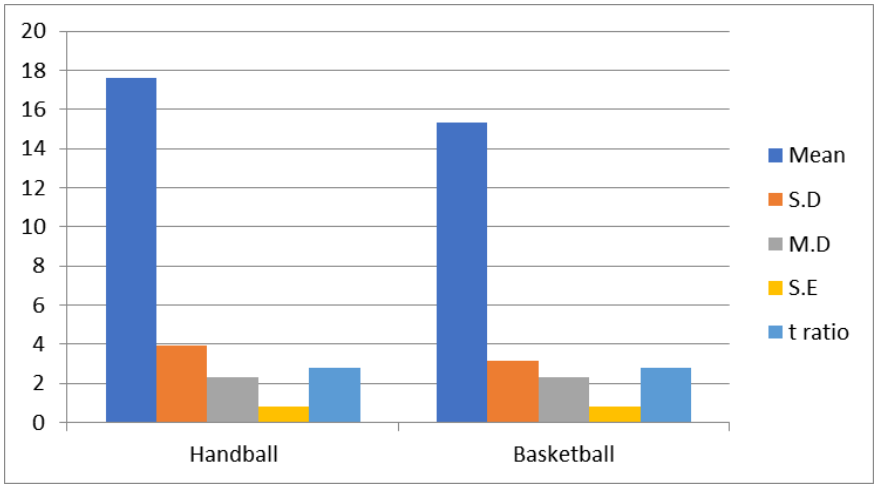
Procedure: The subject steps up onto the beam at one side.

With caution 'ready' 'clap' start walking on the beam to and form, for 20 seconds. The subject makes 1800 after reaching the other end walks back to the other end. If the fall of the beam, he is allowed to continue. After reaching his position on the beam. Two trails were recorded as performance.

Scoring: The distance the subject walks on the beam in 20 seconds was recorded as the score.

Table 3: 't' Test for the Data on Agility of Hand Ball and Basketball

Category	Mean	S.D	Mean Difference	Standard error	T ratio
Handball	17.6	3.96	2.3	0.82	2.80
Basketball	15.3	3.14			



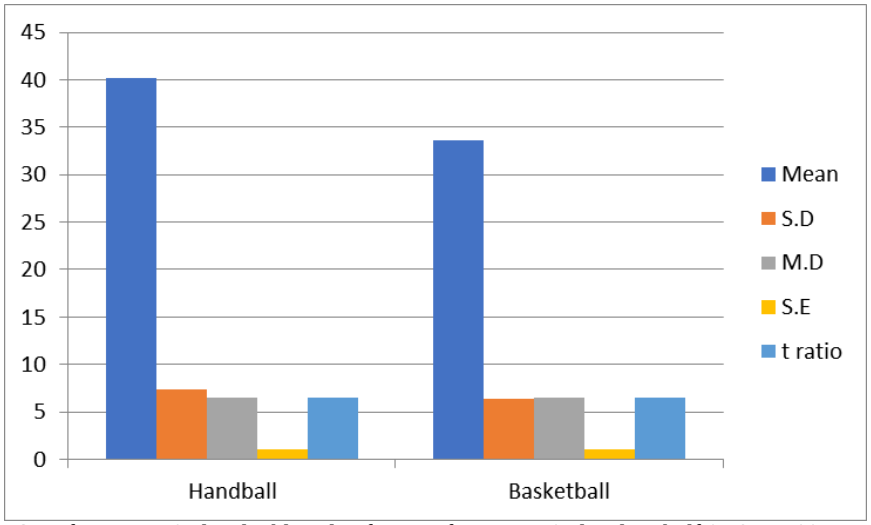
* Significance at .05 levels, table value for significance at 0.05 level with DF 0.58 is 2.00

Fig 1

Table -III shows that the mean of handball and Basketball players in agility 17.6, 15.3 respectively. The standard deviation of the handball players is 3.96 and that of Basketball players is 3.14. The 't' ratio is 2.80, which is higher than the table value required for significance. It shows that the means of Handball players and Basketball players differ significantly. Further the observation of the means states that handball players are better in agility when compare to the Basketball players.

Table 4: 't' Test for the Data on Balance of Hand Ball and Foot Ball Players

Category	Mean	S.D	Mean Difference	Standard error	T ratio
Handball	40.16	7.36	6.5	1.0	6.5
Basketball	33.66	6.36			



* Significance at .05 level table value for significance at .05 level with df 0.58 is 2.00

Fig 2

Table –IV Shows that the mean of handball and Basketball players in Balance 40.16, 33.66 respectively. The standard deviation of the handball players is 7.63 and that of Basketball players is 6.36. The 't' ratio is 6.5, which is higher than the table value required for significance. It shows that the means of Handball players and Basketball players differ significantly. Further the observation of the means states that handball players are better in balance when compare to the Basketball players.

Conclusions

Basketball players were significantly better than the handball players in agility.

Handball players were better than the Basketball players in balance.

Recommendation

The results of the study facilitated to make the following recommendation

Similar study may be planned with different games and sex

The result of the study may be compared with state and national level norms

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