



ISSN: 2456-0057
IJPNPE 2019; 4(1): 21-23
© 2019 IJPNPE
www.journalofsports.com
Received: 16-11-2018
Accepted: 18-12-2018

Dr. Akash Vijayrao More
Director, Department of
Physical Education & Sports
Yuvashakti Arts & Science
College, Amravati Maharashtra,
India

Comparative study of flexibility, agility, explosive strength and BMI of basketball and handball players

Dr. Akash Vijayrao More

Abstract

Researcher studied the comparative study of flexibility, agility, explosive strength and BMI of basketball and handball players. The purpose of the study is to compare the flexibility, agility, Explosive Strength and BMI of Basketball and Handball Players. Researcher hypothesized that, there might be significant differences in flexibility, agility, Explosive Strength and BMI of Basketball and Handball Players. The study was delimited to 15 Basketball and 15 Handball players. The study was also delimited to inter-collegiate level players S.G.B.A.U., Amravati. The study was delimited to the male students only. The age of the subjects ranged between 18-25 years. The present study was delimited to flexibility, agility, Explosive Strength and BMI variables only. 15 Basketball and 15 Handball male players were selected as subjects. The subjects selected for the study was from those who represented inter-collegiate tournaments and inter-university trials of S.G.B.A.U., Amravati by using simple random sampling method. For collecting data the researcher administrated Sit and Reach test was used for flexibility and measured in centimeters. Shuttle run test was used to check the agility and measured in seconds. Standing Broad Jump was used for leg strength and measured in inches. Medicine Ball Throw was used for shoulder strength and measured in foots. Weighing machine used for Body weight was recorded in kilogram and Stadiometer used for standing height and recorded in centimeters. To find out the significant difference 't' test was employed on each variable independently. To test the hypothesis, the level of significance was set at 0.05 level of confidence. Basketball and Handball players having same flexibility. Handball players having good agility than the Basketball players. Basketball players having good leg strength than the Handball players. Handball players having good shoulder strength than the Basketball players. Basketball and Handball players showed same Body Mass Index.

Keywords: Agility, flexibility, strength, basketball, handball.

Introduction

Physical fitness is judged by performance and its common factors are strength, endurance, power, speed, agility, balance, flexibility and stamina. Agility is the ability to perform a series of explosive power movements in rapid succession in opposing direction. As present many researcher have directed their attention towards the study of agility and it's role on the performance level of the player in various games. Because among the truth of physical ability and performance of athlete and trainers, agile movement and flexibility is most important traits. These traits are measured and considered by the coaches and the experts with keen interest. Handball these all variable are much necessary for good playing. In these all ball games one thing is common that all these games are played with hand. Depth perception, Agility and Explosive strength play very important role in it.

Statement of the Problem

The problem is stated as, "Comparative Study of Flexibility, Agility, Explosive Strength and BMI of Basketball and Handball Players".

Purpose of the Study

The purpose of the study is to compare the flexibility, agility, Explosive Strength and BMI of Basketball and Handball Players.

Hypothesis

Researcher hypothesized that, there might be significant differences in flexibility, agility,

Correspondence

Dr. Akash Vijayrao More
Director, Department of
Physical Education & Sports
Yuvashakti Arts & Science
College, Amravati Maharashtra,
India

Explosive Strength and BMI of Basketball and Handball Players.

Delimitations

1. The study was delimited to 15 Basketball and 15 Handball players.
2. The study was also delimited to inter-collegiate level players S.G.B.A.U., Amravati.
3. The study was delimited to the male students only.
4. The age of the subjects ranged between 18-25 years.
5. The present study was delimited to flexibility, agility, Explosive Strength and BMI variables only.

Methodology

15 Basketball and 15 Handball male players were selected as subjects. The subjects selected for the study was from those

who represented inter-collegiate tournaments and inter-university trials of S.G.B.A.U., Amravati by using simple random sampling method. For collecting data the researcher administrated Sit and Reach test was used for flexibility and measured in centimeters. Shuttle run test was used to check the agility and measured in seconds. Standing Broad Jump was used for leg strength and measured in inches. Medicine Ball Throw was used for shoulder strength and measured in foots. Weighing machine used for Body weight was recorded in kilogram and Standiometer used for Standing height and recorded in centimeters.

Statistical Analysis

To find out the significant difference 't' test was employed on each variable independently. To test the hypothesis, the level of significance was set at 0.05 level of confidence.

Table 1: Summary of Mean, Standard Deviation and t-ratio for the Data on Flexibility, Agility, Explosive Strength and BMI between the Basketball and Handball Players

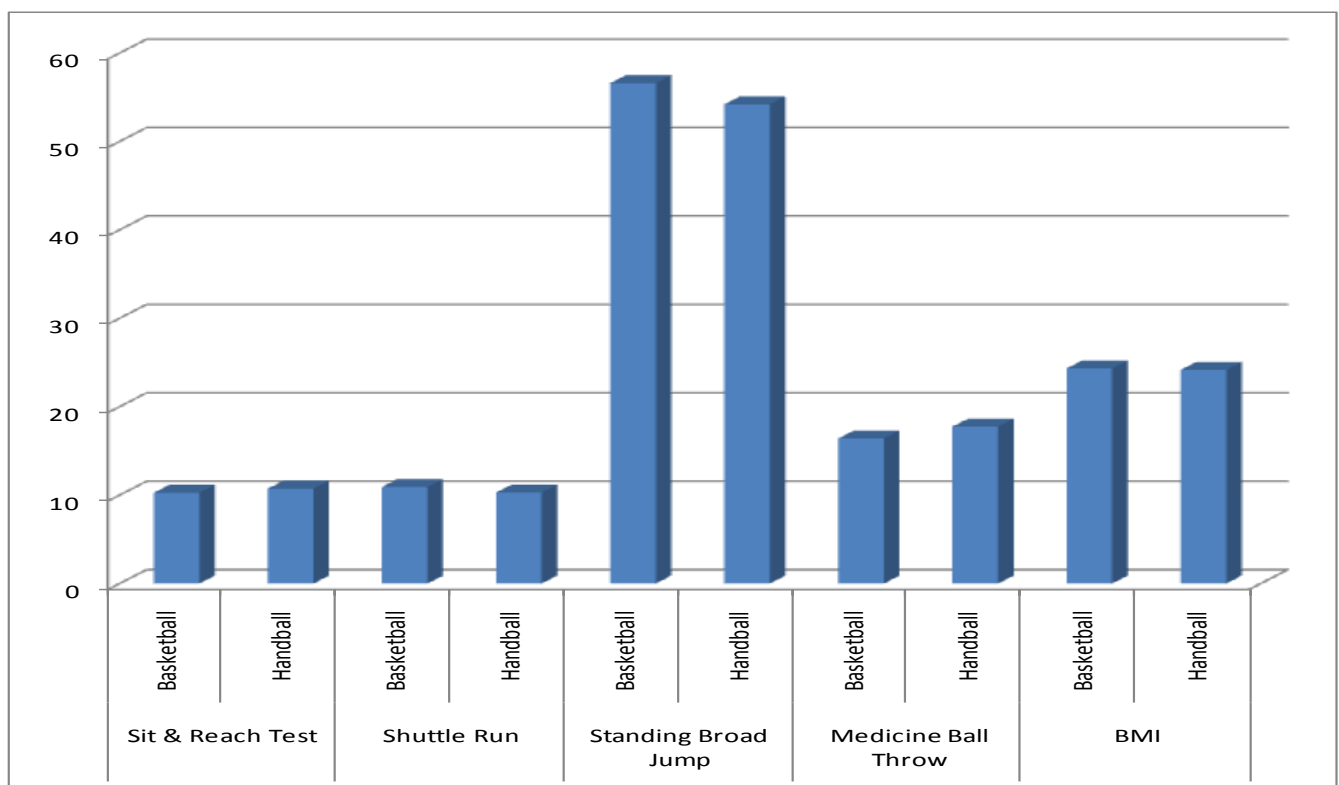
	Players	Mean	S.D.	Mean Difference	S.E.	't'-ratio
Sit & Reach Test	Basketball	10.267	2.530	0.467	1.033	0.452@
	Handball	10.733	2.066			
Shuttle Run	Basketball	10.917	0.580	0.621	0.224	2.770*
	Handball	10.296	0.409			
Standing Broad Jump	Basketball	56.600	2.011	2.400	1.059	2.267*
	Handball	54.200	2.677			
Medicine Ball Throw	Basketball	16.413	1.669	1.340	0.599	2.236*
	Handball	17.753	1.311			
BMI	Basketball	24.329	0.833	0.169	0.433	0.380@
	Handball	24.160	1.128			

* Significant at 0.05 level Tabulated $t_{0.05(18)} = 2.100$

@ Not significant at 0.05 level

Table 1 showed that the significant difference found in Shuttle run ($t = 2.770$), Standing Broad Jump ($t = 2.267$) and Medicine Ball Throw ($t = 2.236$) which are greater than the tabulated t-value of 2.100 at 0.05 level and 18 degree of

freedom. Also insignificant difference in sit & reach test ($t = 0.452$) and BMI ($t = 0.380$) which are less than the tabulated t-value of 2.100 at 0.05 level and 18 degree of freedom.



Graph 1: Showing Means of Flexibility, Agility, Explosive Strength and BMI Between basketball and handball players

Findings

1. Basketball and Handball players having same flexibility.
2. Handball players having good agility than the Basketball players
3. Basketball players having good leg strength than the Handball players
4. Handball players having good shoulder strength than the Basketball players
5. Basketball and Handball players showed same Body Mass Index.

Reference

1. Bucher Charles A. Foundation in Physical Education. (St. Louis: The C.V. Mosby Company, 1983, 23.
2. Frost Bubruben B, Physical Education Practices Principles, Philadelphia, London. Addison Wesley Pub. Company, 1975, 230.
3. Getchell Bed, Physical Fitness A Way of Life. (New York I. John Willey and Sons, Inc, 1976, 8.
4. Robert V. Hockey, Physical Fitness the pathway to Healthful Living, (St. Louis: The C.V. Mosky Company, 1973, 93
5. Barry L. Johnson Jack K. Nelson, Practical Measurement for Evaluation in Physical Education, 3rd Edition (Minneseto: Burger Publishing Company, 1969, 78.
6. Johnson BL, Nelson JK, Practical Measurement for Evaluation in Physical Education, (Delhi, Surjeet Pub, 1992, 217.
7. Berger Richard A. and Paradis Robert L., Comparison of Physical Fitness Score of White and Black Seven Grade Boys of Similar Socio Economic Level, Researcher Quarterly, 1961, 66.
8. Cassell AM. A Comparison of Motor Ability and Physical Characteristics of Collegiate Soccer Players by Position of Play, Dissertation Abstract International, 1979, 4805.
9. Crai Andrews, Barry, Physical Fitness Level of Canadian South African School Boys Dissertation Abstract International, 1976, 5912-A.
10. Dahi Ealph Loyd, A Comparison of Physical Fitness of Negro and White boys of Rome Texas School. Dissertation Abstract International, 1971, 51-74.
11. Herman Boone, Comparison of Physical Fitness Level of Urban and Rural Boys, Complete Research in Health, Physical Education and Recreation, 9096, 86.