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An investigation of motor fitness variables among team game elite athletes

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Abstract

Introduction: The objective of the present study was to analyze and investigate the selected motor fitness abilities between Handball and Basketball male elite athletes of Sri Lanka.

Methods: The sample consists of forty (N=40), out of which twenty (N=20) Handball male elite athletes and twenty (N=20) Basketball male elite athletes, Age ranged between 18-32 years. They were the members of the Sri Lankan national team camp during preparation for their international competition in Colombo 2017. The selected Motor fitness variables were measured with four standardized tests of (Semo) agility, (modified sit and reach) flexibility, (30 m fly start) speed and (medicine ball throw) strength.

Result and Discussion: To determine the significant differences of motor fitness variables, the data was analyzed by applying independent t - test in order to determine the motor fitness abilities between the handball and basketball male elite athletes, at the 0.05 level of confidence was fixed to test the significance.

Conclusions: The results showed that there is a significant difference in the selected motor fitness variables between handball and basketball male elite athletes.

Keywords: Motor fitness, elite athletes, speed, flexibility, strength, agility

Introduction

Motor fitness is that state of body in which a person can carry his daily duties and responsibilities efficiently and with the energy left he can enjoy hobbies and other recreational activities and can meet the unusual. In other words Motor fitness can be defined as the state of body in which a person can do work for a longer duration without undue fatigue. Motor fitness not only a state of younger's, but is the reality for all ages.

Motor fitness factor is the most significant for high performance in sports. Motor fitness testing provides a superior baseline and reference for trainer, physical education teacher, coaches, sports scientists, physiotherapists as well as future researchers. Present assessment in Motor fitness focuses on components related to motor fitness, which includes speed, strength, agility and flexibility. Motor fitness assessments are useful in providing information concerning an athlete's ability to participate in sports and additional information can be gained on possible ways to improve performance and prevent injuries. Assessments are also often used to optimize training and in the selection of teams for competition.

Motor fitness is the product of physical exercises and exercise is very much related to health and wellbeing. Motor Fitness refers to the ability of an athlete to perform successfully at their sports. Speed, Strength, flexibility and agility are the basic components of Motor Fitness and are required for good performance in sports like handball and basketball. Fitness can be described as a condition that helps us look, feel and do our best. It is "the ability to perform daily task with vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergencies demands. It is the ability to endure, to bear up, to withstand stress to carry on in circumstances where an unfit person could not continue and is a major basis for good health and well-being. The findings of the present study will give information regarding motor ability of handball and basketball male elite athletes.

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Objectives of the Study

The main purpose of the study was to analyse and compare the selected motor fitness variables between handball and basketball male elite athletes of Sri Lanka.

- (i) To study the motor fitness variables of the handball male elite athletes.
- (ii) To study the motor fitness variables of the basketball male elite athletes.
- (iii) To investigate the differences in the motor fitness variables between the handball and basketball male elite athletes.

Methodology

To achieve the purpose of the study, a total of forty (N=40) subjects were purposively chosen for this study. Out of 40 elite athletes, twenty (N=20) athletes were from handball and twenty (N=20) from basketball. The age of the players ranged from 18 to 32 years. They were the members of the Sri Lankan national team camp during preparation for their international competition in Colombo 2017.

Selection of test items: The following variables and tests were selected for this study.

Variables	Tests	Unit of Measures
Agility	Semo	Seconds
Flexibility	Sit and reach	Centimeters
Speed	30 meters fly start	Seconds
Strength	3kg medicine ball throw	Meters

Data Collection

Tests of motor fitness were demonstrated and complete instructions were given to all subjects. Data was collected during Sri Lankan national team camp preparation for their international competition in Colombo 2017.

Statistical Analysis

The data collected for this study was treated with statistical technique ‘t’ test was used with the help of SPSS at the 0.05 level of significance.

Results and Discussions

To achieve the purpose of study data collected, was analyzed with statistical technique and results were presented in the following tables.

Table 1: Shows mean, standard deviations and ‘t’ value of agility of handball and basketball male elite athletes.

Subjects	Size	Mean	Standard deviation	‘t’ value
Handball	20	14.42	0.56	3.97*
Basketball	20	13.61	0.71	

Degree of freedom (38) = 2.02 *Significant at 0.05 level.

The above table showed the mean value, standard deviation, and t value of agility between handball and basketball elite male athletes. As the t value indicated in the table showed there was a significant difference in agility between handball and basketball athletes. Handball athletes were found more agile than the basketball male elite athletes.

Table 2: Shows mean, standard deviations and ‘t’ value of flexibility of handball and basketball male elite athletes.

Subjects	Size	Mean	Standard deviation	‘t’ value
Handball	20	16.34	4.81	1.71
Basketball	20	13.85	4.37	

Degree of freedom (38) = 2.02 *Significant at 0.05 level.

The above table showed the mean value, standard deviation, and t value of flexibility between handball and basketball elite male athletes. As the t value indicated in the table showed there was no significant difference between in flexibility of handball and basketball athletes. In this variable handball athletes was found no significant than the basketball elite male athletes. But, when mean values were compared handball athletes were flexible than basketball elite male athletes.

Table 3: Shows mean, standard deviations and ‘t’ value of speed of handball and basketball male elite athletes.

Subjects	Size	Mean	Standard deviation	‘t’ value
Handball	20	3.86	0.19	0.31
Basketball	20	3.88	0.11	

Degree of freedom (38) = 2.02 *Significant at 0.05 level.

The above table showed the mean value, standard deviation, and t value of speed between handball and basketball elite male athletes. As the t value indicated in the table showed there was no significant difference between in speed of handball and basketball athletes. In this variable handball athletes was found no significant than the basketball elite male athletes. But, when mean values were compared basketball athletes were faster than handball elite male athletes.

Table 4: Shows mean, standard deviations and ‘t’ value of strength of handball and basketball male elite athletes.

Subjects	Size	Mean	Standard deviation	‘t’ value
Handball	20	9.69	1.18	1.49
Basketball	20	10.57	0.88	

Degree of freedom (38) = 2.02 *Significant at 0.05 level.

The above table showed the mean value, standard deviation, and t value of strength between handball and basketball elite male athletes. As the t value indicated in the table showed there was no significant difference between in strength of handball and basketball athletes. In this variable handball athletes was found no significant than the basketball elite male athletes. But, when mean values were compared basketball athletes were stronger than handball elite male athletes.

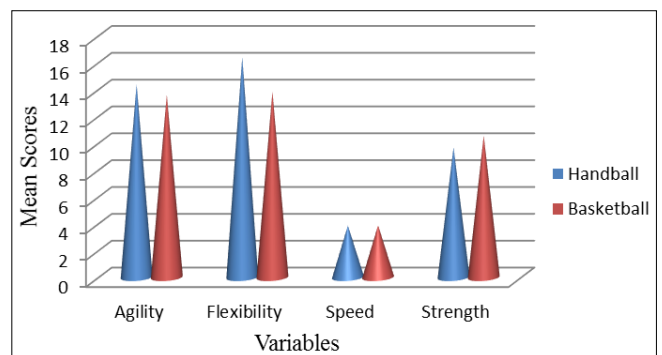


Fig 1: Graphical Illustration of Findings Mean Scores Between Handball and Basketball Teams

Conclusions

The result of the study showed that the motor fitness variables of elite athletes of handball and basketball games varied among them. Results showed that the significant differences were found in agility between handball and basketball male elite athletes. But, there was not found significant difference

in flexibility, speed, and strength between handball and basketball male elite athletes. According to the study, games have different demands on motor fitness attributes, which were specific to each elite athlete of handball and basketball team games.

Therefore, for this variety of results, instructors, teachers, and coaches have to design work out programs according to the games condition and every players in the field. The specific motor fitness differs, mainly in elite male handball and basketball athletes. These results recommend that common motor fitness must be included in any testing of the selection of team games discipline athletes. However, the selection must not be limited to motor fitness data, especially in younger ages, where maturation must be considered.

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References

1. Harbans Lal, Godara A. comparative study of motor fitness components of Handball and basketball players. International journal of multidisciplinary research, studies and developments. 2016; 1(3):1-4.
2. Rani A, Singh J, Kalsi SK. A comparative study of different motor abilities among college level volleyball and Handball female players. International journal of physical education, health and social sciences. 2013; 2(2):1-4.
3. Saharan S, Singh B, Singh M. Comparison of selection motor abilities between the Handball and basketball players. International advance journal of engineering, science and management. 2014; 1(1):23-27.
4. Singh M, Kumar S, Bal B, Singh S. A comparative analysis of motor fitness components of sprinters. Research journal of physical education. 2014; 2(9):9-12.
5. Barrow, Mc Gee. A particle approach to measurement in physical education. Philadelphia, London, 1989.
6. Nafih Cherappurath. Comparison of performance related variables between college level Handball and basketball players. Journal of physical education research. 2015; 2(2):28-33.
7. Gorostiaga EM, Granados C, Ibanez J, Izquierdo M. Differences in physical fitness and throwing velocity among elite and amateur male Handball players. International journal of sports medicine. 2005; 26(2):225-232.
8. Ogabor JO, Sanusi M, Saulawa AI. Comparative analysis of selected motor fitness profile of football referees in cross river and Akwa ibom states, Nigeria. Journal of education and practice. 2015; 6(20):24-30.
9. Pawan G. Comparison of motor fitness among players of different games. Lokavishkar international journal. 2013; 2(4):67-71.
10. Ramesh Kannan S, Chittibabu B, Tripathy PC. Effect of intensive sports specific endurance circuit training on selected motor fitness components of male Handball players during preparatory phase. Asian journal of applied research. 2015; 1(1-7):1-5.
11. Sudhakara G, Virupaksha ND. Study on motor fitness of team game players. International journal of multidisciplinary research and modern education. 2015; 1(2):5-7.