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# ASSESSMENT OF MOVEMENT SPEED AMONG MEN HANDBALL PLAYERS

*** Mr S Sreenivasulu, **Dr R Vidhya Shree & ***Dr P V Shelvam**

*Lecturer in Physical Education, Government Degree College for Women, Madanapalli, Chittoor, Andhra Pradesh
**Associate Professor, Department of Physical Education, Annamalai University, Annamalainagar, Tamilnadu
***Former Dean and Professor, Department of Physical Education, Annamalai University, The Principal, Saveetha School of Physical Education, SIMATS, Chennai

Abstract: The purpose of this research was to analyze the movement speed of men hand ball players. To achieve this purpose, 48 men hand ball players were selected belonging to various states who participated in the South Zone Inter University Handball Championship held at Bangalore North University, Bangalore, Karnataka. The age group of the subjects ranged between 18 to 25 years. The subjects were selected by using simple random sampling method. Playing ability, motor fitness and reaction time are the basic skills required in handball competition. They are not only for the general fitness but they serve as a primary determinant of handball performance. The dependent variable for the present study was movement speed of men Handball players. In order to assess the movement speed of the subjects was assessed by Nelson choice response movement test. The data collected from the men Handball players were statistically analyzed. Descriptive statistics was computed for movement speed, teams separately. Further, mean and standard deviation, one way analysis of variance was computed to find out the significance of difference among the men Handball players of five teams separately. Whenever the 'F' ratio is significant, to know which of the paired mean differ significantly, Scheffe's test was applied. The level of significance was fixed as 0.01. Statistical package for the social sciences (SPSS) was used for the purpose of analyzing the data. The level of confidence was fixed at 0.01 level of confidence.

**Keyword:** movement speed, inter university, handball players.

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## Introduction

Competitive sports are an important aspect of our country's physical education curriculum. It is linked to training, exercises, and competitions. It achieves its high efficacy through organized training and competition in the process of physiological and physical perfection. They enable and influence all other sectors of physical education, pave the route to optimum physical perfection, and play an extremely significant role in society as a whole. Science has contributed in each and every aspect of sports, as they have developed into distinct scientific discipline in itself and as a result of which all countries in the world produce top class players to win laurels in Inter-national competition. Considerable research is devoted in identifying factors that are functioning in achieving the higher level of skills with proper coaching. well-defined set of fundamental factors is required for high-level performance. Each athletic event necessitates sports-specific performance human factors (SSPHF), which are critical to success. Muscular strength and explosive power, for example, are important sport-specific performance human elements for weight lifting success, whereas cardiovascular respiratory endurance and low body fat levels are sport-specific

performance human factors for marathon running success. Other significant human elements for sport-specific performance include response time, speed, anaerobic power, endurance, agility, flexibility, and balance. Although motor fitness elements are important in determining an individual's sport-specific performance human factors, appropriate training is required to maximize inherited performance potential. Sports performance is heavily reliant on physical fitness, which includes strength, speed, endurance, flexibility, and a variety of co-ordinative abilities. Sports activity is a physical activity, which is not possible without these motor abilities, therefore the improvement of physical fitness or motor abilities is a primary goal of sports training. The process of improvement of motor abilities is also called conditioning. Improvement of general health and organic functions increases strength and stability of the musculo-skeletal system. The physical fitness can be differentiated into general and specific types and levels of different motor abilities and when a sportsmen possesses these, he is said to have the specific physical fitness. General physical fitness is the level of various motor abilities, regardless of any sports which the sportsmen possess. Although the influence of general physical fitness to sports performance is indirect, it should never be forgotten that specific physical fitness is heavily dependent on general physical fitness. Fitness comprises of many different components which must be viewed in relation to individual characteristics, needs, goals and tasks that must be performed. AAHPERD and many other professionals classify the fitness components into two categories, those pertaining to health and those pertaining to motor-skill performance. Health fitness is concerned with living where as motor-skill performance fitness is concerned with performing skills better and more efficiently.

Handball is a quick and physically demanding team sport in which natural moves and fundamental skills like running, jumping, and throwing are combined with speed, power, coordination, and endurance. All major joints of the body (ankles, knees, elbows, and wrists) are constantly employed to successfully execute a wide range of individual and team tasks with varying degrees of effort (maximal effort, submaximal, medium alternated with very short break moments). Handball is a relatively new sport. Some believe that the game had its origins in Germany, but other countries also had games which were very similar to handball. Countries such as Denmark, Germany, and Sweden are regarded as handball pioneers in modern times. Along with Russia, France, Norway, Hungary, Romania, Spain, and Korea, these are the top handball nations. Handball has emerged as one of the most popular sports in Africa, alongside football. Egypt, Tunisia, Algeria, Angola, and Congo, to name a few, have achieved significant success at the African and international levels.

Ball games necessitate a wide range of abilities, including physical, technical, mental, and tactical ability. Physical abilities of players, for example, have a significant impact on both the individuals' own skills and the team's strategy. For the ball games in which the use of the hand is essential, hand morphology and functional properties could be important for the performance.

The game's structure symbolizes the dimension that produces the phenomena; in other words, it dictates and is then determined by nature's physiological, energetic, and psychological demands. The organization and coordination of actions (shapes, principles, and factors) in the phases of attack and defense provide the game's

structure. The game consists of many tactics, such as holding, catching, and passing the ball, as well as dribbling, which is combined into various game actions, implying the offensive and defense technique.

The training procedure, in all of its aspects, is so vital that it has an impact on the player's responses and overall training status. As a result, various training aids should be employed both on and off the court, as total adaptation of physical talents is dependent not only on ball training, but also on specialized workouts with or without equipment. A variety of biological elements, including physiological and anatomical ones, influence handball performance. However, physiological factors take precedence in terms of their impact on physical, technical, and tactical levels, as physiological response is linked to training loads and body system adaptations, as well as the player's ability to send neurological signals that are appropriate for the type of muscle contraction required for performance. This clearly demonstrates the role of the neuromuscular system as a prime mover of the increases motor connection and shortens reaction time while boosting stimulus speed, resulting in improved muscle motor coordination.

**Methodology**

To achieve this purpose, 48 men hand ball players were selected belonging to various states who participated in the South Zone Inter University Handball Championship held at Bangalore North University, Bangalore, Karnataka. The age group of the subjects ranged between 18 to 25 years. The subjects were selected by using simple random sampling method. The one of the independent variable for the present study was movement speed of men Handball players. In order to assess the movement speed of the subjects was assessed by Nelson choice response movement test.. The data collected from the men Handball players were statistically analyzed. Descriptive statistics was computed for movement speed, teams separately. Further, mean and standard deviation, one way analysis of variance was computed to find out the significance of difference among the men Handball players of five teams. Whenever the 'F' ratio is significant, to know which of the paired mean differ significantly, Scheffe's test was applied. The level of significance was fixed as 0.01. Statistical package for the social sciences (SPSS) was used for the purpose of analyzing the data. The level of confidence was fixed at 0.01 level of confidence.

**Results**

The mean and standard deviation on movement speed of men handball players is presented in table I.

**Table I**

**MEAN AND STANDARD DEVIATION ON MOVEMENT SPEED OF MEN HANDBALL PLAYERS**

| S. No | University | Mean | SD |
|---|---|---|---|
| 1 | Sree Krishnadevaraya University, | 2.38 | 0.065 |
| 2 | Rayalaseema University, | 2.65 | 0.063 |
| 3 | Bengalore North University, | 2.15 | 0.075 |
| 4 | Sree Krishna University, | 1.94 | 0.062 |

The analysis on movement speed of handball players of different teams is given in table II.

**Table II**

**ANALYSIS OF MOVEMENT SPEED OF MEN HANDBALL PLAYERS**

| Source | Sum of Squares | df | Mean Square | F ratio | Level of Significance |
|---|---|---|---|---|---|
| Between | 3.6372 | 3 | 1.2124 | 233.15 | 0.01 |
| Within | 0.2288 | 44 | 0.0052 | | |

From table II it is clear that obtained F value, 233.15 is significant at 0.01 level. It reveals that the movement speed of different handball teams differ significantly.

As the F ratio is significant, to know which of the paired mean differ significantly, Scheffe's test was applied in table III.

**Table III**

THE SCHEFFE'S TEST FOR MOVEMENT SPEED

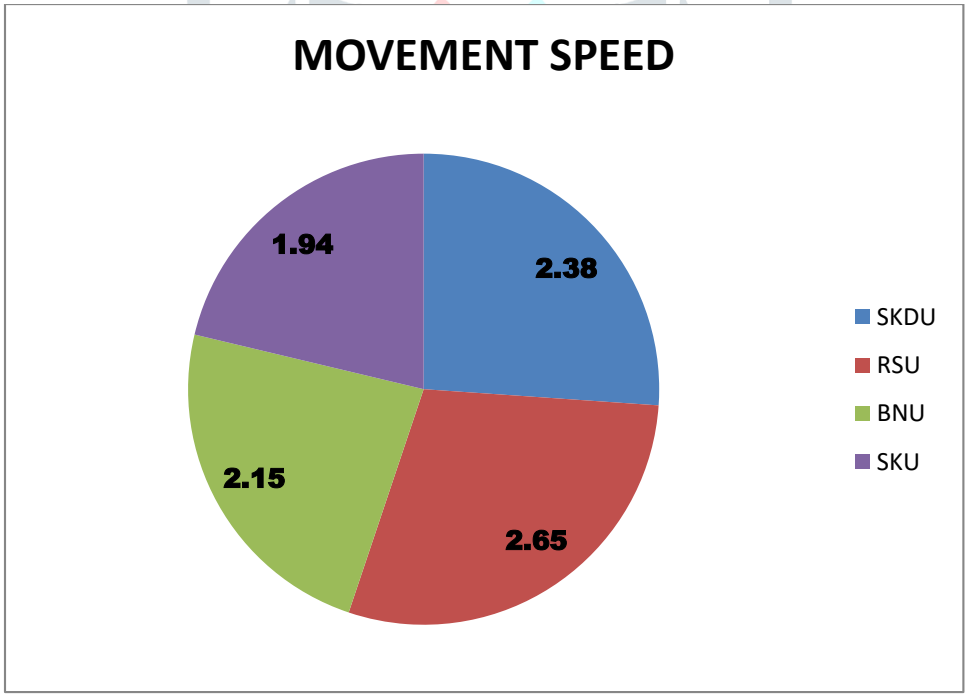
| SKDU | RSU | BNU | SKU | Mean Difference | CI |
|---|---|---|---|---|---|
| 2.38 | 2.65 | | | 0.27 | 0.164 |
| 2.38 | | 2.15 | | 0.23 | 0.164 |
| 2.38 | | | 1.94 | 0.44 | 0.164 |
| | 2.65 | 2.15 | | 0.50 | 0.164 |
| | 2.65 | | 1.94 | 0.71 | 0.164 |
| | | 2.15 | 1.94 | 0.21 | 0.164 |

The result of scheffe's shows that all the teams differ significantly in their movement speed.

The graphical representation of different teams on movement speed is presented in figure I.

**Figure I**

**GRAPHICAL REPRESENTARION ON MOVEMENT SPEED ON MEN HANDBALL PLAYERS OF DIFFERENT TEAMS**




***Discussion/Conclusions***

The findings of the study showed that there was no significant difference between Sri Krishna Devaraya University, Rayalseema University, Bangalore North University and Sri Krishna Devaraya University of handball movement speed ability.

The results concluded that movement speed ability differ from all the selected university, may be one of the factor influencing the sports performance of the teams

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