

A comparative study of depth perception, agility and explosive strength of shoulder in volleyball and handball players

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Abstract

The main purpose of the study is to compare depth perception, agility and explosive strength of shoulder between Volleyball and Handball Players. It was hypothesized that, there might be significant difference found in depth perception, agility and explosive strength of shoulder between Volleyball and Handball Players. The study was delimited to Subjects was selected from the Indira Meghe Mahila Mahavidyalaya, Amravati. Age of subjects ranged between 16 to 20 years. The study was delimited to female players only. The subject was selected from volleyball, handball games only. To collect the data 15 volleyball and 15 handball female players were selected from Indira Meghe Mahila Mahavidyalaya, Amravati as the subject. Simple random method was adopted for selection of the subject. For collecting data the researcher take Depth perception – Depth perception box was used as equipment and was measured in millimeters. Agility – Semo agility test and was measured in seconds. Explosive strength of shoulder – softball throw was used and was measured in meters. The researcher collected the necessary data in the specified scoring tables. To find out the significant difference in the means of depth perception, agility and shoulder strength of Volleyball and Handball players 't'-test was employed. To find out the significance difference, level of significance was set at 0.05 level. Findings of the statistical analysis have been shown in the following table. It was found that, depth perception in Volleyball and Handball players shows insignificant difference. But in the significant difference observed in the Semo Agility and Shoulder strength.

Keywords: depth perception, semo agility, explosive strength of shoulder, volleyball, handball

Introduction

Different games required different body position of balance, finger co-ordination and quick agile movement to execute any skill successfully. The game of handball, football, volleyball, hockey and basketball players are necessary of all the mention variable as to how well control and to give pass or shot at the target successfully. As games has developed into a distinct discipline in itself and each nation is vying with each other to produce top class player to win lords in international competitions, considerable research is devoted to identify factors that will be predictive of achieving high level of skill in a given sports with proper coaching and applying scientific method. Depth perception is the visual ability to perceive the world in three dimensions (3D) and the distance of an object. Depth sensation is the corresponding term for animals, since although it is known that animals can sense the distance of an object (because of their ability to move accurately, or to respond consistently, according to that distance), it is not known whether they "perceive" it in the same subjective way that humans do. 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.

Statement of the Problem

The statement of problem is stated as, "A Comparative study of depth perception, agility and explosive strength of shoulder in Volleyball and Handball Players".

Purpose of the Study

The main purpose of the study is to compare depth perception, agility and explosive strength of shoulder between Volleyball and Handball Players.

Hypothesis

It was hypothesized that, there might be significant difference found in depth perception, agility and explosive strength of shoulder between Volleyball and Handball Players.

Delimitations

- i) The study was delimited in the following aspects
- ii) Subjects was selected from the Indira Meghe Mahila Mahavidyalaya, Amravati.
- iii) Age of subjects ranged between 16 to 20 years.
- iv) The study was delimited to female players only.
- v) The subject was selected from volleyball, handball games only.

Methodology

To collect the data 15 volleyball and 15 handball female players were selected from Indira Meghe Mahila

Mahavidyalaya, Amravati as the subject. Simple random method was adopted for selection of the subject. For collecting data the researcher take Depth perception – Depth perception box was used as equipment and was measured in milimeters. Agility – Semo agility test and was measured in seconds. Explosive strength of shoulder – softball throw was used and was measured in meters.

Statistical Analysis

The researcher collected the necessary data in the specified scoring tables. To find out the significant difference in the means of depth perception, agility and shoulder strength of Volleyball and Handball players ‘t’-test was employed. To find out the significance difference, level of significance was set at 0.05 level. Findings of the statistical analysis have been shown in the following table.

Table 1: Summary of Mean, Standard Deviation and t-ratio between the Means of Volleyball and Handball Players

Test	Players	Mean	Standard Deviation	Mean Difference	Standard Error	T-Test
Depth perception	Volleyball	0.169	0.361	0.015	0.161	0.095@
	Handball	0.185	0.509			
Semo Agility	Volleyball	31.667	2.469	1.733	0.800	2.168*
	Handball	29.933	1.870			
Shoulder Strength	Volleyball	19.400	1.352	1.133	0.510	2.224*
	Handball	18.267	1.438			

* Significant at 0.05 level, Tab $t_{0.05(28)} = 2.048$

@ Not significant at 0.05 level

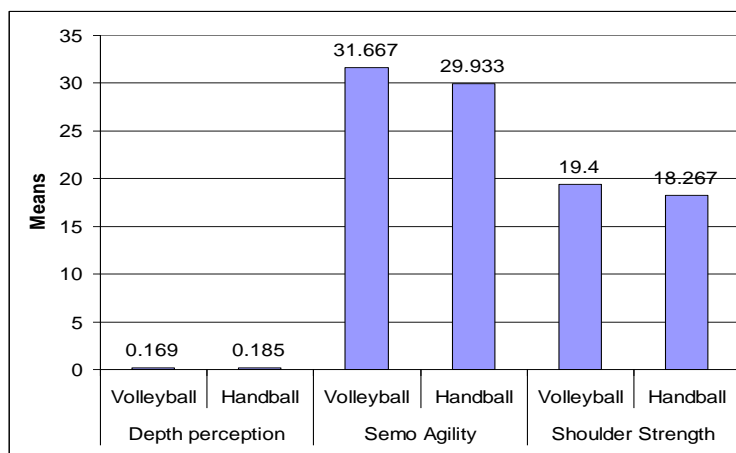


Fig 1: Showing Mean Difference between the Means of Volleyball and Handball Players

Findings

From the above table it was found that, depth perception in Volleyball and Handball players shows insignificant difference. But in the significant difference observed in the Semo Agility and Shoulder strength.

6. Kumar Jitinder. Coordinative Abilities of Indian Kabaddi Players at Different Levels of Participation, (Unpublished Ph.D. Thesis, L.N.I.P.E., Gwalior, 2004)

References

1. Bak Klaus. Shoulder Strength and Range of Motion in Symptomatic and Pain-Free Elite Swimmers MD, University of Copenhagen, Denmark <http://ajs.sagepub.com>
2. Bharat JR, Sidhu LS. A comparative study of reaction time, depth perception in Indian sportsman specially in hockey, gymnastics, volleyball and weight lifting (Journal of sport, medicine and physical fitness) 1980; 12(1):116.
3. Bucher Charles A. Foundation of Physical Education (St. Louist: The C.V. Mosby Company, 1968, 432.
4. Chandler Jeff T at al. Shoulder strength, power, and endurance in college tennis players, Lexington Clinic Sports Medicine Center, Lexington, Kentucky, <http://ajs.sagepub.com>
5. Ferguson Paul D. Reaction time and movement time comparison by race, Sex and body type Dissertation International. 1974; 34:5687A.