



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2017; 2(2): 150-152

© 2017 Yoga

[www.theyogicjournal.com](http://www.theyogicjournal.com)

Received: 13-06-2017

Accepted: 18-07-2017

**Dr. Vasant Vishram Rathod**

Associate Professor,

Nagpur Sharirik Shikshan

Mahavidyalaya, Dhantoli

Nagpur, Maharashtra, India

**Dr. Ashutosh Rai**

Assistant Professor, P.T.N

Degree College Mangalpur

Kanpur Dehat, Uttar Pradesh,

India

## Coordinative abilities of female volleyball players at different levels of achievement

**Dr. Vasant Vishram Rathod and Dr. Ashutosh Rai**

### Abstract

**Background: Objective:** The objective of the study was to compare the Coordinative abilities between selected national and state level female Volleyball players.

**Method:** Total 50 female volleyball players (25 from each selected National and State level Female Volleyball players) were randomly selected (The purposive sampling technique was used to collect the data) with age ranging from 19 to 25 years for the study. Coordinative abilities was selected as a dependent variable and selected Game volleyball were considered as independent variable. Coordinative abilities i.e. Orientation Ability, Rhythm Ability, Reaction Ability and Balance Ability was assessed with the help of numbered medicine ball run test was used and the score recorded in seconds, sprint at rhythm test was used and scores recorded in seconds, Nelson and reaction time test (stick) was used and the scores recorded in seconds and Bass stick test was used and scores recorded in seconds. T-test statistics were used to compare Coordinative abilities of selected female volleyball players. The level of significance were be set at 5%.

**Results:** The study showed that there was no significant difference found in Coordinative abilities (Orientation Ability, Rhythm Ability, Reaction Ability and Balance Ability) of national and state level female volleyball players. The obtained 't' ratio was found -12.391, -10.616, -11.921 and -5.264 is lower than the table value 1.67 for df 48 which is required for significance at 0.05 levels.

**Conclusions:** Based on results of the study it was concluded that there all the selected female volleyball players had similar Coordinative abilities i.e. (Orientation Ability, Rhythm Ability, Reaction Ability and Balance Ability).

**Keywords:** coordinative abilities

### Introduction

Volleyball is the game that is played by all ages and both sexes indoor and outdoor. It is highly competitive and requires high level of fitness. Competitive Volleyball is all action game with none of the players acting as involuntary spectators as seen in the others games. The popularity of volleyball has grown in the past two decades and the game continues to build momentum at all competitive levels (Scates and Linn, 2003)<sup>[1]</sup>.

Coordination is the ability to frequently perform a series of movements without any awkward stance, with accuracy and efficiency. This may include joints movements, muscular contractions & senses. Every activity in which we participate needs the ability to coordinate movements of different parts of body to achieve a success in the matter of result from simple jogging to more difficult movements of field events like high jump.

According to Singh (1991) "coordinative abilities are relatively stabilized and generalized pattern of motor control and regulation process that enable a sports person to do a group of movements with better quality and effect."

According to Uppal (2013)<sup>[4]</sup> Coordinative abilities have a direct relevance to performance to sports performance. It is emphasized that, the Performance in different sports relies on the level of coordinative abilities of an individual & the coordinative abilities depend upon the mechanism involve in the control and regulation of movement, the coordinative process of nervous system & efficiency of various sense organs.

**Orientation ability:** "It is the capability of a sportsperson to examine and alter body position and body parts in space and time in relation to performance area or a moving object. This

### Correspondence

**Dr. Vasant Vishram Rathod**

Associate Professor,

Nagpur Sharirik Shikshan

Mahavidyalaya, Dhantoli

Nagpur, Maharashtra, India

ability depends upon the functional capacity of optic sense organ, vestibular apparatus and kinesthetic receptors.”

**Rhythm ability:** “It is the capability of the sportsperson to understand the rhythm of movement and to execute the movement with required rhythm. It depends upon the functional capacity of optic, acoustic and kinesthetic sense organs.”

**Reaction ability:** “It is the capability of a sportsperson to respond speedily to a given stimulus and execute well-directed actions following a stimulus. It depends upon the functional capacity of optic, acoustic and tactile sense organs.”

**Balance ability:** “It is the capability of a sportsperson to maintain equilibrium of the body both in static and dynamic conditions. All types of body movements are affected by this ability but it has a special importance when movements are done in a small area. This ability depends upon the functional capacity of vestibular apparatus.”

**Objective of the study**

Coordinative abilities of Female Volleyball Players at Different Levels of Achievement.

**Methodology**

**Subjects:** For the purpose of this study fifty female volleyball players were randomly selected from different Stadiums and clubs of Delhi NCR Region. The purposive sampling technique was used to collect the data from National level (n=25) and State level (n=25) female volleyball players. The 50 volleyball players range in age between 19 to 25 years.

**Variable:** Dependent Variables:

Coordinative abilities

- 1) Orientation Ability, 2) Rhythm Ability, 3) Reaction Ability, 4) Balance Ability

**Criterion Measures**

1. **Orientation ability:** To measure the ability of female volleyball players numbered medicine ball run test was used and the score recorded in seconds.
2. **Rhythm ability:** To measure the rhythm ability of female volleyball players sprint at rhythm test was used and scores recorded in seconds.
3. **Reaction ability:** To measure the reaction ability of female volleyball players Nelson and reaction time test (stick) was used and the scores recorded in seconds.
4. **Balance Ability:** To measure the balance ability of female volleyball players Bass stick test was used and scores recorded in seconds.

**Collection of Data**

The data were collected as per direction given in the manual of Coordinative abilities from 50 National and State level Female Volleyball Players on purposive sampling. All the data were collected from the concern National and State level tournaments. Before actual collection of data, the investigator gave a short orientation lecture explaining to the subjects, the purpose of the study.

**Statistical Analysis**

T-test were used to compare Coordinative abilities of selected National and State level female volleyball players. The level of significance were be set at 5%.

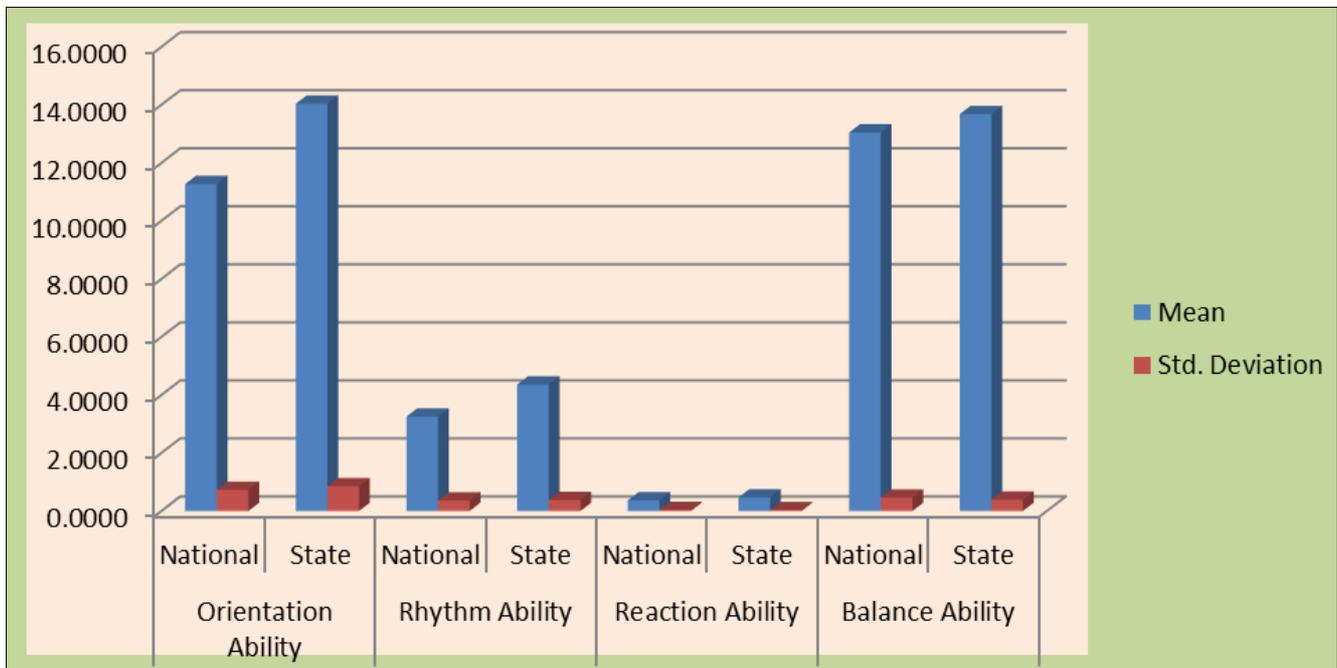
**Table 1:** Representation of Mean and Standard Deviation relation to Coordinative abilities of National and State level Female Volleyball Players

Volleyball Players		Mean	Std. Deviation	t-Value
Orientation Ability	National	11.2688	.72493	-12.3916
	State	14.0380	.85029	
Rhythm Ability	National	3.2544	.35943	-10.6167
	State	4.3592	.37621	
Reaction Ability	National	0.3633	.03306	-11.9216
	State	0.4652	.02707	
Balance Ability	National	13.0464	.45569	-5.26488
	State	13.6792	.39180	

Sig at 0.05, table value (48) = 1.67

Table-1 the study showed that the mean values of Coordinative abilities (Orientation Ability, Rhythm Ability, Reaction Ability and Balance Ability) between National and State level Female Volleyball Players 11.2688 & 14.0380, 3.2544 & 4.3592, 0.3633 & 0.4652 and 13.0464 & 13.6792 respectively. The obtained ‘t’ratio was found -12.391, -

10.616, -11.921 and -5.264 is lower than the table value 1.67 for df 48 which is required for significance at 0.05 levels. It was concluded that there was no significant difference occurred in Coordinative abilities i.e. (Orientation Ability, Rhythm Ability, Reaction Ability and Balance Ability) of national and state level female volleyball players.



**Graph 1:** Graphical Representation of Mean and Standard Deviation relation to Coordinative abilities of National and State level Female Volleyball Players

**Conclusions**

Based on results of the study it was concluded that there all the selected female volleyball players had similar Coordinative abilities i.e. (Orientation Ability, Rhythm Ability, Reaction Ability and Balance Ability).

**Reference**

1. Scates A, Linn M. Complete conditioning for volleyball. Champaign, IL: Human Kinetics 2003.
2. Hakkinen K. Changes in physical fitness profile in female volleyball players during the competitive season. Journal of Sports Medicine & Physical Fitness 1993;33:223-232.
3. Hardayal Singh. Science of Sports Training, New Delhi: D.V.S Publications 1995, 87.
4. Panwar Rehman, Uppal AK. Coordinative abilities of inter collegiate and interuniversity level girls basketball players- A comparative study. (International Journal of physical education and sports sciences 2013, (2)1.
5. Harrold M. Barrow and Rosemary Megee, A practical approach to measurement in physical Education, Phila Delphia: Lea and Febiger 1966, 545.
6. Devender Kansal K. Test and Measurement in Sports and Physical Education New Delhi: D.V.S. Publication Kalkaji 1996.
7. Frank W. Dick, Sports Training Principles, Great Britain University Press Cambridge 1992.
8. Wilf Paish. Training for peak performance, London A& C Black Printers Ltd., 1991.