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## **A COMPARATIVE STUDY OF COORDINATIVE ABILITIES OF TENNIS AND TABLE TENNIS PLAYERS**

# A Comparative Study of Coordinative Abilities of Tennis and Table Tennis Players

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**Abstract:** The study was conducted to serve the purpose to compare the coordinative abilities between tennis and table tennis players of the Madhya Pradesh. The coordinative abilities chosen for the study were Orientation Abilities, Differentiation Abilities, Reaction Abilities, Balance Ability and Rhythm Abilities. Twenty tennis and twenty table tennis male players of national and inter university level in the age group of 18 to 25 were selected as subjects of the study. The tests selected for measuring coordinative abilities of the tennis and table tennis players for the purpose of data collection were Numbered Medicine Ball Run Test, Backward Medicine Ball Throw Test, Long Nose Test, Ball Reaction Exercise Test and Sprint At Given Rhythm Test. T-test was employed to find out the significance difference between tennis and table tennis players in the five coordinative abilities. No significant difference was found in the coordinative abilities of tennis and table tennis players.

**Keywords -** Coordinative Abilities, Orientation Abilities, Differentiation Abilities, Reaction Abilities, Balance Abilities, Rhythm Abilities, T-test.

## 1. INTRODUCTION

Coordinative abilities are the generalized psychometric performance prerequisite having the function of movement control and regulation.

Coordinative abilities are performance pre-requisites which are primarily determined by the mechanism involved in the control and regulation of movement.

Coordinative abilities helps faster and effective learning and also help to achieve high level performance coordination ability help to improve the technical development and effective use of physical training.

Being racket games, there are many similarities between table tennis and tennis. Both involve rackets. Both involve hitting a ball over the net and scoring when your opponent cannot return it. Both sports can be played 1-on-1 or 2-on-2. Tennis and table tennis both have worldwide appeal and are Olympic discipline. There are many characteristics which are almost similar to each other. Table tennis and tennis both emphasize on similar athletic skills like reaction time as player of table tennis and tennis are able to quickly react to his opponent's strike. In spite of this researcher felt that there would definitely be many other characteristics with regards to coordinative abilities, which make them distinguish from each other. Hence, with desired thought and expectation researcher felt necessary to attempt to compare the coordinative abilities between tennis and table tennis players.

The selected coordinative abilities were: -

1. Orientation Abilities
2. Differentiation Abilities
3. Reaction Abilities
4. Balance Ability
5. Rhythm abilities

It was hypothesized that there would be no significant difference in the coordinative abilities of tennis and table tennis players.

## 2. PROCEDURE

Twenty tennis players and twenty table tennis male players of national and inter university level in the age group of 18 to 25 were selected as subjects of the study. The data was collected during various competitions such as Inter University competitions, State championships, State Ranking Tournaments and other Regular Practice Session by administering various coordinative ability tests as suggested by Peter Hirtz in Coordinative Feahigkeiten in School Sports.

All the tests were demonstrated and explained to the subjects prior to their administration. The subjects were given a chance to practice to become familiar with the test. There was no time limit in performing

the test but the subjects were requested to put in their best.

The selected coordinative abilities tests for the purpose of data collection are as follows: -

1. Numbered Medicine Ball run Test (to measure the Orientation Ability)
2. Backward Medicine Throw Test (to assess the Differentiation ability)
3. Long Nose Test (to measure the Balance Ability)
4. Ball Reaction Exercise Test (to measure the Reaction Ability)
5. Sprint At Given Rhythm (to measure the Rhythmic Ability)

To find out the significance difference between tennis and table tennis players in the five coordinative abilities T-test was used for testing the hypothesis. The level of significance was chosen at 0.05.

### 1.1 Findings

Table - 1

Comparison of the Means of Coordinative Abilities of Tennis and Table Tennis Players

S. No.	Variables	Tennis Players		Table Tennis Players		T-ratio
		Mean	S.D.	Mean	S.D.	
1.	Orientation Ability	15.165	1.9499	15.04	2.1485	0.1927
2.	Differentiation Abilities	6.32	1.1574	6.44	1.2089	0.3207
3.	Reaction Abilities	1.515	0.3376	1.41	0.3932	0.9060
4.	Balance Ability	6.66	0.9848	6.15	1.3088	1.3924
5.	Rhythm abilities	6.4	1.2748	6.26	1.5496	0.3009

Total value required to be significant at .05 level of significance with 38 degree of freedom is 2.02.

### 3. RESULTS

There was no significant difference between tennis and table tennis players in the Orientation Ability as the calculated value (0.1927) was less than the table value (2.02) at .05 level of significance.

In case of Differentiation Ability of tennis and table tennis players no significant difference was seen as the calculated value (0.3207) was less than the table value (2.02) at .05 level of significance.

In case of Reaction Ability there was no significant difference as the calculated value (0.9060) was less than the table value (2.02).

The Balance Ability also had the similar outcome as there was no significant difference between tennis and table tennis players as the calculated value (1.3924) was less than the table value (2.02).

The same case was observed in the case of Rhythmic Ability of the tennis and table tennis players as the calculated value (0.3009) was less than the table value (2.02).

### 4. DISCUSSION

On the basis of findings of the study the hypothesis is made earlier as there will be no significant difference in the coordinative abilities of tennis and table tennis players is accepted. This may be attributed due to similar characteristics and nature of both of the games as well as their players.

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