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Prediction of Speed Parameter among Tennis Players in Tamil Nadu

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Abstract

The purpose of the present study was to find out the Prediction of Speed Parameter among Tennis Players in Tamilnadu. To achieve the purpose of the study (N=500) Five hundred men players were selected from various tennis club in Chennai district, during the year 2017. The subject's age ranges from Group-I 16-20 years (n=125), Group-II 21-25 years (n=125), Group-III 26-30 years (n=125) and Group-IV 31-35 years (n=125). The selected players were divided into four equal groups consists of 125 men players each namely age category wise. Speed were taken as criterion variables in this study. Statistical technique 'F' ratio was used to analyze the means of the test data of four age category groups. The results revealed that there was a significant difference found on the criterion variables. These results suggest that group-I 16-20 Years speed level compare better than to all other groups.

Keywords: Speed, Tennis Players and Tamilnadu.

Introduction

Speed is the ability to make rapid movements of the same time in the shortest possible time. Speed is an important ingredient in many sports. Speed in sports contest can have several different meaning, one being instantaneous speed used for jump, throw or 100 meter run. Speed will mean maximal speed and thus apply to sports events where the highest possible speed its strives for a single short lasting effort are in a repeated maximal efforts together lasting less than about ten seconds. The terms "speed" is applied to a variety of different phenomena that occur in sports; fast reaction, a bust of rapid movement's ability to run continuously at high speed, reaction time is a property of nervous system and depends upon the speed at which information is processed. A burst of rapid movements involves the translation of reaction in to motion. If requires acceleration of the body, or part of it, and t he continuation of movement at high speed. In mechanical terms, speed is the distance covered in a given time Speed= Distance / Time Speed is conditional ability, if has complex nature as it depends to a considerable extend on the nervous system. Speed ability should not be equaled with mechanical speed which is equal to the distance covered per unit of time. In several sports action no distance is covered at all. Speed ability primarily signifies the ability to execute motor movements with high speed; these movements should be cyclic in nature (Hardayal singh, 1991).

Although speed is deemed important in tennis, players rarely attain top running speed during match play. In approximately 80 percent of points, the player does not move over than 30feet (9 meters) from the position where he or she started. Yet within those 30 feet (9 meters) a player can only attain 75 percent of his or her peak running speed. (Pual Roetert. Todd S. Ellenbecker, 2007). Speed is important for getting to the ball. Although some people have natural speed, other athletes can improve speed by training their muscles and nervous systems to produce the same effect. The faster you can get to a ball, the more time you have to prepare for your shot. Speed the ability to get from point A to point B rapidly, is also important in tennis. Being fast allows a player to get to more balls and set up with more time to prepare. To some degree speed is genetically determined; players with faster twitch muscle fibers will generally be able to generate more force and will be faster. However all players can improve speed by performing exercises and drills designed to build, the more time you will have to set up for the next shot. (E.Pual Roetert, 2007).

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Methods & Material

The purpose of the study was to analyze the speed parameter of Tennis players in Tamil Nadu. To achieve this purpose of the study, five hundred men(N=500) Tennis players who have participated in the district level tennis matches from Tamil Nadu, India, during the year 2016-2017, were selected as subjects for this study at random. The subjects (n=500) were

randomly assigned to four equal groups of hundred and twenty five boys were selected as a subject. They were divided into four equal groups namely Group 1 (16-20 years), Group II (21-25 years), Group III (26-30 years) and group IV (31-35 years). The subjects were tested in order to find out speed. The selected tests were measured by the following units of testing.

1. **Speed:** It was measured by administering 50 Mts dash Test and recorded to nearest $1/10^{th}$ of a second.

Statistical Techniques Employed

To achieve the purpose of the study one way Analysis of Variance (ANOVA) was used. If the 'F' ratio found to be significant, the Scheffe's post hoc test was used to find out the significant difference, among the paired means. In all the cases 0.05 level of significance was used to test the hypotheses.

Table 1

Computation of Analysis of Variance on Speed of Tennis Players (50 Mts dash Mean score in Seconds)

Mean ± Standard Deviation				**Sources of Variance**	**Sum of Square**	**Df**	**Mean Squares**	**Obtained F-ratio**	**Table "F" Value**
Group-I 16-20 years Tennis Players	**Group-II 21-25 years Tennis Players**	**Group-III 26-30 years Tennis Players**	**Group-IV 31-35 years Tennis Players**						
7.6442 ±0.625	7.7046 ±0.64639	8.1849 ±0.66273	8.6847 ±0.62599	Between	88.125	3	29.375	71.66*	8.53
				Within	203.319	496	0.410		

**Significant at 0.05 level of Confidence.*

(The table 'F' value required for significance with df 3 and 496 is 8.53).

Table 1 shows the mean, standard deviation and 'F' ratio of different ages of Tennis players on speed. The mean values of Group-I is 7.64, Group-II is 7.70, Group-III is 8.18 and Group-IV is 8.68 respectively. The values of standard deviation of Group-I is 0.63, Group-II is 0.64, Group-III is 0.66 and Group-IV is 0.63 respectively. The obtained F-value is 71.66 is greater than the table 'F' value of 8.53 with df 3 and 496 required for significance at 0.05 level of confidence. The results of the study indicate that there is a significant differences among the mean of Group-I, Group-II, Group-III and Group-IV on speed. As the F-ratio was found significant in case of speed the Scheffe's post-hoc test was applied to test the significance of differences between paired means separately among Tennis players belonging to different age group which is presented in Table 2.

Table 2

Significance differences between the paired means of speed performance among tennis players belonging to different age groups (50 Mts dash Mean score in Seconds)

Means				**Mean Difference**	**Confidence Interval**
Group-I 16-20 years Tennis Players	**Group-II 21-25 years Tennis Players**	**Group-III 26-30 years Tennis Players**	**Group-IV 31-36 years Tennis Players**		

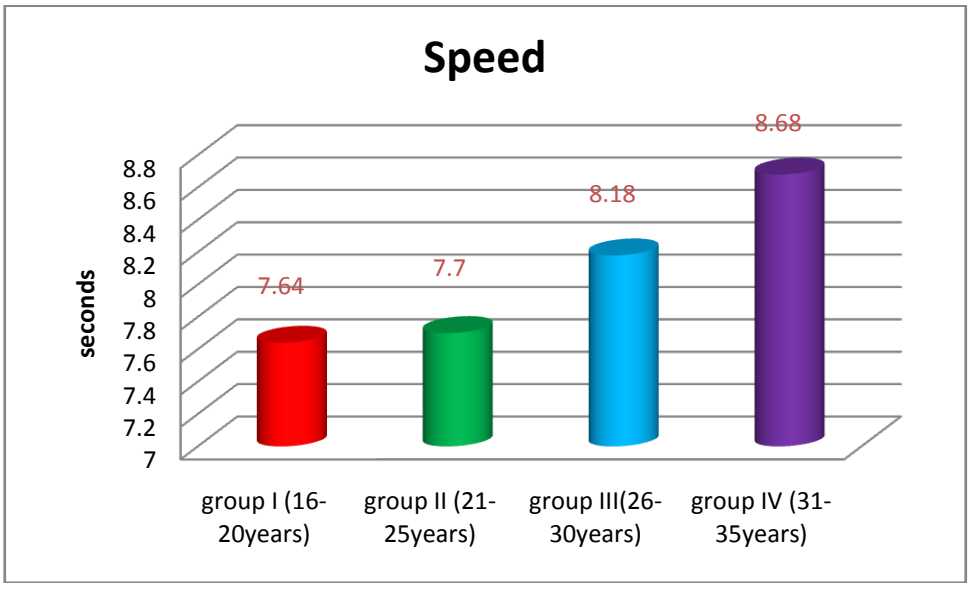
7.64	7.70	--	--	0.06	3.33
7.64	--	8.18	--	0.54	3.33
7.64	--	--	8.68	1.04	3.33
--	7.70	8.18	--	0.48	3.33
--	7.70	--	8.68	0.98	3.33
--	--	8.18	8.68	0.5	3.33

** Significant at 0.05 level of confidence*

Table 2 shows that the mean differences on Group-I and Group-III, Group-I and Group-IV, Group-II and Group, Group-II and Group-IV and Group-III and Group-IV are 0.06, 0.54, 1.04, 0.48, 0.98 and 0.5 respectively and they are lower than the confidence interval value 3.33, which shows significant differences at 0.05 level of confidence. However, the improvement in speed was significantly higher for Group-I than other age Groups. The mean values of Group-I, Group-II, Group-III and Group-IV on speed are graphically represented in the figure I.

Figure I

Bar diagram shows mean values of group-I, group-II, group-III and group-IV on speed (50 Mts dash Mean score in Seconds)



Discussion on Findings

The results of the study indicate that the experimental group namely group I has significantly differed from the selected dependent variables namely Speed, when compared to the group-II, group-III and group-IV. It is also found that the improvement caused by group-I performance was greater than the when compared to the effects caused by the other groups.

Conclusion

From the results of the study the following conclusions were drawn.

1. There was a significant difference on speed among different age groups of Tennis players (16-20 years, 21-25 years, 26-30 years and 31-35 years).
2. The age group 16-20 years tennis players is better in speed than other age groups of 21-25 years, 26-30 years and 31-35 years.

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