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Comparison of accuracy between forehand and backhand drive of the AITA junior national tennis players

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Abstract

The purpose of this study was to compare the accuracy between forehand and backhand drive of the AITA juniors national Tennis players. The data for the study derived from the test that was constructed for the Degree of Doctor of Philosophy entitled 'Construction of Tennis Skill Test for Junior National Players'. One hundred ranked players were the part of this study as subjects. Insignificant difference was found between forehand and backhand accuracy. Means, standard deviation and Independent t-test was used to analyse the data, and the level of significant was set at 05. The mean and standard deviation of the forehand drive accuracy: 22.7 ± 2.12 and backhand drive accuracy: 22.5 ± 2.63 was found that shows Insignificant different between Forehand Drive and Backhand Drive accuracy indicated that the player were able to play same degree of accuracy for forehand as well as backhand drive.

Keywords: accuracy, forehand, AITA, tennis players

Introduction

Tennis, in its simplest form, merely involves hitting a ball over a net. This is done, of course, within a specified area and using an implement called a racket. The addition of an opponent, boundary lines, and a pre-scribed set of rules make tennis one of the most popular sports in the world today ^[1].

The game consists of stroking a ball with a racket, back and forth across a net, until one player misses the ball or hits it into the net or out of bounds. Additionally indicated that the fundamental techniques involved in playing tennis include eye-hand-racket coordination, motor (movement) skills, and stroking skills ^[2].

Forehand Drive

The tennis forehand stroke is the basic and initial part of tennis skills and techniques for every player from beginner to professional tennis players. The forehand stroke is considered as the most natural stroke in tennis.

To execute forehand stroke a player swing his racket with playing hand (may be right or left hand) low to high from west level, contact with the ball in front of the body after that finish it over the shoulder as follow through opposite side of the playing hand and receive the racket with non-playing hand naturally.

Backhand Drive

To execute backhand stroke a player swing his racket from non-playing hand side with playing hand or both hand (one handed or double handed backhand) low to high from west level with a backswing, contact with the ball in front of the body and finish it over the shoulder as follow through playing hand side of the body.

Performance is a key not of all the sports-its basic principle as the sports have become prestigious aspect to prove one's superiority over other". For this research systematically conducted to identify the factors that helps in achieving mastery of skill, which a player can attain through proper coaching and evaluation ^[3].

There is a close-knit relationship between skill and performance. That is why, now-a-day

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much greater emphasis is placed on the practice of and mastery over the basic skills of a game right at the very beginning. Simple skills are not only easy to learn but are also easy to evaluate more objectively. Complex skills, on the other hand, are learned only after simple skills are perfected and that is the reason why they are difficult to evaluate more objectively [4].

The main objective of this study was to compare accuracy between forehand and backhand drive through self constructed forehand and backhand tennis skill tests respectively.

Methodology

Selection of subjects

For this study 100 U-18 AITA ranked junior national Tennis players were selected as subject, out of 200 ranked players.

Test administration and data collection

Data for the Forehand and Backhand accuracy were collected through self constructed test. The test was constructed for the Degree of DOCTOR OF PHYLOSOPHY Titled ‘Construction Of Tennis Skill Test For Junior National Players’ Reliability of the test was set by test re-test method, for validity subject’s score was compared with the AITA rank of the subjects.

For the forehand drive first target area two lines are parallel at a distance of 4.5 feet inside the both singles side line, and a line at a distance of 26 feet from the net parallel to base line

(or 13 feet from the base line) that is green zone. For yellow zone target area two lines are parallel at a distance of 9 feet inside the both singles side line, and a line at a distance of 13 feet from the net (or 26 feet from the base line) parallel to the base line. Rest of the area consider red zone towards the net at the center of both service box that is 13x9 feet. Thus court is equally divided in three zones Green, Yellow and Red that covers 13x9 feet area from the singles court. In addition to measure stroke power a parallel line marked 13 feet from the baseline outside the court.

The tester is stationed approximately 3 to 5 feet from the net on the other side of the net with a basket of balls, along the center service line. Tester feed 12 consecutive balls to the forehand side by overhand throwing motion. The first 2 feed serve as practice, with the remaining 10 trials for scores. The student should attempt to hit the ball designated scoring area within the singles court to get the maximum score.

To measure the backhand drive ability two lines are parallel at a distance of 9 feet inside and parallel to the both singles side line. Thus court is equally divided in Green, Yellow and Red zones, each zone covers 39x9 feet area inside the singles court.

For the forehand and backhand drive score is determined according to the target area for accuracy. For accuracy 3, 2, and 1 points allotted to the green, yellow, and red zone respectively (see Figure 1& 2).

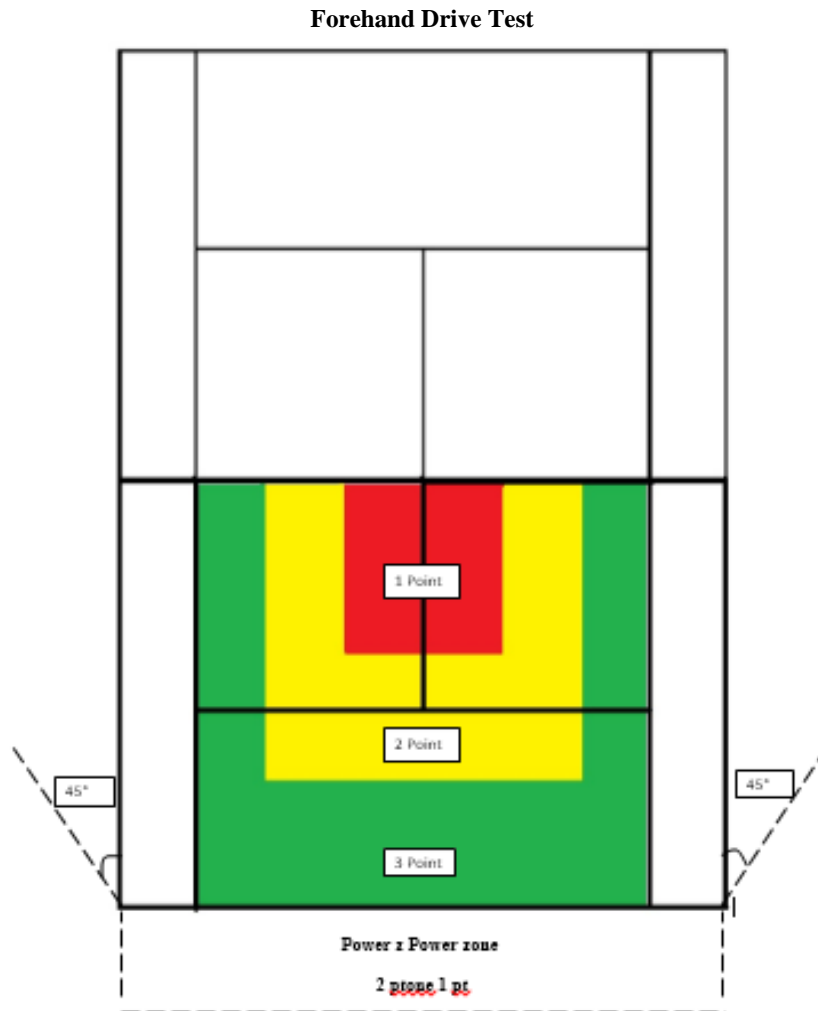


Figure 1: Forehand drive Test for accuracy

Backhand Drive Test

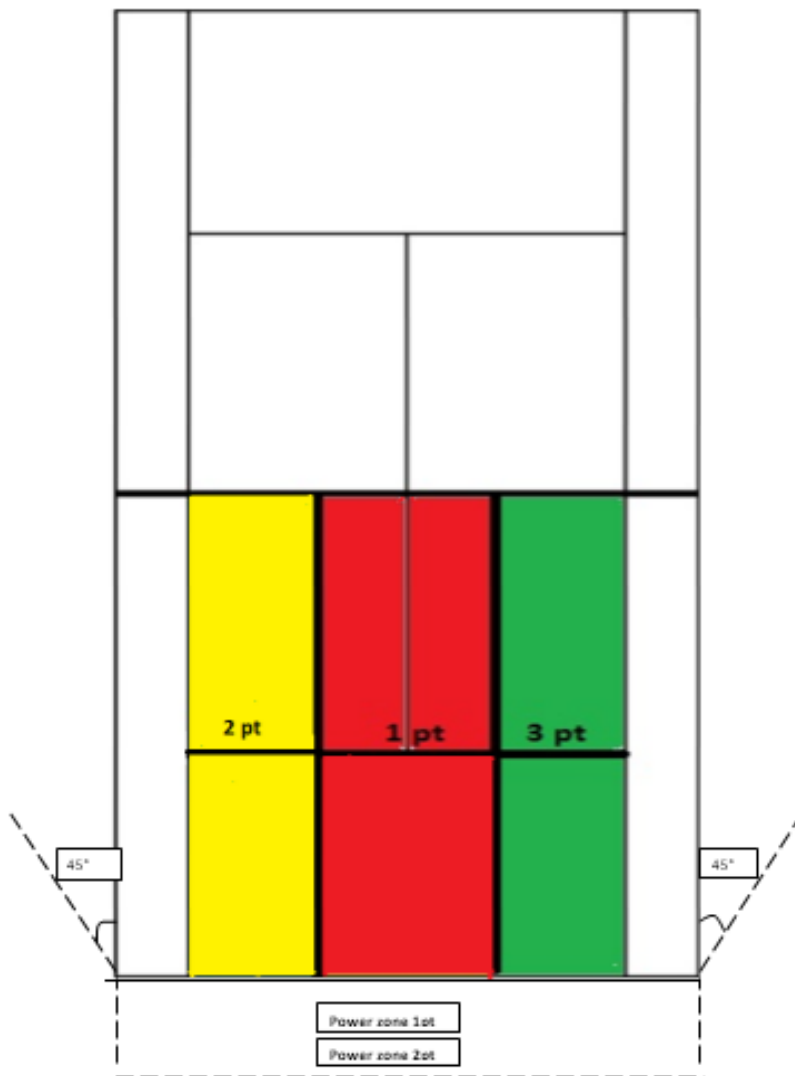


Fig 2: Backhand drive Test for accuracy

Findings

To analyse the data of the study descriptive statistics were applied and for comparing the forehand and backhand accuracy level of the junior national Tennis players 't' - test was used. The level of significance for 't' test was set at .05. The data pertaining to forehand drive test and backhand drive test has been presented in the table 1

Table 1: Mean and standard deviation of Forehand drive and Backhand drive accuracy

Variables	N	Mean	SD	MD	df	t-value	Tab-t
Forehan Drive Test	100	22.7	2.12	.23	198	.67	1.97
Backhand Drive Test	100	22.5	2.63				

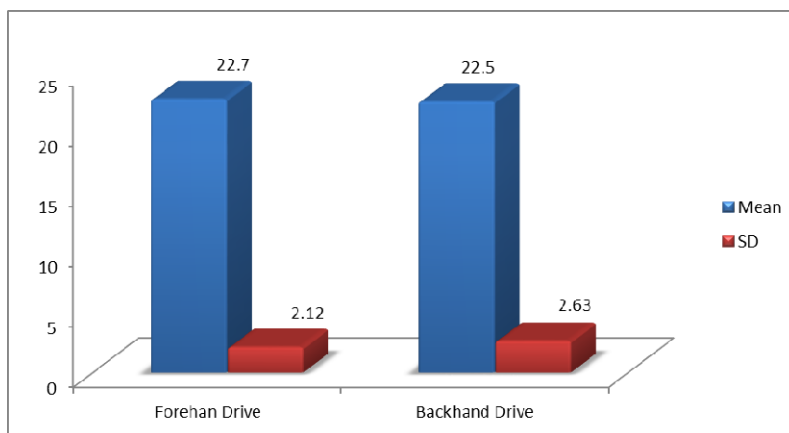


Fig 3: Mean and standard deviation of Forehand drive and Backhand drive accuracy

Table-1 revealed that there was Insignificant different between the Forehand Drive and Backhand Drive accuracy, as obtained 't' value was .67 which is less than tabulated 't' 0.05 (198) = 1.97. The mean and standard deviation of the forehand drive accuracy: 22.7 ± 2.12 and backhand drive accuracy: 22.5 ± 2.63 . Graphically representation shown mean and standard deviation of the AITA junior national tennis players.

The researcher also find out the accuracy of forehand and backhand drive of players. Which was indicated in percentage form.

Out of 10 trials a player can score maximum 30 points, where as the mean score for forehand drive was found 22.7 that is 75.79% and for backhand drive 22.5 that is 75.2%. The percentage of forehand drive and backhand drive accuracy is presented in Fig-4

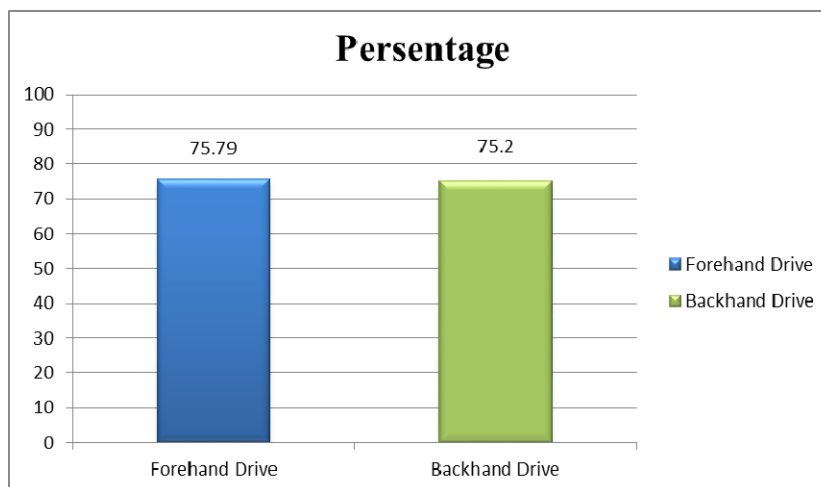


Fig 4: Percentage of Forehand drive and Backhand drive accuracy

Discussion and Conclusion

After analyzing the data researcher had found that there is Insignificance difference between forehand drive and backhand drive accuracy. The mean score shows that there was a little difference between Forehand drive and Backhand drive accuracy. The results indicate that all the subjects have approximately same level of accuracy on the court either it is Forehand drive or Backhand drive.

The study can be concluded that all the AITA junior national tennis players those who have rank within 200 almost have the same level of forehand and backhand accuracy, it may be due to high level of training and representation number of tournament in professional circuit.

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