

# The Relation between Fist Strength and Accuracy of Forehand and Backhand Serving in Tennis

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## ABSTRACT

Sport training settings study the relation between fist strength and muscular strength (which is the basis of elements of physical conditioning). It is the training that depends on muscular contraction, which in turn worked on developing strength of working muscles in motor performance during motor performance from work or performance similar to movement or effectiveness in the same direction of muscular work. Significance of the study lies in determining the correlation between strength of forehand and backhand serving fist in tennis.

**Keywords:** First strength, forehand serve, backhand serve, tennis

## INTRODUCTION

Tennis in its current form is considered one of the highest rank games practiced in international and Olympic events. It is one of the individual sports that attracted the hearts of audience as it is characterized with attractive skill and physical basics being one of the games characterized with special features that distinguished it from the rest of other individual games for not being connected to certain periods of time. It is also distinguished in how to handle the ball as it is sometimes touched, caught and slammed in addition to the great combination between technical and aesthetic performances that is shown through movement of players in the field (Mohamad Hassan, 1998: 9).

Sport managements and trainers around the world always search for the latest technologies and physiology to be transformed by various ways into something beneficial serving the sport field. Thus, sport training studies the relation between fist strength and muscular strength (which is the basis of elements of physical conditioning). It is the training that depends on muscular contraction, which in turn worked on developing strength of working muscles in motor performance during motor performance from work or performance similar to movement or effectiveness in the same direction of muscular work. Significance of the study lies in determining the correlation between strength of forehand and backhand serving fist in tennis as “serve is one of the most significant direct offensive strikes in the match as it is the first hit to score direct points and different types of serving with the flying ball require appropriate fist strength” (Jasmi et al, 1977: 65).

## Problem of Study

Muscular strength in tennis depends on general and particular physical characteristics. Therefore, a serve is one of the main skills and the first opportunity to score a direct point and requires a point in order to each

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correct and mastered model of performance in serving to achieve winning.

Through observations of the researchers in the faculties' championship in Diala University, they found that there is a number of players who do not consider the role of their fists during serve performance. This may be due to lack of direction by their coaches in this case. Hence, problem of the study is shown in discussing the relation between fist strength and accuracy of forehand and backhand serving in tennis.

### Objective of the Study

Defining the relation between fist strength and accuracy of forehand and backhand serving in tennis

### Methodology of the Study

The researchers used the descriptive method as it is appropriate to nature of the study.

### Sample of the Study

The sample was selected among players of team of Faculty of Physical Education & Sport Science/Diala University (6 players).

### Means of Data Collection

Fist Strength Test (Allawi&Radwan 1982: 34).

### Exploratory Trial

The exploratory trial was performed on 12/10/2016 in the outdoor tennis court in Faculty of Physical Education & Sport Science/Diala University on a sample consisting of (10) students tested in a random sample from outside the sample. The exploratory trial showed some aspects that benefited the researcher including:

1. Validity of tools and devices.
2. Appropriateness of tests with sample of the study.
3. Defining some difficulties and obstacles that may face the study.
4. Determining the assistant team sufficient for the trial.
5. Defining appropriateness of educational unit's time and number of repetitions allowed for sample members.

### Main Trial

This trial was performed on the study sample on 15/12/2016 in the outdoor tennis court in

Faculty of Physical Education & Sport Science/Diala University.

## Presenting and Discussing Results

**Table 1:** Arithmetic means and standard deviations of the study sample

Statistical features tests	Arithmetic mean	Standard deviation
First strength/kg	45.75	6.37
Forehand accuracy/degree	23.85	4.45
Backhand accuracy/degree	20.73	3.65

### Correlation of the Study Sample

**Table 2:** Correlation between fist strength and accuracy of forehand swinging serve and magic swing in volleyball

Statistical features tests	Calculated (R) value	Tabulated (R) value	Significance
First strength/kg			
Forehand accuracy/degree	0.870	0.613	Significant
Backhand accuracy/degree	0.658	0.524	

## DISCUSSING RESULTS

Results of Table 2 show that there is a significant correlation between fist strength and accuracy of forehand and backhand serving in tennis. The researchers attribute this to the significance and effect of fist strength on directing the ball with control in striking direction and ball serve towards its path above the net towards the front direction. Hassanin states that: "It is an important factor in various activities such as football, basketball and volleyball as upon which the target is determined and, in turn, achieving winning" (Hassanin 1995: 459).

Both researchers agree with (Ali SalloumJawad) that forehand is one of the most important and most used strikes in tennis as it is characterized with easy learning or being an offensive strike leading the player to gain points (Ali SalloumJawad Al Hakim 2002: 80). In addition, backhand ball striking by the player's hands that hold the racket and it was called so as it strikes the ball with back of the racket. Unlike the forehand from front left side of the racket, the backhand is done by the right front of the racket and it is one of the most frequently used strikes in matches in this game and its significance is not less than forehand hit as hitting the

ball in matches is always done from front, right or left of the player (Ali SalloumJawad Al Hakim 2002, 81).

## CONCLUSIONS

1. Serving strength is affected by physical variables including fist strength.
2. There is a significant correlation between fist strength and accuracy of forehand and backhand serving in tennis.

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