

# A Comparative Study on Eye-Hand Co – Ordination Ability Between Attackers and Blockers in Volleyball

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Received May 10, 2017

Accepted June 01, 2017

## ABSTRACT

*The present study was conducted for the comparison on eye-hand coordination between attackers and blockers in volleyball age ranged between 20 to 25 years. The subjects were taken from a club and B.V.D.U of pune city. Eye-hand coordination was measured by Hand eye coordination test (Beashel and taylor 1997).The means of the respective variables were compared between central blockers and counter attackers by applying t-test. Statistical significance was tested at 0.05 levels. The result of the present study shows that there was no significant difference in the mean value of eye-hand coordination between central blockers and counter attackers in volleyball.*

**Key words:** Eye-hand coordination, Central Blockers, Counter Attackers Volleyball.

## 1.INTRODUCTION

Volleyball is a team sport in which two teams of six players are separated by a net. Each team tries to score points by grounding a ball on the other team's court under organized rules. It has been a part of the official program of the Summer Olympic Games since 1964. The complete rules are extensive. But simply, play proceeds as follows: a player on one of the teams begins a 'rally' by serving the ball (tossing or releasing it and then hitting it with a hand or arm), from behind the back boundary line of the court, over the net, and into the receiving team's court. The receiving team must not let the ball be grounded within their court. The team may touch the ball up to 3 times but individual players may not touch the ball twice consecutively. Typically, the first two touches are used to set up for an attack, an attempt to direct the ball back over the net in such a way that the serving team is unable to prevent it from being grounded in their court. On February 9, 1895, in Holyoke, Massachusetts (USA), William G. Morgan, a YMCA physical education director, created a new game called Mintonette as a pastime to be played

(preferably) indoors and by any number of players. The game took some of its characteristics from tennis and handball. Another indoor sport, basketball, was catching on in the area, having been invented just ten miles (sixteen kilometers) away in the city of Springfield, Massachusetts, only four years before. Mintonette was designed to be an indoor sport, less rough than basketball, for older members of the YMCA, while still requiring a bit of athletic effort. The first rules, written down by William G Morgan, called for a net 6 ft 6 in (1.98 m) high, a 25 ft × 50 ft (7.6 m × 15.2 m) court, and any number of players. A match was composed of nine innings with three serves for each team in each inning, and no limit to the number of ball contacts for each team before sending the ball to the opponents' court. In case of a serving error, a second try was allowed. Hitting the ball into the net was considered a foul (with loss of the point or a side-out)—except in the case of the first-try serve.

Volleyball is an enjoyable activity. The game is played by two teams of six players, with up

to six substitutes allowed in a squad. A net is fixed across the middle of a court eighteen meters long and nine meters wide. Two flexible antennae mark the extremes between which the ball must pass over the net. Play starts by one player serving the ball over the net from behind the base line. When the ball has passed over the net, the receiving team may play the ball three times before they must pass it back over the net. Each player is only allowed to touch the ball once. The object of the game is to force the ball down onto the floor of the opponent's court, or to put them under so much pressure that they are unable to return the ball. In volleyball, if the ball does not go back over the net, the opposition wins a point. After each time a team wins the ball back from the opposition each player rotates one position clockwise. This rotation is a special feature of the game and it means that all players must play both in the front line and the back line. A team wins a set by scoring 25 points with a two point lead and wins the match by winning three sets. Volleyball is one of the most successful and popular competitive and recreational game which is played all over the world. FIVB is the world's largest sports organization with 220 affiliated member countries. It is a sports involving short and intensive physical efforts during training and competitions. Volleyball players mainly relies on force, power, jumping ability with proper co-ordination of muscles and organs.

Along with the other component one of the most important component is co-ordination, which also plays a major role. A sportsman can compete effectively only by a coordinative mastery of the technique. Coordinative abilities enable the sportsman to do a group of movements with better quality and effect. Coordinative ability are needed for maximal utilization of conditional abilities, technical skills

In volleyball game two very important positions are attackers and blockers. This study revolves these two very important positions. Blocking in volleyball is a method of defending a spike in which the defensive team jump up the net and stops the spike from crossing the net by contacting it with arms and hands. Blocking is the first line of defence against the attack of the opponent. Spiking is another very important skill in volleyball. Spiking is the act of driving the ball hard into an area of your opponent's court through cross or diagonal hit or straight hit.

In case of spikers eye-hand coordination enable them to spike the ball with perfect technique and hit in the desired zone of the opponents court with full power and sometimes even with slow pace. And in case of blockers they resist the attackers from attacking the ball by use of proper blocking technique and placement of hands with the help of proper eye hand coordination.

The study is an effort for the path of investigation to seek the required amount of eye-hand coordination among blocker and attackers.

## 2. STATEMENT OF THE PROBLEM

The purpose of the study was to compare the differences on eye-hand coordination between attackers and blockers in volleyball.

## 3. METHODS

The objective of the study was to investigate the difference on eye-hand coordination between attacker and blockers in volleyball. For this study 20 central blockers and 20 counter attacker form B.V.D.U. and a club (Pailwan amol buchade sports foundation ambegaon pathar chintamani dnyanpith katraj pune) were selected. The age of the participant ranged between 20 to 25 years.

To compare the eye-hand coordination ability subject were asked to stand two metres away from a smooth wall. With the command of the assistant the subject will throws a tennis ball with their right hand against the wall and catches it with the left hand, throws the ball

with the left hand and catches it with the right hand. This cycle of throwing and catching is repeated for 30 seconds .Number of catches are individual score. Two trials are permitted.

**Table 1: Deceptive statistic of Means and Standard Deviations of Eye-hand coordination between central blocker and counter Attacker**

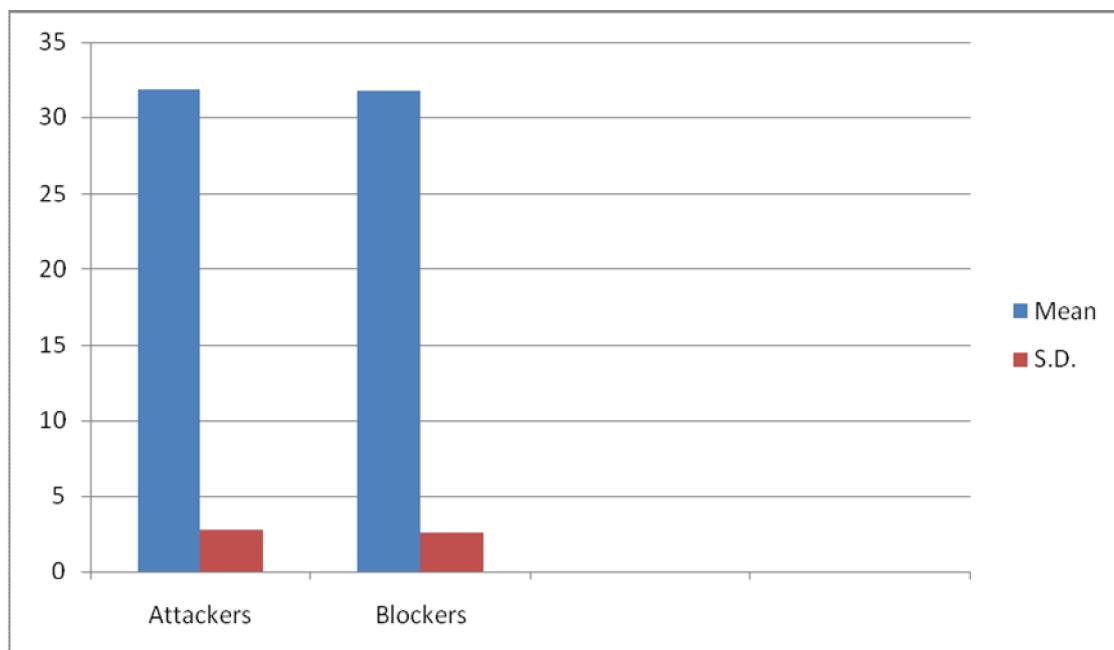
| Group     | N  | Mean  | SD   | S.E  | DF    | MD   | Cal. T. Value |
|-----------|----|-------|------|------|-------|------|---------------|
| Attackers | 20 | 31.90 | 2.82 | 0.63 | 38    | 0.10 | 0.118         |
| Blockers  | 20 | 31.80 | 2.54 | 0.56 | 37.59 |      |               |

Significant at -0.05 level .

Tabulated value - 2.71.

**Graph- 1**

**Comparison of Mean and Standard Deviation of Eye-Hand Coordination Ability between Central Blockers and Counter Attackers**



#### 4. DISCUSSION OF FINDINGS

The calculated "t" value (.118) of eye-hand coordination from the obtained data is less than the tabulated "t" value at 0.05 level of significance that the blockers does not

differentiate significantly with attackers in case of eye-hand coordination ability.

The blockers need to have sheer perception and accurate time while completing a

successful block. The eye-hand coordination plays a major role and the blockers required to develop these motor qualities. In case of attackers the ability to spike the ball with great effect successfully will only be possible when they can jump and connect properly with the ball and smash it in the desired place of the opponent's court. For this purpose good eye-hand coordination ability is considered as prime requisition for both attacker and blockers. There might father study on this topic may be conducted using large sample size, elite player, participate of different gender to investigate the differences between attacker and blockers if any.

## 5. CONCLUSION

Significant difference was not found in case of eye-hand coordination between blockers and attackers.

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**Anger is a bad adviser.**

**~ French Proverb**