



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 3.4  
IJAR 2015; 1(3): 90-92  
www.allresearchjournal.com  
Received: 18-01-2015  
Accepted: 20-02-2015

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## Comparative study on response time of defensive and offensive male soccer players

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### Abstract

The aim of the study was accomplished to evaluate the response time of inter college defensive and offensive male Soccer Players with respect to their playing positions. These players belong to Maharishi Dayanand University, Rohtak. The study was conducted on 30 male players, 15 offensive and 15 defensive players. The offensive players consist of forwards and the defensive players include midfielder, full backs and goal keeper. The data was composed by the use of electronic chronoscope. Electronic chronoscope is used to evaluate the visual and audio response time. The data was examined and evaluated with the assist of statistical measures in which, arithmetic mean, standard deviation, standard error deviation, and t-test were employed.

**Keywords:** Reaction time, Audio, Visual, Defensive, Offensive.

### 1. Introduction

Association football, more commonly known as football or soccer, is a sport played between two teams of eleven players with a spherical ball. It is played by 250 million players in over 200 countries, making it the world's most popular sport. The game is played on a rectangular field with a goal at each end. The object of the game is to score by getting the ball into the opposing goal.

The goalkeepers are the only players allowed to touch the ball with their hands or arms while it is in play and then only in their penalty area. Outfield players mostly use their feet to strike or pass the ball, but may use their head or torso to strike the ball instead. The team that scores the most goals by the end of the match wins. If the score is level at the end of the game, either a draw is declared or the game goes into extra time and/or a penalty shootout depending on the format of the competition. The Laws of the Game were originally codified in England by The Football Association in 1863. Association football is governed internationally by the International Federation of Association Football (FIFA; French: Fédération Internationale de Football Association) which organizes a World Cup every four years.

Football refers to a number of sports that involve, to varying degrees, kicking a ball with the foot to score a goal. Unqualified, the word *football* is understood to refer to whichever form of football is the most popular in the regional context in which the word appears: association football (also known as soccer) in the United Kingdom and most of the non-English speaking world; gridiron football (specifically American football or Canadian football) in the United States and Canada; Australian rules football or rugby league in different areas of Australia; Gaelic football in Ireland; and rugby football (specifically rugby union) in New Zealand. These different variations of football are known as football codes.

Various forms of football can be identified in history, often as popular peasant games. Contemporary codes of football can be traced back to the codification of these games at English public schools in the eighteenth and nineteenth centuries. The influence and power of the British Empire allowed these rules of football to spread to areas of British influence outside of the directly controlled Empire, though by the end of the nineteenth century, distinct regional codes were already developing: Gaelic Football, for example, deliberately incorporated the rules of local traditional football games in order to maintain their heritage. In 1888, The Football League was founded in England, becoming the first of many

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professional football competitions. During the twentieth century, several of the various kinds of football grew to become among the most popular team sports in the world.

Reaction time is the interval time between the presentation of a stimulus and the initiation of the muscular response to that stimulus. A primary factor affecting a response is the number of possible stimuli, each requiring their own response, that are presented.

If there is only one possible response (simple reaction time) it will only take a short time to react. If there are several possible responses (choice reaction time) then it will take longer to determine which response to carry out.

Hick (1952) discovered that the reaction time increases proportionally to the number of possible responses until a point at which the response time remains constant despite the increases in possible responses (Hick's Law).

A variety of field and racquet sport players can also be used by sprint and other power athletes, as a means of improving their general reaction and coordination. Many of the drills require acceleration and agility plus reaction, which make them particularly relevant to sport. Reaction is obviously crucial in numerous sporting situations, for example, for a football defender reacting to a striker who is turning to try to spin past them. If the defender is able to 1) react, and 2) crucially position their body in the most efficient position to turn and accelerate, then they will be all the more likely to dispossess the attacker of the ball.

Soccer has many different positions and many different names that come along with them.

Each player position has own very specific task, from defending against opponent attacks to scoring. To simplify, we will categorize the football positions into four: the goalkeeper, defenders, midfielders, and forwards.

Soccer positions can be confusing, especially if you have just started to play soccer. It took me a while to figure out what a sweeper, fullback or central midfielder is, but of course I didn't have access to this information.'

Lucky for you, I have created a guide that describes every position in soccer, so just take your time and check out any position that interests you.

However, if you are really serious with your soccer career and want to learn all the secrets behind every soccer position. Keep in mind also that you should try to play many soccer positions before deciding what position suits you best. My experience is that many soccer players (especially young people) want to play as forwards and strikers.

As you already know, this is not possible because someone has to be fullback, midfielder, goalkeeper and so on. However, just because you don't play these soccer positions, doesn't mean that you will not become a good soccer player.

**Objectives of the Study**

1. To discover out the audio response time of male Soccer players with respect to their playing positions.
2. To discover out the visual response time of male Soccer players with respect to their playing positions.

**Hypothesis of the Study**

1. There will be no significant difference between offensive and defensive male Soccer players with respect to audio response time.
2. There will be no significant difference between offensive and defensive male Soccer players with respect to visual response time.

**Procedure and Methodology**

**Sampling**

The purpose of the current study was conceded out on 40 players of Maharishi Dayanand University, Rohtak, and inter-college Soccer male players whose age between 19-24 years. All these players were separated into two clusters of their playing positions.

- a. Offensive players includes forwards.
- b. Defensive players includes midfielder, full backs & goal keeper

**Apparatus used**

The extent of visual and auditory response time, electronic chronoscope was used. It is a specifically considered apparatus which measures both audio and visual response time of the players. It consists of four different types of light for visual response time and four different types of sounds for auditory response time.

**Procedure**

For evaluate the response time, first of all the directions were specified in a cluster of ten players throughout competition at Maharishi Dayanand University, Rohtak, at formerly in a day. When it was make sure that the topic has understood the complete process, ten testing for both audio and visual response time were specified at random; initially audio and then visual. The time as recorded on the digital timer was noted down for each testing.

**Statistical Techniques Used**

The data was evaluated and compared through t-ratio to find out the importance variation. For testing the hypothesis the level of significance chosen was 0.05.

**Result and Discussion**

**Table 1:** Classification of male Soccer players with respect to their playing positions

Playing Position	Number of Soccer Players
Offensive player ( Forward)	20
Defensive Players ( Goal Keeper, Full Back & Midfielder )	20
Total	40

Table - 1 exposed that the offensive players which contains only the forwards ( left out, left in, centre forward, right in & right out) while the defensive players includes: Goal keeper, left back, right back, left half, centre half & right of all the players.

**Table 2:** Audio response time of male Soccer players

Playing Position	Number of Players	Mean	SD	SED	df	t-value
Offensive	20	0.57	0.68	0.32	38	2.64
Defensive	20	1.04	1.13			

\*Significant at 0.05 level

Table - 2 is exposed that the mean of audio response time of offensive players is less than defensive players. It proves that audio response time of offensive players is better as that of

defensive players and the value of t-ratio is 2.28 which are greater than the tabulated value 2.01. So there was considerable variation concerning audio response time among offensive and defensive soccer players. Therefore Null hypothesis is rejected. It shows that the offensive male players get less audio response time than defensive players. So, audio response time of offensive male players is better than defensive players.

**Table 3:** Visual response time of male Soccer players

Playing Position	Number of Players	Mean	SD	SED	df	t-value
Offensive	20	0.51	0.56	0.39	38	2.94
Defensive	20	1.21	1.09			

\*Significant at 0.05 level

Table - 3 is exposed that the mean of visual response time of offensive players less than the means of defensive players. It confirms that the visual response time of offensive players is enhanced than the defensive players and the value of t-ratio is 2.94 which are superior to the tabulated value 2.01. So there was considerable dissimilarity concerning audio response time among offensive and defensive soccer players. Therefore Null hypothesis is rejected. It proves that the offensive male players get less visual response time than defensive players. So visual response time of offensive male players was better than defensive players.

Hence from above results this study, “comparative study on response time of male soccer players with respect to their playing positions” is undertaken which will systematically donate to the field of response time and will be the foundation for future studies in this observe.

## Conclusion

Under the situations and within the restriction of this study the following termination was drawn:

1. Offensive male Soccer players are superior then defensive players in case of audio response time.
2. Offensive male Soccer players are superior then defensive players in case of visual response time.

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