



## Relationship Of Cognitive Speed On Scoring Accuracy From Stability In Football Young Players

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### Abstract

The study aimed to identify contribution of perceptual speed to accuracy Goal scoring in football is consistent among a sample of young players. The researcher used descriptive method, and the research sample consisted of 25 young players from a group of 30, all players from Al-Minaa Club in Basra Governorate were selected purposively. Perceptual speed is below required level during scoring, it negatively affects players, which is reflected in player's performance level, perception may be related to accuracy of scoring from a stationary position in football and contribute significantly to improving level of offensive skills performance among young players. Results show differences in standard deviations of two variables perceptual speed is necessary for young players to perform skill of shooting accuracy in football, player needs tactics and to see what opponent is doing during shooting, and this depends on player's speed of perceiving stimuli surrounding. Because no matter how complete and effective shooting is at a high level of skill performance, still needs perceptual speed, as calculated value of (T) is 3.82. When comparing it to tabulated value, which is 2.06, we notice that calculated value of (T) is greater than tabulated value, and this indicates its significance. Conclusions was that perceptual speed contributed well to the accuracy of stationary shooting in football among young players, also concluded that it is important to consider perceptual speed in improving stationary shooting accuracy in football for young players, and indeed in various sports as well. Recommendation is to adopt current research cognitive speed in various research and studies due to its very high validity and reliability.

**Keywords: Cognitive speed, Scoring accuracy, Football, Motor learning.**

### Introduction

Mental processes are essential for athletes in both individual and team sports, especially in football. Perceptual speed is a crucial variable for players performing offensive skills, including scoring goals in football . This is achieved by maintaining a certain level of accuracy, attention , and perceptual speed . Therefore, the researcher sees the importance of this study in examining the contribution of perceptual speed to the accuracy of scoring from a stationary position among young players at Al- Minaa Club in Basra Governorate . This can benefit both the players themselves and their coaches in football , enabling them to demonstrate high-level skill and accuracy when these skills are properly developed.

Perceptual speed is one of the important and influential changes affecting the overall skill performance and scoring from a standstill for young players. In particular, and this is clearly evident through the current research, players will need a certain level of perception and speed in

skill and offensive performance. Through the researcher's observation of this game, he noticed that if the perceptual speed is below the required level during scoring, it negatively affects the players, which is reflected in the player's performance level. Hence, perception may be related to the accuracy of scoring from a stationary position in football and contribute significantly to improving the level of offensive skills performance among young players.

Research Objective is to identifying contribution of perceptual speed to accuracy Goal scoring in football is consistent among a sample of young players. Research Hypotheses is perceptual speed has a contribution to accuracy of shooting from a standstill among a sample of young players.

### **Research Methodology**

The researcher used the descriptive method correlational studies because it suits the nature of the research problem "studying a phenomenon or addressing a problem as it exists in the present with the intention of diagnosing it, revealing its aspects, and determining the relationships between its elements through the use of objective tools to collect and analyze data".

Research Community and Sample Wajih Mahjoub (1993) defines a research sample as "the model upon which the researcher bases and focuses his entire work ."The sample of 25 players was selected from 30 players, representing 83.33 %, which represents entire original community, and they are players from Al-Basra Governorate, Al-Minaa Club for players in the youth category, aged 17-18 years.

#### *Perception Test*

To measure perceptual speed , the researcher relied on a test called the Differential Attention Test. (Differential Attention Test) The test, abbreviated as (DAKT), was developed by Oswald Bratfisch and Eva Hagman. It was first digitally developed in 1991 and then computer-based in 2001. This test was specifically designed to measure perceptual speed. Indicators of the validity and reliability of the cognitive speed test

Validity: The psychological validity of the DACT test is evident , as the respondent immediately thinks about it and focuses on it. The logical validity of the test was established by defining Content validity is also proven through factor analysis, and the prognostic validity of professions that require a high degree of speed and perceptual accuracy has been clarified.

Reliability: The reliability coefficient using the parallel testing method (criterion-based testing) is 0.96 .  $r =$  for perceptual speed, and  $r = 0.85$  for accuracy.

Test Description: The test consists of three subscales containing different items: numbers, letters, and shapes. Two columns are displayed, each containing five sets of numbers, letters, or shapes. Each row contains one or more sets of numbers, letters, or shapes, arranged neatly in the left column. The examinee's task is to identify and select the critical items as quickly and accurately as possible. The task focuses on identifying all the sets of numbers, letters, or shapes specified in the left column. All three sections consist of 250 items. The examinee is allowed only 3 minutes to answer each section, with an additional 4 minutes for instructions and practice in solving those items.

Test application duration: The time required to apply each subscale of the test is approximately (3) minutes, with an additional (4) minutes for instructions and for solving the items related to training on applying the test .

Recording and calculating test scores: The number of items solved correctly is a measure of cognitive speed. The percentage of errors calculated from the total number of solved items

constitutes a measure of accuracy. The methodology also shows us the results of the raw scores and standard scores for each test, as well as the test as a whole. The (DAKT) test is used mainly to measure the speed and accuracy of perception, i.e., the quality and quantity of focus and attention . The main field of application can be found in the psychology of selecting and classifying individuals.

#### *Scoring test from a stability position in football*

The purpose of the tests: Measuring the player's accuracy in shooting with their foot at the goal from sensitive positions in front of the goal.

How the test is conducted: The goal is divided into three equal sections by strips that fall onto the goalpost and are fixed to the ground . Three balls are placed: the first is placed on the penalty area line in front of the left corner of the goal area, the second is on the other side in front of the right corner of the goal area, and the third is placed between them on the penalty area line in front of the penalty spot.

Method of performance: The player shoots the right ball towards the right third of the goal, then moves to the middle to shoot it towards the middle third of the goal, then moves to the left to shoot it towards the right third of the goal, repeating this twice with the right foot and twice with the left foot. Registration method: A point is given for each correct shot , and a ball not shot towards the goal is not counted.

#### *Main Experiment*

The main experiment included conducting tests used in the research, namely perceptual speed test , shooting accuracy test from a stationary position with a football), on the members of the research sample, which consisted of 25 young players , at Al-Minaa Club in Basra Governorate. The perceptual speed test was conducted . Which is abbreviated as (DAKT): at the Port Club Then, the skills test was conducted for the young players 17-18, where the testing procedures were carried out. On 1/3/2024 , and it ended On 1 / 4 / 2024 The same procedures that were applied to the exploratory experiment were observed , including the availability of all the necessary tools and supplies for the research.

#### *Statistical Methods*

The researcher used the statistical software package SPSS version 16.0 to process the data.

### **Results and Discussion**

Presentation, analysis, and discussion of the results of the relationship between perceptual speed and shooting accuracy from a stationary position in a sample of young players.

Table 1. Statistics procedures of tests

Variables	Mean	St.d	Calculated (T) value	Tabular (f) value	Sig. type
Cognitive speed	7.4	6.2	3.82	2.06	Sig.
Scoring accuracy from stability	9.3	3.45			

Degrees of freedom = ( = ( N - 2 (2-25) and at level (05 , 0) equals (06 , 2)

Table No. (1) shows differences in means between perceptual speed and shooting accuracy from a standstill in football. We also note differences in standard deviations of two variables. This means that perceptual speed is necessary for young players to perform skill of shooting accuracy in football. Player needs tactics and to see what opponent is doing during shooting, and this depends

on player's speed of perceiving stimuli surrounding. Because no matter how complete and effective shooting is at a high level of skill performance, still needs perceptual speed, as calculated value of (T) is 3.82. When comparing it to tabulated value, which is 2.06, we notice that calculated value of (T) is greater than tabulated value, and this indicates its significance.

The researcher attributes improvement in certain sensory-motor variables, including perception of time, to practice of sports activities, particularly football. This aligns with findings of Alawi and Abu Al-Ala (2020), who indicated that sensory receptors in muscles, tendons, and joints transmit sensory nerve signals carrying information about muscle shortening or lengthening, tension and relaxation, speed and strength of muscle contraction, as well as accuracy of movement in surrounding space and time of its execution. Furthermore, they emphasized that determining temporal relationship in motor action and coordination of different movements are among sensory perception processes possessed by athletes as a result of coordinating muscular action between contraction and relaxation. Since research sample consists of athletes who practice various sports activities, this, in turn, leads to development of athlete's ability to enhance their spatial and temporal perception.

## Conclusions

The contribution of perceptual speed was good in the accuracy of scoring from a stationary position in football among older players.

## Recommendations

Adopting the current research tool cognitive speed in various research and studies due to its very high validity and reliability.

## References

1. Adel Abdul Rahman Siddiq and others: The Psychological Laboratory: Its Foundations, Components, and Scientific and Practical Applications. Reviewed by: Prof. Dr. Ghassan Hussein Salem. 1st Edition, Iraqi National Library and Archives Deposit No. (77) for the year 2012, Psychological Research Center, University of Baghdad.
2. Wael Qasim Jawad. Master's Thesis: The Effect of Corrective Exercises on Developing Some Kinematic Variables of Accuracy in Shooting from Set Pieces in Football, College of Physical Education, University of Basra, 2007, p. 37
3. Wajih Mahjoub: Scientific Research Methods and Approaches, 3rd ed., University of Baghdad, Higher Education Press, 1993, p. 181.
4. Bangsbo, J., & Mohr, M. (2012). Fitness testing in football: a systematic review. *Bangsbo Sports*, 35-42.
5. Gabbett, T. J., & Mulvey, M. J. (2008). Time-motion analysis of small-sided training games and competition in elite women soccer players. *Journal of Strength and Conditioning Research*, 22(2), 543-552.
6. Ghaida, F. A. (2024). Some physical and respiratory variables and their relationship to the accuracy of the spike in volleyball. *Indian Journal of Modern Research and Reviews*, 2 (10) .
7. Memmert , D., & Roca, A. (2019). Tactical creativity and decision making in sport. *Routledge*, 89-112.
8. Morris, T., Spittle, M., & Watt, A. P. (2005). Imagery in sport. *Human Kinetics*, 2546.
9. Reilly, T., & Williams, A. M. (2003). *Science and soccer: developing elite performers*. Routledge, 2nd edition, 145-162.
10. Smith, MR, Coutts, AJ, & Fransen, J. (2019).Mental fatigue and soccer: current knowledge and future directions. *Sports Medicine*, 48(7), 1525-1532.

11. Travassos, B., Araújo, D., & Vilar, L. (2013). Tactical performance in soccer: from information to action. *Journal of Sports Sciences*, 31(8), 819-828 .
12. Williams, A. M., & Davids, K. (1998). Visual search strategy, selective attention, and expertise in soccer. *Research Quarterly for Exercise and Sport*, 69(2), 111-128.
13. Williams, A. M., & Jackson, R. C. (2019). *Anticipation and decision making in sport*. Routledge, 45-67.