

Design and implementation of a temporal perception test using computer technology for male and female players of some team games at Basra University

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Abstract

The research problem lies in the lack of computerized tests that rely on computers to measure temporal perception, and the study aimed to design and implement a temporal perception test for the research sample representing the community and the research sample with the players and players of some differential games in the College of Physical Education and Sports Sciences at Basra University for the academic year 2019-2020 and the adult's number was 93 players. The third chapter included presenting the results and analyzing them for the Raja test for the temporal perception of the players and the female players of some differential games (for the right and left limb movement rate), and one of the most important conclusions of the test was the ability to accurately measure temporal perception as it relies on computers in measurement, and recommendations were The temporal perception trait is a mental quality, and the higher the level of the player in this characteristic, the better his level in the game.

Keywords: Temporal perception, computer technology, mental quality

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Introduction

Any deficiency in the performance of a sample is caused by the incomplete interaction and understanding between the sensory receptors passing through the medium that transmits nerve impulses and the mechanical ability of movement for the body's muscles represented by the muscle mass of the body and the amount of force produced (1: 262). The ball to the other player accurately in the volleyball game is the inability to estimate the distance (the distance between one player and the other) and the time (the period that must be spent for the ball to reach the teammate) with the least distance or proximity to the required point, which forces the player to move from his place to complete The preparation process, which generates a state of inaccuracy in a performance that leads to failure and that the only reason is that the player does not possess sufficient skills of perception of movement and in general that the motor sensations play a prominent and effective role in completing the sports movement, and conversely, the error in performance is caused by the lack of concentration of the quantity necessary for the required strength, and thus the researchers observed that there is a high positive correlation between the perceptual skills of movement and the skill level.¹

The temporal perception is a mental quality that the player prefers to understand early and its performance, whether it is a skill, movement, transfer from one point to another point, handing over a ball to a colleague, or a move to receive a ball estimated at that time the ball arrives, so he must move at a certain speed to receive it before the opponent player receives it (3: 123) Therefore, the researchers deliberately made a test that measures the temporal perception quality of the players. The problem of the research lies in the lack of computerized tests that rely on computers to measure temporal perception.²

Research objectives

1. Designing and applying a test to measure temporal perception.
2. Knowing the level of temporal perception of the male and female players of some differential games.

- Identify the differences in the level of time perception between the players of some differential games.

Research field

- The human field: represented by a sample of male and female team players in the College of Physical Education and Sports Sciences.
- Time range: represented by the period from 1/10/2019 to 1/2/2020
- Spatial field: represented in the sports hall of the College of Physical Education, University of Basra

Research Methodology

The researchers used descriptive method by adopting the survey technique.

Research Community and Sample

The community and the research sample represented the male and female players of some differential games in the College of Physical Education and Sports Sciences at Basra University for the academic year 2019-2020, whose number is 93 male and female players, according to Table (1).

Table 1. Shows the distribution of the research sample

Samples	Number			
	Players (M)	The ratio%	Players (F)	The ratio%
Volleyball	12	24.48979592%	11	25%
Handball	8	16.32653061%	12	27.27272727%
Football	16	32.65306122%	11	25%
Basketball	13	26.53061224%	10	22.72727273%
Total	49	100%	44	100%
The total number is 93	49	52.68817204%	44	47.31182796%

Tools used in the research

- A laptop computer with specifications (RAM 4KA - Hard 500KA - processor speed 2Ka Hz - Core i5 processor type).
- A stop lever.
- 3- An electronic intermediate circuit between the test lever with a wire tied to the computer, as shown in Figure (1).



Figure 1. Show an intermediate electronic circuit between the test lever

The scientific basis for the test

The researchers conducted validity, consistency and objectivity by following the necessary statistical steps, and thus the test was ready for implementation.

The test used

- Test name: Rajaa test to measure temporal perception
- The purpose of the test: to measure the level of temporal perception
- The tools used: a laptop computer with the following specifications (Ram 4 Giga - Hard 500 Giga - processor speed 2 KHz - processor type Core i5) - An electronic intermediate circuit between the test peg with a wire tied to the computer - A special test established in the language of Faull Basic Sixth Edition By programmer researcher Abdullah Jassim Yassin.
- Method of performance: After running the test on the computer through the icon on the desktop, the following window appears, Figure (2), in which the text is entered, the data is displayed, or the assessment is displayed.

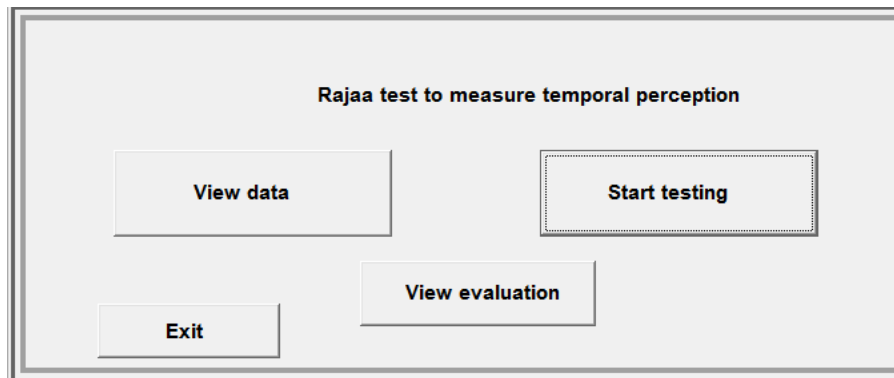


Figure 2. Show the first window of the test

Specialization	Type of game	Hand used	Gender	Age	Name
Prepare	Volleyball	Right	<input checked="" type="radio"/> Male <input type="radio"/> Female	51	Rajaa Abdulsamad
				80	Weight
					177 Length

Figure3. Show the second window in which the important data is entered



Figure 4. Show the third window in which the test is selected or the test is tried

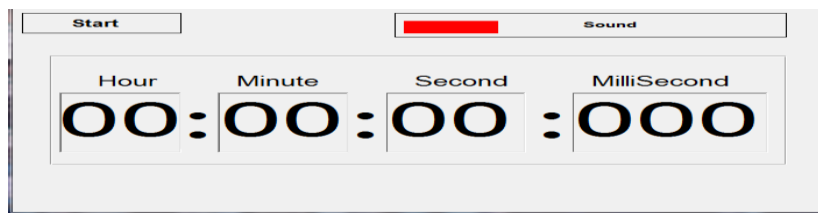


Figure 5. Show the fourth window in which the test is piloted

From the window distinguishing seconds (Figure 5), when choosing the colour, and when you press the (start) button, it glows in this window when you press the test lever. Pressure yellowing of data and so there is a visualization of the test at the tester, and this test restricts healthy and deaf-mute people, and when choosing the volume button from a window that distinguishes seconds, it is a test that is useful for sighted people who hear but do not see. When the (start) button is pressed, the test is counted at a time And every second that passes, a click sound appears, and here is a visualization of the blind tester, the pressure position on the test lever with the number of times the speaker clicks the seconds. The time is calculated and when the test lever is pressed to perceive the time, the visual response time of healthy people and the auditory response time of the sighted testers are calculated. The difference between the required time and the perceived time, and the smaller the difference, the better the test result, and so on, for ten attempts.

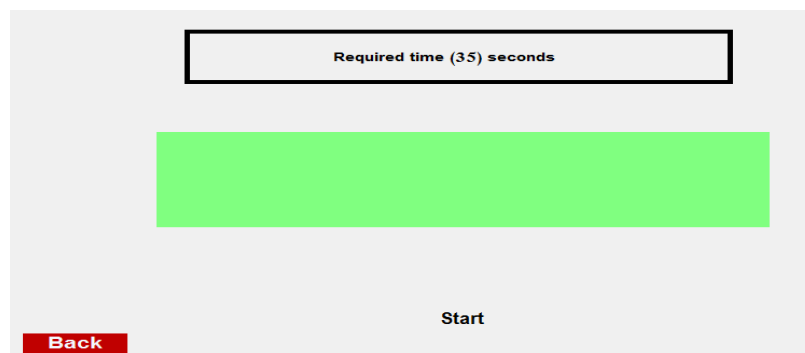


Figure 6. Show Time required for testing

Results and discussions

Table 2.Showing off the results of the calculated and tabular value of (F) for the Rajaa test of temporal perception among volleyball players

F-Test Two-Sample for Variances			
	Raja's temporal perception test for volleyball players(M)	Raja's temporal perception test for volleyball players(F)	Statistical significance
Mean	46.8009208	53.52681103	No sig.
Variance	393.3328599	259.9869869	
Observations	12	11	
df	11	10	
F	<u>1.512894413</u>		
P(F<=f) one-tail	0.261084344		
F Critical one-tail	<u>2.942957268</u>		

Table 3.Showing the results of the calculated and tabular value of (F) for the Rajaa test of temporal perception between male and female handball players

F-Test Two-Sample for Variances			
	Raja's temporal perception test for handball players(M)	Raja's temporal perception test for handball players(M)	Statistical significance
Mean	44.80546826	54.87509746	No sig.
Variance	237.9456974	138.1183658	
Observations	8	12	
df	7	11	
F	1.722766527		
P(F<=f) one-tail	0.201664393		
F Critical one-tail	3.012330343		

Table 4.Show of the results of the calculated and tabulated value of (F) for the Rajaa test for temporal perception between basketball players and players

F-Test Two-Sample for Variances			
	Raja's temporal perception test for basketball players(M)	Raja's temporal perception test for basketball players(M)	Statistical significance
Mean	48.42543671	47.72562129	Sig.
Variance	243.9870643	446.6442648	
Observations	13	10	
df	12	9	
F	<u>0.546267093</u>		
P(F<=f) one-tail	0.162746411		

F Critical one-tail	0.357605766		
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Table 5. Show of the results of the calculated and tabulated value of (F) for the Rajaa test of temporal perception among football players and players

F-Test Two-Sample for Variances			
	Raja's temporal perception test for football players(M)	Raja's temporal perception test for football players(M)	Statistical significance
Mean	44.90731385	51.3803512	No sig.
Variance	288.9944158	184.808853	
Observations	16	11	
df	15	10	
F	1.563747686		
P(F<=f) one-tail	0.240073087		
F Critical one-tail	2.845016527		

And through tables (2,3,4,5), which show the calculated and tabular value of (q) for the values of the temporal perception variable among the players of team games (volleyball, handball, basketball, football), which showed us the absence of significant differences and attributed The researchers concluded that the cognitive variable is a mental process that occurs in the brain and depends on the effectiveness of the nervous system and the senses, which is not very dependent on the physiological (muscular) side of the athlete, so if we find there is a little effect on the muscle building and physical measurements on the level of the values of that skill between the players and the players of those Differential games, unlike other variables in the science of perception, a mental capacity that has a close relationship with sports activity.³ Actively motivated (2: 195). Perception has an important and influential role when practising various sports activities. It is an important mental process that classifies stimuli and filters them according to their importance and intensity, then works to transfer them to treat them and store them in the Brain.⁴

Conclusions

1. Computer-based testing supports the truth of the traits measured through the same program, and the data extracted is more reliable.
2. The test is distinguished through the computer as a means of measurement that stores the largest amount of various information (age, height, weight, user, gender, in addition to the evaluation of the measured characteristic and some of the variables that enter into the calculation of the final value of the test.
3. The computer-based test is considered one of the best methods that attract attention.

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