

The effect of special exercises using system (VTS.s) in the development of some executive functions of the brain and the skill of crushing hitting for some volleyball players aged 14-15 years

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The effect of special exercises using system (VTS.s) in the development of some executive functions of the brain and the skill of crushing hitting for some volleyball players aged 14-15 years

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Abstract:

The research included the introduction and importance of the research, as the adoption of scientific training methods and methods, especially with regard to mental training, and the unprecedented trend towards the acquisition and learning of electronic and computerized technologies, especially applied scientific innovations, from here the international sports community in general and the volleyball community in particular turned towards the interest in measuring, training and developing mental processes The primary and higher levels for advanced volleyball players within the specialized psychological laboratories, and the importance of the research lies in the use of modern specialized field mental exercises and a set of computerized global tests to measure some of the executive functions of the brain and one of the mental processes of volleyball players .Among the most important objectives:

1. Preparing specialized mental exercises to develop some executive functions of the brain)according to the system VTSs (and the skill of overwhelming hitting among volleyball players aged 15-14 years in volleyball.
2. Recognizing the effect of specialized mental exercises in developing some executive functions of the brain (according to the system VTSs (and the skill of overwhelming hitting among volleyball players aged 15-14 years in volleyball .The researcher also assumed that there are statistically significant differences between the results of the pre and posttest in some executive functions of the brain and the skill of crushing beating among the players of the research sample .The fields of research included the human field: the South Oil Gas Club players participating in the Premier League for the season (2020-20 21AD), the temporal field: for the period from 23/3/2021 until 1/7/2021 and the spatial field: the closed People's Hall - Stadium Volleyball / Baghdad The research sample consisted of (23) players representing the main research sample 20 players, including the exploratory sample of 3 players who are outside the main sample, then the researcher touched on the means, tools and devices used in the research and explained the Vienna Test SystemVTS.s for psychological measurement and evaluation, and then touched upon the tests used) TMT-L And WAFR (to measure three variables, as it showed how the

fourth variable was measured by adopting the crushing skill test, and this section also included field research procedures with a detailed explanation of the field specialized mental exercises prepared by the researcher .Finally, he touched on the statistical methods used .As for the fourth chapter, the researcher presented, analyzed and discussed the results, as this chapter included a presentation and analysis of the results reached by the researcher, in order to reach the conclusions and recommendations in the fifth chapter, as the most important of them were:

1. Specialized mental exercises have a significant positive effect in developing information processing speed, cognitive flexibility, and spatial attention.
2. The results showed statistically significant differences for the research sample in three variables (information processing speed, cognitive flexibility, and spatial attention .(The most important recommendations were:
3. 3The necessity for researchers to use computerized mental tests) TMT-L (And) WAFR And the rest of the mathematical tests within the Vienna Test System.VTS. SPORT (in sports psychology studies and research.

Keywords: VTS.s, brain and the skill of crushing hitting, executive functions of the brain

Introduction

Introduction and importance of the research

The adoption of scientific training methods and methods, especially with regard to mental training in all stages of preparation and competitions, ensures the achievement of goals with less time, cost and energy, especially after the relationship between the various sports sciences appeared more closely, strength and overlap on the one hand, and the discovery of new patterns of mutual influence on the other hand, Therefore, those interested in psychological sciences may notice the unprecedented trend towards acquiring and learning electronic and computerized technologies, especially applied scientific innovations that have imposed their presence as a sweeping alternative to electrical and manual devices and tools in various fields and fields of scientific and practical life, such as the sports field and the volleyball community in particular .Hence, the international sports community in general, and the volleyball community in particular, tended towards the interest in measuring, training and developing the primary and higher mental processes of advanced volleyball players within specialized psychological laboratories. Positive on the tactical aspect and its requirements that the player and the team as a whole need while performing the skill duties at the higher levels in particular .The importance of the research lies in the development of some executive functions of the brain and skill performance through the researcher preparing and using modern field specialized mental exercises. In a single training unit, and the impact on the level of skill performance , because today's achievement is the psychological factor in its mental aspect as it is decisive in matches, especially sensitive ones.

2- Research problem

Some of those in charge of the training process deal with mental exercises less attentively when developing or designing training curricula, as they usually lack specialized mental exercises, which

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may negatively reflect on the players' level of tactical ability, and if the coach wants to conduct a process of examining and evaluating the executive functions of the brain when For volleyball players, there are only paper and pen tests (questionnaires) that require large numbers of samples to give reliable results and with high credibility, as Iraqi volleyball clubs lack specialized psychological laboratories that contain modern tests and standards with a high degree of credibility and objectivity, through The adoption of computerized psychological techniques enables us to evaluate some of their executive brain functions to determine the reality of their mental and skill abilities that are affected by the level of these functions .As well as the adoption of specialized mental exercises to support the psychological factor in its functional mental aspect, which is the most important for high-level athletes such as Premier League players, as the researcher tries through his research to answer the following question:

Do specialized mental exercises have an impact on developing some of the executive functions of the brain (information processing speed, cognitive flexibility, and spatial visual attention according to a system VTS.s And the skill of the crushing beating of the research sample?

3-1Research Objectives:

1. Identifying some of the executive functions of the brain (according to the system VTSs For volleyball players aged 14-15 years.
2. Preparing specialized mental exercises to develop some executive functions of the brain and the skill of crushing volleyball players aged 15-14 years.
3. Recognizing the effect of specialized mental exercises in developing some executive functions of the brain (according to the system VTSs (and the skill of smashing volleyball players aged-14 15years.

4-1Imposing search :

- There is an effect of specialized mental exercises on some executive functions of the brain and the skill of crushing volleyball players aged 15-14 years.
- There are statistically significant differences between the results of the pre and posttest in some executive functions of the brain and the skill of crushing volleyball players aged 15-14 years.

5-1Research Fields : The research fields included:

1-5-1The human field: the players of the specialized volleyball school aged 15-14 years for the season (2020-2021 AD

2-5-1Time range :for the period from (23/3/2021AD to 18/8/2021AD.(

3-5-1Spatial domain :Baghdad / Al-Shaab closed hall - volleyball court.

1-6 Define terms:

1-6-1executive Functions Executive functions :It is the term used to describe a tool of knowledge which functions performed by the brain (Calantbah, thinking, coding, organization, classification,

integration, remembering, retrieval ..) and others ([1]). Through the researcher's review of a group of scientific articles, he found that the executive functions of the brain were described as a set of interrelated abilities - although they are different - that contribute to the intended actions, and include planning and organizing... These functions harmonize between aspects of Intellectual and practical. Such as: managing and regulating the speed of information processing, inhibiting undesirable behavioral responses, cutting off distractions to return to the psychological priority of attention, applying delayed cognition and precognition in information processing. **The researcher believes** that the executive functions of the brain are the factory and the first engine of mental abilities, **which are psychological, physiological, and mental procedural operations carried out by the brain to produce the primary and higher mental processes.**

2-6-1system) VTSS It is one of the most important contemporary psychological laboratory systems, fixed and mobile (mobile) and is also one of the leading global procedures in the field of computer-supported measurement, evaluation and psychological diagnosis. Computerized Psychological Assessment Through it, various types of examinations and tests can be applied by developing and employing the latest technology within this system. ([2]).

-3Research methodology and field procedures:

1-3 The research community and its sample

The community of origin is represented by the specialized school players in Iraq, which numbered (25) players, and the research sample was on volleyball players aged 15-14 years who were selected by lottery and are within the experimental group (10) players for the season (2020-2021) (3). (players were selected as a survey sample, and (2) players were excluded for not complying with attendance, and the remaining (20) players were used as a final pilot sample. Table (1) shows the statistical description and the normal distribution of the research sample.

Table (1) shows the statistical description of the sample according to the tribal research variables.

NS	Variables/standard score	Arithmetic mean	pretest	
			standard deviation	Labs skewness
1	processing speed the information	34.00	3.38	0.59
2	Cognitive flexibility	54.30	16.03	0.26
3	visual attention interstitial	57.20	7.85	0.28
4	Hitting skill crushing	53.99	9.68	0.24
The distribution is normal within the limits of (+ - 1)				

3-3 devices and tools used:

- Vienna sports system tests for measuring psychological assessment) Vienna Test System Sport.(

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- Legal volleyball court.
- Legal volleyballs type micassa Number 20.
- Plastic strips to mark playing areas.
- whistle type fox- number 1.
- electronic calculator Laptop Type ASUS ,Chinese of origin - 1 number.

3-31 Vienna Test System VTS)mobile^([3]) :

First, the components of the system:

The Vienna Examination System consists of a basic (system) program Basic software protection tool Dongle To act as a copy protection tool to ensure the security and protection of copyright, and the set of checks and tests that we want to use, as we choose from more than 130 tests and standards that fit the questions we want to apply, in the language we want for the application, and finally, input tools and external devices Input devices & Peripheral hardware Most of the examinations and tests can be viewed and applied via a traditional keyboard and mouse, or optionally via special input tools and external devices designated for this purpose and as desired.

• Steps to work on the system:

The Vienna Test System can be used as a means of psychological examination and diagnosis within the psychological laboratory, through the following steps:

1. **Enter the examinee's complete data :**with the date of the test, and everything related to the examinee .
2. **Choose the type of test :**or examination, as it contains a system VTS. Sport On an integrated set of modern and contemporary tests in the sports field, so the type of examination required is chosen from among a set of tests for individual and team games and other global tests, and there are diagnostic tests, tests for attention and cognitive functions, stress tests, and others. with each other.
3. **Test application :**After the completion of entering the examinee's data and the completion of the process of selecting the tests to be applied, the application of the test takes place face to face directly in front of the computer screen, by pressing the buttons of the control panel of the system according to the instructions given by the researcher to each laboratory individually .
4. **Test evaluation :**After the examinee completes his answer to the test, the . system VTS The test evaluates automatically.
5. **Display and print test results :** Test results are clearly displayed on the computer screen, and can be printed immediately after the test is completed, which makes the Vienna Examination and Evaluation System an authentic, professional and scientific research tool, free of typographical

errors, and far from the examiner's bias

3.4.2 Test the speed of information processing TMT-L) :information processing speed(

- **Definition of test)** application It is the test that measures general neuropsychological functions such as the speed of processing visual-motor information and other executive functions .It is denoted by the symbol) TMT -L ,(which is an abbreviation for) Trail Making Test Version (means tracing test.
- **Stages of test application :**In the first stage, the person supervising the test explains a brief general idea of the meaning of the test and the purpose of the test and what are the desired benefits of conducting it, so that the test person is aware and psychologically and mentally prepared to apply the test, and then the supervisor records the laboratory data, to move To the second stage, which is training on how to perform the test, and then after making sure that the team knew how to conduct the test correctly, we move to the main stage of the test, which is conducting the test in its parts) A And B.(
- **How to apply the test :**The part A From the computer-structured test which is a refined version of the numbers 1-25 randomly arranged on the screen, the tester is asked to perform a task of clicking or pressing The numbers are in sequential order as soon as possible .and done Touch or tap with the forefinger from the hand dominant, while Complete click With the mouse if it is used and according to the desire of the examinee .Then the test moves to the part B who uses Numbers from(13-1) and characters from A)- (L .And here asks the laboratory to do pressure on her or click alternately And in ascending order As quickly as possible, using index finger from the hand predominant or computer mouse. Any time he clicks on the number and the other presses on the letter corresponding to it in the sequence, and so on, taking into account the exact sequence of numbers with the randomly scattered letters without intersecting and as quickly as possible .Knowing that if the tester erred in the correct path, the computer will issue an alert sound to the tester, to avoid repeating this as it greatly weakens the test result .As in the picture included.
- **Scoring :**The test reports the variables Main target and are:
 1. working time in a the two parts A And B from the test.
 2. The number of errors during the performance of the test.
 3. degree ratio.
 4. Degree the difference.is analyzed outliers to determine whether affected Results are one side weak according to operations search.
- **Test time :**This test consists of two parts (part A And B (and that the time of work around 2 minutes For each part , about 5-4 minutes.

3.4.2 Test attention visual stereochemistry ([4]) : Visuo -spatial attention) WAFR(

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- **Definition of the test** : It is one of the tests of the attention and perception functions group that measures the ability to pay attention to stimuli in space or space... It is denoted in the list of tests by the symbol) WAFR (In this test, the spatio-spatial orientation of attention is measured using either 4 or 8 spatio-functions.
- **Stages of test application** :The test goes through stages that the laboratory must learn either by reading the instructions that appear in front of it on the test screen or with the help of the person supervising the test if necessary, and after giving a general idea about the test and the meaning of the test and what the test measures (the purpose of it) and its benefits) The second stage is to be represented by training to perform the test. At this stage, the laboratory performs the test for a short period of time, the aim of which is to fully identify its content and method of performance to ensure that the test is performed correctly without delay or pause .After that, the laboratory moves to the third stage, which is the stage of conducting the main test. Here, the test person and the test are separated, and he is not entitled to receive any additional help or instructions.
- **How to perform the test** :In this test, the test stimuli are displayed in several locations in the right or left of the visual field or simultaneously in similar locations in each half of the field of view (the four directions .(As the test person appears, four gray triangles pointing outward, in the center of which is a small square with a sign) x (as in the picture listed within, and he is asked to focus on an area inside the square, this is in Figures (1-4) of the spatial attention test, then one of the triangles is lit in black (it lights up in black and turns off), and then the tester has to press the green button on the control panel for the fastest possible, noting that the triangles lighting preceded by a sign of that is displayed for a period of 500 ml / sec, and that the warning sign is an arrow in the center of the screen indicating one of the sites of the stimulus, as this arrow appears to the tester And it disappears quickly to hint at the direction of the arrow that will light up , but this is in the first stage of the test, while in the second stage, the warning sign (arrow) is not given before each stimulus, and it often indicates an imaginary location of the stimulus, i.e. (false) and its aim is to make the stimulus focus. The laboratory was conducted on the external areas in the four directions without other stimuli, and that the time between the warning sign and the appearance of the stimulus ranged between (80-150 ml/sec), and the interval between stimuli ranged between (3-5 seconds .(The task of the laboratory is to respond to any triangle that turns black as soon as possible, because the accuracy of this test (spatial attention) depends on the time factor. test scores and therefore results in a different reading of the test results.

Then the test moves to an advanced stage in terms of the number of stimuli (illuminations) and in terms of the appearance of the warning sign until the end of the time of the test in which the laboratory task is difficult in recent times and the appearance of signs of mental stress on the face of the test person for carrying out complex and continuous mental functions as part of the functions of attention and perception.

- **Scoring: Points** are calculated based on:
 - 1- reaction time.
 - 2- The number of errors during response to stimuli.

- ❖ **Test time:** The test time takes approximately (5) minutes for each form of the test, so the total time taken is approximately 10 minutes.

3 -5Field research procedures

6-3The exploratory experiment

It is the survey of the circumstances surrounding the phenomenon that the researcher wishes to study, and it is the detection of mysterious episodes.. It is considered one of the very important and necessary means in carrying out research ,([5]) so the researcher conducted an exploratory experiment on (3) players from the same research sample who were excluded from the main research sample, as the researcher conducted tests on the exploratory sample only and applied a model of mental exercises with the participation of some players to complete the number of players required to apply The exploratory exercise, in order to identify the most important requirements in the main experiment, on 3/23/2021 AD .The purpose of the exploratory experiment:

- Identify the efficiency of the devices used in the research.
- Identify the obstacles and difficulties that the researcher and the assistant work team may face.
- To identify the suitability of the tests to the research sample.

7-3Tribal tests: _

The researcher conducted tribal tests on the main research sample consisting of 20 players on 3/24/2021 until 3/28/2021 AD, from 10 am until 2 pm, in the closed People's Hall in volleyball ,and the researcher wrote down and recorded all the conditions related to the tests in terms of The time, place, equipment and method of executing the tests in order to create the same or similar conditions when conducting the post tests.

8-3The main experience:

After completing the tribal tests by the Vienna Mathematical Testing System) VTS.Sport The researcher conducted the main experiment and started applying specialized mental exercises on the research sample for the period from 29/3/2021 AD to 29/6/2021 AD .Which lasted 3 months, during which the experimental sample members were trained regularly and sequentially, using a set of field mental exercises that the players applied gradually within the daily training curriculum assigned to them by the coach. Specialized mental exercises, as the team players were trained as follows:

Explanation of the exercise in detail :by showing the video of how to implement the exercise in front of the players

The second section: the application of the exercise in the field :It is the stage of the players' implementation of what was explained and clarified in the first section, with the researcher and coach monitoring and correcting errors and stopping the exercise temporarily to give feedback whenever necessary.

Thus, specialized mental exercises were applied according to the following data:

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- 1- **Total training period** (90) : days.
- 2- **Duration of the exercise** (15) : minutes approximately.
- 3- **Duration of weekly mental training** 15) : minutes x 4 exercises) = 60 minutes per week.
- 4- **Total mental training duration** 60 : x 12 = 270 minutes.
- 5- **Total number of exercises** (10) : exercises
- 6- **Number of exercises in one training unit** (2) :two exercises in each training unit.
- 7- **Number of weekly training units that include mental exercises** (2) :Two training units per week, with (4) exercises.
- 8- **Total number of training units** 2 : x 10 = 20 training units.
- 9- **Total number of times the exercise is performed** 4 : x 12 = 36 planned mental exercises (with repetitions.)
- 10- **Training time** : from 4 pm to 6 pm.

3-9 Post-tests:

After the research sample completed the period allotted for the application of mental exercises within the training curriculum of the team, the post tests were conducted on 25/6/2021 AD until 1/7/2021 AD for a period of one week at the People’s Hall of Indoor Sports Games - volleyball court, and the researcher was keen to: Conducting posttests under conditions similar to pretests.

Table (2) shows the arithmetic mean, standard deviation, and (t) value between the pre-test and the post-test in the variable (information processing speed)

Variables	pretest		post test		NS	q	Calculated t value	The real moral	difference type
	s	p	s	p					
Information processing speed	34.00	3.38	46.00	4.62	12.00	1.16	10.31	.000	moral

Significant ≤ 0.05 at degree of freedom (19).

Through table (2), we find that in the variable (information processing speed), the arithmetic mean in the pre-test was the value of) 34.0000)with a standard deviation of(3.38728In the post-test, the arithmetic mean was) 46.0000)with a standard deviation of(4.62260 (And when calculating the value of (t), it appeared with the value of) 10.318 (with a real morale of) 0.00 (which is (smaller) than) 0.05 (This indicates that the difference is (moral) and in favor of the (post-test) test .The researcher attributes the reason for this development to the effect of specialized mental exercises, which positively reflected on the speed, health and accuracy of thinking and decision-making, which

expresses superior and quick mental capabilities in the process of processing and processing information, as some of the mental exercises prepared by the researcher focused on creating critical situations It requires the player to be at the highest degree of ability to make a quick and correct decision at the same time in order for him and his colleagues to get out of a tactical impasse or a complex plan set that needs a special mindset capable of processing the surrounding data and vocabulary, which increases in difficulty, composition and complexity as the time of the exercise progresses, the Placing additional difficulties and conditions would force the player to quickly perceive and think and make a sound decision with the least error rate) .This is what happens in the player’s bid during the match, according to the different players in the face of different playing situations and their handling of the problems and sudden and quick situations that the volleyball player faces during the match, in addition to the player’s skills and behavior and the extent to which they are employed in the performance of that player, and it is natural that the volleyball game needs Very high mental requirements for the purpose of general and correct preparation at the required level from the technical and behavioral side of the player... for the purpose of implementing quick, sudden, repetitive and multiple activities in the possible speed and appropriate timing [6] .

Table (3) shows the arithmetic mean, standard deviation and (t) value between the pre and post test in the variable (cognitive flexibility)

Variables	pretest		post test		NS	q o	Calculat ed t value	The real moral	Type the difference
	s	p	s	P					
Cogniti ve flexibility	54. 30	16. 03	66. 55	8. 54	12. 25	3. 72	3.29	.004 0	moral

Significant ≤ 0.05 at degree of freedom (19).

Through table (3), we find that in the variable (cognitive flexibility), the arithmetic mean in the pre-test was the value of) 54.3000)with a standard deviation of(16.03647In the post-test, the arithmetic mean was) 66.5500)with a standard deviation of(8.54385 (And when calculating the value of (t), it appeared with the value of) 3.293 (with a real morale of) .004 (0which is (smaller) than) 0.05 (This indicates that the difference is (moral) and in favor of the (post-test) test.

The researcher believes that one of the conditions for the development of cognitive flexibility for the volleyball player is the development of some mental processes and other brain functions related to this variable, among them the most important of which is the process of cognition, which is one of the most important higher mental processes, which performs the function of interpreting stimuli and covers the connection and installation in issues, events, movements and conclusion, and from here The researcher found that the effect of exercises on the cognition process will be reflected in an effective and positive way on the flexibility in thinking and making the appropriate decision, which collectively constitutes the basis for solving skill duties (p) In order for the player to be able to solve tactical duties and for his skill thinking to be at a high level of development, work must be done. on the development of flexible thinking and speed of perception([7]) .

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Table (4) shows the arithmetic mean, standard deviation and (t) value between the pre and post test in the variable (spatial attention)

Variables	pretest		post test		NS	q o	Calculated t value	The real moral	Type the difference
	s	p	s	P					
Attention interstitial	57.20	7.85	52.20	8.12	5.00	1.87	2.66	.0150	moral

moral ≥ 0.05 at a degree of freedom (19).

Through table (4), we find that in the variable (spatial attention) the arithmetic mean in the pre-test was the value of (57.2000) with a standard deviation of (7.85795). In the post-test, the arithmetic mean was (52.2000) with a standard deviation of (8.12792). (And when calculating the value of (t), it appeared with the value of) 2,661 (with a real morale of) 0.015 (which is (smaller) than) 0.05. This indicates that the difference is (moral) and in favor of the test (post-test). Through the mechanism and conditions for implementing some exercises and some additional difficulties that the researcher added to achieve the goals of mental training, in particular the process of spatial attention). The spatial attention allows selective processing of visual information by setting priorities from a specific area within the visual field in a selective manner, as a region is selected from space within the visual field for attention and information within this region and then receives further processing... Spatial attention is distinguished from other types of Other attention, that the rest of the attention types are based on the selection of a complete shape or a distinctive feature regardless of its location, while spatial attention selects a specific region of space and then processes objects and features within that region ([8]).

Also, the increase in attention processes in terms of size, intensity, focus and distribution, and an increase in the level of perceptual processes is one of the psychological manifestations of the integrated preparation ([9]).

Table (5) shows the arithmetic mean, standard deviation and (t) value between the pre-test and the post-test in the variable (the skill of crushing multiplication)

Variables	pretest		post test		N	q o	Calculated t value	The real moral	Type the difference
	s	p	s	p					
Skill smash hit	53.99	9.68	49.06	6.36	4.93	4.17	1.18	0.303	random

moral ≥ 0.05 at a degree of freedom (4).

Through table (5), we find that in the variable (squash multiplication skill), the arithmetic mean in the pre-test was the value of) 53.9960)with a standard deviation of(9.68983In the post-test, the arithmetic mean was) 49.0620)with a standard deviation of(6.36197 (And when calculating the value of (t), it appeared with the value of) 1.181 (with a real morale of) 0.303 (which is (greater) than) 0.05 (This indicates that the difference (not significant).(The researcher believes that psychological and mental preparation should start from the beginning of the general preparation and accompany all the vocabulary of the training curriculum and outside it as well, because the repercussions of mental training are evident in the skill side more than any other aspect, and the researcher noticed that psychological preparation and mental training did not take sufficient attention from the beginning season, until the coach agrees to include specialized mental exercises and qualitative cognitive lectures in sports psychology that the researcher gave to the players, and therefore this may affect the skill ability of the team).The short-term psychological preparation (direct psychological preparation of the individual) before his participation in the sports competition (match) will not lead to the desired results in the case of lack or omission of long-term psychological preparation([10]).

The efficiency of the players to implement the skill is not achieved in a short time and without other factors that may be available to some, not all players).There are factors that affect the efficiency of the players' implementation of skills, as there are several factors related to the ability and efficiency of the players to implement these skills, and the degree of efficiency of the mental and psychological preparation of the players is also related to the players' ability to implement that skill...as the skill ability requires focus attention and distribute it in accordance with the conditions of play and the surrounding environment, as well as understanding and cognitive skill and the ability to make a decision([11]).

5 1-Conclusions:

1. Specialized mental exercises have a significant positive effect in developing information processing speed, cognitive flexibility and spatial attention, according to the data of the two tests)TMT And WAFR (high resolution.
2. The results showed statistically significant differences for the research sample in three variables, namely (information processing speed, cognitive flexibility, and spatial attention) according to the results of the system .VTS.s.
3. The results showed non-statistically significant differences for the research sample in one variable (the skill of crushing multiplication.(
4. High reaction speed positively affected the development of cognitive flexibility in players.
5. The use of modern digital devices and techniques in measurement as the Vienna Test System VTS.s Sports at higher levels positively affects the research results and their credibility.

5.2 Recommendations :

1. The necessity for researchers to use computerized mental tests) TMT-L (And) WAFR And the rest of the mathematical tests within the Vienna Test System.VTS. SPORT (in sports psychology studies and research.

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2. The coaches should pay attention to the development of the psychological and mental aspect of the players (by analogy and training) as much as they are interested in the physical, skill and functional aspects, and periodically to keep pace with scientific development in the developed world.
3. Apply specialized field mental exercises like these exercises in most training units, especially in the competition stage, and include them in the team's training program, because of their positive impact in terms of mental, psychological and recreational terms.
4. Adopting some mental and personal tests as part of the admission tests for new students applying to the College of Physical Education and Sports Sciences, just like the physical and skill tests.
5. Adoption of the Iraqi Central Volleyball Federation system) Vienna test system sport (for psychological and mental measurement and diagnosis to assist in the selection process of national team players and to determine the level of their mental abilities and personal characteristics.

The introduction and importance of the research included that the adoption of scientific training methods and methods, especially with regard to mental training in all stages of preparation and competitions, ensures the achievement of goals with less time, cost and energy. **VTS.s** for psychological measurement and evaluation, and then touched upon the tests used) **TMT-L And WAFR** (to measure three variables, as it showed how the fourth variable was measured by adopting expert observation and assessing the team's skill ability in a special form prepared by the researcher, and also included field research procedures with a detailed explanation of the specialized field mental exercises prepared by the researcher. Finally, he touched on the statistical methods used. As for the fourth chapter, the researcher presented, analyzed and discussed the results, as this chapter included the presentation and analysis of the results reached by the researcher, as the researcher reached the achievement of the research objectives and hypotheses. Evolution in three variables, or in the absence of significant differences in the differences. Arriving at the conclusions and recommendations in Chapter Five, the most important of them were:

1. Specialized mental exercises have a significant positive effect in developing information processing speed, cognitive flexibility, and spatial attention.
2. The results showed statistically significant differences for the research sample in three variables (information processing speed, cognitive flexibility, and spatial attention. (The most important recommendations were:
3. The necessity for researchers to use computerized mental tests) TMT-L (And) WAFR And the rest of the mathematical tests within the Vienna Test System. VTS. SPORT (in sports psychology studies and research.
4. National team coaches for age groups can apply these exercises after changing the time and reducing additional difficulties and conditions .space
5. The Deanship of the Faculty of Physical Education and Sports Sciences, the mother, has adopted

the establishment of an integrated contemporary sports psychological laboratory equipped with the latest digital devices and equipment to keep pace with the development taking place in European universities and some neighboring countries, due to the data it provides that are difficult to extract by other means.

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