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**THE EFFECT OF A VISUAL TRAINING CURRICULUM TO  
DEVELOP THE LEVEL OF THROWING AMONG ADVANCED  
PLAYERS WITH AIR PISTOLS**

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shooting accuracy antenna.**

**Abstract**

The research consists of four chapters and the aim of the study is to identify the effect of exercise used to develop the correction pistol antenna accuracy, the experimental research sample totaling (5) archers from players exert youth team shooting was carried out the experiment on the shooting hall in the Iraqi Central Union, from 02/01/2020 until 01/03/2020, was used experimental method in the research was the use of tests to measure the correction pistol antenna accuracy, and after the completion of the experiment was calculated results statistically by a program (spss), and the results were significant differences between pre and post tests and for the post-test, and concluded that the researcher that exercises used positively affected in improved correction accuracy, the researcher recommended the necessity of using new methods and techniques for the development of pistol shooting accuracy antenna.

**Chapter one**

**1-Introduction to research:**

**1-1Introduction and importance of the research:**

The second half of the last century witnessed a great scientific revolution that was able to bring about wide changes in various fields, including the field of physical education and sports sciences, which plays a key role in the process of change for the better, and which knocked on all doors of modern science in various respects, it was not limited to one aspect. Rather, it branched out to include many sciences, and as a result of the development taking place in the field of sports, some obstacles appeared that hinder human movement, so researchers had to delve into the causes of these obstacles, and search for them to find sound scientific solutions to get the best results.

In view of the entry of the sport of shooting into the wheel of development, as well as the development in shooting activities in the modern era, it has diversified due to the diversity of its training methods, technological development and other links, which also require diversity in the ways of performance and training.

The importance of the research lies in preparing a training curriculum for the development of the stages of the shooting process for the shooters, which seeks to raise the level of achievement for the shooter and obtain adaptations that cannot be obtained in natural conditions. And create shooters who are accustomed to conditions that do not exist in reality and are trained on them.

### **1-2 Research problem:**

Through the researcher's briefing on many training curricula prepared for air pistol shooting players, I noticed that most of these curricula do not give great importance to visual exercises that develop the most important visual abilities. On the other hand, the players of the research community did not undergo any prior examination in the field of visual vision so The beneficiary of learning about the strengths and weaknesses in terms of the physiological capabilities of the most important sense they rely on for shooting, so the researcher seeks to design a visual training program that increases the capacity of the field of vision and activates and revitalizes brain cells through exciting and entertaining interactive exercises that activate the work of neural communication pathways in the brain And reduce the losses in the field of vision by activating the eye and half of the brain that is not used.

### **1-3 Research Objectives:**

- 1-Preparing a visual training program to develop the achievement with the air pistol.
- 2-Identifying the effect of the visual training program on achievement with the air pistol.

### **1-4 Imposing Search:**

- 1-There are significant differences for the control and experimental groups between the pre and post tests and in favor of the post tests.

### **1-5 Research Areas:**

The human field: Iraqi Central Federation youth team players in the air pistol event.

Time range: for the period from 1/2/2020 to 1/3/2020

Spatial domain: Shooting hall in the Iraqi Central Federation.

## **Chapter Two**

### **1-Research methodology and field procedures:**

#### **1-2Research Methodology:**

The researcher used the experimental method with one group (experimental) for its suitability to the nature of the research problem, "The experimental method is one of the approaches that adopt change and adjust specific observations of the reality or phenomenon, while noting what results from this change of adjustment to this reality or phenomenon" (Amer Ibrahim: 1993 The experimental method is also one of the most accurate and most efficient methods in reaching results (Wajih Mahjoub: 1988).

## 2-2Research community and sample:

The selection of the research sample is one of the important steps and stages of the research, as it must be chosen in a way that suits their problem with the research problem. To reach a scientific solution, the researcher must think about the research sample since he begins defining the research problem and its objectives, because the nature of the research, its hypotheses and plan control the steps of its implementation and the selection of its tools such as the sample, questionnaires and necessary tests (Thukan Obeidat (and others): 1988). It is considered one of the most important foundations necessary in scientific research because it honestly represents the research community, and in fact, the researcher has determined the research sample in a deliberate way, representing the Secretariat Club, which number (5) archers, ages ranged from (20-25) years, and they represent 100% of the community origin.

### 2.2.1The homogeneity of the sample:

**Table (1)**

It shows the homogeneity of the research sample in the chronological and training ages

Skew coefficient	Standard deviation	Median	Arithmetic mean	N	Unit of measure	Variable
0.823	5.626	175	176.1	10	cm	Height
0.543	4.477	71.5	73.4	10	kg	Weight (mass)
0.307	2.003	24.5	24.7	10	سنة	Chronological age
0.223	0.876	4	3.9	10	سنة	Training age

It is noted from Table (1) that the values of the skewness coefficient of the variables referred to in the table were confined between (3+), which indicates the homogeneity of the research sample in it, and that it is within the normal curve of the distribution.

### 2-2-2The equivalence of the sample:

Equivalence in the prior tests:

**Table (2)**

It shows the equivalence of the research group with the variables investigated in the prior tests

Sig.	degree(Sig)	T Calculated	Research Sample		Unit of Mea- sure	Test
			G $\pm$	+ s		
Non-sig.	0.750	0.329	3.647	66.4	degree	Achievem- ent score

#### **N Freedom degree4 = 1-Level of Significance(0.05)**

Table (2) shows that the research group is equivalent in the pre-test on one starting line, as all (Sig) values were greater than (0.05) at the degree of freedom (4) and the level of significance (0.05).3 means, tools and devices used in the research:

The method is the one that appoints the researcher and by which he can collect data to solve a problem and achieve the objectives of the research, whether it is tools, data, samples or devices. (Wajeeh Mahjoub: 1988) In order to reach a solution to the research problem presented, the researcher used during the experiment the following means, devices and tools to collect information, which are:

#### **1-3-2Means of collecting information:**

- 1-Arabic and foreign sources and references, as well as internet sources.
- 2-Personal interviews
- 3-Statistical means
- 4-Auxiliary work team
- 5-A questionnaire form to determine the appropriate exercises for the research site and for the sample in particular.

#### **2-3-2Tools used in the research:**

- Shooting range for air weapons.
- whistle.
- Weapon (air pistol) weighing 1500 gm, 1 number.
- Equipment (scrap).
- Cartoon target boards for shooting (legal).
- Cardboard target boards manufactured (different shapes).
- a chair.
- stopwatch.

#### **2-3-3The devices used in the research:**

- HP laptop computer.
- SAMSUNG digital camera.
- A device for measuring height and weight, the quality of Rastametr.

#### **2-4The test used in the research:**

**2-5-4Throwing level test:** A test to measure the level of achievement by throwing:

**The objective of the test:** to measure the level of achievement of throwing the air pistol.

**Test tools:** an air pistol of German origin, with sports bullets caliber (1 mm) for sports air throwing, Olympic shooting targets, a throwing field.

**Description of the test:** The player implements the racing curriculum consisting of (40) race shots divided into (4) groups, each group consisting of (10) shots. The values of the launches are calculated according to the marks of the holes of the launches that hit the target, as the best value of the launches is (10) points, which are thrown at the center of the target, and the further away the launches are from the center of the target, the lower their value decreases and gradually and consecutively until zero, the marks of the shooting are calculated for each target on Solo (Calculating the marks of shooting is the responsibility of the referees committee, which takes the goals of the shooters to extract the value of each shot and then extract the final score, and they are :

1-Mr. Ali bin Saud Salem, international referee - Vice-President of the Iraqi Shooting Federation.

2-Mr. Ali Ibrahim, shooting referee -. Member of the Iraqi Shooting Federation

3-Mr. Mohi Muwaffaq, shooting referee -.Iraqi Shooting Federation), as all (10) targets are collected and given the value of the first (10) launches, as well as the (10) second and third launches, and so on to the fourth.

## **2-6 Field research procedures:**

### **2-6-1Exploration Experience:**

A reconnaissance experiment was conducted on shooters from the research sample on the day (Monday) 20/1/2020 at exactly three o'clock in the afternoon and with the help of the assistant work team. The aim of the first reconnaissance experiment was summarized in:

- 1-Knowing the validity of the experiment place and other services for the sample
- 2-Identifying the ability of the assistant work team.
- 3- Identifying the response of the sample to the performance of the test.

### **2-3-2 Tools used in the research:**

A reconnaissance experiment was conducted on shooters from the research sample on the day (Monday) 20/1/2020 at exactly three o'clock in the afternoon and with the help of the assistant work team. The aim of the first reconnaissance experiment was summarized in:

- 1-Knowing the validity of the experiment place and other services for the sample
- 2-Identifying the ability of the assistant work team.
- 3-Identifying the response of the sample to the performance of the test.
- 4-Assisting in organizing work by knowing the time taken to carry out tests and measurements.

### **2-6-4Prior tests:**

The researcher met with the research sample on 1/2/2020 for the purpose of explaining what is related to the vocabulary of the tests for the research to explain its details and the details of the training curriculum prepared after the first sample meeting that was on 10/1/2020 to know all the details that pertain to the research sample, weaknesses and strengths, and everything that fits a sample The research, the researcher and the assistant staff conducted the tribal tests on 25/2/2020 corresponding to Wednesday at ten o'clock in the morning in the Olympic Shooting Federation hall.

### **2-6-5The main experience:**

It was agreed to implement these exercises in the main section of the training unit prepared by the trainer, with three training units per week and over a period of (4) weeks. 90) minutes of the

training unit duration of (120) d, and the experimental group performed the exercises prepared by the researcher in applying the vocabulary of the skills to be developed, and accordingly, the main experiment began on 1/2/2020 on (Sunday) and ended on 3/1 / 2020, which coincides with (Sunday), and the vocabulary sequence of the training unit was:

- 1.General warm-up.
- 2.Special warm-up.
- 3.Preparatory exercises.
- 4.Real throwing drills.
- 5.Relaxation exercises.

## 2-6-6Post-tests:

The achievement test was conducted on Wednesday 4/3/2020, and the researcher was keen to provide the same conditions in terms of the nature of the organization and the conditions of the tests that took place in the tribal tests.

## 2-7Statistical means:

The data and raw values of the research variables were processed by using the Social Statistical Package System (SPSS) version (V21), (statistical package for social sciences), and the values of the percentage, mean, standard deviation, median, skew coefficient, and coefficient of skewness were automatically calculated. Simple correlation (Person), and (T-test) for correlated samples.

## Chapter Three

### 3-Presentation, analysis and discussion of the results:

#### 3-1Presentation and analysis of the results:

#### 3-1-2 Presentation of the results of the pre and post achievement tests between the two research groups and their analysis:

The researcher presents the results of the pre and post achievement tests in the experimental group, as shown in Table (3):

**Table (3)**

It shows the arithmetic means and standard deviations in the achievement test and for the experimental group in the pre and post-tests.

post tests		Pre test		Unit of mea-sur-ement	T Test	Se q.
G	S	G	S			
21.992	285.500	14.974	275.750	Degree	Achievement	1

**Table (4)**

It shows the difference of the arithmetic means and their deviations, the calculated (t) value and (sig) and the type of significance in the achievement test for the experimental group, the pre and post tests.

Sig.	Sig. value	قيمة value of calculate d T	Fh	F-	test	Se q.
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Non-sig.	0.548	0.675	14.447	9.750	achievement	1
<b>Sig. at freedom degree (5) if the level of sig(0.05)</b>						

N Freedom degree4 = 1-Level of Significance(0.05)

Table (3.4) shows that the experimental group in the achievement test had its arithmetic mean in the pre-test (275.750) and its standard deviation (14.974), and in the post-test its arithmetic mean became (285.500) and the standard deviation was (21.992), and the average difference of the arithmetic means was Between the two tests (9.750) and the standard deviation of the difference (14.447), the calculated value of the t-test was (0.548) for the correlated samples at the level of significance (0.05), which is a function in comparison with the value of (Sig) and the degree of freedom (5) of (0.005) which is less than (0.05), which means that there is a statistically significant difference between the pre- and post-tests in the achievement test and in favor of the post-test.

### **3-1-4Discussing the results of the pre and post achievement tests of the experimental research group between them:**

From the review of Table (3), the development of the experimental group players in spatial accuracy in the dimensional tests appears. The sample, which proved its effectiveness in terms of improving both the visual functions and achievement, as the researcher believes that the visual functions have a positive role in the development of achievement, as the simple improvement that occurred in the visual functions is an important thing in improving the achievement of the research sample, and that “this is due to the ideal method of using the human eye in directing the weapon to the target to ensure the achievement of the most accurate injury” (2003: Bni kalaed).

Thus, the proposed exercises effectively contributed to activating the visual center in the brain and activating performance with it, as a result of generating experiences resulting from the repetitions of the harmonic exercises that lead to a speed in the Making the decision to shoot at the target in the desired direction, angle and height, and this was confirmed by (Sareeh Abdel Karim) that repeating the exercises leads to the development of a sense of kinetics and the formation of a map Visual kinetic internal sensory surroundings, Faisal Rami Al-Turab to the stage of automaticity in performance and moves according to the sensory-visual map stored in the brain (Sareeh Abdel Karim: 2010).

## **Chapter Four**

### **1-Conclusions and Recommendations-:**

#### **4-1Conclusions-:**

1-The stomach exercises have a positive effect on the achievement with the air pistol.

#### **4-Recommendations:**

1-The researcher recommends the necessity of preparing special exercises and new methods to develop the achievement of shooting with the air pistol.

2-The necessity of conducting similar research on different samples and skills with the air pistol.

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### Appendix: Training Module Template

Training unit / first day and date

Time / 90 minutes, number of shots / 400 shots

Observations	Objective of the exercise	Time	Repetition	Content of the exercise	Seq.
	Increase blood circulation to the eyes and strengthen the muscles surrounding the eyes	sec20	20	Close the eyes tightly for 1.5 _ 2 seconds and then open them at a fast speed	1
Lack of severity in closing the eyes and focusing on their movement	Strengthen the eye muscles with increased blood flow to them	25 sec	20	Close the eyes and move them while they are closed from top left to bottom right in the form of the letter X	2



1. Fix the distance between the eye and the paper.  2. Be careful to relax the muscles of the eyes and face.	To strengthen visual focus	1.30 min	5	Sit against a white wall and place a white paper 10 m away from the eye with continuous focus on the paper for 10 to 15 seconds and then focus on a green leaf and let the tree be without moving the head for 10 to 15 seconds and then return Looking again at the white paper at the same time	3
Commitment to the same technical bases of throwing	Increase the stimulation and mobilization of the abilities of throwing	8 sec	1 shot	The shooter stands 10 meters from the target, which is the legal line of throwing, and then the distance is only 1 meter away, where the shooter throws at a distance of 11 meters and thus the throw takes place in 12 m and 13 m and 14 AD and 15	4
1. Emphasis on mental isolation when exercising.  2. The exercise is displayed only once, and if the answer to the exercise fails, the exercise is replaced with a second image, and so it changes every time.	Repeated increase in stimulating visual abilities (visual focus)	5min.	1	Sitting in front of a computer screen and displaying a picture of the drawings that were drawn very carefully and let it be an overlapping picture With other pictures to hide some details of the required picture and ask the player to search for the details entered by rotating his eyes right, left, up and down and then close his eyes and ask him to imagine the picture  Then he presents a report on the picture and what he saw, and distracts his thinking with another opinion about the vision he saw  That is, displaying different pictures each time you display them, and they are 5 pictures	5
Stimulating the mental isolation of the shooters among the trainees	Stimulating the visual ability (visual focus)	8 sec	10	The shooter stands on the throwing line while wearing slightly darkening glasses, i.e. wearing sunglasses with dry throwing, and then the real throw.	6

Maintaining no muscle tension plus	developing visual abilities	8 sec	10	The thrower stands on the scoring line while throwing at a white and striped target in very light colors, meaning that it is difficult to see the target except from close up and it is done by dry throwing and then it is done by real throw	7
Develop the mental training for the event	Develop the visual memory and develop the mental training	6 sec	1	<p>Presenting landscapes to the players and then closing the eyes to the laboratory and asking them to draw a close view of what they saw with the throwing arm on a white paper for a maximum period of one minute</p> <p>The exercise is divided into</p> <p>A, B, C, D, E, and</p> <p>Each time the exercise is repeated, it displays different shapes and graphics</p>	8