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The Effect Of Visual Exercises On Developing Some Coordination Abilities Among Handball Players At The Specialized Center In DHI QAR

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ABSTRACT

The development of training curricula has forced coaches to pay attention to the fine details of technical performance requirements by accurately analyzing that performance and which of those details can enhance and strengthen his team and thus win the competition. Perhaps the fact that the levels of physical and skill abilities are close can be overcome by paying attention to the most effective details through the accuracy of interpreting and responding to the most appropriate visual stimulus by the player, and among these details are the coordination abilities. Hence, the importance of the research emerges, which is represented in preparing exercises using visual means to develop some coordination abilities among handball players. Through the follow-up of the researcher and the supervisor, as well as the assistance of experts and specialists on the level of local handball teams, which is represented by the presence of weak defensive and offensive performance of players, which can be attributed to multiple factors, including the coordination abilities of the handball player, which is an important and necessary factor in correct and accurate performance in different playing situations. The aim of the research is to prepare and manufacture some visual means to develop some coordination abilities in handball. The research sample represented

Players of the Specialized Center in Dhi Qar Governorate in handball for the year (2024-2025) and the research work extended for the period from

15/10/2023 to 1/10/2024 All tests and exercises were applied in the hall of the specialized center in Dhi Qar Governorate. The researcher used the experimental method with two groups, control and experimental, to solve her problem. Therefore, the researcher determined her research community intentionally, which is the players of the specialized handball centers in Dhi Qar, aged (15-17), numbering (20) players. The researcher used a comprehensive census of the research community, as the sample represented 100% of the community. The sample was divided randomly by lot equally into two groups (experimental and control), with (10) players for each group. The researcher conducted homogeneity and equivalence on the research sample, as the researcher manufactured an optical device that works in a random sequence to develop the coordination capabilities of the research sample. The device was used through exercises prepared by the researcher and applied to the experimental research sample, for 12 weeks and three training units per week. The researcher used the method of high and low intensity interval training, and the training load was formed within the week (2-1). After that, the data was unloaded, tabulated, and statistical operations were performed on it, which resulted in: The research objectives were achieved and at the end of the work, the researcher reached a set of conclusions, including: Visual exercises led to development in the variables of coordination abilities.

Keywords: *visual aids - coordination abilities - handball*

1. INTRODUCTION

That Modern handball is widely popular in many countries around the world because of the beauty of individual and collective technical performance it displays, and because of its strength and speed in moving from one performance position to another, which requires those involved in the game to pay attention to these special performance requirements when planning and implementing training curricula to keep pace with the development that this game has achieved.

It is worth noting that the development of training curricula has forced coaches to pay attention to the finer details of technical performance requirements by accurately analyzing that performance and which of those details might enhance and strengthen their team and thus win the competition. Perhaps the fact that the levels of physical and skill abilities are close can be

overcome by paying attention to the most effective details through the accuracy of interpreting and responding to the most appropriate visual stimulus by the player. Among these details are the harmonious abilities of the handball player, which allows the player to perform the motor duty accurately and enhances the chances of quickly performing the most appropriate offensive and defensive skills and a higher success rate, which leads to his team members being faster and more accurate in the performance output than the competitor and thus more effective in their offensive and defensive performance.

Coordination skills are important in handball, as they enable the player to find, comprehend and store the stages of motor performance at the appropriate time and the appropriate movement, his ability to recall the stored ones and diversify their performance, and the ability to act purposefully quickly and correctly in response to a pre-determined signal or a signal chosen as a result of a sudden change of situation, in addition to quickly preparing to act purposefully according to a specific signal from a teammate, opponent or the ball.,All of this is done quickly and purposefully in a way that suits changing situations and the ability to correct, change or modify the new situation, in addition to correcting the motor behavior program in an ideal way. This is often done through motor control and adjustment processes (i.e. it depends on...ATo receive information), There is no doubtIn itThe use of training aids greatly helps in enhancing the training process, as these aids play a major role in developing the players' skills and performing exercises that are difficult to implement without these devices and aids.It containsIt simulates the requirements of the handball game, in addition to the excitement and challenge it provides, working to achieve the desired goals.

Hence, the importance of the research emerges, which is represented in preparing exercises using visual means to develop some capabilities.compatibilityHandball players have.

Research problem

Through the follow-up of the researcher and the supervisor, as well as the assistance of experts and specialists, the level of local handball teams, which is represented by the presence of weak performance.Defensive and offensiveFor players, this can be attributed to several factors, including the handball player's coordination abilities, which are an important and necessary factor in correct and accurate performance in various playing situations.

Which prompted the researcherThaTo study this problem, which is based on visual vision, and thus the effectiveness of the coordination capabilities will be built upon to perform the motor duty with the speed and accuracy required for successful performance.

Research objectives :

1-Preparing special exercisesBy meansVisual development of some coordination abilitiesThe players of the center specialize in handball in Dhi Qar.

2-Preparing and manufacturing some toolstheVisual to develop some of the matching abilitiesThere is a shortage of handball players in Dhi Qar..

Research hypotheses :

1-The presence of significant differencesStatisticsBetween the pre-testsAnd the dimensionIn favor of the post-tests of the control and experimental groups

2-There are statistically significant differences in the post-tests of the control and experimental groups in favor of the experimental group.

Research areas :

- **Human domain:-** Handball players of the specialized center in Dhi Qar Governorate For the year (2024-2025)
- **Time frame:-** 15/10/2023 to 1/10/2024
- **Spatial domain:-**Specialized Center HallsHandball inDhi Qar Governorate

2. RESEARCH METHODOLOGY AND FIELD PROCEDURES

2-1 Research methodology :

The choice of the appropriate approach depends on the nature of the problem.soWe try to choose the best methods for the solution and that "the most important thing that distinguishes precise scientific activity is the use of the experimental method."[1]Experimental research is also considered a dependent variable that is controlled by the specific conditions of a particular event and observing and interpreting the resulting changes in this same event.[2] whereI usedresearcherAndThe experimental method with two groups, control and experimental, to solve his problem

2-2 Research community and sample :

Determining the sample is considered one of the important matters in scientific research, so

[1]Wajih Mahjoub: Scientific Research Methods and Approaches, 2nd ed., Baghdad, Dar Al-Hikma for Printing and Publishing, 1993, p. 33.
[2]Muhammad Labib and Muhammad Munir: Educational Research - Its Origins - Methods, Cairo, Alam Al-Kutub, 1983, p. 102.

determineTresearcherAndResearch communityA Intentionally and they arePlayers of specialized handball centers inDhi QarAt ages(17-15)The number of them is (20) player,The researcher used a comprehensive census of the research community, where the sample represented 100% of the community, andIt was dividedSamplerandomlyBy lotteryEqually divided into two groups (experimental and control) with a rate of (10) Player for eachgroup.

Sample homogeneity

To demonstrate the homogeneity of the research sample members, the variables of height, weight, and training age were measured.and variables of adaptive abilitiesFor the pre-test of the two groups, as they are related to the research variables under study, by extracting the coefficient difference

Table (1)

It shows the homogeneity of the research sample

T	Variables	lonliness Measurement	The middle Arithmetic	deviation Standard	Factors difference
1	the age	month	201.6	9.79	4.85%
2	height	poison	166.6	7.65	4.59%
3	mass	kg	61.3	6.44	10.50%
4	Training age	month	31,200	4.93	15.83%
5	ability to change the situation	degree	16,15	2.08	12879%
6	ability to respond	second	6.24	0.52	8333%
7	Ability to adapt to situations	second	1.88	0.38	20212%
8	Ability to put in the appropriate effort	second	6.83	1.22	17862%

*** All coefficient valuesdifferenceIt was less than (30%), which indicates the homogeneity of the sample in the above variables .**

Sample equivalence

He did And researcher And Sample equivalence using the test (t.test) for independent samples of the pre-test results in the two groups in order to control for variables that change in the experiment. The starting point is the same for both groups, and the results showed random differences between the two groups through comparison.(t)The calculatedwith (Sig) for each of the paragraphs.

Table (2)

Shows resultsSample equivalence inTeststribal tribalismAnd the value of (t) calculated for the totalControl and experimental figs

T	Variables	lonliness Measurement	The officer		empiricism		value(t) calculated	Sig	significance Statistics
			S	+A	S	+A			
1	ability to change the situation	degree	16,300	2,213	16	2,054	0.314	757	Non-moral

2	**ability to respond**	second	6237	450	6260	613	0.096	0.925	Non-moral
3	**Ability to adapt to situations**	second	1,838	0.396	1,928	0.377	0.519	610	Non-moral
4	**Ability to put in the appropriate effort**	second	6,737	1,211	6,938	1,300	0.358	725	Non-moral

*** The table shows (2) That valuesThe significance levels were higher than the significance level (0.05) for all research variables.Thus, the differences between the two research groups are insignificant, which achieves equivalence between them.**

2-3 Information gathering methods and toolsThe devices used in the research :

2-3-1 Information collection methods

1- Arabic and foreign sources and references.
2- Internet of information
3- Questionnaire.
4- Testing and measurement.
5- The interview.
6- Note.

2-3-2 Tools and equipment used

Research tools are the means through which the researcher can collect data and solve the problem to achieve the research objectives, regardless of the data, samples, and devices used by those tools.[3].

1- Handball court legal dimensions
2- Random lighting device
3- Random lighting accessory with different timing
4- handballsColorfulnumber20.
5- 4 colorful fitness balls
6- wheezyatType (FOX) Number (4).
7- hours Timing number (4).
8- laptopHP.
9- Measuring tape.
10- Colored adhesive tapes
11- Weight scale
12- IndicatorsColorfulMultiple sizes
13- Multiple height barriers
14- Colorful hoops
15- floor stairs

2-4 Field research procedures :

2-4-1 Manufacture of the device used

The device:It is a sports tool that randomly activates lights.LED using the Arduino platform. The device aims to provide a

3Muhammad Subhi Hassanein: Measurement and Evaluation in Physical Education, Part 1, 3rd ed., Cairo, Dar Al Fikr Al Arabi, 1995, p. 273

unique and enjoyable training experience for users by randomly turning on the lights during exercises.

The job:

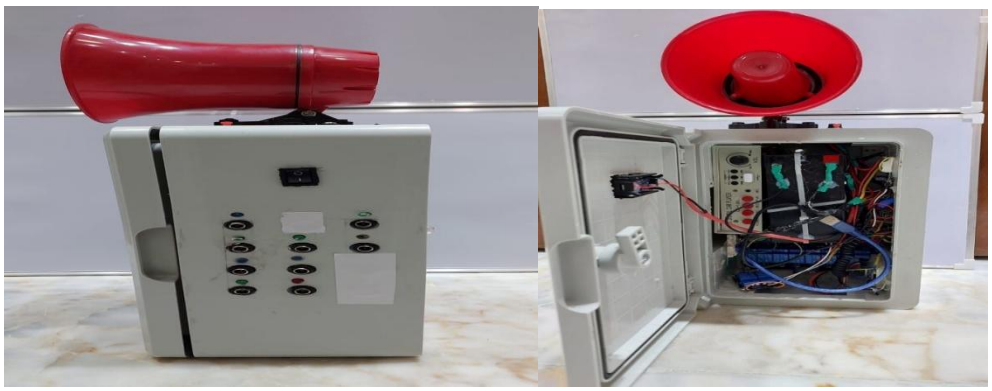
The device works by activating the lights.LEDs randomly flash in groups, providing extra motivation to users during workouts.whereThe lights are activated.Randomly generate LED using Arduino and program it to generate random sequence of lights to turn on.

The device is designed to control the on and off periods of each group of lights to provide a varied and stimulating experience.

This project aims to design an intelligent system to operate a group of lights randomly. Using ESP32 The system relies on a mechanism that ensures that the same lamp is not turned on repeatedly during the cycle. Operational. The project includes setting a time period for turning on the lights with a time delay between turning on one group and the next. This system has flexibility in interacting with LEDs, making it useful for dynamic lighting applications in displays, decorations, or improving energy consumption in electronic systems.,Randomly manage lights:Ensure the lights operate randomly to create a distinctive visual effect.

- Avoid repetition:Design a mechanism that prevents the same lamp from being turned on twice during the operating cycle.
- Improve energy consumption:Control lamp on and off periods to reduce energy consumptionAnd
- Achieving consistency:Provide a temporary mechanism that ensures a regular delay between the operation of each group and the next..

(The final shape of the device)



2-4-2 **Testing procedures :**

2-4-2-1 Identify tests that measure adaptive abilities :

The First test (shooting at 9 points with your knees together from a distance of 7m)[4]

Purpose of the test : To measure the ability to change the situation.

Tools used in the test : Legal handball No. (2), No. (9), indicator No. (9).

- The handball court has the middle of the (7m) throw line as the starting line, and (9) markers are placed in the goal area as follows: The goal is divided into several sections with a rope as follows:

- Two ropes divide the goal horizontally, the first 60 cm from the upper and lower edges of the posts, and the other two vertically.

- Two ropes, each (3m) long, the first of which is tied between the two posts to divide the goal crosswise, (60) cm away from the lower edge of the crossbar. This area is divided by cutting the rope into three squares.twoLength

A side (60 cm) from the goalposts and the two markers are placed in a wayAdhesiveThe two posts are numbered (1 and 2), and another square is placed halfway between them and of the same size and is numbered (3), and the marker is placed in the middle of the square's base. Another rope connects the two posts, (60) cm from the lower edge of the post (i.e. at the third rectangle of the post). This area is divided by small pieces of rope tied to the crossbar into five squares, each with a side length of (60) cm. The middle square is left empty, and two markers are placed adjacent to the inner corner of the post's meeting with the column from each side, numbered (6 and 7). The two markers are tied halfway between the two squares on

[4]Fouad Mutab Hussein, (2016), Building and standardizing a test battery for adaptive abilities and their relationship to emotional intelligence among handball players, PhD thesis, University of Baghdad/College of Physical Education and Sports Sciences

both sides of the middle square and are numbered (8). And 9).

The measurement of the two squares is in the middle of the distance of each post (60x80cm) The two markers are placed in the middle of the distance between the posts, and are numbered (4 and 5).

- A marker placed halfway between the goal line and the goalposts, at a point determined at a distance of (1.50 m) from the lower inner side of the goalposts.

- It bears the number (3) and is defined by a rectangular area (60 x80 sM Two markers, the bases of which are attached to the inner side of the middle of each post and at a point determined at a distance of (1 m) from the top and bottom of the inner side of the post, bearing the numbers (4) and (5). And two markers, the bases of which are attached to the inner side of the post at the point where the posts meet the goalpost, bearing the numbers (6 and 7) are defined by a square with a side length of 60 cm. And they are defined by a square with a side length of 60 cm. Two signs are attached to the inner side of the goal crossbar and at a distance of (1.20 m) from each inner side of the posts, bearing the numbers (8) and (9).

- PointingdirectionThe pointed head of all the markers points into the goal.

Performance description :- The tested player kneels behind the starting line (7m throw line) and upon hearing the start signal, shoots the balls towards the nine markers inside the goal.

Performance conditions : -The knees should be on the ground and close together and the rest of the body should be in line when aiming the ball at the posts.

The sequence of aiming at the signs is from number (1) to number (9).

Supporting staff : ManagedTestFrom a person responsible for the starting signal and recording the requirements and performance of the tested player, standing parallel to the starting line and at a distance of (2-3 m).

Registration method :-The player is given (9) shots.

The tested player will receive four points when hitting the indicators (3, 8 and 9).

The tested player will receive three points if he hits indicators 1, 2, 6 and 7.

The tested player is awarded (two points) if he hits the two indicators (4 and 5).You countThe tested player gets one point if he does not hit the designated marker and the ball passes near it and enters the goal.

- A zero is scored for the tested player when the ball passes away from the marker. The target is either off target or out of bounds. Maximum degree (28).

The second test : Rapid response to stimulus and touching one of the colored balls

Purpose of the test: To measure the ability to respond

Tools used in the test:- Legal handball No. (2) No. (3) in different colors, indicator No. (3), clock Electronic timing, 120 fps camera. Handball court for testing, where the (7m) throw line is designated as the line At the beginning, the first indicator is (2m) away from it, followed by two other indicators. At a distance of (1 m) and in a straight line towards the middle of the field, and after the marker At the last (5m) distance, three balls of different colors are placed, in a parallel direction. To the midfield line, and a distance of (3m) between one ball and another, and the distance is Test (9m).

Performance description:- The tested player stands with his back to the starting line and when the signal is given The test player starts by600Backwards in a defensive move to overtake The three signs in the 8-way direction and upon reaching the sign

Finally, the person conducting the test sends the command with one of the colors of the balls. To the midfield line, and a distance of (3m) between one ball and another, and the distance is Test (9m).

Performance conditions: - The specified color must be called the moment the tested player reaches the last marker.

- Change the balls' locations after each player's attempt. The support team administers the test by two people:

- The first calls out the specified ball color and the method of scoring the test.

The other is responsible for calculating the test time and changing the colors of the balls. In each attempt, he stands near the colored balls.

Registration method:- The player is given three attempts. The arithmetic mean of the time of attempts is calculated to the nearest (1/100).

Second, from the moment the command is sent with the specified ball color, i.e. when The player reaches the third level, and the timer ends. The moment the ball touches the specified color.

The third test : Test name: Reverse between the signs and change direction within (5.73) seconds

Purpose of the test: To measure the ability to adapt to changing situations.

Tools used in the test:- Legal handball number (2), number (3), stopwatch, indicator number (6). Handball court for test performance, where the start and finish line is In the middle of the halfway line, and the first pointer is (2m) away from it. Towards one of the goals and five consecutive markers, the distance between one marker and the next (1.5m) so that the test distance is (9.5m) and indicators afterD (6)

Performance description:- The tested player stands behind the starting line (center of the midfield line). The field with his back facing the markers, and when he hears the signal to start the test, It reverses between the signs in a zigzag pattern, and when He sees the ball placed on the ground and then the tested player changes His movement to move to carry the ball and return to the starting line (line Midfield).

Performance conditions: - Estimated time to complete the test is (5.73) seconds.

The ball is placed on the ground by the assistant upon arrival. The tested player is to the left of the third person in the attempt. First, then at the fifth marker on the second attempt, then reversed. The process goes to the next player, i.e. the fifth player, then the third, and so on.

- If the ball goes out of the control of the tested player, no attempt is counted.

The support team administers the test by two people:

- The first is responsible for starting the test, calculating the time and the registration method and stands Near the sixth indicator.

- The other is responsible for placing the ball to the tested player, and enforcing the performance conditions.

Registration method:-

The arithmetic mean of the time of the two attempts is calculated.

- (Half a second) is added when touching any indicator.

- The time difference between the calculated and estimated time to complete the test is calculated.

Fourth test : Test name: Rebound handling towards different heights from a distance of (6) m within (18.43) seconds

Purpose of the test: To measure the ability to exert appropriate effort.

Tools used in the test: Legal handball No. (2) Number (6), adhesive tape to mark heights Different and starting line, tape measure, electronic stopwatch. A place where the starting line is determined at a distance of (6 m) from a smooth wall. It has three rectangles to aim at, each rectangle is 1 m long. Show (40) cm) and a distance between one rectangle and another (20 cm), and the heights are Rectangles on the ground in a row (80 cm) and (1.40m) and (2m).

Performance description :- Upon hearing the start signal, the tested player directs the ball towards The ground to bounce off and touch the bottom square then the middle rectangle and finally on The top rectangle and continuously, so that two passes are performed on each

Rectangular, and at the end of each handling, he returns to the starting line to perform the handling. The suffix.

Performance conditions : - Emphasis on speed of performance as handling is time-sensitive.

- Estimated time to perform the test (18.43) seconds.

The support team administers the test by two people :

The first is responsible for signaling the start and end of the test and calculating the time. The tester stands on the left side of the tested player.

- The other is responsible for the performance of the tested player and the implementation of the test conditions. The attempts are made and the player stands on the right side of the test.

Registration method :-

- The player is given (6) rebound passes.
- (0.50) seconds are added to the test time for each handling. Inaccurate does not touch the selected rectangle.

The time difference between the estimated and calculated time to finish is calculated. Test.

2-4-3 Exploratory experiments :-

After the most important tests were determined, the researcher conducted the first exploratory experiment on a sample of (4) players who were chosen by lottery from the research sample. With the help of the support team, the exploratory experiment was conducted on Thursday, May 23, 2024, and its goal was the following:

1- Verify the suitability of the tests for the sample individuals and their ease of application.

2- Verifying the validity of the devices and tools used in the research.

3- Verify the support staff's understanding and competence in performing measurements, tests, and recording results.

4- Knowing the time required to run the tests.

2-5-1 Pre-tests for the research sample

⮜ Pre-tests were conducted on the research sample, which consisted of (10) players for each control and experimental group.

Thursday, May 30, 2024

⮜ The researcher took into account the circumstances related to the tests in terms of time, place, tools used, method of implementation, and the assistant work team in order to work on providing them in the post-tests.

2-5-2 Main experiment (exercise application)

- He didTresearcherAndWith special exercise numbers Within the framework of the training curriculum in its main section for the special preparation stage based on the exploratory experiments that he carried out, taking into account the available capabilities and the general level of the research sample, basing its preparation on the scientific foundations of sports training and on some scientific sources and references, in addition to the help and consultation of the supervisor, and the training curriculum focused on comprehensiveness in developmentCoordination abilities
- The training curriculum was applied on the day (Saturday)Corresponding to 1/6/2024Until the day (Sunday)Corresponding to 9/1/2024 The experimental group underwent training sessions under the direct supervision of the team coach. With help researcherAnd.
- Continue the experiment for12Weeks, 3 training units per week in (Sunday- Monday -Tuesday) within the main section of the curriculum
- The researcher's exercises took (50) minutes from the main section of the training unit.
- The researcher adopted the high-intensity interval training method.Low intensity period
- He didTresearcherAndBy following the undulation in the training loadFor exercises within the training curriculum during the training session

weekly(1:2)

2-5-3 Test Al-Badi:

After thatCompletion of the application of the research exercises over eight weeks,Post-tests were conducted for the research sample.,The groupControl and experimentaldayWednesdaycorresponding4/9/2024 The researcher followed the same conditions and procedures for the pre-tests in terms of location, time, tests used, their sequence, tools used, and support team to ensure that no changes occurred that might affect the research results.

2-7 Statistical methods

useTresearcherAndThe bag Statistics SPSS for statistical processing

Where he used the following means:

1- arithmetic mean

2- standard deviation

3- The mediator

4- Coefficient of skewness

5- t.test

6- The percentageandAnd

3. PRESENTATION AND DISCUSSION OF RESULTSTESTS :

3-1 offer Results of the differences between Tests(tribalism-(Dimensionality) of the group empiricism For capabilities compatibility **Under investigation:**

Table (3)

Shows the results of the differences betweenTestsTribalism, dimension and value (t) calculated for the group empiricism

T	Variables	lonliness Measurement	tribal		The distant		value(t) calculated	Sig	significance Statistics
			S	+A	S	+A			
1	ability to change the situation	degree	16	2,054	19,600	843	4,909	0,001	moral
2	ability to respond	second	6260	613	4,700	0,876	5,065	0,001	moral
3	adaptability With the situations	second	1,928	0.377	0.959	0.104	8,117	0,000	moral
4	Ability to put in the appropriate effort	second	6,938	1,300	4,506	0.287	5,912	0,000	moral

*** Moral at the significance level≤(0.05)**

3-1-1 Discussion of the resultsFor tests(Pre-post) for the experimental group.

The test results showed significant differences betweenThe two testsPre- and post-test for all abilitiescompatibilityFor the benefit ofTestDimensional, and these differences are due to the fact that the variables that were addressedTHere is the researcherAnd TIt was influenced by the exercises that were applied through training methods by the researcher.AndWhich was performed by the members of the experimental group in the main section of the training units, as it showed a positive impact on developing the capabilities ofcompatibilityUnder study"This is consistent with what Diaa Al-Khayat and Noufal Al-Hayali see: “The important basic principles that must be taken into account during the educational and training process are the availability of tools and assistive devices that work to speed up the learning of skills through a sense of ability and self-confidence, and in developing and improving performance from a motor perspective.”And the skillsIn addition to the excitement that accompanies the player through performance, there is a tool that has a positive and effective impact on developing these skills."[(5)]

As it wasTo useTraining methods had a positive impact on increasing the desire and motivation of players to practice and maintain exercises, as these methods were new inputs into their training curriculum. The type of selected exercises included also had a positive impact on increasing the desire and motivation of players to practice and maintain exercises, as these methods were new inputs into their training curriculum.THere is the researcherAndIn the training curriculum, which was prepared in a manner consistent with the type of training methods, asITraining on assistive devices and tools is an important practical training aspect that aims to get the player to the correct performance that provides the correct movement mechanism (dynamic imprinting), the necessary strength, speed and appropriate timing.[6]The specificity of the training was also taken into consideration in line with the requirements of the training phase, which is the special preparation period. The reason for the amount of development achieved in the level of the aforementioned capabilities - in the researcher’s opinion - is due to:And- toFor exercises Private and means Training help, jointly with Training The organizer, results Positive in development Coordination capabilities as wellThanks Training continuous And the methodological, Which Includes Exercises Miscellaneous and means Training Effective, Enable Players from development Their abilities thecompatibility, Which led to to lift Their level.

3-2Show results of differences between Tests(tribal-post) group The officer For capabilities compatibility Under investigation :

Table (4)

Shows the results of the differences between the pre- and post-tests and the value of (t) calculated for the groupThe officer

([5]Diaa Al-Khayat and Nawfal Al-Hayali: Handball (Mosul, Dar Al-Kutub for Printing and Publishing, 2001), p. 436.

[6] Amin Anwar Al-Kholi and Diaa El-Din Mohamed. Sports Education and Training Technology. 1st ed.: Cairo, Dar Al-Fikr Al-Arabi, 2009. p. 234.

T	Variables	Unit of measurement	tribal		The distant		value(t) calculated	Sig	Statistical significance
			S	+A	S	+A			
1	ability to change the situation	degree	16,300	2,213	17,800	1,032	2,043	0,071	Non-moral
2	ability to respond	second	6237	450	5,855	645	1,689	129	Non-moral
3	Ability to adapt to situations	second	1,838	0.396	1,312	0.436	2,889	0,018	moral
4	Ability to put in the appropriate effort	second	6,737	1,211	5,666	0.994	2,357	0,043	moral

*** Moral at the significance level≤(0.05)**

3-2-1 Discussion of the results of the tests (pre- and post-test) for the control group for the abilitiescompatibility

The test results are shown in the table (4) onnonThere are significant differences in the pre- and post-tests.In the test of the ability to change the situation, as well as in the test of the ability to respond, in the test of the ability to adapt to situations, as well as in the test of the ability to exert appropriate effort and the ability to connect, there are significant differences.In favor of the post-tests of the control group, this indicates the presence of slight differences betweenThe two testsPre- and post-tests for the control group that was not exposed to the study project, using the training aids that were manufactured by the researcher.AndNor the exercises that were applied in the main section of the training units, but rather practiced its training curriculum that was adopted by the specialized trainer according to his own vocabulary.The researcher attributes the reason for the development that occurred between the pre- and post-tests of the control group to the efficiency of the coach as well as the result of repetition and practice by the players. The researcher also believes that continuous training helps in developing the players, but this development does not reach the level of ambition and advancement of the players to a better stage.

3-3 Display the results of the differences between the tests (Dimensionality- Dimensional) for the group Control and experimental figs For capabilities compatibility Under investigation :

Table (4)

Shows the results of the differences between the tests Dimensionality Dimension and value (t) calculated for the total Control and experimental figs

T	Variables		The officer		empiricism		value(t) calculated	Sig	significance Statistics
		lon liness Measurement	S	+A	S	+A			
1	ability to change the situation	degree	17,800	1,032	19,600	843	4,269	0,000	moral
2	ability to respond	second	5,855	645	4,700	0,876	3,354	0,004	moral
3	Ability to adapt to situations	second	1,312	0.436	0.959	0.104	2,486	0,023	moral

4	**Ability to put in the appropriate effort**	second	5,666	0.994	4,506	0.287	3,545	0,002	moral

*** Moral at the significance level≤(0.05)**

3-3-1 Discussion of results For tests Dimensions of the experimental and control groups :

It appears from the display in the table (4)toThe results of the differences on the presence of significant differences in The tests between the experimental and control groups were in favor of the experimental group in their post-tests, and this is whatTAtzwa Al-BahethAndUntil these abilities were affected by the independent variableUsingVisual aids exercises In the experimental group curriculum, through special exercises included according to the literature of sports training science during the special preparation period, consisting of three training units.weekly According to scientific principlesCorrect with the help of the supervisor and cooperationThe coach andThe sample where the result of the development of capabilities was clear among the individuals of the research sample andThe qualitative exercises were characterised by change, composition, overlap and continuous diversification of the auxiliary means and tools, as "the diversity of tools and their exercises is all likely to…"excitement The players And increase their motivation to progressAnd ascension At the levelThe athlete[7)]...and that "the exercises are prepared in a standardized and scientific manner, taking into account the necessary foundations."To chooseProper exercises help to achieve the desired goal.[8)]. Diversification and change in qualitative exercises makesplayerHandball is prepared and ready to handle all situations that Directs it During the match, diversification and change in exercises achieves many goals.For the player During practice, which is consistent with the performance of complex handball skills, "practice is a necessary and helpful factor in the interaction between the learner and the motor skill and control."onHis movements and achieving coordination between the components of the motor skill in a correct, sequential performance and at an appropriate time.[9)].This is what we have noticed through the development of the compatibility capabilities where **ability to change the situation** There was a clear development in this ability and the results in the post-test were positive and there was a noticeable improvement that helped the players develop themselves, as (Abbas Mahdi and Mahdi Kazim) mention. she" amount And ability athlete on to set situation And move it Their body In place rate for things Other or animated Like a ball and athletes competitors and his colleagues any a movement opponent And move it colleague And Forms Her appearance play The deceiver from above The head in ball The plane And pass Hate Back And then changing the situation on reception And treatment Information on the situation variable In a way correct and movements conversion To return in swimming and movements floor in Gymnastics Here It increases receptors Visual and futures Alerts Private By changing speed And the trend And put body"[10].

Certainly, the most important role in creating the device was the effective impact on developing this ability through the exercises designed by the researcher. We also see that the use of training methods has a significant impact on developing the player, as Mohamed Othman states:AN practical delivery Information For the player from during The coach I became Depends today Depending entirely on assistance By means Training Different Instead from style traditional Which I depend By degree First on practical the explanation oral[11]

ability to respond This ability depends on the ability to quickly identify the stimulus and to quickly call up a response to this stimulus, as Jamil Qasim states, "It is the athlete's ability to perform a purposeful action quickly and correctly in response to a pre-determined signal or a signal chosen as a result of a change."suddenFor the situationandRapid preparation and implementation to act purposefully accordinglynoA signal (alarm) from a teammate, opponent, ball, or referee[12]" and thatResults of the ability to speed up motor response. The researcher believes that the diversity in the use of auxiliary means in the exercises and their difference in the training unit had an effective impact on performing the motor duty with a high compatibility between the nervous signal.And the responseMuscle which helped in reducing the timeResponseKinetic and this is consistent with(schmudit) "thatThe playersThose who practice several variations of exerciseYou will get strongerThey have the idea of generating different values and diverse and new principles, and thus the outcome of all of this will be positive.onreaction"[13)] This ability is what we need most in handball due to the requirements of the game and it is considered the decisive factor in many situations in defense while responding to the attacker's movements and taking the correct position and performing the defense better and in the offensive side in developing the skill as the relationship between skill and coordination ability is a close relationship, and it is of great importance in the process of sports training, the player must have a certain basis of coordination abilities so that he can develop and improve his sports skills, also training on different motor

[7)]Ahmed Amin Fawzy, Psychology of Sports Training for Juniors, 2nd ed., Cairo, Dar Al Fikr Al Arabi, 2007, p. 20.
[8)]Sherine Mohamed Abdel Hamid: A proposed educational program to develop qualitative coordination abilities and improve the level of performance in the motor sentence of rhythmic artistic exercises. (The fifteenth international scientific conference of the college (the third international conference for sports creativity), Helwan University, 2014, p. 90.
[9)]Nahida Abdel Zaid, Mazen Abdel Hadi: The previously mentioned source, 2018, p. 99.
[10]Abbas Mahdi Saleh and Mahdi Kazim Ali: Theoretical and applied training for sports games, 1st ed., Al-Manar Press - Najaf Al-Ashraf, p. 121, 2018.
[11]Muhammad Othman: Sports Education and Training, 2nd ed., Dar Al-Qalam for Publishing and Distribution, Kuwait, 1994, p. 152
[12]Jamil Qasim and Ahmed Khamis: previously mentioned source, p. 79
[13)]Schmudit and wrisbrege: motor learning and performance, third edition, human kinetics, 2004, p267.

skills using various training methods works to raise the level of coordination abilities in the player ([14]).

Moreover, the coordination abilities are what enable the athlete to perform various technical skills.To performMulti-activity is the cornerstone for an individual to reach the highest levels.[15]).alsoWe need itAIn deception and successful attack.

AAbility to adapt to situations "It is the athlete's ability to change the behavior he started (the behavior program).The kineticSecretlyAAnd in a purposeful manner that suits the changing, expected situation) provided that the action that was initiated is stopped in order to correct, change or modify it according to the new situation, in addition to correcting the action program in an ideal manner according to the new situation, and the expected change in the situation and monitoring the motor implementation.[16]We need this behavior in handball because there is a competitor and the player needs to make multiple decisions due to the variables on the field, according to the researcher's opinion.AndthatThe result of this development is due to the device manufactured, especially since the device enhances the ability to make multiple decisions on the field and depends on visual vision and the type of command issued. All of this has helped develop this ability among players.

Ability to put in the appropriate effort Performing sports movements requires a high degree of fluidity in performance, accompanied by the ability to perform with high consistency, which helps in making an appropriate effort and not making an effort greater than required, which causes the players to waste energy. Through the exercises that were put in place and with the help of the manufactured device, we were able to get the player to perform an appropriate and economical effort that maintains the distinctive and best performance with the least possible effort. This is what Jamil Qasim and Ahmed Khamis mention: "It is..." capacity athlete on coordination His actions accurately High with feeling It has internal And the course Its strength And its time And its location And diversification With it on according to what The situation requires and accuracy High And match standard do power occasion Accordingly For distance In movements Partial[17]

4. CONCLUSIONS AND RECOMMENDATIONS.

4-1- Conclusions.

In light of the content of the discussion of the results, the study reached the following conclusions:

1- Visual exercises led to a development in the variables of coordination abilities.

2- Visual exercises led to an improvement in the ability to change the situation, as well as the ability to respond, the ability to adapt, the ability to make efforts, and the ability to connect.

3- The development of previous coordination abilities has a positive impact on the player's performance and greatly improves his level, and this is what the researcher seeks in her work.

4-2- Recommendations.

Based on the results obtained, the researcher made several recommendations:

1- It is recommended that trainers pay attention to visual stimuli training and include these exercises in their training curricula.

2- It is recommended that the Iraqi Handball Federation conduct training courses for coaches to familiarize them with the importance of visual training in developing visual abilities and skill performance.

3- Conducting studies using visual exercises on different samples of handball players in terms of gender and age.

4- Conducting similar studies on other sports, whether individual or team sports, for all age groups and both genders.

REFERENCES

[1] Ahmed Amin Fawzy, Psychology of Sports Training for Juniors, 2nd ed., Cairo, Dar Al Fikr Al Arabi, 2007.

[2] Amin Anwar Al-Kholi and Diaa El-Din Mohamed. Sports Education and Training Technology. 1st ed.: Cairo, Arab Thought House, 2009.

[3] Abbas Mahdi Saleh and Mahdi Kazim Ali: Theoretical and Applied Training for Sports Games, 1st ed., Al-Manar Press - Najaf Ashraf 2018

[4] Qasim Lazam and others Foundations of Learning and Teaching and its Applications in Football (Baghdad, House of Books and Documents - National Library, 2005)

[5] Sherine Mohamed Abdel Hamid: A proposed educational program to develop qualitative coordination abilities and improve the level of performance in the motor sentence of rhythmic artistic exercises. (The fifteenth

(3)Qasim Lazam and others: Foundations of learning and teaching and its applicationsn football.(Baghdad, House of Books and Documents - National Library, 2005)p. 79.

(4)Muhammad Hassan Alawi: Sports Training Science,(Cairo, Dar Al-Maaref, 1989)p. 25

(5) Jamil Qasim and Ahmed Khamis: previously mentioned source. p. 79.

(6) Qasim and Ahmad Khamis: The previously mentioned source. p. 79.

international scientific conference of the college (the third international conference for sports creativity), Helwan University, 2014, p. 90.

[6] Muhammad Othman: Sports Education and Training, 2nd ed., Dar Al-Qalam for Publishing and Distribution, Kuwait, 1994.

[7] Muhammad Subhi Hassanein: Measurement and Evaluation in Physical Education, Part 1, 3rd ed., Cairo, Dar Al Fikr Al Arabi, 1995.

[8] Muhammad Labib and Muhammad Munir: Educational Research - Its Origins - Methods, Cairo, Alam Al-Kutub, 1983.

[9] Muhammad Hassan Alawi: Sports Training Science, (Cairo, Dar Al-Maaref))1989

[10] Mustafa Taha Mahmoud: The effect of visual training on developing the speed and accuracy of some offensive skills and sensory perceptions - movement for juniors field hockey(PhD thesis, Faculty of Physical Education for Boys, Benha University, 2015)

[11] Jamil Qasim Muhammad and Ahmad Khamis Radi: The World Handball Encyclopedia, 1st ed., Al-Safa Printing House, Beirut, 2011

[12] Diaa Al-Khayat and Nawfal Al-Hayali: Handball, (Mosul, Dar Al-Kutub for Printing and Publishing, 2001)

[13] Sherine Mohamed Abdel Hamid: A proposed educational program to develop qualitative coordination abilities and improve the level of performance in the motor sentence of rhythmic artistic exercises. (The fifteenth international scientific conference of the college (the third international conference for sports creativity), Helwan University, 2014, p. 90.

[14] Fouad Mutab Hussein, (2016), Building and standardizing a test battery for adaptive abilities and their relationship to emotional intelligence among handball players, PhD thesis, University of Baghdad/College of Physical Education and Sports Sciences

[15] Nahida Abdul Zaid, Mazen Abdul Hadi Ahmed: Motor Learning, 1st ed., Amman, Safa Publishing and Distribution House, 2018.

[16] Wajih Mahjoub: Scientific Research Methods and Approaches, 2nd ed., Baghdad, Dar Al-Hikma for Printing and Publishing, 1993, p. 33.

[17] Schmudit and wrisbrege: motor learning and performance, third edition, human kinetics, 2004, p267.