The Effect of Special Exercises in the Development of Some Visual Abilities and the Accuracy of Some Basic Skills of the Young in the Handball

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Abstract

The problem of research is the lack of use of some trainers for visual exercises during the training modules and do not have great importance in their training curriculum as it is for the physical, skill and planning aspects, and thus the objectives of the research are as follows:

- Develop special exercises to develop some visual abilities and the accuracy of some of the basic skills of beginner's handball.

- Knowing the impact of special exercises in developing some of the visual abilities of the emerging handball players.

- Knowing the effect of special exercises in developing the accuracy of some of the basic skills of beginner's handball.

Either Research Hypotheses

There is a significant impact of special training in developing some visual abilities of the emerging handball players. There is a significant effect of special exercises in developing the accuracy of some of the basic skills of beginner's handball. The researchers adopted the experimental approach in the design of the two equal groups with Pre and Post testing through the research society represented by the players of the specialized center of handball at Al-Qasim Sports Club. The number of (40) player was randomized. The random number of 16 players was divided into two equal groups, And the tests used in the visual abilities and skill handball were conducted Pretests, and then applied visual exercises for the experimental group by combining them with the curriculum prepared by the trainer (3) units per week for a period of (8) weeks, and then conducted After the data were obtained from the Pre and Posttests where the researcher treated them statistically to extract the results. The results were presented, analyzed and discussed according to research objectives, the most important conclusions reached by the researchers in:

There is an evolution of the experimental group in all visual and technical tests of the hand pulley except the test (Perception of the depth of vision) as well as the control group, except for the Perception of the depth of vision and the test of the accuracy of handling from the head level by the field of vision. Visual training is futile in the latest development in the Perception of the depth of vision and accuracy of the performance of the correction of the jump field of vision of the two groups.

Keywords: *Special exercises, Visual abilities and accuracy.*

Introduction

Achieving achievements through building the athlete and preparing it in an integrated and correct manner physically, professionally, technically and planning. The views and modern theories that the trainers and specialists have brought through their research and creativity continuously and continuously about the modern methods and methods of training have led to improving the level of sport in general and large [1].The visual training is one of the modern training methods in the field of sports, it consists of a series of repeated eye exercises to improve the basic visual abilities, noting that there

are many variables that have an impact on the ability of the athlete to perform one of these variables are visual variables, Is relatively important in the performance system but it is of great importance, since it is necessary to give it high attention and not ignore its value and its benefits in performance because it is necessary for athletes in all individual and differential games. The game of handball is of a special nature from other games of the other ball, in terms of the way the technical performance and planning, and this diversity in the training process is to reach the goal of training we seek to reach the high levels of the athlete. Hence the importance of research in a real scientific attempt by researchers in their experience using an individual training method to develop the visual skills of the handball player in order to achieve important goals in sports training [2]. The trainers and specialists in the field of sports use the various methods and methods of modern training, which constitute a necessary requirement for the coach according to the type of game or the effectiveness of training and visual training of those methods currently used. Through the experience of the researcher as a coach and continuous training and continuous follow-up of handball games noted that many players lack precision in the performance of some of the basic skills hand also noted there is weakness in the compatibility of muscular nervous and ball sense, which depends on many variables, including visual variables and the importance of visual exercises Which are directly related to the development of

accuracy, the researchers found and identified the problem of their research the lack of use of this method and lack of interest in relation to the physical, skill and planning of the care of coaches, as well as this method is used by many of the coach The researchers decided to go into this field and use this training method and know its effect in developing the accuracy of some basic skills of handball [3].

Research Methodology

The researcher used the experimental method of design (the two sets of equal) to suit the nature of the research.

Community and Sample Search

The researchers identified the research community with the specialized school boys of Al-Qasim Junior Handball Club (40). The sample of the main research was chosen from this society in a simple random way. The number of players was 16 randomized. The random sample was divided into two equal groups, one representing 8 players and the other representing (8) players. This sample represents (40%) Of the original community and is a suitable proportion to represent the research community real and sincere representation.

Homogeneity and Equivalence between the two Groups

The researchers found the homogeneity and equivalence between the members of the research sample, in the visual tests and the professional handball as shown in table (1).

Table 1: Shows the homogeneity and equivalence of the two groups of research (experimental and control) in the visual and skill tests of the handball

S	Tests	Units	Experimental group		Control group		(t) value		Significance
			Mean	SD	Mean	SD	Calculated	Tabulated	
1	Understanding the depth of vision	Cm	34.67	9.36	36.77	8.4	0.47		Non sig.
2	Understanding the field of vision	Cm	5.47	0.47	5.24	0.56	0.93		Non sig.
3	The accuracy of the correction of the stability of the Perception of depth of vision	Degree	10.19	2.86	9.22	2.12	1.54	2.145	Non sig.
4	The accuracy of the correction of the perception jump field of vision	Degree	3.6	1.012	3.1	1.7	0.65		Non sig.
5	The handling accuracy of the head level by the field of view	Degree	20.88	2.12	20.23	2.31	0.59		Non sig.
* When the degree of freedom (14) and the level of significance 0.05									

Means, Tools and Devices used in the Research

Data Collection Methods

- Interviews conducted by the researcher.
- A questionnaire for the opinions of experts and specialists.
- Testing and measurement.
- Observation and experimentation.
- Arab and foreign sources.
- The Internet.

Search Tools & Devices

- Legal handball field.
- Hand balls number (10).
- Measuring tape length (10) m.
- Stopwatch and digital timer number (3).
- Colored tapes.
- Type the plastic type (12).
- Camera video filming number (2).
- Tennis balls of several colors (12).
- Glasses type transparent shade from the bottom number (2).
- Plastic hoops in several colors diameter (1 m) number (4).
- Colored posters with numbers and English letters (24).
- Wooden sticks at the end of balls of tennis in different colors number (4).
- Plastic column length (2.5 m) with a colored lamp number (4).
- A wooden column (1.80 cm long) with a colored lamp (3).
- Square (1 m) with a radius (1 m) and a plan (8) Corners from the center of the circle each corner (45) 0 Representing (8) different directions Number (1).
- A wooden box with no cover and without front side, 100 cm long and 40 cm wide and 15 cm high. Two pieces of wood, 2 cm x 2 cm in height, 10 cm in height, black curtain on the front side.

- Table made of wood number (1).
- Ordinary wheelchair number (2).

Field Research Procedures

Selection of basic Skills and Tests

Basic Skills Selection

The researchers selected some basic skills of handball according to a questionnaire for experts and specialists. These skills were chosen according to the opinions of experts and specialists:

- Correction of stability.
- The correction of the jump.
- Handling from head level.

Select Tests

The researchers used standardized tests used by previous researchers to measure the visual abilities of the players (depth of vision, field of vision) with some minor modifications to suit the research sample. The basic skills tests were also presented to a group of experts and specialists.

Tests used in Research

First, Test Perception of depth of vision [4]

- Objective of the test

Measuring the player's ability to estimate distances between two bodies and distances between them

- Test time:

(60) Seconds per laboratory.

- Used equipment's :

Korzybski is a wooden box with no cover and no front side placed on a table, 100 cm long, 40 cm wide and 15 cm high.

Contains a number of 2 sticks to estimate the distances of 2 cm x 2 cm and height of 10 cm.

A black-colored curtain is placed on the front side of the box to change the attempts as shown in Figure (1).

Figure 1: The test shows the depth of the player's vision

Performance

- The player sits on the chair facing the wooden table.

- Adjusts the height of the chair so that the wooden table is at the player's level of view.

- Black curtain closes search the player cannot see the sticks.

- Move the second stick with a distance of (10 cm) and then (20 cm) and then (30 cm).

- After each attempt is removed the curtain and asks the player to determine the distance between the two sticks.

Calculation Method

- The wrong distance is calculated for each attempt and its value is recorded.

Second, Test the Perception of the field of vision: [4]

Objective of the Test

The optical field is plotted and a circular plate is used with a radius of 1 m. It is planned by 8 angles from the middle of the circle. Each angle (45) represents 8 directions as shown in Figure (2).
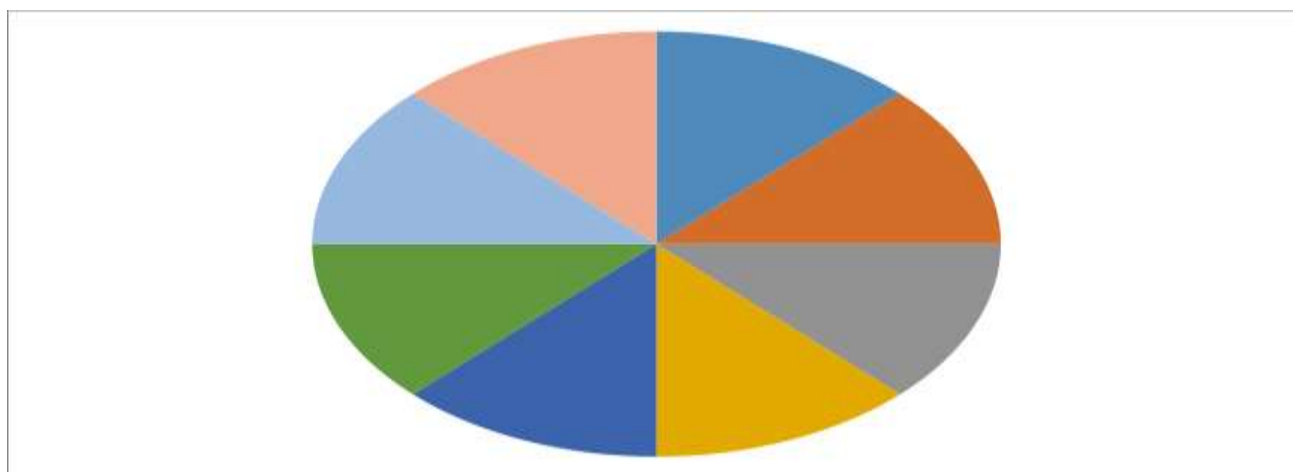

Figure 2: Demonstrate the field of vision Perception

Test time: (20) minutes per laboratory.

Test conditions

(33 cm) from the middle of the circle there is a column in which a special stand rests on which the laboratory is to be dismantled so that it can be viewed at the midpoint with the head position fixed without any movement on the head. There is a graduated scale starting at zero centered midpoint moves to the circumference of the circle up to (100 cm) on each of the eight directions lines specified in the previous figure.

Performance

The laboratory sits down and puts a hole in the place and one of his eyes is closed. The signal is moved from the center point to the end of the circle using the indicator in the direction indicated by the laboratory player. The pointer is kept moving from zero until the player is out of sight without the player moving his head. The process is repeated for eight axes (the axes indicated on the drawing) at an angle (45º) in each attempt to complete the laboratory 360 °.

Calculation Method

In the absence of the pointer from the player's view, the last number reached by the player is recorded in a special form of this laboratory in each of the eight attempts of each player.

The visual field of each eye is measured individually (where there are eight axes per eye).

Third, Test the accuracy of the correction of stability in the Perception of the depth of the revised vision [5].

Objective of the Test

Measuring the accuracy of the correction of the stability and depth of vision and sense of distance required.

Test time

(6) Minutes per laboratory.

Performance Method

The test is carried out in two groups, each group having a goal, and in front of each target three lines for correction of stability.

The three lines are separated by 25 cm.

Test Conditions

- The player does not know which of the three lines will be performing.
- The player shoots five corrections from one line, preceded by two shots on the goal.

Calculation of Grades

- The referee stands next to the player to confirm the distance of correction.
- One score is calculated to try a successful shot.

Fourth, Test the accuracy of the correction of jumping aware of the field of vision modified: [6]

Objective of the Test

Measure the accuracy of the jump and the field of vision of the player at a time.

Test Time

(5) Minutes per laboratory.

Used Equipment's

Three pipes are made of plastic length (3 m), two of them are placed on both sides of the target and in the level and prove by the column, and one above the goal is installed vertically so that above the middle of the target, and at the end of each end of the tube of a red lamp, M) for the side and (50 cm) above the target, the lateral horizontal lights are in a straight form with the goalkeeper's pause, the other lamp perpendicular to the center of the goalkeeper's position.
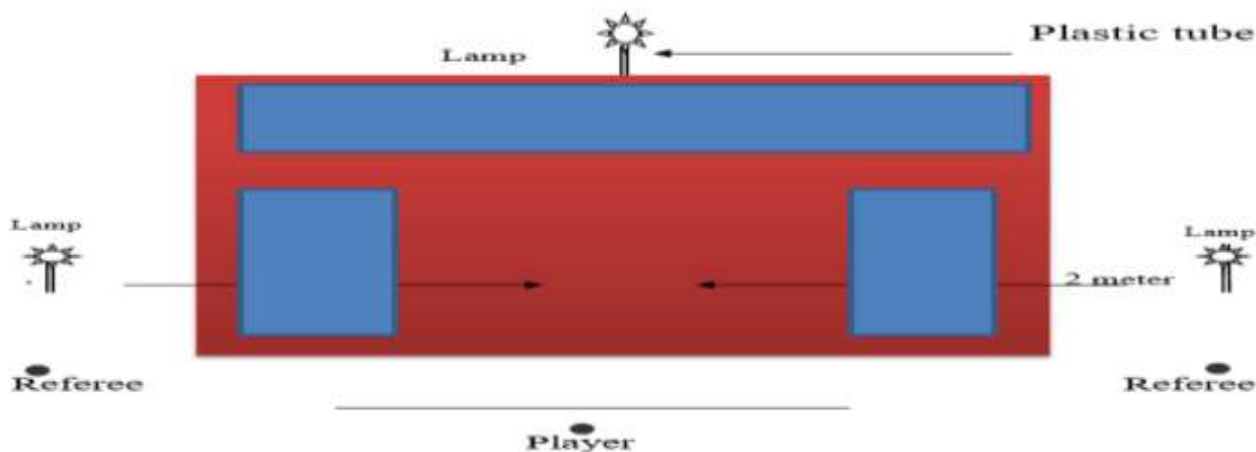

Figure 3: The accuracy test shows the accuracy of the jump by realizing the field of view

Test conditions

- The player must make corrections from the place specified in advance
- The player directs the correction immediately after seeing him lighting one of the three lamps after the lighting of the goal and is a failed attempt if the delay in the goal on the goal.
- Two referees stand on both sides of the player to confirm correctness and scoring.
- Give (10) attempts for each player.

Method of Calculating the Degree

- A score is calculated for each successful attempt in which the ball enters the goal.
- Do not count any score for every failed attempt not to enter the ball goal.
- The score is not calculated when the player performs one or most lamps did not light up even though the ball entered the target.

Fifth, Test the accuracy of handling from the level of head to see the field of vision modified [7]

Objective of the Test

Measure the accuracy of the chest handling and the field of vision of the player (broad view) in that one.

Test Time

(30) Seconds per laboratory.

Test Specifications

A wall with three overlapping circles, the radius of one circle according to the order of the smallest to the largest (45, 98, 150) cm, the thickness of the lines (5 cm) and the height of the ground by (150 cm).

Two lamps are placed on the wall on both sides of the circle and are removed from the center of the circle (3 m) and up from the ground by 150 cm.

Two lines are drawn on the ground in front of the wall and one facing (3m) and the other
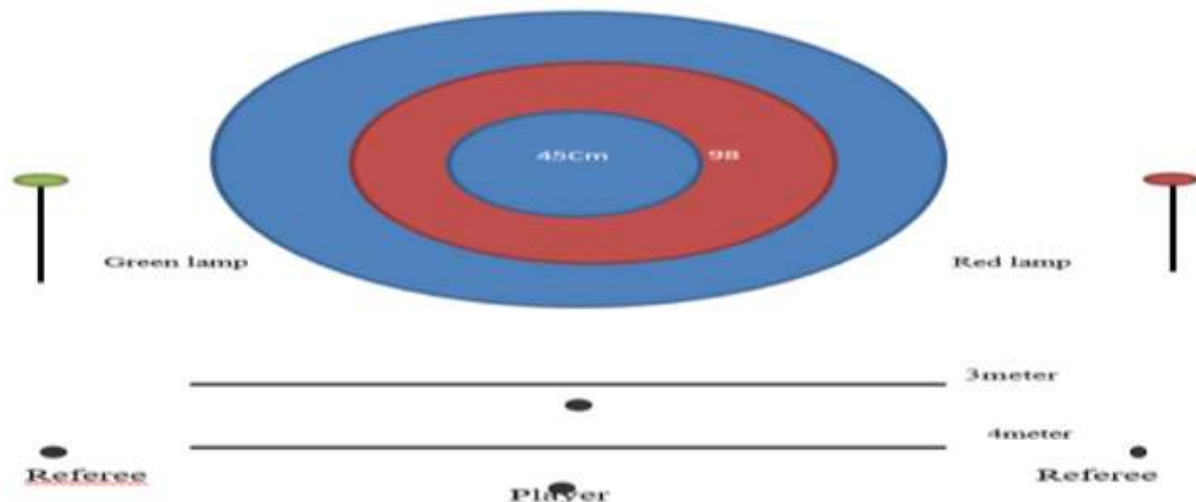
(4m) away from the wall.

Figure 4: The test of handling accuracy from the head level shows the Perception of the field of view

Performance Method

The player stands behind the line (4 m) and facing the circle. When the player sees the red light, the player performs the maneuvers continuously. When the player sees the light, the green light moves to the 3 m line and continues to play until the end of the test.

Test Conditions

- The player starts the test execution of the line (4 m).
- Test time is one minute.
- There are two rules between the sides of the player to confirm the validity of performance and the calculation of grades

Calculation of Grades

Three degrees are calculated for the attempt in which the ball is in the lower circle and is counted as two degrees if the attempt is to the middle circle and one degree in the case of injury to the outer circle.

The Pilot Study

The researchers carried out the pilot experiment on a sample of the research community reached (16) players with the same specifications of the research sample, as the researcher conducted the pilot experiment with the same conditions and the possibilities and specifications used in the research and its objectives:

- The validity of tests for the sample.
- The validity of the instruments used in the test.

- The time it takes to perform the test.
- Adequacy of the Task Force.
- Find scientific transactions for the tests used (honesty - stability - objectivity).
- Extracting the validity of tests under study.

Pre Tests

The researchers carried out the Pretests before training the experimental group on the training curriculum prepared by the researcher applied the tests of visual abilities and skill handball on the main research sample in the hall (Forum Youth Qasim) closed.

Main Experience

Visual Exercises

The researchers developed a series of visual exercises through the researcher's reliance on a collection of sources and references and the World Wide Web. The researchers also added a set of visual exercises prepared by the researcher which he deems necessary and suitable for the subject and sample of the research. And exercises with and without the ball.

Methodology

The researchers adopted the curriculum prepared by the trainer, with the introduction of visual exercises in the main section of the training module of the experimental group, after the sample was divided into two equal groups:

- Control Group: - This group uses the same curriculum prepared by the coach only.

- The experimental group: - This group uses the same approach followed by the trainer with the introduction of visual exercises in the main section of the module, while the time of the training group of the experimental group is the same time as the training group control

Posttests

The researchers carried out post-tests after completing all the training modules which included the exercises prepared by the researcher for the experimental group, while trying to carry out these tests under the same conditions as the Pretests, by fixing all the conditions related to the tests in terms of time, space, Posttests.

Results and Discussions

View and Discuss the Results

Presentation of the Results of Optical Capacity Tests and the Accuracy of Some of the Basic Skills of Hand ball for Experimental Group and Analysis

Table 2: Shows the results of mean, standard deviations and calculated and tabular t values between the Pre and Posttests of optical capacity tests and the accuracy of the basic skills of handball for the experimental group

S	Tests	Units	Pretest		Posttest		(t) value		Significance
			Mean	SD	Mean	SD	Calculated	Tabulated*	
1	Understanding the depth of vision	Cm	35.76	9.27	37.1	6.83	1.6		Non sig.
2	Understanding the field of vision	Cm	5.37	0.45	6.95	0.34	9.71		Sig.
3	The accuracy of the correction of the stability of the Perception of depth of vision	Degree	11.16	2.82	16.19	2.17	4.11	2.35	Sig.
4	The accuracy of the correction of the perception jump field of vision	Degree	3.7	1.04	6.29	1.5	3.19		Sig.
5	The handling accuracy of the head level by the field of view	Degree	20.45	2.17	24.28	2.08	7.90		Sig.
* At the degree of freedom (7) and the level of significance (0.05)									

Table (2) shows the values of the computational and standard deviations of the experimental group in the visual abilities tests and the basic skills tests of the Pre and Post handball. The results show that there are differences in the computational and standard deviations of the results of tests before and after the experiment.

These differences and differences between the test values before and after the test. In all tests, the researchers used the tit test for the (non-independent) samples. The results showed that the index of the Perception of the depth of the vision did not have any real or significant difference because the calculated (t) value was (1.6), which is less than the corresponding table value at freedom level (7) and (2.35). (9.71, 4.11, 3.19, 7.90) were greater than their corresponding tabular values at the freedom level (7) and the significance level (0.05) 2.35) indicating a significant difference between the Pre and Post tests and the benefit dimension.

Presentation of the Results of the Visual Abilities Tests and the Accuracy of Some of the Basic Skills of the Handball of the Control Group and Analysis

Table 3: Shows the computational and standard deviations and calculated and tabular t values between the Pre and Posttests of the optical abilities tests and the accuracy of the basic skills of the handball of the control group

S	Tests	Units	Pretest		Posttest		(t) value		Significance
			Mean	SD	Mean	SD	Calculated	Tabulated*	
1	Understanding the depth of vision	Cm	36.75	8.05	42.12	7.31	0.99		Non sig.
2	Understanding the field of vision	Cm	5.04	0.54	5.10	0.76	4.50	2.36	Sig.
3	The accuracy of the correction of the	Degree	9.6	2.13	12.77	1.38	2.77		Sig.

S	Tests	Units	Mean	SD	Mean	SD			Significance
	stability of the Perception of depth of vision								
4	The accuracy of the correction of the perception jump field of vision	Degree	3	1.07	5	1.05	2.61		Sig.
5	The handling accuracy of the head level by the field of view	Degree	20.11	2.30	21	2.50	1.86		Non sig.
	* At the degree of freedom (7) and the level of significance (0.05)								

Table (3) shows the existence of the computational and standard deviations of the control group in the visual abilities tests and the technical tests of the Pre and Post handball. The results show that there are differences in the computational and standard deviations of the results of tests before and after experiment. In order for the researchers to recognize the fact that these differences and differences occurred between the test values before and after the experiment, in all tests, the researchers used the T-test of the corresponding samples (non-independent). The results showed that the values of the depth of vision and the accuracy of the chest handling in the field of vision did not have significant difference. The calculated T value was 0.99 and 1.86, the degree of freedom (7) and the level of significance (0.05), amounting to (2.36). The results of the other tests showed that the values of (t) calculated for the other tests were in the search (4.50), (2.77) and (2.61), which is greater than the corresponding value of the values of freedom (7) and the level of significance (0.05) (2.36) indicating a significant difference between the Pre and Post tests and the benefit dimension.

Presentation of the Differences for the Tests of Visual Abilities and the Accuracy of the Basic Skills of Handball between the Experimental and Control Groups in the Post Tests and Analysis

Table 4: Shows the computational and standard deviations and the calculated and tabular t values of the control and experimental groups for the optical abilities tests and the accuracy of the basic skills of the handball in the Post tests

S	Tests	Units	Experimental group		Control group		(t) value		Significance
			Mean	SD	Mean	SD	Calculated	Tabulated*	
1	Understanding the depth of vision	Cm	37,1	6.83	42.12	7.31	1.06		Non sig.
2	Understanding the field of vision	Cm	6.95	0.34	5.10	0.76	3.89		Sig.
3	The accuracy of the correction of the stability of the Perception of depth of vision	Degree	16.19	2.17	12.77	1.38	3.90	2.36	Sig.
4	The accuracy of the correction of the perception jump field of vision	Degree	6.29	1.5	5	1.05	1.21		Non sig.
5	The handling accuracy of the head level by the field of view	Degree	24.38	2.08	21	2.50	3.11		Sig.
	* At the degree of freedom (7) and the level of significance (0.05)								

The table shows (4) circles and standard deviations values and values (t) calculated and tabular tests dimensionality for two experimental and control tests visual skills and hand ball capacity. From the previous table, there were significant differences in some of the studied variables. In other words, there is an effect obtained by applying the methodology used by the researchers.

In order to determine the difference in the effect of either of the two groups (experimental and control), the researcher used t-test for the independent samples to treat the after-effects. And from it came the results indicate that the indicators (Perception of vision depth) and (correction of jumping Perception the field of vision accuracy) did not get them moral and real difference, and the piece because the T

calculated for two value amounted to (1.06) and (1.21) which is less than the tabular value corresponding At the degree of freedom (14) and the level of significance (0.05) and the amount (2.14). While showing the rest of the other tests the results of the values (t) calculated for tests and other under consideration amounting respectively (3.89) and (3.90) and (3.21), which is greater than the tabular value of the corresponding degree of freedom (14) and the level of significance (0.05) (2.14), indicating a significant difference between the experimental and control groups for the experimental tests.

Discussion of Results

The results showed that there were statistically significant differences between the Pre and Posttests of the experimental group in all tests and for the tests of the dimension, except for the test of the Perception of depth of vision, which showed insignificant differences between the Pre and Post tests and the members of the same group.

The researchers attributed the emergence of such differences to the use and follow the experimental group visual exercises that affect effectively in the development of the accuracy of basic skills and some of the visual abilities related to it and because eyesight is a very important element in the performance of basic skills of handball, and must be cared for and practiced, as "exercise.

The visual is very important for players in various sporting events, as it should be exercised without exception, especially eye training, to overcome the visual stress, which negatively affects the functions of sight over time. The researchers believe that the use of visual exercises contributes greatly to the development of visual abilities, because the ability to make the right decision and sound performance based on a good vision and effective, the player transmits what he sees through sensory receptors (visual) to the center of the brain, which in turn organizes the performance of light data which is obtained from the eye and therefore the wrong vision dealt with by the brain (center of mental processes) in a way reflected on the performance is not good in the stadium, and since the sense of sight has an important role in the process of performing the basic skills that when the performance can the player to recognize the place for the player and grasp

the opponent moves when he tried to cut the ball in the light of these variables can the player make the right decision, so the moral differences that appeared when you realize the field of vision is reflected positively on the performance of my skills correction of jumping and handling of the level of the head Perception field of vision[8].

The accuracy of the correction of the stability of the Perception of the depth of vision, the differences were significant, although the test (Perception of depth of vision) did not result in significant differences, and this is due to the absence of moving variables as a case of play, but made stability, which provided a good insight to the depth of vision, because " On the kinetic experience, acquired as a result of the repetition of this skill, and therefore depends on the visual ability to determine the distance and location of the correction "[8].

As for the control group, note (3) shows that there are significant differences in the Perception of the field of vision and the accuracy of the correction from the stability of the Perception of the depth of vision and the accuracy of the correction of jumping in the field of vision, which attributed to the researcher to the special exercises included in the curriculum followed by the coach, and continuity in the continuation Training can assist in the development of visual abilities through the recognition of the distance, which in turn will directly affect the accuracy of the performance of some basic skills.

At the same time, the test of Perception of depth of vision and accuracy of handling from the level of head to see the field of vision with insignificant differences. The development of a simple indicating the need for visual exercises that increase accuracy in performance [8]. (4) to extract the differences between the two groups in the Post tests, it was found that there were no significant differences in the Perception of the depth of vision, which was not affected by the test (precision accuracy of stability in Perception of depth of vision), where the differences were significant and for the benefit of the experimental group for this test.

The difficulty of understanding the depth of vision in the research sample and not affected by visual exercises used by the experimental group, but the state of development of this skill was affected by the

process of repetition and practice as "the efficiency or capacity of Perception is not fixed, but it is permanent change depending on the increase in age, His cognitive ability increased by increasing his experience and skills in different play situations "[9]. As for the field of visual Perception test, there were significant differences in favor of the experimental group where there was a role and effectiveness of the visual exercises used by the experimental group to develop the state of awareness of the field of vision, as well as its effect in the development of (accuracy of handling from the level of the head of the field vision) There were significant differences in this test for the benefit of the experimental group and did not affect the accuracy of the correction of the jump in the field of vision, and the moral

differences showed by the accuracy of handling and did not show differences in accuracy of correction. Because the growth of visual Perception when teaching distance accuracy is not equal in the degree of success of all players, and seeing the area of the position of the stimulant in terms of distance and speed is done by the muscles and nerves of the eye as well as experience and previous experiences possessed by players [10]. The researchers attribute that the development of a simple development and not to show differences in some of the skills studied by the control group to the general exercises practiced by the trainer. Continuous and continuous training leads to the development of some visual abilities and thus the accuracy of the performance of skills that are affected by such abilities.

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