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"The effect of mixing between gliding exercises and visual vision on some visual abilities and feet movements for basketball juniors

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This research aims to try to identify the effect of the combination of ice training and visual vision on some of the visual abilities and foot movements of young basketball players. The research community included female basketball players at the Heliopolis Sports Club, where the researcher chose the research sample from the research community in an intentional way, which numbered (37) young people. The researcher deliberately selected the research sample, which consisted of (12) twelve basketball juniors under (14) years of age, which represents (32%) of the research population. The most important results indicated that using a combination of icing exercises and visual exercises for A positive impact on some visual abilities and foot movements among the basketball youth, the research sample. The researcher recommends the need to pay attention to activating the role of icing exercises and visual exercises in team sports in general and basketball in particular, and the necessity of creating field visual measurements specific to the sport of basketball.

"The effect of mixing between gliding exercises and visual vision on some visual abilities and feet movements for basketball juniors"

Introduction and problem of the research :

The scientific research became one of the most important factors that are depended upon it to develop societies to reach the highest levels in all fields in general and sport field in particular through recognizing what God grants man of multiple capacities and energies in an attempt to achieve the greatest amount of benefit from modern scientific theories in sport field that reflect on athletes results , where it became a measure that is depended upon and taken it's significance on the extent of advancement and progress of intellectual and scientific level for any society . Coaches , athletes and sport scientists seek permanently and continuously via modern training methods in purpose of improving sport performance and acquiring a competitive advantage , Visual training is considered one of these modern technicalities in sport field . Assistant apparatus and tools play an efficient part in training process , since learning movement skills requires inapplicability of boredom to mind , as well as adding the excitement element and that part of the used apparatus and tools and contribute in acquiring physical characteristics and movement and some psychological characteristics that are necessary for performance . It is preferable that the training method for developing physical characteristics is suitable for the type of muscular work , as well as that the available movements performed on the assistant apparatus and tools have a positive in rising the level of physical and skilful performance (25:2) .

Mohamed Shehata (2015) sees that the particular methods indicate to tools and methods through which can provide for the learner or the trainee sensory experiences and (physical – motor – skilful) situations to acquire movement or skilful duty to help in facilitating performance and offer the athlete or the learner from the beginning with obvious movement imagination about the technical; performance

with inapplicability of bored to the mind , as well as adding the excitement element and acquiring physical characteristics and movement fitness and some psychological characteristics that are necessary for performance (15 :10- 34) .

Fathy Hady (2010) indicates that sport training is an educational process subjected to the scientific and educational bases and principles and aims at preparing the athlete comprehensively to reach the highest possible sport level and improves all somatic , physical and skilful proprieties (12: 66) .

Gliding exercises are considered one of modern trends aiming to using a method to improve sport performance in different aspects and through it physical capacities of the game can be developed that contribute in developing physical performance and has the greatest effect in rising the level . The importance of these exercises in being a gliding that engages a group or more of muscles in purpose of enforcing and stretching the basic muscles in body such as (hamstrings – gluteus – triceps – inner thigh – quadriceps) (52) .

Mendy Mylrea (2007) sees that this system was designed particularly to transfer movements to practice lines that are smooth for the movement since they help on achieving the ideal goal of movement easily and continuously by using much of exercises that differs with the goal of the movement difference and add a soft touch on the difficult movements , whereas other programs and instruments are difficult and sometimes expensive giving gliding exercises it's importance .

Gliding disks is a simple idea that are considered plates on the form of plastic or nylon dishes according to the ground type . The instrument is placed under athletes feet or hands , where the movements are performed in different movement groups allowing the practitioners to stimulate the process of gliding on ice .

Zaire Scott mentions that " disks are floppy disks made of nylon that can be used on the mat or the carpets that give the potential to use

it inside homes easily since they are light in weight , easily used achieving big results (50) .

Both Myros , Lowrence , Robert Kelly and Felaz Quiz who are the most famous gliding trainers agree that the movement has several benefits including :

- 1- Developing the elements of fitness
- 2- Acquiring health and coordinated posture ,
- 3- Making the heart work in a good way and increasing it's competence
- 4- increasing the lungs competence .
- 5- Achieving self confidence and self realization
- 6- Helps to reduce tension , anxiety and increases feeling of pleasure .
- 7- Reducing the potential of exposing to injury through improving the strength and flexibility for the primary muscular groups that are necessary for performance .
- 8 – Helps on developing exercises with new and different levels .
- 9 – Groups or more of movements can be performed simultaneously
- 10- Suitable for all age classes and different levels of fitness . (52) (51)

Mendy Mylrea (2007) indicates that gilding exercises are considered an integral program of fitness where are characterized with continuity in performance without feeling with boredom or tired with practitioners feeling with pleasure and delightful during performance , in addition that practicing gliding exercises regularly leading to improve fitness through improving strength , flexibility , endurance and agility . She adds also that gliding exercises are considered one of the aerobic activities in purpose of making the individual acquires the aerobic power and that practicing these exercises including exercises for developing strength , flexibility , coordination , agility and endurance making the heartbeats reach the highest rate that helps on rising physiological competency beside physical competency (48) .

These exercises are considered new method for a program of contemporary fitness that is performed in a social atmosphere characterized with excitement and delight . It is suitable for the individuals whose these some other activities are not suitable for them , and the purpose of these gliding exercises not to make the practitioner skilled in performing these exercises but to improve physical and physiological fitness and maintain health .

Both " Hussein Kenbar (2015) and Henry Obstfeld (2013) see that physical education and sport is one aspect that affect man as an important and basic element in building the individual and preparing him integrally on scientific bases . The individual ability on exerting effort depends on much variables in the forefront are the visual variables and there is no much interest in visual vision intensively through daily exercises for athletes on the part of much trainers and athletes themselves . If the athletes don't realize the vision importance for their sport performance , in spite of their training in it's general form including training for vision unintentionally . Sport performance includes movement aspect and visual one , if the visual aspect works competency , this of course will affect performing the movement aspect (4: 25) (40: 112) .

Sport scientists searches permanently and continuously the modern training methods in purpose of improving sport performance and visual therapy is considered one of these technicalities known in sport field and the visual training is a recurring series of the eye trainings in purpose of improving the visual functions and they are important for athletes in all competitive sports (41: 15) .

The researcher sees that there are much interest in the visual capacities intensively through daily exercises for athletes on part of much trainees and athletes themselves if the athletes don't realize the importance of the visual aspects for their sport performance in spite of performing training with the it's general form including training the visual capacities unintentionally .Sport performance includes motor

aspect and visual one . If the visual aspect doesn't work efficiently , this of course will influence on performing the skilful aspect .

The visual therapy is important for all classes and individuals , particularly athletes , where all must practice without exception , especially eye trainings to reach a state of visual adaptation with variables difference during training leading to overcome the visual stress during competitions and not affected negatively on vision functions over time (37: 20) .

Susanna Catharina Venter (2003) mentions that the vision therapy can be defined as training and educational process for improving the visual perception or adaptation between the two eyes in a relaxed and efficient way " but AOA (the American Association for measuring the vision , defined the visual therapy as " an art , development , enforcement and therapy of the visual capacities to achieve the best , efficiency and comfortable visual performance (44 : 155) .

Vision is the sensory through the specialized organ that is the eye that the external world can be realized . The real vision includes forming images in the brain . The degrees of the image resolution differ with eyes of various creatures (17: 102) .

Brian Ariel (2007) indicates that the visual therapy is one branch of Optometry that is (the vision measurement) and it is a branch concerns with vision and perception, evaluates and improves the level of the visual performance , as well as identifies the visual instruments that are most suitable for the nature of sport activity .

Visual therapies require a clear vision with an ability of concentration on the things sharply on the retina , hence the visual passages transfer the information to the mind . These information are used in coordination with the sensory , motor , perceived and cognitive skill . The vision plays an important role in the spatial orientation , coordination , accuracy , reaction speed , response and (dynamic – stationary) balance . The visual therapies make on achieving the ideal performance under the conditions of playing and improve the visual

muscles , develop the visual perception , tracking , as well as the ability on appreciating the distances and things . in addition to develop the ability of good concentration on the target quickly and accurately by using a series of eye movements (7:18 , 19) .

The visual therapies develop the ability on good concentration on the target quickly and accurately by using a series of eye movements as follows :

* The eye movement : most experiments and researches that were conducted on the eye movements confirmed that most referees haven't the ability on the clear tracking for the moving things . There are some activities that need tracking the athlete and the performance simultaneously , for example the movement of basketball athlete stroke for the ball and this hinders the clear vision , sometimes the visual system is inability to track something moves if the sight speed and the mutual speed of the head and eye movements are unable on fixing the image on the retina (32 : 7) .

Thomas & Wilson (2004) indicates that the eye movements require four movements as follows :

*Tracking : it is used in tracking cases for something moves in one direction with eye movement equal with the target speed .

*The short quick eye movement : it is used in tracking cases for something moves quickly such as basketball start blow . The vision during the short quick eye movement is reduced because of compensation .

* The movement of visual stationary : it is used to maintain the sight during the head movements .

* The movement of the visual convergence : the system of the visual convergence to observe something comes close and the visual axes convergence to keep the images on the retina clear .

Sahar Salama (2015) mentions that there are visual therapies as follows :

*exercises of the external conscious .

*Exercises of the visual tracking .

- *Exercises of the visual concentration.
- * Exercises of depth realization .
- *Exercises of the visual reaction .
- *Exercises between coordination between eye , hand and body .
- * Exercises of the visual accuracy (7: 20)

Sahar Salma (2015) quoted from , The from the American Association of Ophthalmology mentions that studying the visual effects through to two basic determinants are the external effects of the eye and the external effects of the eye . The eternal effects of the eye is meant the eternal eye competence such as power of vision and its competence and all about the eternal eye components such as eye pressure and others . The external eye effects is meant improving the competence of the external eye through improving all about the specific performance in life in general and sport field in particular , These effects include improving vision accuracy with it's stationary and dynamic types , the external conscious , visual concentration and others , these are used in sport field greatly and it's effects are more than expected (7:17) .

Mahoud Naguip (2017) mentions that basketball needs a great amount of efforts and requires developing both of movement speed , rapid reaction , compatibility , endurance and speed strength in particular , flexibility , agility as well as strength (24:1-2) .

Nevin Zedan (2014) indicates the necessity that basketball trainer must know all the physical capacities and understands very well so that he can plan the section of the physical preparation inside his training plan of the sport season efficiently and integrally with the rest of the plan content whether skilful of tactical or psychological or mental preparation (10: 31)

, The researcher sees that mixing between gliding exercises and the eyesight has an clear value in sport activities in general and basketball in particular since basketball juniors in different situations inside matches or during the training process work on follow up a specific goal whether it is stationary or dynamic , as well as the ability

to tracking this goal is a so difficulty since it needs a visual concentration with a high degree to detect opponent gaps , shoot through it , also know his place for the opponent . The ball can be directed in the opponent field , as well as the movement can be determined in which the opponent can approach or keep away from the net , in addition to referee or trainee signals that increases the need to improve the good vision surrounding .

Through the researcher knowing of several previous studies and the scientific references and the related researches such as the study of both Mahmoud Mahy El Din Mohamed (2020) (25) , Mohamed Abel Ahafez (2019) (21) , Ahmed Nashat (2017) (2) ,Badry Hamad (2017) (3) , Abdllah Mohamed (2017)(9) , Omar Abed Aziz (2017) (11) , Mahammed Hussein , Adel Ramdan , Ahmed Kalifa (2017) (23) , Mahammud Naguip (2017) (24) , Dalya Ahmed (2016) (5) , Mohamed El Safy (2016)(19) , Sameh Magdy (2015) (6) , Moshrek Azez , Lazem Mohamed (2014) (27) , Paul Maman et .al (2011) (43) , Asseman et.al (2005) (35) , Maha El Hagrasy , Hala Kasem (2009) (29) , Enek Weinck (2009) (46) , Medhat Saleh (2005) (26) . It is found that these most studies agree that modern basketball sport requires a high level of physical fitness so that the junior can perform his attack and offence duties efficiently all over the match or skilful duties , when the winning opportunities of the match increase , because these skilful performances need a high level of the visual capacities and feet movements , so the visual capacities are considered of the basic factors that contribute in rising the skilful level of basketball juniors .

Through the researcher scientific and practical experience , as a basketball trainer , as well as her work in the colleges as an assistant professor of basketball in the department of sport athletics , it was found that basketball faces a problem because of the serious lack of the modern apparatus and methods used during the training . It should be noted that recently concept of modern apparatus and methods used in the training process and broadened to include several apparatus and instruments that have huge potentials whether in purpose of training or

measurement and their available is one of the success causes to achieve the training program goals that can help the trainer in developing the technical and physical level of athletes . The researcher sees that the more the training level increases by using modern instruments and apparatus , these led to the development of the visual capacities and feet movements to achieve the highest sport level , hence , appeared the problem of the research , and this led the researcher to conduct this study by mixing between gliding exercises and the visual sight to develop the physical level and feet movements of the juniors far away from the traditional trainings that are used currently as an attempt form the researcher for developing the juniors performance level in visual capacities and feet movements and this what led the researcher to make this research as an attempt to recognize the effect of mixing between gilding exercises and visual sight on the visual capacities and feet movements for basketball juniors " under research " .

Goals of the research :

This research aims at recognizing the effect of mixing between gliding exercises and visual sight on some visual capacities and feet movements of basketball juniors .

Hypotheses of the research :

In the light of the current research , the researcher postulates the following :

- 1- There are statistically significant differences between the pre – post measurements for the individual sample in the visual capacities " under research " and on behalf of the post measurement .
- 2- There are statistically significant differences between the pre – post measurements for the individual sample in the feet movements " under research " and on behalf of the post measurement .
- 3- The are differences in improving percentage of the individual sample in the level of the visual capacities and feet movements for basketball juniors " under research "

Terms used in the research

Gliding exercises

A group of exercises that are dependent on using an instrument of gliding dishes places under feet or hands as a simulates of gliding on ices .

A new instrument of training by using light weight disks characterizes with exercise similar to the gliding in ices that that can preformed on small distances and with multiplier partition capacities (52) .

The researcher protectoral defined these excises that are done with the steps of the basic skills " under research, a series of eye exercises repetitions in an attempt to improve the basis visual functions ,concededly sport performance (22:34) .

*** Plan and procedures of the research**

Method of the research :

The researcher used the experimental method for I'd appropriate for the research by using the experimental deign for a single experiential group by following the pre-post measurements for these group .

Community and sample of the research

The research community included baseball athletes in Heliopolis spot club where the researcher selected the reach sample from the research community purposively of (37) juniors .The researcher selected the research purposively of (12) of basketball jointers under (14) yours and represent 32% of the reach community .

Moderation of distribution of individuals in the research sample:

Measurements were made for the research sample by finding the skewness coefficients before starting to implement the proposed training program, in order to ensure moderation in the research variables that may affect the research results in all research variables, and the following table (1) shows this.

Table (1)

The arithmetic mean, median, standard deviation, and skewness coefficient for the research sample regarding the basic variables, visual abilities, and foot movements under investigation (n = 20)

Variables		Unit of measurement	Arithmetic mean	Median	Standard deviation	Skewness
Basic variables						
Age			13.6	13.7	0.260	1.399
Height			168.1	168.5	3.669	.586
the weight			58.4	58.5	4.069	.979
Visual abilities						
Surrounding vision	right eye	Degree	1.97	2	0.472	.502
	Left eye		1.82	2	0.281	.493
Constant optical resolution	right eye	Degree	1.94	2	0.292	.351
	Left eye		1.90	2	0.302	.562
Animated visual precision	right eye	Degree	1.15	1.5	0.438	.404
	Left eye		1.29	1.5	0.388	.355
Perception of depth of vision	distance of 20, cm	number	4.64	5	0.882	.679
	distance of, 30 cm		5.08	5	0.902	.736
Visual tracking		number	4.51	4.5	0.741	.609
Eye and hand compatibility		Degree	12.27	12.5	2.008	1.083
Foot movements		second	26.53	27.5	7.89	1.35

It is clear from Table (1) that the skewness coefficients for the sample under study in the variables of age, height, weight, visual abilities, and foot movements of the research sample members ranged between (0.351, 1.399), that is, they were limited to (± 3), which indicates the moderate distribution of the research sample due to the presence of skewness values. Inside the equinoctial curve.

Data collection methods

To collect data, the researcher used the following:

- Devices and tools
- Expert opinion survey form
- the exams
- Visual vision exercises

First: Devices and tools:

- 1- A restameter device to measure length in centimeters
- 2- A medical scale to measure weight in kilograms
- 3- Stopwatch and measuring tape
- 4- Basketball court
- 5- Auxiliary tools

Second: Forms:

Expert opinion survey form on visual abilities and skill tests In line with the objectives of the research and taking into account the characteristics of the current sample, the researcher presented a different set of tests to measure the physical abilities and footwork of the basketball player under study, which she collected from a large group of scientific references, Arab and foreign studies and research, and the researcher was satisfied with an approval rate of no less than 80%. From the opinions of the experts to choose any test within the group of tests used to measure the physical and skill abilities of the individuals in the research sample.

Third: Tests:

- 1- Visual abilities
- 2- Skill tests

To determine the appropriate set of tests to measure the physical and skill level of basketball juniors, the research sample, the researcher included many visual tests that measure visual abilities as well as foot movements in the sport of basketball, through a reference survey of

many scientific references in measurement and evaluation, as a reference, Muhammad Allawi and Nasr. El-Din Radwan (2000)(18) Kamal Darwish, Qadri Morsi, and Imad El-Din Abbas (2002)(13) Mohamed Hassanein (2004)(20), Mustafa Bahi, Ahmed Abdel Fattah, Mohamed Fawzi, Haitham Abdel Majeed, Nasser El-Wassief” (2012) (28) And the scientific references in the sport of basketball as a reference include Ahmed Farouk (2013) (1), Mahmoud Hussein (2016) (22) Then these tests were placed in an opinion poll form to be presented to (7) seven professors specializing in training. Mathematical, measurement and evaluation. The researcher required an agreement rate of no less than 80%, and through this procedure the following physical and skill tests were reached:

1. Visual tests: Appendix (4)

- Surrounding vision. (right and left eye)
- Constant optical resolution. (right and left eye)
- Motion visual accuracy. (right and left eye)
- Perception of depth of vision. (from a distance of 20, 30 cm)
- Visual tracking.
- Coordination between eye and hand.

2. Foot movements: Appendix (5)

To ensure the ability of these tests to measure the visual abilities and foot movements for which they were developed, as well as their suitability to the age group of the sample under study, the researcher presented these tests to a group of experts (Appendix 1), who agreed that this set of tests is suitable for measuring the tests that were developed. Postpone it.

Scientific transactions for the tests under investigation:

The researcher conducted scientific procedures for the tests under study on a sample from the same research community and from outside the original sample, which consisted of (10) ten young people, on 8/26/2023 AD until 8/30/2023 AD, as follows:

A- Honesty: Honesty of differentiation:

One of the most important components of validity is the ability of the test to distinguish between different levels. The researcher

extracted the validity of the differentiation using peripheral comparison before starting to apply the test in order to ensure the suitability of this test for the target group, and to demonstrate the differentiation of this test and by arranging the results of the sample members on the test listed. The research was conducted in descending order. From the research sample, 27% of those who obtained higher grades and 27% of those who obtained lower grades were identified. (27%) is the best percentage to obtain discriminant validity, and then the researcher compared the results of the youth through the independent samples t-test, and Table No. (2) shows this:

TABLE (2)

TEST (T) FOR THE SIGNIFICANCE OF THE DIFFERENCES IN THE VISUAL AND SKILL ABILITIES UNDER INVESTIGATION BETWEEN HIGHER AND LOWER)GROUPS (N1 = N2 = 3

Variables		Unit of Measurement	Upper Group		Lower Group		Value (T)
			M1	O1	M2	O2	
Visual abilities							
Surrounding vision	right eye	Degree	2.44	1.099	1.88	0.633	3.702
	Left eye		2.41	0.952	1.81	0.409	3.461
Constant optical resolution	right eye	Degree	2.31	0.477	1.89	0.598	2.891
	Left eye		2.69	0.639	1.85	0.381	3.907
Animated visual precision	right eye	Degree	1.88	0.789	1.14	0.358	3.955
	Left eye		2.09	0.609	1.22	0.373	4.007
Perception of depth of vision	distance of 20, cm	number	5.95	0.877	4.68	1.103	3.965
	distance of, 30 cm		6.14	0.952	5.00	1.901	5.082
Visual tracking		number	6.08	0.622	4.67	0.541	6.044
Eye and hand compatibility		Degree	14.21	0.714	12.77	2.306	8.883
Foot movements		second	21.84	4.55	26.71	4.07	11.67

The tabular (t) value is at the level of $0.05 = 2.571$

It is clear from Table No. (2) that there are statistically significant differences at the level of (0.05) between the upper group and the lower group in the scores of all measurements of visual abilities under investigation, which indicates that these tests are capable of

distinguishing between the upper and lower groups of young people, and this is what indicates On the validity of the test using the discriminant method.

-It is also clear from Table No. (2) that there are statistically significant differences at the level of (0.05) between the upper group and the lower group in the scores of the footwork test under study, which indicates that these tests are capable of distinguishing between the upper and lower groups of players, and this is what indicates On the validity of the test using the discriminant method

B- Stability:

The stability of the test means the extent of accuracy, mastery, or consistency with which the test measures the phenomenon for which it was developed. Accordingly, there are three ways to ensure the degree of stability of the test results, including the method of applying the test and re-applying it at a time interval, which is known as: TEST RETEST

Visual abilities and foot movements were measured and re-applied to a sample of (10) ten young people, which is a sample similar to the research sample and not the original sample, with a time difference of (3) three days. Correlation coefficients were found between the first and second applications as shown in Table (3)

TABLE (3)
CORRELATION COEFFICIENTS BETWEEN THE FIRST AND SECOND
APPLICATIONS IN THE VISUAL AND SKILL ABILITIES UNDER
INVESTIGATION

Variables		Unit of Measurement	first application		second application		correlation coefficient
			M1	O1	M2	O2	
Visual abilities							
Surrounding vision	right eye	Degree	1.92	0.623	1.93	0.354	0.509
	Left eye		1.83	0.713	1.85	0.607	0.489
Constant optical resolution	right eye	Degree	1.96	0.638	1.97	0.594	0.603
	Left eye		1.88	0.637	1.89	0.377	0.579
Animated visual precision	right eye	Degree	1.19	0.385	1.20	0.474	0.612
	Left eye		1.23	0.406	1.22	0.547	0.614
Perception of depth of vision	distance of 20, cm	number	4.69	0.874	4.68	2.304	0.583
	distance of, 30 cm		5.11	0.957	5.12	0.784	0.544
Visual tracking		number	4.71	1.108	4.72	1.908	0.608
Eye and hand compatibility		Degree	12.89	1.095	12.91	0.958	0.741
Foot movements		second	27.41	5.24	26.22	6.04	.680

The tabular value of (R) is at the level of $0.05 = 0.378$

The correlation coefficients for the visual abilities under study ranged between (0.489, 0.741), which are statistically significant correlation coefficients, which indicates the stability of these tests.

The correlation coefficients for the foot movements test under study ranged between (0.680), which are statistically significant correlation coefficients, which indicates the stability of these tests

The suggested excises by using mixing between gliding exercises and visual sight " under research "

To design a group of visional excises to improve the level of the visual sight and attention concentration for basketball juniors , the researcher knew several of the scientific specialized references , as well as previous studiers and interviews (specialist professors and trainers) to recognizes the extent of the program suability in terms if the suggests program continuity and the total period of the training program on the training staged , the training units weekly , the daily

training unit and the component of the training load during different training stages .

The goal of mixing between exercises " under research "

The goal of using the mixing of the gilding exercises and the suggested visual sight is to improve and develop some visual capacities and feet movement of bask ball juniors .

Steps of deigning and applying the program of gliding excises and the visual exercises :

- 1- The researcher conducted a reference survey for the scientific specialized references and the pervious studies in the field of eye training to detriment the nature and forms of gliding excises and visual excises .**
- 2- As proviso mention , gilding excises and visual therapies and whet it includes of visual skills , the researcher puts in confederation a group of basis in this excises.**

The fundamental of designing and Applng the gliding excises and visual therapies

The researcher designed the excises based upon the following scientific basis :

- * Put in contestation the principle of variation in perform the exercises in side the training unit .**
- * Following the principle of degrading from earners to difficulty and from earnest to the compounded.**
- * Guiding the finding of the previous studies when developing the program**
- * Put into consecration the goal of the visual training .**
- * The suitability of the visual content and the art capacities.**
- * Providing the art potential . designing interments and visual apparatus.**
- * The flexibility of exaction and applying that is appreciate with the current position of the rehash sample artificially and visually .**
- * The availably of excitement and serious component of the suggested trainings .**
- * Using the assistant muscles in eye movements**
- * Observing the individual differences and variation in tanning inside the training unit .**

Temporal distribution

The fixation of daily appellation of the research expiration of (40) minutes during the daily training unit for (12) weeks as (36) training unit as follows :

- * preparation (warm up) (5 minutes)
- * Guiding excises and variation exercises (30 minutes)
- * cool down and closing

The number of frequency of every unite that are determined according to the nature of guiding excises and visual therapy and according to the total time of train where the results of the pilot study showed that :

- * Time of performing the single unit is from (1 : 4) minute
- *The of Interval rest in a single group and between groups from (20: 50) minutes
- *Numbers of frequency in the group from (1: 4) and the numbers of the of the groups are (1:3) .

Steps of implement the research

* The pilot sturdy

The researcher conceded the pilot study from 26/8/2023 to 30/8/2023 in purpose of recognizing the suitable period of the suggested program (under research) of the research sample and recognizing the validity of the used tools , as well as experiment some suggested trains and the extent of the sample capacities . The pilot sturdy revealed the determination different training in the suggested program and confirmed the validly of the used tools and its suitable for the research .

The pre measurements :

The pre measurements of the research variables were conceded from 2/9/2023 to 4/9/2023 .

Implement the experiment :

Implementing the suggested training lasted (12) weeks from 6/9/2023 to 5/12/2023 as much as (3) unites weekly in a total of (36) units all over the period of the experiment

Dimensional measurement:

After completing the application of the program, the researcher conducted post-measurements of the research sample in the period from

7/8/12/2023 AD for the tests (under research) under the same conditions that were followed in the pre-measurement.

Statistical processing:

The researcher statistically processed the data related to the research results using the statistical program SPSS v22 and through the following statistical parameters:

- SMA.
- standard deviation.
- T-test for significance of differences.
- Improvement rate.

The researcher was satisfied with the significance level at the level of (0.05)

Presentation and discussion of results:

First: Display the results:

The researcher reviews the research results according to the following order:

1. The significance of the differences between the averages of the pre- and post-measurements of the sample members in the level of visual abilities under study.
2. The significance of the differences between the averages of the pre- and post-measurements of the sample members in the movements of the feet under study.
3. The percentages of improvement of the sample members in the level of visual abilities and footwork of the basketball juniors, the research sample.

TABLE (4)

THE SIGNIFICANCE OF THE DIFFERENCES BETWEEN THE MEANS OF THE
PRE- AND POST-MEASUREMENTS FOR YOUNG PEOPLE IN THE SAMPLE
IN THE VISUAL ABILITIES UNDER INVESTIGATION (N = 10)

Variable		unit of measureme nt	pre- measurement		post- measurement		statistical significance	
			م ١	م ١	م ٢	م ٢	(ت)	الدالة
Surrounding vision	right eye	Degree	1.91	0.541	2.41	0.633	3.044	دال
	Left eye		1.85	0.358	2.35	0.609	3.972	دال
Constant optical resolution	right eye	Degree	1.95	0.373	2.33	0.598	2.891	دال
	Left eye		1.87	0.477	2.68	0.622	3.907	دال
Animated visual precision	right eye	Degree	1.17	0.381	1.86	0.714	3.722	دال
	Left eye		1.21	0.409	2.11	0.639	4.007	دال
Perception of depth of vision	distance of 20, cm	number	4.71	0.877	5.97	1.103	3.461	دال
	distance of, 30 cm		5.09	0.952	6.13	1.099	5.043	دال
Visual tracking		number	4.73	0.789	6.09	0.952	5.675	دال
Eye and hand compatibility		Degree	12.81	1.901	14.33	2.306	7.994	دال

The tabular (t) value at the level of 0.05 = 2.262

It is clear from Table (4) that:

- There are statistically significant differences between the average scores of the pre-measurement and the post-measurement for the young sample members in all visual abilities, and in favor of the post-measurement, as the calculated (t) value is greater than the tabulated (t) value at the level (0.05).

The researcher attributes this result to the research sample's conviction of the importance of the feasibility of practicing visual training to develop visual abilities over the long term for eye training. The researcher also attributes this to the impact of the scientifically planned and codified visual exercises for the research sample, which led to the development of visual abilities in addition to the integration and comprehensiveness of those training. In developing these capabilities, which had an effective positive impact.

In addition to the various exercises for the eye muscles included in these exercises, which have become extremely important for the development of various visual abilities such as eye-hand coordination, static and moving visual accuracy, depth perception, visual tracking, in addition to peripheral vision, as the player during competition is exposed to many pressures. Mental and physical, and as a result, sensory receptors (especially the visual analyzer) become disturbed. The electrical sensitivity of the eye decreases under conditions of physical stress, and low oxygen levels cause a decline in visual perception. Therefore, competitive performance conditions must be taken into account when conducting visual measurements. The researcher took this into account when developing The proposed exercises under study have had a positive and effective impact on improving the visual abilities under study.

This is consistent with what Barry Seiller (2004) (36) indicated that the eye leads the body to perform. The player performs as a result of qualitative visual information, and special visual abilities in tennis can be evaluated, trained, practiced, and improved through sports vision programs.

In this regard, Faisal Hassan (2004) (39) and Williams, et al. confirm that (2000)(42) indicated that the first step to the success of visual training programs is to recognize the visual skills specific to the nature of the activity being practiced, as every sport has visual skills that distinguish it from other sports.

"Amr Hamza, Ashraf Khattab, Merfat Rashad Amr Hamza, Ashraf Khattab, Merfat Rashad" (2005) (34) adds that visual training is important for athletes and non-athletes, as everyone should practice it without exception, especially eye training, in order to overcome visual stress, which It negatively affects visual functions over time.

These results are consistent with the results of the study of: Muhammad Abdel Hafeez (2019)(21) "Ahmed Nashat" (2017AD) (2) "Abdullah Muhammad" (2017AD) (9) "Muhammad Al-Safi" (2016AD) (19) "Nihad Mahmoud (2016) (30) Muhammad Awad (2015) (16) Paul Maman, et al (2011) (43) Asseman, et al (2005) (35) Mazyn, et al (2004) (42) that visual training programs contribute to improving visual abilities.

From the above, the first hypothesis of the research has been validated, which states that “there are statistically significant differences between the averages of the pre- and post-measurements of the sample members in the level of visual abilities under research and in favor of the”.post-measurement

Table (5)

The significance of the differences between the means of the pre– and post–measurements for young people in the sample

)In the movements of the feet under investigation (n = 10

Variable	unit of measure ment	pre-measurement		post- measurement		statistical significance	
		١ هـ	١ عـ	٢ هـ	٢ عـ	(ت)	الدلالة
Foot movements	second	26.47	1.271	21.35	0.587	21.150	دال

The tabular (t) value at the level of $0.05 = 2.262$

It is clear from Table (5) that:

- There are statistically significant differences between the average scores of the pre-measurement and the post-measurement of the junior sample members in foot movements in basketball, in favor of the post-measurement, as the calculated (t) value is greater than the tabulated (t) value at the level (0.05).

The researcher attributes the emergence of this result to the effect of using a combination of icing exercises and visual exercises on improving foot movements, as we find that the icing tool is one of the modern tools that have been used recently in the training process, and developed countries have preceded us in it, so the researcher included this tool in the sport of basketball (His field of specialization) and its use within the training units. He found that this tool was very useful during special training for the players and led to tremendous developments in their performance, especially when focusing the training of this tool on improving the physical capabilities under investigation: “muscular ability of the legs and arms, compatibility, speed of response.” Action, agility, transitional speed.

The researcher attributes the emergence of this result to the fact that the proposed visual vision exercises under research have a positive effect on the foot movements under study because they work to achieve optimal performance under playing conditions, and work to improve visual abilities, visual perception and tracking, and work to develop the ability to estimate distances and objects as well. The ability to focus well on the target quickly and accurately is developed, which leads to improving the foot movements of the sample under study.

The researcher also attributes this result to the extent of the similarity of the dynamics of visual vision training with the nature of the effectiveness of skill performance, which led to the acquisition of the correct movement path and increased control and adjustment in the level of technical performance and thus led to ease and fluidity in performance and the ability to exploit the best timing for attack or defense.

In this regard, Yahya Al-Hawi (2002) points out that modern technologies, through modern means and devices, help the coach while setting training loads that contribute to developing muscle strength and motor speed of one or more parts through technology, guidance, and supervision (33: 223).

Issam Abdel Khaleq (2005) points out that the spread of the use of non-traditional means is one of the recent trends in the field of sports training, as the use of non-traditional means has increased to increase the effectiveness of benefiting from the functional capabilities of the athlete, such as the use of devices and auxiliary tools to improve the level of physical abilities and skill aspects. (10:222).

The researcher also attributes this result to the research sample continuing to perform the proposed exercises and the presence of a new, different, and unconventional tool that increased the excitement and effectiveness of the players' performance.

The researcher also attributes this result to the fact that the effect of using the proposed training program using icing exercises led to an improvement in the level of foot movements of young basketball players, as we find that the icing tool is one of the tools that works to improve and develop the level of performance because it helps the player to move

quickly in directions. It also helps to react quickly to sudden situations that he is exposed to while playing, and it also helps to perform faster while playing. It is also considered one of the interesting and unconventional exercises that helps the player to train in a better psychological atmosphere than usual and adds a spirit of joy, enjoyment and ability to exercise.

Training process

This result is consistent with the result of the study of “Maha Al-Hagrasi and Hala Qassem” (2009 AD) (29), the results of which indicated that using the icing tool as one of the modern tools in the training process in general has a positive effect in improving the level of performance.

These results are consistent with the study of Abdullah Muhammad (2017AD) (9) Muhammad Al-Safi (2016AD) (19) Nihad Mahmoud (2016AD) (30) Laila Ahmed (2009AD) (14) Calder & Noakes (2003 AD (38) that the training program for visual skills has a positive impact on the visual abilities and the level of skill performance of the variables under research.

From the above, the second hypothesis of the research has been validated, which states that there are statistically significant differences between the averages of the pre- and post-measurements of the sample members in the movements of the feet under study and in favor of the post-measurement.

Table (6)

Rates of improvement among the sample's youth in visual abilities and foot movements In the sport of basketball

Variables		Unit of measurement	Average score			Percentage of improvement
			2 ^o	1 ^o	^{-2^o} _{1^o}	
Visual abilities						
Surrounding vision	right eye	Degree	2.41	1.91	0.50	% 26
	Left eye		2.35	1.85	0.50	% 27
Constant optical resolution	right eye	Degree	2.33	1.95	0.38	% 19
	Left eye		2.68	1.87	0.81	% 43
Animated visual precision	right eye	Degree	1.86	1.17	0.69	% 59
	Left eye		2.11	1.21	0.90	% 74
Perception of depth of vision	distance of 20, cm	number	5.97	4.71	1.26	% 27
	distance of, 30 cm		6.13	5.09	1.04	% 20
Visual tracking		number	number	4.73	1.36	% 29
Eye and hand compatibility		Degree	Degree	12.81	1.52	% 12
Foot movements		second	21.35	26.47	5.12	%19

It is clear from Table No. (6) that:

- The scores of the research sample of basketball juniors improved in the visual abilities under study, as the rates of improvement of these juniors in visual abilities ranged between (12% and 74%).

The scores of the research sample of basketball juniors in the footwork test scores also improved significantly, as the rates of improvement of these juniors in the footwork test ranged from (19%).

The researcher attributes this result to the transfer of the training effect of this visual improvement to the performance of the basketball juniors, the research sample, as the functional ability of vision plays a major role in focusing the junior's attention effectively. Fixed and dynamic visual accuracy is very important for basketball juniors, as all the points that the junior achieves and the points that Success in achieving it in competition depends greatly on this visual ability, and this is what helps him understand different playing situations better, which helps him choose

the most appropriate behavior for the playing conditions and exploit opportunities to be in a better position to achieve his goal, which is winning.

This is consistent with what Barry L. Seiller (2004) (36) pointed out that visual skills have a direct impact, whether positive or negative, on the level of performance, as well as what was published on the Sportsvision.us site (2005) that it has appeared in In the last decade, several studies indicate that high performance is linked to high visual abilities and that weak visual abilities cause performance impairment. If the visual information is inaccurate, the body misses the appropriate timing and this causes a decrease in the level of performance.

Samia Khalil (2013) adds to the relationship between the senses and sports that the visual sensory system conveys complete information about the surrounding environment and helps the athlete distinguish interconnected materials present in the place, such as the distance to the goal and between them, the direction, the speed of the opponent's movement, and the movement of the surroundings, which cannot be determined and performed successfully. When the eyes are closed, the sense of sight helps in knowing the position and shape of the body during movement, as well as the muscular sensations required gradually in association with the stimuli received through the sense of touch and sensory and motor balance. In the beginning, the motor sensation is unclear, disordered, and incomplete, so the sense of sight works to form and integrate The correct timing of movement, as movement has spatial timing in addition to temporal and kinetic timing, and spatial timing is implemented by the sense of sight (8: 52, 53).

The researcher also attributes the improvement in the percentages of footwork results for the experimental group under study to the icing exercises, which positively affected the performance of the basketball juniors in the research sample, because it includes various forms of variable and unstable reactions that require the junior to change place, speed, and direction during the movement when performing Foot movements, where the percentage improvement between the pre- and post-measurements for the experimental group under study reached (19%), which indicates the effect of icing exercises in improving the skill variables of the experimental group under research.

These results are consistent with the results of the study of: Muhammad Abdel Hafeez (2019)(21) “Ahmed Nashat” (2017AD) (2) “Abdullah Muhammad” (2017AD) (9) “Muhammad Al-Safi” (2016AD) (19) “Nihad Mahmoud” (2016 AD) (30) Study by Muhammad Awad (2015) (16) Asseman, et al. (2005) (35) Mazyn, et al. (2004) (42), which indicated that visual training programs led to improvements in the variables under their research.

From the above, the third hypothesis of the research has been validated, which states that “there are differences in the rates of improvement of the sample members in the level of visual abilities and foot movements of the basketball player under study”.

Conclusions and recommendations:

First, the conclusions:

In light of the research results, the researcher reached the following conclusions:

1. Using a combination of icing exercises and visual exercises has a positive effect on some of the visual abilities under investigation among the basketball juniors in the research sample.
2. Using a combination of icing exercises and visual exercises has a positive effect in improving the foot movements of tennis juniors, the research sample.
3. The proposed visual exercises under research led to improvement rates in the visual abilities and foot movements of the basketball youth research sample.

Secondly, recommendations

In light of the research results, the researcher recommends the following:

1. The need to pay attention to activating the role of ice training and visual training in team sports in general and basketball in particular.
2. The necessity of creating field visual measurements specific to basketball.
3. The necessity of having an optical specialist who evaluates the visual abilities and functions of players and youth and determines the type

of glasses and contact lenses in terms of efficiency and color to protect the player and youth.

4. Pay attention to eye health and care and make visual exercises an essential part of daily life
5. Establishing a laboratory for optical measurements within the laboratories of colleges of physical education.
6. Conducting further studies that address the impact of ice skating training and visual training in other sports and on different samples, as well as on the percentages of the contribution of the sense of vision in these sports activities and the extent of its influence by visual stimuli and the relationship of this to the level of motor abilities.

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