The Effect of (Vertimax) Exercises on the Molecular Pressure of Oxygen, the Explosive Ability of the Two Legs, and the Accuracy of Scoring for Advanced Football Players

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Abstract

The research aimed to: Prepare (Vertimax) exercises for football players. Learn about the effect of exercises (Vertimax) on the molecular pressure of oxygen and the explosive ability of the two men, as well as the skill of scoring accuracy for advanced soccer players. This study examined several axes, including the introduction to the research and its importance, which lies in the use of exercises (Vertimax), as the importance of research lies in preparing these exercises through working with extreme intensity exercises and sufficient rest periods, as these exercises work to develop the molecular pressure of oxygen and the explosive capacity of the two legs. For advanced soccer players, in addition to developing the scoring skill of advanced soccer players, as these exercises give the best possible opportunity to achieve the greatest gains in the ability to jump, speed and explode in order to target the central nervous system (CNS) and activate all movement modes and make them circulate To better and also improve the player's ability to perform the scoring skill better throughout the match time and thus the player's performance is reflected in the team's result.

Keywords: *Vertimax, Molecular pressure, oxygen, legs*

Introduction

The field of training was affected by the revolution of science and technology, as the training process took a form [1], structure and organization consistent with the state of development and modernity of the methods and means used in the training process, so the scientific and technical development has added many new and modern methods in line with the nature of the age group of the trainee through the endeavors of the trainers to choose The best and most recent methods that are appropriate to the specialized activity, with the aim of achieving and investing the specificity of training related to the type of activity in order to reach a direct impact to improve the skill [2], physical, functional, planning and psychological level and reach it to the form sport.

Football is one of the games that has received increasing global attention because it is one of the most popular games in the world, and the development that occurred in the global levels of Football teams, which we sensed during the last World Cup championship, was the result of harmony and physical [3] and skill integration, planning, mental and career This harmony and integration are spontaneous and random. Rather, it came as a result of the coaches 'reliance on the science of sports training based on other sciences that achieve the best levels and results because" it has been scientifically proven that the response of the body's systems to sports training has a special importance in knowing the extent [4] of physical improvement and Functional for athletes, as well as the case of creativity, innovation and the development of methods and means of sports training through the use of the foundations and principles of sports training and the required scientific planning to prepare a comprehensive training curriculum.

Methodology

To achieve the goals of the research, it was necessary to define the research community and choose a representative sample for it, in addition to choosing the appropriate statistical methods to analyze the data and produce the results, as follows:

Research Methodology

Society and sample of the research:

The research community was determined by the athletes of the Kufa Sports Club who applied for the sports season (2019-2020) and they numbered (27) players and the researcher chose (4) players as a sample of an exploratory experiment from the same community and formed (14.8%) of the research community and the researcher chose the sample of the main experiment amount (20) Player The selection of the research sample came in a simple random method (the lottery) and it accounted for (74%) of the research community, and the researcher excluded the goalkeepers who are (3) players who formed a percentage of (11.11%) due to the inconsistency of the research requirements with their capabilities Table (1) shows the distribution of the community members and the research sample.

Table (1). Show community and research samples

research community	Sample application		Sample Exploratory experience	
27	the number	percentage	the number	percentage
	20	74%	4	14.8

Table (2). Shows the consistency of the research sample

Variables / Statistical parameters	Measuring unit	Mean	Median	STD.EV.	Skewness	Significant
Tall	Cm	176.75	177	1.879	0.826	homogeneous
Mass	Kg	73.831	74	2.862	0.11	homogeneous
Age	Year	18.5	18.5	0.516	0.00	homogeneous
Training age	Year	8.7	8.6	0.879	0.11	homogeneous

Through the are less than (1 ±), which indicates the homogeneity of the research sample in the variables (length, body mass, and chronological age).results of Table (2), it was found that the values of the torsional coefficient

Equivalence of the two research groups:

In order for the researchers to attribute the differences in the results of the post-test of the variables under study to the effect of the experimental factor, the researchers resorted to verifying the equivalence of the two groups by using the test (t) of the independent samples as shown in Table (3).

Table 3. Shows the equivalence of the two research groups in the tests of the variables studied

Statistical means / Variables	Measuring unit	Control group		Experimental group		(t) Value	Level of significance	Type of significance
		Mean	STD. EV.	Mean	STD. EV.			
The explosive ability of the muscles of the legs	Watts	1473.3	71.48	1449.3	7.407	0.51	0.624	Non sig.
(PO2) ratio before voltage	Mercury mm	32.8	1.303	32.4	1.673	0.422	0.684	Non sig.
(PO2) ratio after voltage	Mercury mm	17.6	1.816	18	1.581	0.371	0.72	Non sig.
Scoring	Degree	14.5	1.08	14.6	0.69	0.24	0.809	Non sig.

Through Table (3), it becomes clear to us that the value of the test significance level (sig) is the largest value of the significance level (0.05), and for all variables under consideration, therefore, the test significance is not significant.

Determining metrics and tests Variables:

First: measure the oxygen molecular pressure (PO2).

Measurement method:

The partial oxygen pressure (PO2) is measured by an electronic device, and a device for measuring the percentage of oxygen in the blood, a medical device used to measure the rate of blood saturation with oxygen O2sat or SaO2 by a light sensor, and this percentage can be detected through the device without the need for acupuncture, and the device is formed From a small unit equipped with a special position of the hand / foot or a small unit that is manually carried and equipped with a wire probe that can be attached or used on a finger, toe, or earlobe to measure the percentage of oxygen in the blood, as well as to measure the number of heart beats per minute, among members of the research community Putting rest before warming up (15) minutes and after giving out Immediately (scoring accuracy test skill), after (5) seconds have passed where the laboratory sits on a chair and the arm is attached to a compressor (Turnka) to facilitate the process of drawing blood from it by (200 micro) of venous blood by the chemical specialist, as the blood is placed in tubes Medical (tube), then transferred to the specialized laboratory directly

Figure (1). It shows the pulse oximetry.

Second: The vertical jump test of stability:

The purpose of the test: to measure the explosive power of the muscles of the legs.

Hardware and tools: a blackboard that is attached to the wall so that its lower edge is 150 cm above the ground, to be inserted after that from 151 cm to 400 cm, (the blackboard can be dispensed with marking on the wall), Manizia or Chalkboard, Aluminum Ladder and Nails.

Performance specifications: The laboratory dips the distinct hand in chalk powder, the laboratory raises his arm along its entire stretch to make a mark on the blackboard, then the player swings the arms and bends the knees to the vertical jump, no maximum distance he can reach to make another mark and the arm along its entire stretch, as shown in the figure (2).

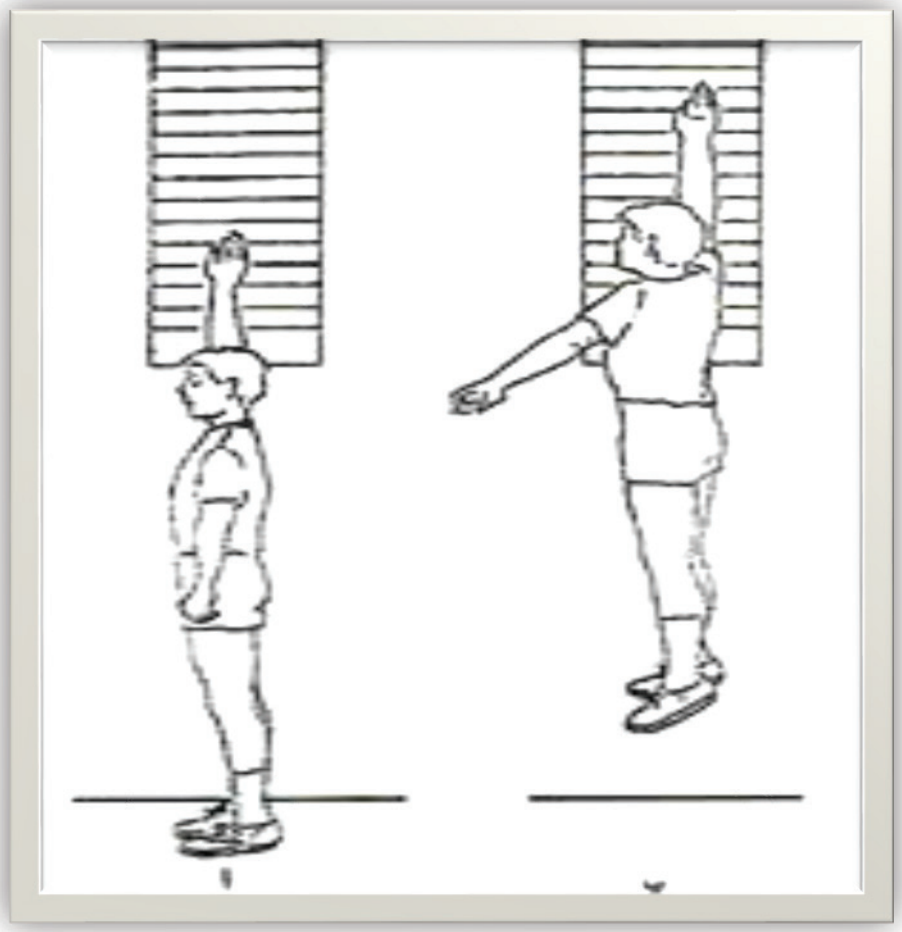

Figure (2). Vertical jump test shows stability

Second: scoring test:

- Objective of the test: to measure the accuracy of scoring.

- The necessary tools: football stadium, balls number (10), tape to set the aiming area for testing, tape measure.

Testing procedures

(10) footballs are placed in different places on the line and inside the penalty area, as shown in the figure below where the player is aiming in the areas indicated in the test and according to their importance and difficulty and sequentially one after the other, provided that the test is performed from jogging mode.

- The test starts from ball number (1) and ends in ball number (10).

- The attempt is not valid if none of the four targets in each side is hit.

Registration method:

- Calculate the number of injuries that enter or touch the four goals specified in each side of the goal and any feet of the feet so that the scores of each ball of the ten balls are calculated as follows: -

(3) scores when scoring in field (3), (2) scores when scoring in field (2)

(1) Score when scoring in the field No. (1), (0) zero in the rest of the other target areas.

- The player is given only one attempt.

Exploratory experience:

The researchers conducted an exploratory experiment on a sample from the original research community and outside the research sample and with (4) players on Thursday 25/4/2020 where the exploratory experiment aims to: -

1- Ensure the fitness of the stadium, the tools and equipment used, research requirements and their suitability.

2- Organizing the assistant work team, and the required instructions.

3- Ensuring that special tests can be carried out for the explosive power of the two men and the oxygen molecular pressure of soccer players.

4- Knowing the readiness of the research sample to perform the skill tests.

5- Know the time taken for the tests.

2-4-3 The main experiment:

2-4-3-1 Pre-test:

After completing the exploratory experiment and confirming it, the researchers applied the main experiment through applying tests and measures to the research community. Tribal tests were conducted on Sunday 7/5/2020, as the tests were according to the following sequence: -

1. Test the explosive power of the two legs and the molecular pressure of oxygen (PO2) by the soccer ball.

2. Football scoring accuracy test.

Vertimax Exercise:

The researchers prepared and organized the exercises (Vertimax) based on the personal experience of the researchers, and applied to the experimental group on 9/5/2020 until 11/7/2020, taking into account (intensity, repetitions, appropriate rest periods) and the researchers codified these exercises on a scientific basis Physiological, as well as the physical ability of the research community, the tools used, and the training method, so that these exercises are able to develop the molecular pressure of oxygen (PO2), the explosive ability of the two legs, and the accuracy of scoring for footballers, and to achieve the goals and objectives of the training process.

The details of the (Vertimax) exercises in the training curriculum are as follows: -

• The number of the total training units that included exercises for the (Vertimax) (24) units.

• The number of weekly training units that exercise for (Vertimax) (3) units for a period of (8) weeks.

• Exercise time for (Vertimax) per training unit (30 minutes) (main section only).

• Training days during the week are (Sunday, Tuesday, Thursday).

The goal of the exercises (Vertimax) is to develop the explosive potential and molecular pressure of oxygen for soccer players.

• The goal of the training exercises for (Vertimax) is to develop a soccer goal scoring skill for advanced players.

Consideration of labor exchange between muscle groups.

• Planning Vertimax training formations during the weekly and daily units (1-2).

2-4-3-3 Dimensional tests:

The researchers, with the assistance of the assistant work staff and physiology lab staff, carried out the dimensional tests of the research sample after completing the application of the exercises (Vertimax).

And that was on Monday, corresponding to (10/13/2020) in the same sequence of tribal tests, as the researchers considered the same conditions in which the tribal tests were conducted in terms of the sequence of the tests.

2-4-4 Statistical methods used:

The researchers used the statistical bag (spss) to analyze the research results, including: -

- Arithmetic mean .
- standard deviation .
- Mediator .
- (t) test for correlated samples.
- (t) test for independent samples.
- Pearson correlation coefficient.

Table (4). shows the arithmetic media, the standard deviations, the calculated value of (T) for the correlated samples, the level of the significance of the test and the difference of the significance of the pre- and post-tests of the control group of the variables studied.

Statistical means / Variables	Measuring unit	Control group		Experimental group		(t) Value	Level of significance	Type of significance
		Mean	STD.EV.	Mean	STD.EV.			
The explosive ability of the muscles of the legs	Watts	1449.328	77.407	1498.89	54.516	2.875	0.054	sig.
(PO2) ratio before voltage	Mercury mm	32.4	1.673	32.8	1.923	1.633	0.178	Non sig.
(PO2) ratio after voltage	Mercury mm	18	1.581	22.2	1.303	3.628	0.022	sig.
Scoring	Degree	14.5	1.08	16.3	0.94	4.32	0.002	sig.

Present the results of the pre- and post-tests of the experimental group of the variables studied:

Table (5). It shows the arithmetic media, the standard deviations, the calculated value (t) of the correlated samples, the level of the significance of the test and the significance of the difference for the pre- and post-tests of the experimental group Of the variables researched

Statistical means / Variables	Measuring unit	Control group		Experimental group		(t) Value	Level of significance	Type of significance
		Mean	STD.EV.	Mean	STD.EV.			
The explosive ability of the muscles of the legs	Watts	1453.36	89.698	1533.77	60.365	4.685	0.009	sig.

Cont... **Table (5). It shows the arithmetic media, the standard deviations, the calculated value (t) of the correlated samples, the level of the significance of the test and the significance of the difference for the pre- and post-tests of the experimental group Of the variables researched**

(PO2) ratio before voltage	Mercury mm	32.8	1.303	33	1.224	0.206	0.874	Non sig.
(PO2) ratio after voltage	Mercury mm	17.6	1.816	24.2	1.095	7.117	0.002	sig.
Scoring	Degree	14.60	0.69	19.10	0.73	13.17	0.000	sig.

The results presented in Tables (4) and (5) showed the skill test (scoring) about the existence of significant differences between the pre and post tests in favor of the post-test for the members of the control and experimental groups. It has an effective role in developing and increasing the level of skill performance among the members of the control group, as a number of exercises implemented by the control group focused on diversification of skill performance, as well as the repetitions performed by players during the training unit and the game, as for the development of members of the group. According to the researchers, the reasons for this development are attributed to the Vertimax exercises that were prepared, as they were similar to competitive skill performance, which sought to provide sufficient opportunities for their development [5]. "The high skill level contributes to reducing the player's ability to perform this skill on the one hand, and on the other hand, The stability of the good technical level throughout the game depends on the good physical condition [6-12] of the player, and the more fatigue the player has, the more He fell from his level of motor skills, especially that need to be consistent in performance.

Conclusions

Based on the research results that were reached within the limits of the research community, the following conclusions were reached: The exercises (Vertimax) led to an evolution in the explosive ability of the two men and the molecular pressure of oxygen for the advanced soccer players. The exercises (Vertimax) helped to increase the goal rate of football players among the members of the experimental group more than the members of the control group. Reflection of the exercises (Vertimax) on the instructions of the central nervous system (CNS), developing the football scoring skill.

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Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the University of Kufa and all experiments were carried out in accordance with approved guidelines.

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