The Impact Of Exercises Strongly In The Atmosphere Of Competition In The Development Of Some Biomechanical Capabilities And Functional Indicators And The Completion Of The 1500-Meter Youth

Ali Nori Ali[1] ,Fahem Abdul Wahid Easa[2] , Bushra Kadhum AbdulRida[3]

[1]*College of Physical Education and Sports Sciences , Al-Mustansiriya University*
[2]*College of Physical Education and Sports Sciences , University of Baghdad*
[3]*Baghdad University, College of Physical Education and Sports Sciences, for Woman*

N3665989@gmail.com , *fahimwahed972@yahoo.com*

Abstract:Sports training is a science and art in scientific knowledge and that knowledge contributed to the development of the mathematical achievements of the science of sports training. The science of sports training is one of the sciences that contributed to the progress of many achievements, including the rapid and immediate response to the biomechanical capabilities and adaptations of the functional indicators of the players to reach high achievements in terms of codifying the training program according to the components of pregnancy Training, as the synchronization and development of global numbers by developing and using training methods in terms of adaptations to the atmosphere of competition to form a champion with all possible specifications to upgrade new numbers and capabilities for players to achieve a high achievement, and the running competition (1500 meters) is one of the competitions with a common system that depends on the efficiency of biomechanical capabilities and functional indicators For the players, which requires the coaches to choose the best training methods to influence the development of these capabilities to keep pace with the development in the level of achievement of this competition, the importance of research in the use of modern scientific methods, exercises in the atmosphere of competition, to make players in an atmosphere similar to the atmosphere of competitions and periodic tests to express the level of the goal of training and achieve better Completion.

1. INTRODUCTION

Research problem:
After the developed countries of the world developed great capabilities to raise the level of sports with advanced scientific methods through which they could invest the technical and physical capabilities of all athletes, making them reach the highest levels and reaping honors on the international and Olympic levels, it came as a result of using modern scientific methods in planning and training continuously, and through work The researchers present in the academic and field fields noticed that there is a weakness in the physical adaptations of the biological capabilities and the functional indicators of the players who ran (1500 meters), which leads to a decrease in the level of achievement as the physical and functional

adaptations of the body systems are considered an important factor in the completion of the competition (1500 meters) where the researchers decided to prepare a standardized training program Strongly, the competition climate is the result of positive adaptations for the players by implementing training work in light of the training methods and methods that constitute an important role for the success of the training program and achieving the best achievement.

research aims :

1- Preparing exercises strongly the competition atmosphere in developing some biomechanical capabilities and functional indicators and achieving 1500-meter jogging for youth

2- Identifying exercises in a strong competition climate in developing some biomechanical capabilities and functional indicators and achieving 1500-meter jogging

Research hypotheses :

- Exercises strongly in the competition atmosphere have a positive effect on the development of some biomechanical capabilities and functional indicators and the completion of 1500-meter jogging for youth

Research areas:

- The human field: for the players of a 1500-meter running competition at the Specialized School for Sports Talent Care of the Ministry of Youth and Sports for the 2020 season

Time domain: Duration 7/19/2020 Goal 9/15/2020.

Spatial domain: Ministry of Youth and Sports Stadium / Baghdad Governorate.

Search procedures:

The researchers used the experimental approach by pre and post testing of the experimental group and the control group for suitability to the nature of the research.

The research community was determined by the players of the 1500-meter running competition in the Specialized School for Giftedness for the 2019-2020 sports season, which numbered 12 players, and the sample was divided into two groups, the experimental group and the control group, with (6) players for each group.

Measures of homogeneity and equivalence were performed for the sample, and the results were:

Table (1) shows the homogeneity of the sample

Variables	measuring unit	Arithmetic mean	Mediator	standard deviation	Coefficient of torsion
Length	Cm	**172.12**	**172**	**4.162**	**0.254**
the weight	Kg	**66.61**	**62.51**	**10.565**	**1.832**
Age of training	Year	**6.92**	**7**	**0.862**	**0.221**

Table (2): shows the arithmetic mean, standard deviations, the calculated (t) value and the significance of the differences in the examined tests between the experimental and control groups in the pretest

Variables And tests		the group	A	STD±	T)(Calculated	error percentage	Significance
	Endurance	Experimental	**3.30**	**2.154**	**1.332**	**0.221**	

1	speed (1200m)	Control	**3.35**	**1.405**			random
2	Endurance force (jump jogged 150 meters)	Experimental	**27.22**	**4.832**	**1.478**	**0.167**	random
		Control	**29.54**	**2.675**			
3	Heart rate	Experimental	**67.00**	**0.414**	**1.231**	**0.253**	random
		Control	**70.01**	**0.374**			
4	Vo2max	Experimental	**56.500**	**2.941**	**1.324**	**0.212**	random
		Control	**57.400**	**2.452**			
5	Lactic acid	Experimental	**14.02**	**2.671**	**1.221**	**0.276**	random
		Control	**15.22**	**2.421**			
6	Completion of a 1500-meter run	Experimental	**4.00**	**1.891**	**1.267**	**0.221**	random
		Control	**4.03**	**1.321**			

Significant at the significance level (0.05) if the error level is less than (0.05).

The following methods and tools were used in the research:

Observation. - Tests and measurements - A device for measuring height and weight - Legal athletic track: Cones of different heights (20 cm, 30 cm) count. 60- 30 barriers, 8 electronic stopwatches.

Tests used:

- Endurance running test, and strength endurance test (Peter Thompson: 2009, p. 124)
- Heart rate measurement (Rafe 'Saleh Fathy and Hussein Ali Alali: 2011, p. 124)
-Vo2max measurement (katpmun: 1999: p78)
-Lactic acid measurement
-1500-meter run (Josephl: 2000 p67)
- Pre-exams: The two researchers conducted the pre-tests at the Ministry of Youth playground for the Specialized School for Talent Development, corresponding to 4/2/2019.

Exercises used in the research:

The exercises began on 7/25/2020 until 9/13/2020.

• The duration of the exercises set in weeks: (8) weeks.
• The total number of training units: (24) training units.
• Number of weekly training units: (3) units.
• Weekly training days: (Sunday - Tuesday - Thursday).
• The training method used: The method of high-intensity interval training.

Post-tests: After completing the implementation of the special exercises within the specified period, then conducting the research-specific tests on Tuesday 15/9/2020, and the researchers took into account the provision of conditions similar to the pre-tests in terms of (time, place, tools used, and the method of conducting tests). On the playground of the Ministry of Youth and Sports for the Specialized School for Talent.

The researchers used the following exercises for the experimental group.

Table (3): the exercises used in the research

the days	the exercise	Intensity	Rest between		Total Size
			Repetition	Groups	

Sunday	200m x 5 + 400m x 5 Double jumping on 3 boxes of different heights, the first is 30 cm, the second 50 cm, and the third is 70 cm, and the distance between the box is 1 m	%80	1 min 90s	2min	6000m
Tuesday	600m x 4 + 800m x 3 The side jump on the bench 8 jumps for a distance of 10 m, with a height of 30 cm	%80	2min	3min	2800m
Thursday	100m x 4 + 1,200m x 2 -Double jumping on 8 hurdles of 80 cm high	%80	90s	3min	6400m

The following statistical methods in the research: The researchers used the statistical package (SPSS) to find the appropriate statistical treatments.

research results:

The results of the experimental and control groups in the researched variables were presented, analyzed and discussed, as well as the results of the differences between the pre and post tests of the experimental group in the studied variables were presented and analyzed.

Table (4) shows the difference of the arithmetic mean, its standard deviation, the value of (t), and the significance of the differences between the results of the pre and post tests of the two groups of research in the variables under investigation

Tests	measuring unit	the group	Pre-test		Post-test		Value (T) calculated	error percentage	Significance of differences
			A	STD	A	STD			
Endurance speed (1200m)	Minute / second	Experimental	**3.30**	**2.156**	**3.29**	**1.541**	**3.531**	**0.022**	Sign
		Control	**3.35**	**1.412**	**3.34**	**2.212**	**2.886**	**0.043**	Sign
Endurance force (jump jogged 150 meters)		Experimental	**27.22**	**4.843**	**26.01**	**2.775**	**3.933**	**0.015**	Sign
		Control	**29.54**	**5.132**	**28.03**	**3.212**	**2.821**	**0.041**	Sign

Heart rate	Blow / min	Experimental	**66.01**	**0.407**	**65.01**	**0.701**	**6.062**	**0.004**	Sign
		Control	**70.00**	**2.914**	**68.01**	**00.244**	**4.206**	**0.014**	Sign
Vo2max	Milliliter / kg / minute	Experimental	**56.500**	**2.911**	**60.100**	**2.133**	**7.134**	**0.002**	Sign
		Control	**57.400**	**2.412**	**59.200**	**2.566**	**3.834**	**0.019**	Sign
Lactic acid	Mmol / L	Experimental	**14.00**	**2.843**	**13.01**	**2.434**	**3.873**	**0.032**	Sign
		Control	**15.21**	**2.851**	**14.11**	**2.453**	**3.562**	**0.022**	Sign
Completion of a 1500-meter run	Minute / second	Experimental	**4.00**	**1.748**	**3.58**	**2.686**	**3.923**	**0.017**	Sign
		Control	**4.03**	**1.211**	**4.01**	**2.352**	**3.244**	**0.031**	Sign

* Significant at the significance level (0.05)

Table (5) shows the difference of the mean, the value of (t), the level of error and the significance of the differences between the results of the post-test for the two groups of research in the variables under consideration

Tests	measuring unit	Experimental		Control		Value (T) calculated	error percentage	Significance of differences
		A	STD	A	STD			
Endurance speed (1200m)	Minute / second	**3.28**	**1.522**	**3.33**	**2.210**	**3.941**	**0.003**	Sign
Endurance strength	Blow / min	**25.07**	**2.734**	**27.02**	**3.034**	**4.952**	**0.000**	Sign
Heart rate	Blow / min	**64.01**	**0.7013**	**67.02**	**0.219**	**4.282**	**0.002**	Sign
Vo2max	Milliliter / kg / minute	**63.600**	**2.172**	**61.100**	**2.543**	**4.321**	**0.006**	Sign
Lactic acid	Mmol / L	**12.01**	**2.632**	**13.11**	**2.435**	**3.974**	**0.004**	Sign
Completion of a 1500-meter run	Minute / second	**3.56**	**2.643**	**3.59**	**2.365**	**3.232**	**0.003**	Sign

Significant at significance level (0.05)

Discuss the results:

The results of Table (3 and 4) show that there are significant differences in the research variables between the pre and post tests of the two research groups and in favor of the post test. The different types and specific exercises depending on the level and biomechanical abilities through physiological changes and the extent of the response occurring inside the body, where the human body is characterized by the events of physical and physiological changes when repeatedly exposed to the impact of training loads, and it is not a lesson in the use of large training loads, but in the amount of codifying the training program and training loads The accuracy of its construction and planning in terms of size, intensity, comfort and quality of the exercises used to reach the desired goal (Abu Al-Ela Ahmed Abdel-Fattah: 1999, p. 51), as the accumulation of acid in the muscles is a hindrance to the continuation of muscular performance with high efficiency and is the result of high severity with a lack of quantity Oxygen that is not proportional to that intensity.

Which causes the appearance and accumulation of lactic acid, so when developing speed endurance, a little rest is given until the athlete is accustomed to the performance despite the lactic acid remaining in the muscles and not being removed during the little rest that the appropriate rest is chosen and in the event that the training aims to develop and improve the endurance of speed, take into account Use of imperfect comfort (Bompa TO 2000, p123)

As well as the large number of repetitions that the researchers used in performing each exercise, which resulted in the development of strength endurance. The most important methods for developing strength endurance are to increase the number of repetitions of exercises or groups with the distinction of pregnancy being characterized by moderate intensity in addition to the equation of pregnancy to gradually shorten the rest period, and use the rate of Heart rhythm: This is a very important physiological indicator in monitoring intensity and regulating rest for runners. It used an indicator of the lack of oxygen that meets the body's need during the rest period, that is, compensation for oxygen consumed during physical exertion, as it is one of the very important indicators for a coach and athlete for his field ease of measuring heart rate Which gives an indication of the athlete's training status and the effort exerted. The researchers attribute this to the use of the heart rate as an indicator in regulating the rest period. The intensity raises the maximum oxygen consumption, increases the heart rate to more than 170 z / d, and increases the level of lactic acid in the blood because The energy system used for anaerobic lactic susceptibility of lactic acid to appear in the blood is achieved only when the level of effort used is between approximately 90-85% of the maximum level of oxygen consumption (Muhammad Ali Al-Cat: 1999, p. 112).

The most important foundations in preparing runners is their knowledge of the importance of competition with an atmosphere to achieve physical and functional adaptations, which achieves the desired goal of high achievement for the 1500-meter race in developing the level of physical performance and conveying the clear idea that participation in competitions is not limited to individual aspects, but must be related to the aspects, the atmosphere of competition, The player's participation in the competition is predominantly determined by personal motives and tendencies that directly affect the runner, because competitive exercises are tantamount to creating motives for improving the level of performance (Kunath, 1992, p 231).

2. **CONCLUSIONS**:

1- The results showed the development of biomechanical capabilities and functional indicators between the pre and post measurement through exercises strongly competitive atmosphere for the players of the experimental group and in favor of the post measurement.

2- The results showed an evolution between pre and post measurement at the time of completion. 1500 meters were run for players for the experimental group and for the post measurement.

3. REFERENCES

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