

The effect of exercises with oxygen lacking masks on the speed storage and the achievement of 800m runners under 18 years old

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Abstract

Athletics is one of the sports task that you need all fitness components of fitness , in order to upgrade these components can develop the physical aspects through which they can develop the sporting achievement , because all the effectiveness of these activities require special specifications of the different each one from the other in all its components and i saliva performance And its technical stages. The effectiveness ran 800 m enemy competitions distances medium fast exciting Olympic and globally in athletics , which features a range of features and qualities of its own a where you need to your endurance , and this on the coach to choose F should err training methods and the most influence on these variables to reach the best achievement for this event , and these modern methods exercises (masks a lack of oxygen) , which is one of the exercises significant lack of oxygen and have positive effects in the special abilities that depend on the completion of the effectiveness of 80 0 m .

Keywords: *exercises, oxygen lacking masks, speed reserve, achievement, 800m runners.*

Introduction

Through the follow - up to the researcher to race the effectiveness of 800 m in tournaments hosted by the Central Union of the game clubs Iraq and the fact that the researcher one hostile event previously noted that there is a weakness in the completion of this event and certainly, this weakness results in a weakness in the stages of the race that make up the event , as noted The researcher said that there are some runners who have high speeds through the researcher's follow-up to them, but they do not achieve good achievement and this defect is due to the fact that the speed reserve of the runners is not at the required level , in addition to that, the researcher noticed through the follow-up of training programs the lack of use of modern methods in the training process which That would raise the basic requirements for the event and thus achieve a better achievement (Jamal, 2017) . Hence, the researcher decided to use a new method, which is (exercises with hypoxic masks), which would raise the level of work of the two systems (anaerobic and antenna) for runners and reserve speed and achieve the effectiveness of 800 m, and hopefully this study will apply scientific information and practical service to the coach and runners.

1 - 3 Research Objectives:

- 1- Preparing exercises for B. (Masks a lack of oxygen) to develop and speed up the completion of 800 m
- 2- Learn about the effect of training) Masks a lack of oxygen) in the development and speed up the completion of 800 m .
- 3- Identify the impact preference of the two groups' exercises (control and experimental) in developing speed reserves and achieving 800 meters .

1-4 imposition of a search: -

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1. There is a positive effect of the exercises with hypoxic masks in the development of the speed reserve and the achievement of 800 meters.
2. There is a preference in the effect between the training of the two groups (control and experimental)
3. In developing the speed reserve and achieving 800m for the benefit of the experimental group (hypoxic masks)

1-5 Research areas:-

1.5.1 *Human field*: - 800 m runners of clubs province of Karbala under 18 years old for the season 2018_2019.

1-5-2 *Spatial field*: - stadium youth in the province of Karbala, estimated Study of the yard and field.

1.5.3 *Temporal field*: - 26 / 12/20 20 - 9/13/2020.

1-6 Terminology definition: -

The lack of oxygen convinced him was a type of epoxy machine training in the field of sports training and it means a lack of oxygen when the player performs continuous physical efforts, as this leads to an increase in oxygen debt as the oxygen decreases. Athletes can be trained to perform continuous physical exertion with a reduction in the volume of oxygen This is done by setting up special programs for this, and by controlling the player to reduce the respiratory rate " (Aqeel, 2009) , regardless of the player's exposure to diseases that may withhold the necessary amounts of oxygen .

Speed reserve: (i.e. the time difference between the maximum time for a certain distance and the same distance in the activity) (Jamal, 2017)

3 - Research methodology and field procedures

3.1 Research methodology

The methodology adopted in the research is one of the important matters through which it is possible to know the facts and reach accurate results. The experimental method is one of the scientific research methods most used in the mathematical field because it "is based on direct and realistic interaction with different phenomena, and is based on two basic pillars: Observation and experiment of all kinds "(Abd al-Mu'ti, 2002). The choice of approach depends mainly on the nature of the problem to be solved. Therefore, the researcher used the experimental approach using the system of designing the two equivalent groups (control and experimental) with the two pre and post measurements to suit the nature of the research and the use of an appropriate experimental design It is important in writing the research because it will help in obtaining answers to the research hypotheses and it also helps with experimental control. Table (1) illustrates this design

Table (1) illustrates the experimental design adopted in the research

the group	Tribal measurements	The experimental factor	Dimensional measurements of
Of the officer	Reserve speed xD	Coach exercises	Reserve speed xD
Experimental		Exercises B masks lack of oxygen	

3- 2 research community and appointed:

Society in the educational and sports experiences all individuals, events or things that brought them together in common are the subject of the research problem (Mohammed, 2002) , t select the research community from hostile (800 m) is not dewy province of Karbala , the holy and of numbering m (10) runners distributed (6 clubs) that have formally participated in the tournaments held by the Central Athletics Federation , and the research sample was chosen by the method of comprehensive enumeration, meaning that the community is the same as the research sample , and the researcher conducted the homogenization process on the members of his sample researching (height, mass and training age) when It has an impact on the research variables , through the use of the statistical law, coefficient of variation , and Table (2) illustrates that

Table (2) shows the homogeneity of the individuals of the research sample

Variables	measuring unit	Arithmetic mean	standard deviation	The value of the coefficient of variation
Length	cm	173,850	5,645	3,247

Bloc	Kg	61,600	5,103	8,284
Age training of	Month	28,670	3,225	11,249

Built the table (3) that all coefficient of variation values of all variables less than (30) indicating Al Z homogeneity of members of the sample in these variables. Then, the researcher divided the sample randomly into two simple control group and the other experimental, and by (5) runners for each group, as shown in the table (3)

Table (3) shows the research community and its sample

The name of the club	Community and sample research	Control group	Experimental group	Exploratory research sample
1 _ Karbala	2	1	1	1
2_ Gamaheer	2	1	1	1
3 _ Indiana	2	1	1	1
4_ Iraq	1	-	1	1
5_ Imam righteous	1	1	-	-
6_ Ghaderia	2	1	1	1
Total	10	5	5	5

3 - 3 methods of gathering information, equipment and tools used in the research.

The researcher used the following methods, devices, and tools

3 - 3 - 1 Information gathering methods: Observation; Test and measurement; The questionnaire; Personal interview of (see; Appendix 2)

3 - 3 - 2 Search devices and tools

(2) Chinese Stopwatch.- Medical balance for measuring mass and length, count (1) - Oximeter device, the percentage of oxygen saturation in the blood - Camera type (Sony) Number (2)- Hypoxic training masks, count (5) - A tissue measuring tape (50 m), 1 count - (2) Chinese whistle - Registration forms - Plastic cones

3 - 4 Field search procedures:-

3-4 -1 determine the speed test reserve:

After consulting the scientific committee to approve the title and Messrs. Supervisors were adopted to complete the time difference (200 m) maximum distance runner and the time of each (200 m) from the completion of a distance (800 m) to extract the speed reserve.

Characterization of the speed reserve test: In order to measure the speed reserve, the researcher conducted a maximum test for a distance of 200 m for each runner and recorded it in a registration form , after which the researcher conducted an achievement test (800 m), with a mark, a timer and a judgment and lowered an arm when the mark reached every 200 m in order to start recording the distance The second and thus the process continues until the end of the race distance, and each timer records the 200- meter time while performing the achievement test, using a special form . After the completion of the race, the researcher collected the forms and record the time of each 200 m for each runner race completed (800 m) was put forward time maximum distance of 200 m for each runner from the time of each 200 m from the time of completion of the race to get the speed up all 200 m

3-4 - 2 Exploratory Experiences

3 -4 - 2 -1 experiment first reconnaissance: -

Confirmation of scientific research steps and for the purpose of determining the accuracy and validity of the research work, it is important to carry out a small experiment on a sample of the community to which the tests will be applied to ensure the integrity of the organization of the topic, and the first exploratory experiment was conducted on a group consisting of (5 runners) from the research community on two days' resources (Sunday and Tuesday) corresponding to (29- 31/12/2019), when on the first day the researcher conducted a test (strength characterized by speed and endurance of

force), taking into account the comfort between the two tests, which is a complete comfort, and on the second day, a test (endurance of speed) was conducted where the tests were performed At exactly three o'clock at the Youth Sports Stadium in Karbala, the purpose of the experiment was: -

- Determine the appropriate time for tests.
- Identify the suitability of the tests for the sample.
- Identify the time it takes to test data.
- Briefing the assisting work team on the exploratory experience and taking their opinions about work requirements and their observations (Appendix 7)
- Knowing the difficulties facing the researcher in order to avoid them applying the test.
- Extracting the scientific foundations for the tests.

3-4- 2-2 experience the second reconnaissance exercises and special oxygen masks shortage: -

Was a second exploratory experiment on Thursday approved (2/1/2020)

Learn about the validity of masks

Identify the difficulties that the sample faces while using the mask

Set the masks to the appropriate height

3-4- 3 tribal tests:

Before starting the implementation of the exercises prepared by the researcher, the researcher conducted pre-tests for speed reserve and achievement for the members of the research sample, which numbered (10) runners, divided into two control and experimental groups, in order to establish the degree of tests and identify the level of runners , and before that (length and mass) were measured and the training age was recorded , it has been conducted tribal tests for the research sample over four days (6-7-9-11 / 1/ 202 0)

3-4- 4 tests posteriori:

After the completion of the application of exercises prepared within the training program for runners , s a m researcher conducted a meta - tests for the same search for the two groups experimental and control procedures themselves that have been adopted in the implementation of tribal tests , days (Monday , Tuesday , Thursday , Saturday) corresponding to (9-10- 12-14 / 3/2020) on the Al Shabab Sports Stadium, taking into account the provision of the same conditions for the pre-tests as possible , and the results are recorded in a special form prepared for this purpose.

35- *Statistical methods* the researcher used the statistical bag (SPSS) To deal with the results of the tests were used the following laws: -

- Arithmetic mean
- standard deviation
- Difference Lab
- Relative importance
- Correlation coefficient (Pearson)
- Test T For symmetric samples
- Test T For independent samples

4- Results analyzed and discussed:

This included display the results analyzed and discussed and reached by a researcher through a result of the Tests tribal and implementation of the exercises bandanas lack of oxygen in the training the program of conducting posteriori tests for eye T research (the experimental and control group), and after the data were collected, organized and classified in the illustrative and tables Treated statistically to reach the final results to achieve the research objectives and hypotheses.

4-1 Presenting and analyzing the results of the speed reserve and achievement test for the two research groups and discussing them:

4-1-1 Presentation and analysis of the results of the pre and posttests of the speed reserve and achievement of the experimental group:

Table (8) Circles calculations and shows the deviation of data standard of average differences and standard deviations of the differences and the values of (T) The calculated level of significance and the type of statistical significance between the pre and posttests in the physical variables under study for the experimental group

Variables Calculated	The pretest		Post test		P	P. P	T Value		
	Level of morale	Indication type							
	s	P	s	P				0.937	Insig.
Speed reserve is 200 m first	3.880	0.517	3.900	0.474	0.020	0.240	0.083	0.001	Sig.
Speed reserve 200 meters per second	5.380	0.383	4.420	0.259	0.960	0.103	9.324	0.007	Sig.
Speed reserve 200 m r	6.300	0.480	5.020	0.192	1.280	0.252	5.084	0.001	Sig.
Speed reserve 200 m fourth	7.320	0.277	5.840	0.251	1.480	0.146	10.117	0.002	Sig.

The tabular value is below the level of significance (0.05) and the degree of freedom $4 = 2.776$

Table (8) shows the statistical indicators of the results of the pre and posttests of the research variables, the speed reserve and the achievement that the members of the experimental group underwent, if the results appeared that the values of the arithmetic mean of the speed reserve variable for the first 200 meters, the differences were not significant, and this is confirmed by the level of significance. Greater than (0.05), because the speed reserve depends on the special endurance (withstand speed and force endurance) to a large extent, while the special endurance does not appear at the start of the race, i.e. the first 200 m, so the differences became insignificant.

4-12- Presenting and analyzing the results of the pre and post tests for the speed and achievement reserve of the control group:

Table (9) Circles calculations and shows the deviation of data standard of average differences and standard deviations of the differences and the values of (T) The calculated level of significance and the type of statistical significance between the pre and posttests in the physical variables under study for the experimental group

Variables Calculated	The pretest		Post test		P	P. P	T Value		
	Level of morale	Indication type							
	s	P	s	P				0.072	Insig.
Speed reserve is 200 m first	3.680	0.327	4.080	0.259	0.400	0.164	2.434	0.141	Insig.
Speed reserve 200 meters per second	5.000	0.100	4.720	0.415	0.280	0.153	1.830	0.009	Sig.
Speed reserve 200 m r	6.060	0.305	5.480	0.327	0.580	0.124	4.674	0.031	Sig.
Speed reserve 200 m fourth	6.920	0.311	6.300	0.292	0.620	0.191	3.250	0.010	Sig.

The tabular value is below the level of significance (0.05) and the degree of freedom $4 = 2.776$

The table shows (9) statistical indicators for the results of tribal tests and meta variables search (reserve speed and achievement), which underwent group members of the officer, if the results showed that the arithmetic mean of the values of the variable speed reserve first and second were the differences were not significant, and this was confirmed by the moral level, as was Greater than (0.05).

4-13- Discussing the results of the pre and post tests for the speed and achievement reserve for the experimental and control research groups:

First: - Speed Reserve: Tables (8 and 9) show that there are significant differences in the pre and post tests for the two groups (experimental and control) and in favor of the dimensionality, as the researcher attributes the development of the speed reserve variable to the prepared exercises that were included within the training curriculum, which was applied to the members of the group and for good planning. This is what was indicated by the mechanism (Ahmed Youssef). Planning is considered one of the predictive measures that depend on many studies of reality, taking into account the experiences and the available capabilities and capabilities and what can be achieved to achieve a specific goal , except for preparing athletes to reach the highest level of achievement (Ahmed, 2014) , as the hypoxia exercises aim to improve the efficiency of the respiratory circulatory system and thus improve the protracted characteristic of the runner, which leads to the development of the speed reserve .

Second: Achievement: As for the achievement of an enemy (800 AD), the researcher attributes this development that appeared on the members of the experimental group due to the effectiveness of the previously prepared exercises that were included within the training curriculum adopted by the researcher , where he focused mainly on the use of masks in training and on developing physical abilities way training interval is high intensity , reflecting on the mutual between my ability endurance and speed Kqdarat vehicle relationship in determining Alang gas , and this was confirmed (Kamal Jamil) " the games and sports events characterized as power and speed are often influenced by the level of tolerability private the athletes, especially in the relatively fast and long such as race races (400 m 800 m) Therefore, the athletes will be exposed to significant during the second half of the race due to exhaustion along the distance traveled and it's time for this whenever your high whenever the level of the development of endurance was able athlete to overcome various pressures Easier training and distances " (Kamal, 2004). And the use of high intensity with the length of the performance run (80 0 m) affects the ability of the performance of the Riyadh. Therefore, we see that understanding the power requirements of the competition and the distribution of the voltage is not at a single frequency, i.e. get used to the economy in its distribution during the performance.

4- 3 **presentation and analysis of the results** of Meta - tests for the two sets of research (experimental and control group) reserve speed and achievement and its discussion:

Table (12) Shows mean values, deviations, and value (T) The calculated level of significance for the post-tests of the variables of velocity reserve, physical abilities, and achievement of the two experimental and control groups

Variables	the group	s	P	T Value		
Calculated Speed reserve is 200 m first	Level of morale	Indication type		0.745	0.478	moral
	Control	4.080	0.259			
Speed reserve 200 meters per second	Experimental	3.900	0.474	1.372	0.207	moral
	Control	4.720	0.415			
Speed reserve 200 m r	Experimental	4.420	0.259	2.711	0.027	moral
	Control	5.480	0.327			
Speed reserve 200 m fourth	Experimental	5.020	0.192	2.674		
	Control	6.300	0.292			
	0.028	moral				
	Experimental	5.840	0.251			

The tabular value is below the level of significance (0.05) and the degree of freedom 8 = 2.306

Table (12) shows the statistical indicators of the results of the post-tests of the speed reserve and achievement, which represent the nature of the performance of the two groups after the completion of the implementation of the main experiment. Results showed a n arithmetic mean of the values for variable data backup speed and achievement was a less of mg pilot for the control anguish , the fact that a n this variable is an ad valorem inverse (i.e., the lower the arithmetic mean of the more level better because it deals with the time factor measurement With reference to the level of significance, we will notice that the difference is significant and in favor of the experimental group because the level of significance is less than 0.05 .

Discussion

Through the presentation and analysis of the results obtained by the researcher, it becomes clear that there are significant differences between the results of the two research groups in the results of the post-tests and in favor of the experimental group of the research variables (speed reserve and achievement). As the researcher attributes the reason for the preference of the experimental group over the control group, due to the experimental group being subjected to the exercises of hypoxia masks prepared by the researcher and included in the training curriculum, and the researcher attributes the development of the speed reserve through the results shown. The researcher noticed that hypoxic training has helped in developing the speed reserve. The research sample, as shown in the results of the post-test, had a great impact on this development by using special endurance exercises that have a great impact on the speed reserve, and the researcher attributes the development in the speed reserve variable to improving the special endurance capacity (speed bearing and force endurance), especially Speed bearing, which is closely related to the speed reserve variable, as the more the speed bearing is good and the hostility has the endurance of speed for longer distances with high efficiency, the more the speed reserve is good and thus the achievement is better and this is what has been achieved by hypoxia training that is consistent with what was stated by (Muhammad Reda) (Muhammad, 2008) If the speed reserve is good and the special endurance training is regular, this will lead to a high achievement in the game or the practice competition, Whereas, the development that took place in the achievement was attributed to the hypoxic training, where the results of the achievement (800 meters) showed that there was an improvement in the completion of this run. That these variables and factors are of the important matters related to achieving better achievement and that these variables and factors were better in the experimental group than in the control.

5-1 Conclusions:

From the researcher's findings, the following can be concluded:

1. That the exercises prepared by the researcher had a great impact on the development of reserves of speed, physical abilities, biochemical indicators and achievement, and this was proven by the results obtained.
2. Training using oxygen deficiency masks contributed to improving the speed reserve for runners, which led to improving the achievement of distances determined for this variable and thus improving achievement.
3. That the exercises with masks a lack O₂It was better than training without these masks at developing research variants.

5.2 Recommendations:

In light of the findings Yu is recommended researcher, including the following:

1. The necessity of using hypoxic training in training, events and games that are of high intensity and last for a long and relatively long period and in which there is a high oxygen deficiency such as soccer halls, hand, boxing, middle-distance running and others.
2. The need to use the masks and the rate of heart beat 120 z/d during the comfort and means of training to impede the delivery of blood saturated with oxygen to the muscles of labor training in the training curricula and in other distance races.
3. The necessity of conducting similar research on long-distance running and some team and individual games that last for a relatively long period, such as tennis and soccer.

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