Research Journal of Medical and Public Health 7 (2)



# The effect of the vartlik exercises in some breathing functions of my runner and the achievement of the 200m freestyle

**Mabdar Mutalib Khalaf Hammadi**

**Anbar Education Directorate**

## 1. Introduction

Sports training is the only means to improve the physical and functional level of players and bring them to the sports form to achieve achievement, and varied methods and methods of training that seek to achieve these goals through the formation of loads or through the method of performance of the exercise, and the method of training al-Fartlik is one of the training methods that seek to improve thephysical and functional level of the athlete, and the basis of work in this method of training depends on changing the speed during the enemy between fast - medium - Slow, or enemy in a changing environment such as forests or beaches that require the athlete to change the speed of the enemy according to the earth's ruggedness.

The training form of this method is adopted in the light enemy at the beginning and then change its intensity from time to time for short distances and from fast to faster and in proportion to the abilities of the athlete during the time or distance of total training or high and low level of performance continuously without stopping or regularity in the requirements of performance (Iyad Hamid and Hossam Mohammed 2011: 94), the nature of training in this way allows to change the speed of pulse due to the change of the intensity of performance to range from (140-16)N/D to increase to reach To (180)N/D during the rise of the enemy rhythm for a period of time a period of time ranging from (5-8) seconds (Abu Abdo 2011: 50), and the performance depends on the effectiveness of an enemy (200 m free) ) on the non-oxygen energy system and this requires the athlete to work highly efficiently in the periodic and respiratory systems so that he can keep up with the high physical effort during competitions and thus achieve sports achievement, so attention to the efficiency of the work of breathing functions of the runner comes from the priorities of the trainers that they are working to achieve and which greatly helps to perform physically during the competition.

(Ibrahim Salem et al. 1998:95) the muscles cannot continue to work muscle without oxygen (no antenna) more than (10) seconds while the muscle work can continue for more than a minute if the muscle is extended with oxygen by transferring it from the lungs to the working muscles, i.e. the more severe the load the faster oxygen consumption, hence the importance of research through the development of breathing functions in the runners 200m free to ensure the integration of physical and functional performance and achievement.

Focusing on training the actual performance requirements is very important but ignoring some side things that will negatively affect the performance and achievement of the runner, as the commitment in a certain way or training method would hinder the process of progress and development and the use of new training methods and methods that will raise the level and add an atmosphere of suspense and excitement in the athlete and stay away from thedaily rotin training, and the problem of research is manifested in the answer to the What are the effects that occur through the use of vartlik exercises in breathing functions and do these effects have an impact on the level of digital achievement of the 200m freestyle runner?

The research aims to develop exercises at different speeds and to know their effect on some breathing functions and to achieve 200m free for young runners.

**2- Research approach and field procedures**

**2.1 Research approach:**

The experimental approach designed by the same group with pre- and post- testing has been adopted to suit it and the nature of the problem and the objectives of the research.

2.2 Search sample:

The research sample was for the 17-18-year-old freestyle runners from the Anbar Education Directorate's Athletics Training Centrefor 2019/2020.

Sample homogeneity in search variables:

Homogeneity was performed on the members of the research sample in the research variables and the results showed that all members of the sample were limited to the values of the twisting factor between (±3) and this indicates the homogeneity of the sample and there are no individual differences between them that would affect the results of the research, as shown in table 1.

Table (1)

Sample homogeneity in search variables

| Variables | Q | and | ± | for |
|---|---|---|---|---|
| VC Biocapacity | 5.022 | 4.95 | 0.123 | 0.884 |
| Maximum respiratory potential MVV | 4.22 | 4.18 | 0.201 | 1.627 |
| FVC Forced Biocapacity | 179.55 | 178.5 | 1.762 | 0.4 |
| Completion of 200 m | 23.94 | 23.82 | 0.609 | 0.09 |

**2.3 Means of collecting information, devices and tools used in research:**

**2.3.1 Means of gathering information:**

- Arab and foreign sources and references
- auditions
- Electronic Stopwatch Casio Type 2

- FIT MIT

2.4 Identify search variables:

Breathing functions have been determined by

- VC biocapacity is meant to be the maximum amount of air that can be removed from the lungs after the individual takes the deepest possible inspiration without regard to the time taken (Scarecrow: 2009: 422).
- MVV's maximum respiratory potential means the amount of air that can be inhaled and extracted from the lungs at full speed within one minute (Sid: 2003: 209).
- FVC's forced biocapacity is meant to be the maximum size of exhalation air after maximum inspiration, maximum speed and strength (Abu Ala: 2003: 356)

200m completion test:

- Purpose of the test: measuring the achievement of 200 m
- Tools used: legal track, stop hour
- Performance Description: The laboratory stands behind the starting line of standby and when you hear the instructions start with the enemy at full speed to the finish line, which is 200 meters from the starting line.
- Registration: The recording of the time it takes to travel 200 m from the moment of departure to the end moment begins.

**Field search procedures:**

**2.5.1 Pre- tests:**

The pre- experiment was conducted on theresearch sample on Sunday, December 3, 2019, if tests were conducted for breathing functions on the first day and at 10:00 a.m. using a ft. device in the laboratory of the Faculty of Physical Education and Sports Sciences university of Anbar , and after the completion of the tests the post-measurements were taken for individuals The search sample was conducted directly from the VitT device, and the next day the 200m completion test was conducted on the members of the search sample and on the field of Anbar Sports Club stadium at 4 p.m., and the conditions for conducting pre- tests were installed to apply the post-tests.

**2.5.2 The exercise curriculum in the style of the vartlik:**

The vocabulary of the exercise curriculum was applied in the style of the vartlik onTuesday , 5/11/2019 my agencies:

- The eight-week training curriculum took 24 training units and three training units per week, as it was the first training unit on 5/11/2019 and the end of the last training unit on Tuesday, 24 December 2019. .
- The researcher took advantage of the physical section of the main part of the training unit with only three exercises per training unit.
- The researcher used the repetitive training method to perform the exercises.
- The total time of exercises in the training unit ranges from (30-35) minutes.
- The exercises ranged from (10-50m, 20-75m, 50-150m, 50-200m) at different speeds (cut- slow-cut) in each repetition, taking into account that the comfort is complete between each repetition and the other.
- Ripple of external load (1-2) and internal pregnancy ripple (1-1).
- The intensity of the exercise was determined by pulse using the Carvonin equation Required pulse rate = maximum pulse rate× required intensity/100

**2.5.3 post- tests:**

After completing the application of the vocabulary of the Al-Fartlik exercise curriculum to the broadcastsample on Tuesday, 24 December 2019 and taking a day off, the post- tests were conducted on the members of the research sample on Thursday, 26 December 2019, and the researcher took into account as much as possible the provision of conditions similar to those conducted pre- tests.

**2.6 Statistical means:**

The researcher used the statistical bag (SPSS) to extract the search results using the following statistical means: computational medium, standard deviation, independent sample test.

**Presentation, analysis and discussion of results:**

After obtaining the results of the pre- and post- measurements, they were statistically processed using a test (t) of associated samples to reach the search results.

3.1 View the results of the pre- and post- measurements of search variables:

Table (2)

Computational circles, standard deviations, differences in computational circles, deviations for pre- and post-measurements, and a value calculated for research variables

| Variables | Unit of measurement | Pre- test | | Post- test | | S.F. | P | to Calculated | Level of significance |
|---|---|---|---|---|---|---|---|---|---|
| | | Q | ± | Q | ± | | | | |
| VC Biocapacity | L/D | **5.022** | **0.123** | **5.22** | **0.078** | **0.2** | **0.05** | **8.85** | **0.001** |
| Maximum respiratory potential MVV | L/D | **4.22** | **0.09** | **5.044** | **0.047** | **0.824** | **0.120** | **15.23** | **0.00** |
| FVC Forced Biocapacity | L/D | **179.5** | **0.788** | **183.9** | **1.113** | **4.4** | **1.01** | **9.65** | **0.001** |
| Completion of 200 m | second | **23.93** | **0.272** | **0.54** | **0.379** | **1.386** | **0.536** | **5.779** | **0.004** |

Table (2) shows the statistical parameter values of the research variables in the pre- and distance measurements and the calculated values, with the value calculated for the biocapacity variable (8.85) below the indication level (0.001) and for maximum respiratory possibility (15.23) below the indicative level (0.00) The forced bio-sting (9.65) is below the indicative level (0.001), while the 200m (5,779) completion variable is below the indicative level (0.004), indicating moral differences between the pre- and post- measurements of the variables under consideration.

The researcher attributes the moral differences in breathing functions of both vital capacity, extreme respiratory potential and forced vitality to the effectiveness of training with fartlike-style exercises, which have improved the functioning of breathing functions in question, as this training method depends on the variation in the speed used in the exercise between fast, medium, slow and vice versa and instability at one speed, which makes the work of the respiratory system vary between these speeds and allows the entry of a greater amount of oxygen if the enemy At high and steady speed, this improves the efficiency of the work of the antenna and anaerobic systems, and in this regard mentions (Malik: 1998) and (Mohammed: 2004) that the exercises in the style of vartlik work to improve the efficiency of the work of the periodic and respiratory systems and the development of oxygen and non-oxygen tolerance as well as improving the physiological aspects of the athlete, adds both (Hamdi Mohammed: 2004) Vartlik exercises improve the respiratory system and reduce pulse rates during hospitalization.

The improvement in breathing variables in the research sample members was the result of the use of high- and medium-speed exercises that need to be made by the sample members throughout the exercise period, and as a result of the adaptation of the members of the research sample to the nature of this effort, the respiratory system improves its performance and increases its efficiency as a result of adapting to the effort on the athlete's shoulders, as he mentions (Bahaa Salama: 2000: 62) "The lust increases during the effort exerted as a result of increased constriction and flatness of the muscles working in the breathing process and this helps to make the process of lust much deeper and the amount of air entering the lungs is greater than normal"

The development in breathing functions reflected positively on the achievement of 200 m in the members of the research sample as well as the speed exercises used in this method that worked to improve the performance of the body's functional organs, which in turn led to improved physical performance, as in enemy competitions the body of hostility depends on the non-antenna system in energy production, which in turn depends on the compound acryatine phosphate to produce adinocin triphosphate During anaetic metabolism, the contraction and simplicity of muscle fiber is accompanied by a hydrolysis of adenosine phosphate triathylone, which is transformed into adenosine diphosphate, as well as a phosphate part, and releases and produces the energy needed for muscle contraction (Ibrahim Salem et al.: 1998:61) and this work needs adjustments in muscle cells and depends on oxygen stored in the muscle and this treasury is the result of the efficiency of the respiratory periodic system in hostility, "The respiratory circulatory system is responsible for the distribution of oxygen and absorbed nutrients to all cells and is responsible for ridding these cells of waste and carbon dioxide formed as a result of combustion and oxidation" (Ibrahim Salem et al.: 1998:1) "High intensity training leads to a significant improvement in athletes' vital capacity and high overall fitness, resulting in the body extracting more oxygen and increasing pulmonary sizes," he said. 10).

## 4- Conclusion

Through the results of the research, the training of the vartlik has a positive impact in improving the efficiency of the work of the respiratory periodic system if the exercises are used in this way according to scientific bases and the legalization of the necessary rest periods and this improvement has positively reflected the actual performance of the members of the research sample, as the interest in improving the efficiency of the functional devices associated with the physical aspects of effectiveness or sports activity practiced during training will achieve the training goals and give positive results in the competitions.

Sources:


- Ibrahim Salem Al-Skar et al.; Encyclopedia of The Physiology of Track Competitions : (Cairo, Book Publishing Center, 1998).
- Abu Ala Abdel Fattah and Nasreddine Sayed; Fitness Physiology: I1 (Cairo, Arab Thought House, 1993).
- Abu Ala Abdel Fattah and Nasreddine Sayed; Fitness Physiology: i2 (Cairo, Arab Thought House, 2003).
- Iyad Hamid Rashid and Hossam Mohamed Heydan; Future Trends in Sports Training: (Anbar , Anbar University Press, 2011).
- Bahaa al-Din Ibrahim Salameh; Physiology of Sports and Physical Performance: (Cairo, Arab Thought House, 2000).
- Mohammed al-Hazaa, Physiology of Physical Voltage, Theoretical Foundations and Laboratory Procedures for Physiological Measurements (Saudi Arabia, Scientific Publishing and Printing Presses, King Saud University, 2009).
- Hassan Al Sayed Abu Abda; Physical Preparation of Footballers: (Cairo, Arab Thought House, 2011).
- Azza Fikri: High-intensity pregnancy affected the response of some endocrine glands during the training season of enemy racers: (Doctoral Thesis, Faculty of Sports Education, Helwan University, 1997).
- Nasreddine Ahmed Sayed;
- Hamdi Mohammed Ali; the impact of the development of non-pneumatic endurance on some physical and physiological variables and the digital level of the 1500m runners (Doctoral thesis, Faculty of Sports Education for Boys, Suez Canal University, 2004).
- Hanan Mohammed Malik and Hala Attia Mohammed, the impact of a proposed training program using the Vartlik method to raise the functional competence of the respiratory periodic system and the motor capacity of summer schools: (published research, Faculty of Sports Education for Boys, Helwan University, 1998).