



The Effect Of A Proposed Training Method Using The Diminishing Recovery Approach On Improving The Performance Of The 800-Meter Sprint For Young People

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Research Abstract

The research objectives were:

To identify the effect of the progressive rest method.

To identify the differences between the pre- and post-tests for the control and experimental groups. The researcher used the experimental method to solve the research problem, and the conclusions were:

The proposed method had a positive effect on improving the performance of the experimental group in the 800-meter race and their endurance. Structure and anaerobic endurance: The proposed method outperformed the traditional method in terms of progress and development in the 800-meter race, physical ability, and anaerobic endurance, as evidenced by the differences

between the two methods (proposed and traditional) in the variables under study. Limited development for the sample. The experimental group was tested according to the training program developed by the coach in the 800-meter race, focusing on physical ability and anaerobic endurance. The experimental group showed a better rate of improvement than the control group in the 800-meter race. The anaerobic endurance improvement of the experimental group was significantly greater than that of the control group. The respiratory system and its ability to consume oxygen improved, as observed in the control group. Recommendations include: adopting the principle of progressively worsening training in certain sports activities, given its positive impact on the variables under study; and incorporating physical training exercises into the proposed training program. To develop physical ability and anaerobic endurance for the (800) meter run. To conduct studies that address other athletic events in the field using training with decreasing rest. To conduct a comparison of the effect of physical load movement with decreasing rest with another physical component to determine its effect on the performance of some athletic events in the field.

Keywords: Decreasing recovery, 800m youth effectiveness, athletics, training methodology.

- 1- Research Overview:
- 2- 1-1 Introduction and Importance of the Research

In the modern era, physical education has become a distinct science in its own right, especially since all the sciences that contribute to its development are integrated within this field and serve as contributing factors to its advancement. This is evident in the utilization of all natural and educational sciences following the significant scientific progress in the field of sports. In the modern era, physical education has become a distinct science in its own right, especially since all the sciences that contribute to its development are integrated within this field and serve as contributing factors to its advancement. This is evident in the utilization of all natural and educational sciences following the significant scientific progress in the field of sports. The optimal adaptation state leads to the training state that achieves (athletic form). Among these methods that attracted the researcher's attention is the method of decreasing rest periods, which is considered one of the methods that has not been studied by researchers and specialists due to the positive effects it achieves.

1-2 The Research Problem:

Based on the concept of the problem, which is defined as the precise understanding of agreed-upon facts and ideas, and which represents a test of the researcher's skill (Ahmed Badr: 1988), the problem usually requires the researcher to be accurate and objective in solving it and to arrive at specific readings that help define this problem. The researcher, through reviewing numerous sources, references, and studies, observes the limited use of

the decreasing rest periods technique in many training programs for those conducting running drills. This highlights a need for some changes in the methods employed to enhance performance. The researcher's perspective is that... Currently, many have found shortcomings in achieving the required numbers in this activity through their field observations, which has led them to develop and standardize the training program based on decreasing rest periods in order to achieve satisfactory results through the impact of this program on young runners in Dhi Qar Governorate. This category is considered the foundation upon which sporting achievements are built.

1-3. Research Objectives:

1. To identify the effect of the diminishing rest method.
2. To identify the differences between the pre- and post-tests for the control and experimental groups.
3. To identify the differences between the post-tests for the control and experimental groups.

1-4 Research Hypotheses:

1. There are differences between the pre-tests and post-tests for the control and experimental groups.
2. There are differences between the post-tests for the control and experimental groups.

3- Research Methodology and Field Procedures:

1-2 Research Methodology:

The researcher used the experimental method because the nature of the problem being studied determines the research method used to obtain accurate data and information. The experimental method is considered more suitable for solving the problem being researched, as it deals with the influential phenomenon, its causes, and the process of change resulting from a specific situation. And verifying its causes, but it deals with the facts (Rissan Khribat: 1987).

2-2 The research population and its sample:

2-2-1 Homogeneity of the research sample:

The sample in the model on which the research is conducted, and the researchers must choose their research sample so that it is truly representative of the original population (Wajih Mahjoub: 1993).

Thus, the researcher selected their research sample using the purposive method, and it consisted of (10) youth middle-distance runners in the (800) meter race in athletics, representing a percentage of (100%) of the original population, which are the runners registered in the federation's lists. Athletics in Dhi Qar Governorate. After that, the researcher divided the sample into two groups, experimental and control, in a simple random way and by using a lottery, so that the number of each group became (5) players. The researcher also carried out homogeneity within each group using the coefficient of difference, which was (25%).

3-2. Data Collection Methods and Tools Used:

2.3.1 Data Collection Methods:

- Arabic and foreign sources and references.
- Self-observation and rigorous scientific observation.
- Computer programs and applications.
- Tests and measurements.
- Electronic stopwatch.
- Laptop.
- Stethoscope for measuring pulse.
- Height and mass scale.
- Flags.

2-4 Field Research Procedures:

2-4-1 Identifying the Abilities Used in the Research:

The researcher presented a number of physical ability variables (speed-strength in the legs, explosive power in the legs, strength endurance in the legs, back, and abdomen), and maximum speed in futsal. These abilities were then presented. The skills are on the experts and specialists, to survey their opinions on nominating what they see as appropriate from the physical ability variables related to the study variables, and to take a percentage (75%).

2-4-2 Determining the research tests: The researcher presented a number of variables and tests related to the variables of physical abilities in futsal football to the experts, which have a high degree of validity, reliability and objectivity. These tests were presented to the experts and specialists, and a percentage of (75%) or more was taken.

2-4-3 Pilot Test

First: The researcher conducted the first pilot test on 11/23/2024 on a sample of (4) young athletes at the Al-Furat Sports Club before starting the main experiment, in order to apply the physical and functional tests under study. This pilot test also confirmed the objective.

The first thing that can be identified is the following:

1. Understanding the organizational and administrative aspects of the tests.
2. Overcoming difficulties and obstacles that the researcher may encounter during the main experiment.
3. Ensuring the competence of the research team and support staff in conducting the test.

Second: The researcher conducted the second exploratory experiment on 11/30/2015 on the research sample and on the field of Al-Furat Sports Club to standardize the level of intensity of time achievement for each exercise of the experimental method on the research sample.

2-4-5 Training Curriculum

The researcher prepared the training curriculum based on scientific sources and references, as well as personal interviews with a number of experts and specialists in the field of sports training and athletics. The intensity, volume, and density were formulated and standardized using heart rate and decreasing rest, as in (2, 3), for each training unit, based on the average.

The researcher used the training methodology starting from 1/12/2024. This methodology was applied during the special preparation phase to the research sample, and it consisted of (12) weeks with (3) training units per week, thus the total number of training units became (36) units using The high-intensity interval training method is suitable for anaerobic training by relying on heart rate during the use of a progressively slower rest period. The rest periods are undulated at a ratio of (3:2). The training program included the main section and was similar to the control group in terms of intensity, volume, and variation. Comfort through the use of the pulse in a decreasing manner. The researcher has set the method with emphasis and restraint as in

Appendix (2).

2-5. Statistical Methods: The researcher used statistical tools to extract the research results.

3. Presentation, Analysis, and Discussion of Results

3.1 Presentation, Analysis, and Discussion of Control Group Results

3.1.1 Presentation of Control Group Results

Table (2)

shows the arithmetic mean, standard deviation, standard error, calculated and tabulated (t) value, and percentage of improvement for the (800) meter pre- and post-test of the control group.

Variable	Pre-Test	Post-Test	Standard Deviation of Differences	Standard Error	Degrees of Freedom	(t) Calculated	(t) Tabular	Result	Rate of Progress
800 m	2.172	2.15	0.0047	0.0003	4	11	2.776	Significant	%1,01
Physical Power (kg.m)	140.72	163.36	4.856	2.171	4	10.424	2.776	Significant	%13,3
Anaerobic Endurance (kg·m/s)	13.778	15.272	0.448	0.2007	4	7.394	2.776	Significant	9.785 %

3-1-2 Discussion and Analysis of the Control Group Results

The researcher attributes the significant differences shown in Table (3-4) to the fact that the traditional method developed by the trainer had a positive effect on the development of the anaerobic control group. The researcher believes that this developmentIt is a self-evident truth that any training program through which a coach seeks to develop his players may not reach an advanced level, because the program set by the coach may be within a single context in terms of time distribution and a similar training method and related sciences such as sports physiology and sports training. And others through the researcher's observation of the curriculum set by the trainer, which is usually a daily training dose given spontaneously (according to the expert) most of the time, and this is what Majid Ali Musa (2003) pointed out.

4-2 Presentation, Analysis, and Discussion of the Experimental Group Results

4-2-1 Presentation of the Experimental Group Results

Table (3)

shows the arithmetic mean, standard deviation, standard error, calculated and tabulated value of (t), and the development of the pre- and post-tests for the experimental group.

Variable	Pre-Test	Post-Test	Standard Deviation of Differences	Standard Error	(t) Calculated	Tabular (t)	Result
800 m	2.144	2.064	0.0041	0.00032	12.649	0.776	Significant
Physical Power (kg.m)	140.82	168.87	4.88	2.193	13.166	2.776	Significant
Anaerobic Endurance (kg.m/s)	14.03	16.182	0.133	0.097	35.997	2.776	Significant

3-2-2 Discussion and Analysis of the Experimental Group:

The researcher attributes the significant differences in favor of the experimental group in the variables under study (800 meters), physical ability, and aerobic endurance to the nature of the methodology and its contents, which the researcher sought to develop based on the time of the decreasing rest system, considering that rest is one of the essential components of

physical exertion and is appropriate for With the nature and energy system in the 800-meter run, which is regulated under the mixed (lactic) system, we have observed a significant improvement in the performance of the 800-meter run. This was confirmed by Kamal Darwish and Muhammad Subhi Hassanin (1984). The improvement is a result of the training units, which served as an indicator of the functional mechanisms involved in producing the necessary energy. This mixed energy is what we also observed in the rate of development in anaerobic endurance and physical capacity, all of which represent general indicators of anaerobic and aerobic functional capacity simultaneously. The researcher sought, through load movement and the formation of training units, to make the functional systems work The athlete primarily relies on a mixed system, employing a systematic reduction in rest based on scientific principles and sports training methodologies. It's also worth noting that the progress athletes make in the 800-meter race is attributed to functional adaptation, as the proposed training program allows this adaptation to reach world-class levels. In accordance with the scientific principles of sports training and the units established based on the foundations of sports training to achieve the (800) meter event and the specific intensity range of this event through its most important indicators such as physical ability and anaerobic and aerobic endurance, this gives the athlete a state of achieving the training units adaptation The cumulative effect of the body's functional systems activated during the 800-meter event (Kamal Darwish and Muhammad Subhi Hassanin, 1984).

4.2.3 Discussion and Analysis of the Results of the Two Groups

The researcher explains the significant differences between the experimental and control groups in the variables under study (800 meters): physical ability and anaerobic endurance. All of these differences favored the experimental group. The following are the reasons:

The training units developed based on the proposed training curriculum were based on the principle of diminishing rest, which the researcher considers a means to improve the performance level of the 800-meter run, given that the mechanism is a fast-paced activity that falls under the lactic energy system, and since this system relies on energy production To support adequate oxygen intake during the session, thus reducing rest has a positive effect on improving the level of the lactic energy system, which does not depend entirely on oxygen but only relatively. This is what the researcher aimed for by reducing the player's rest during the physical exercises designed to achieve Reaching (50-65%) above half of the total energy reserves in this event, this clearly illustrates the progress of the experimental group in the level of anaerobic endurance necessary to complete the 800-meter run. This progress and achievement are clear responses to the established method using diminishing rest. This is

considered one of the effective training methods that aligns with the activity under study (Qasim Hassan Hussein, 1998).

4- Conclusions and Recommendations

4-1 Conclusions

1. The proposed method demonstrated a positive effect on the experimental research sample's performance in the 800-meter run, physical strength, and anaerobic endurance, as evidenced by the differences between the pre- and post-tests. For the experimental sample
2. The proposed method outperformed the traditional method in the progress and development of the (800) meter achievement, physical ability and anaerobic endurance through the apparent differences between the two methods (proposed and traditional) in the variables under study. 3. Limited improvement was observed in the control group, following the training regimen developed by the coach, in the 800-meter race and in physical endurance and anaerobic endurance only.
4. The experimental group showed greater improvement than the control group in the 800-meter race.
5. The experimental group showed significantly greater improvement in its anaerobic endurance than the control group. 6. The respiratory system and its ability to consume oxygen improved, as observed in the control group.

4.2 Recommendations

1. Adopt the principle of progressive rest training in training certain sports activities, given its demonstrated positive impact on the development of the research variables under study. 2. Relying on the movement of physical loads within the proposed program to develop physical ability and anaerobic endurance for the 800-meter race.
3. Conducting studies examining other athletic events using progressive rest training.

4. Comparing the effect of progressive rest training with other physical components to determine its impact on performance in specific athletic events. Sources

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