

The Effect Of Special Exercises According To Critical Velocity To Improve The Endurance Of Speed And Achievement For 200m Freestyle Swimmers

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Abstract: The sports training process undertakes the harmonious development of the physical elements from all aspects (physiological and psychological) to suit the level of the physical structure with an emphasis on the development of the physical elements.

Water activities differ from the rest of the other activities as they take advantage of the water medium in performance, however the characteristics that must be available in swimming are similar to those required by many other activities, swimming is similar to running and generally includes short, medium and long-distance competitions.

The aim of the training process in the field of swimming is to help the swimmer to adapt to other training duties entrusted to him, which help him in reaching the best achievement according to his capabilities and aptitudes. And the digital achievements that swimmers achieve in all swimming activities did not come suddenly, but rather as a result of good plans proven on modern scientific foundations as well as correct planning and programming of the training curriculum vocabulary. The importance of the research is evident in the number of special exercises according to the critical speed to develop the endurance of speed and achievement for 200m free swimmers and to identify the extent of their impact on developing the research variables under study. As for the research problem, it lies in the lack of use of the training method that targets the energy system according to the principle of critical speed and the determination of the time period of the critical speed using fewer distances and high stresses (high) when determining the time period for the critical speed to develop the endurance of speed and achievement for swimmers (200 m) freestyle. And that the goal of the research is to prepare special exercises according to the critical speed to develop the endurance of speed and achievement for swimmers (200 m) free, as well as to identify the effect of special exercises according to the critical speed to develop the research variables under study for the members of the research sample.

As for the research hypotheses, there are statistically significant differences between the pretest and the post test for the individuals of the research sample and in favor of the post test. The critical velocity is the maximum velocity that can be maintained continuously without fatigue below the lactic threshold. Research methodology and field procedure:

1. INTRODUCTION

Research Methodology:

The two researchers used the experimental method for its suitability to the problem and nature of the research in the design of one group with pre and post test.

Community and Sample Research:

The research sample was chosen by the deliberate method of one experimental group represented by the Police Club swimmers, who numbered (7) swimmers, and (2) swimmers were excluded.

Tools and devices used:

Scientific resources, testing and measurement, observation and experimentation, data dump form, statistical methods, whistle, Casio stopwatch, Dell laptop.

Tests used in research:

First: Freestyle swimming test for a distance of (150) m:

- The purpose of the test: to measure the strength tolerance of a swimmer.
- Tools used: swimming pool, stopwatch, registration form, whistle, auxiliary staff.
- Description of the performance: the position of the body of the laboratory (swimmer) is horizontal, that is, the same position of float in the water at the edge of the basin, and when the signal is heard, the swimmer begins to swim freely until the end of the specified distance.
- Recording method: it records for the tester (swimmer) the time spent on traveling the distance in seconds and its parts.

Second: Achievement test freestyle swimming for a distance of (200) m:

- The purpose of the test: to measure achievement of a (200) meter freestyle swimming.
- Tools used: swimming pool, stopwatch, registration form, whistle, support staff
- Description of the performance: the swimmer stands on the starting platform of the swimming pool and upon hearing the word (take your place) from the launcher, the tester (swimmer) takes the preparation position for the starting jump and after hearing the whistle, the swimmer jumps into the water at the maximum speed to swim freely until the end of the required distance.
- Recording method: it records for the tester (swimmer) the time spent on traveling the distance in seconds and its parts.

Note: Three timers were used to calculate the time for each laboratory (swimmer) for the required distance according to the articles of the International Swimming Law for the sport of swimming in the absence of electronic timing in order to achieve justice and calculate the real time for the distance traveled by the swimmer, and the average time is calculated after deleting the upper and lower time If the timing is the same for two hours.

Presentation and discussion of results:

Presentation of the results of the test of endurance of speed (150) m and achievement for a distance of (200) m freestyle using the test (Mann Whitney) with an indication of (0.05).

Num	Tests	measuring unit	Pre-test	Post-test	The calculated (E) value	(E) tabular value	Significance
1	Withstand speed for a distance of 150 m	second	0	16	0	0.171	Sign
2	Achievement (200) m freestyle	second	0	16	0		Sign

2. DISCUSS THE RESULTS:

Through the results obtained, it was found that there are significant differences between the pre-test and the post-test and in favor of the post-test for the members of the research sample.

The researchers attribute the reason for this to the use of special exercises and that it has a positive effect. In the development of the studied variables, the development was also reflected in the reduction of the achievement time for swimmers (200m) freestyle.

The researchers believe that organized sports training based on scientific foundations will lead to the occurrence of physical and functional changes for various body systems, and that special exercises have caused changes and developments for the various functional organs resulting from organized physical preparation. And Kinetic such as muscle strength, endurance, velocity, flexibility, and force compounds such as velocity, explosive power, force endurance and velocity endurance.

And that this improvement and development is due to the regularity of the members of the research sample in applying the vocabulary of special exercises during the training units and the keenness to perform them in order to achieve achievement, reduce time and match the result with the plan.

And that the significant differences between the pre-test and the post-test and in favor of the post-test, the researchers attribute it to the use of special exercises and partial distance exercises, with intensity that were determined according to the critical speed and rest periods according to the intensity used.

We attribute the reason for the significance of achievement to the percentage of development of partial distances, which are common in both physical and physiological terms, as the high intensity and the relatively long performance time is related to the special endurance capabilities, including the speed bearing that is characterized by the lack of oxygen reaching the working muscles, because one of the conditions of conditioning for special endurance is resistance Fatigue or a delay in the occurrence of fatigue.

3. CONCLUSION:

The two researchers reached a set of conclusions and recommendations, including:

The effectiveness of special exercises and that they have a positive effect in developing the research variables and that the results of the research showed the presence of significant statistically significant differences in the achievement of swimming (200 m) free between the pre-test and the post test and in favor of the post-test, the contribution of exercises according to the critical speed in the development of bearing the critical speed and achievement of swimmer (200) m is free for individuals of the research sample.

The most important recommendations are to emphasize the study of critical speed as a dependent variable and to know the extent of its effect, taking into account individual differences when applying critical speed training to a group of athletes, and conducting other studies and research on the applications of critical speed for various events and races for swimming.

4. REFERENCES:

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