

The effect of weight training to develop of some physical abilities and the achievement of the 50-meter freestyle swimmers

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Abstract

The science of sports training has laid a basic foundation for all sports events and activities, and that the link and overlap of the science of sports training with other sciences can be used to achieve the desired achievement.

The effectiveness of training with weights in swimming is important because it increases the speed of the swimmer through the use of correct scientific methods, which will enable the coach to discover the extent achieved from training with weights that reach the shortest way and best performance and work to achieve the desired goals in the curricula and training units.

The importance of the research is to identify the effect of weight training on the development of some physical abilities and achievement of the 50-meter freestyle swimmer, because of its impact on the speed of the swimmer in cutting the distance and achieving the best time during the race and competition.

After presenting, analyzing and discussing the results, the most important conclusions were that exercises with weights have a positive effect in developing some selected physical abilities and achievement for the 50-meter freestyle swimmer.

The most important recommendations were the need to pay attention to weight training for its impact on the development of research variables for the members of the research sample and the achievement of 50 free meters.

Keywords: *weight training, physical abilities, free swimming.*

Introduction

The science of sports training has contributed to achieving the goals of practical sports activities and events because it depends on the basic scientific foundation of the scientific principles and laws of other sciences that are closely related with it in order to achieve the desired goal, because it is considered the essential element for the success of sports activities because of its distinctive and effective role for the numbers of players in all respects. (physically, skillfully and psychologically) to achieve the gains of the training process.

Swimming has witnessed a remarkable and rapid development, whether at the Arab or continental level, and the smashing of numbers is a clear evidence of the extent of development and the increase in training loads and the associated development of physical capabilities that lead to achieving the desired achievement. The effectiveness of training with weights in swimming is important because it increases the speed of

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the swimmer through the use of correct scientific methods, which will enable the coach to discover the extent achieved from training with weights that reach the shortest way and best performance and work to achieve the desired goals in the curricula and training units.

The importance of the research is to identify the effect of weight training on the development of some physical abilities and achievement of the 50-meter freestyle swimmer, because of its impact on the speed of the swimmer in cutting the distance and achieving the best time during the race and competition.

Research problem: By informing the researcher of the sources and follow-up in the field of swimming training, as well as being one of the rulers of the Iraqi Central Swimming Federation and a teacher of swimming. And put it in the hands of players and coaches in order to promote the sport of swimming in general to be of assistance in achieving the required achievement in competitions and championships.

Research aims:

- Preparing weight training exercises to develop some physical abilities and achieve the 50m freestyle swimmer.
- Recognizing the effect of weight training to develop some physical abilities and achievement of the 50m freestyle swimmer.

Research Force:

- There is a statistically significant relationship between weight training to develop some physical abilities and achievement of the 50m freestyle swimmer.

1-5 Research Areas:

1-5-1 the human domain: Adhamiya Club swimmers, youth category (15-17) years..

Spatial domain: Al Shaab Olympic Indoor Swimming Pool (Baghdad Governorate).

1-5-3 Time range: the period from 2/7/2019 to 12/9/2019.

2-1 Research Methodology:

The nature of the problem to be studied is what determines the nature of the approach followed, the researcher used the experimental method by designing a single group with a pre and post test for its suitability to the nature of the research problem.

2-2 Research Sample:

The sample of the research was chosen by the intentional method, and they are the swimmers of the Adhamiya Club, the youth category (15-17) years And their number (7) swimmers represent the main research sample.

2-3 Devices and tools used in the research:

- Portable Personal Calculator (Dell).
- Manual stopwatch type (Diamond). number (3)
- Weight hall.
- Pool.
- Fox 40 whistle. Number 2).

2-4 Tests used in the research:

The tests used that achieve the objective of the test were determined for the individuals of the research sample.

2-4-1 Physical abilities tests in water.

First: the name of the test: a test for a distance of (100) meters free swimming with the paws.

Purpose of the test: To measure the strength endurance of the swimmer.

Tools used: swimming pool, stopwatch, registration form, whistle, paws, support staff.

Performance description: The position of the body of the tester (the swimmer) is horizontal, that is, in the same position of buoyancy inside the water at the edge of the basin. When the signal is heard, the swimmer begins to swim freely, until the end of the specified distance.

Recording method: The laboratory (the swimmer) records the time he took to travel the distance in seconds.

Second: A test for a distance of (50) meters free swimming.

1. The purpose of the test: To measure the speed endurance and achievement of the swimmer.

2. Tools used: swimming pool, stopwatch, registration form, whistle, paws, support staff.

3. Description of performance: The position of the laboratory body (the swimmer) is horizontal, i.e. in the same position of buoyancy inside the water at the edge of the basin. When the signal is heard, the swimmer begins to swim freely until the end of the specified distance.

4. Recording method: The laboratory (the swimmer) records the time he took to travel the distance in seconds.

Third: A test for a distance of (25) meters free swimming.

1. Purpose of the test: To measure the speed characteristic of the swimmer.

2. Tools used: swimming pool, stopwatch, registration form, whistle, assistant work team.

3. Performance description: The position of the body of the tester (the swimmer) inside the basin is horizontal, i.e. in the same position of buoyancy inside the water at the edge of the basin. When the signal is heard, the swimmer starts free-swimming at the maximum speed until the end of the specified distance.

4. Recording method: The laboratory (the swimmer) records the time he took to travel the distance in seconds.

2-5 Field Research Procedures:

2-5-1 Tribal tests:

The researcher conducted the tribal tests on Saturday 6/7/2019, physical abilities and achievement tests were conducted for the members of the research sample, and the data for the tests were collected in a special form.

2-5-3 Approach to exercises with weights:

Weight exercises were prepared for the members of the research sample to target the working muscles and directly influence them to achieve the training goal in the shortest way and the best performance. Saturday and Tuesday, and that the time of the exercises that were applied within the main section of the training unit was for (60-90) minutes, and the training volume was determined on the basis of the number of repetitions of the exercise in one group. 10/9/2019.

2-5-3 Post-tests:

After completing the application of exercises with weights on the members of the research sample, the researcher conducted the post tests on Thursday, 12/9/2019, and tests of physical abilities and achievement were conducted with the same procedures as for the tribal tests.

2-6 Statistical means

The researcher used the statistical package (SPSS) to process the data and results of the research variables.

3- Presentation and discussion of the results:

3-1 Presentation and discussion of the results:

Table (1) represents the presentation and discussion of the results of the research variables for the individual research sample in the pre and post tests.

Table No. (1)

It represents the arithmetic means, standard deviations, and the value of (T) for the individuals of the research sample.

T	Variables	the exams	sample number	Arithmetic mean	standard deviation	Standard error of the mean
1	m 100 freestyle test	pretest	7	59.429	1.718	0.649
		post test	7	59.013	1.791	0.677
2	m 50 freestyle test	pretest	7	28.113	0.075	0.028
		post test	7	28,056	0.065	0.024
3	m 25 freestyle test	pretest	7	13.064	0.123	0.047
		post test	7	12,736	0.347	0.141

T	Variables	Arithmetic mean	standard deviation	Standard error of the mean	T. value	Indication level
1	m freestyle 100 test	0.416	0.207	0.078	5.311	0.002
2	Achievement m freestyle50	0.057	0.041	0.015	3.714	0.010
3	Achievement m freestyle25	0.329	0.345	0.131	2.517	0.045

3.2 Discussing the results:

The selected physical abilities under study developed positively as a result of the exercises carried out in the training units through which the swimmers were able to achieve speed of performance.

And the positive development of speed endurance with some other physical abilities, which means the higher the level of speed endurance, the greater the swimmer's ability to cover the distance more efficiently and in less time. Training is related to the body's ability to withstand fatigue and bear the pain resulting from high acidity in the blood as a result of the accumulation of lactic acid. Therefore, the ability (velocity endurance) was linked to the lactic acid system. The swimmer has the ability to endurance speed because swimming is one of the frequent activities, which requires avoiding the manifestations of fatigue for the speed of forward movement in short competitions." (Essam Abdel-Khaleq, 184, 2005) (Muhannad Al-Bishtawi, 33, 2005)

As well as the positive development of endurance of force, which means that the higher the level of endurance of force, and that this ability "represents the marriage of the two elements of muscular strength and endurance of great importance from the physical and physiological points of view for many sports activities and games that require continuous movement such as long and medium distance swimming, long and medium distance running, bicycles, rowing and gymnastics, and this Mating results in an element of endurance of force, and force endurance is defined as the ability of a muscle or a muscle group to resist muscle fatigue during repeated muscle contractions and for a long period of time." (Bahaa Al-Din Salama, 275, 2000)

And that the development of strength characterized by speed, and it is one of the necessary components of physical fitness and an essential component in the performance of most sports activities that require fast and strong performance, as the swimmer needs the speed characteristic of the muscles of the arms and legs because swimming activities depend greatly on them, "it is required for the availability of distinguished strength with speed The individual must be characterized by a high degree of muscular strength and a high degree of speed as well as a high degree of motor skill to integrate muscular strength with speed, which is the rapid manifestation of muscular strength that combines both speed and strength in a movement. (Mufti Ibrahim Hammad, 85, 1998).

Everything that was achieved to develop physical abilities by using weights had a positive and effective effect in achieving the development of achievement by cutting the race distance in the least possible time and saving effort to achieve what was prepared and planning scientifically and accurately by reducing resistance and paying attention to technique to achieve speed performance.

Conclusions

- 1- Exercising with weights has a positive and effective effect in developing selected physical abilities as well as achievement.
- 2- The high level of some physical abilities of the swimmer helped to cover the distance in the shortest time by combining speed with strength.

Recommendations

- 3- Attention to physical abilities in general and exercises outside the water to ensure the development of working muscles.
- 4- Benefit and interest in research that gives positive results to serve the selected event.
- 5- Conducting similar research on other variables, activities and samples in swimming.

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