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The effect of using rebound exercises on the special endurance of the 400-meter freestyle event for juniors

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Abstract

That all exercises in sports have a benefit if they are based on scientific foundations, and rebound exercises occupy an important place in scheduling training for athletics to reach achievement, especially short events, including (400m),And the achievement of a 400-meter run. Thus, this research makes a serious contribution to overcoming many field obstacles as a result of low numbers in this effectiveness at the local level. As for the research objectives, it was to develop suggested exercises to develop the endurance of special speed and to complete the 400-meter freestyle run among the members of the research sample, And knowing the effect of these exercises in developing the endurance of special speed and the achievement of the 400-meter freestyle run among the members of the research sample. Among the most important conclusions reached by the researchers are: The methods of working using the proposed rebound exercises led to the development of endurance of special speed and the achievement of the 400-meter freestyle run among the members of the experimental group.

Keywords :*special endurance, rebound exercise.*

Introduction

That all exercises in sports have a benefit if they are based on scientific foundations, and rebound exercises occupy an important place in scheduling training for athletics to reach achievement, especially short events, including (400m). and the achievement of a 400-meter run. Thus, this research makes a serious contribution to overcoming many field obstacles as a result of low numbers in this effectiveness at the local level. The problem lies in the fact that the effectiveness of 400 meters of events that need a special technique to lead the race and achieve achievement and through the experience of researchers and being former runners and worked in the field of training and at the same time they searched in all areas of training methods and means and found a weakness in the strength of special endurance and most of the movements need great strength in The feet, arms, and abdominal muscles, and because the endurance of the feet has a key role in performing most of the movements in the 400-meter event, the researchers decided to know the effect of using reflexive exercises, Hence the research problem. The research aims to prepare exercises using regressive training to develop the endurance of special speed and the achievement of the 400-meter

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freestyle run among the members of the research sample. As well as knowing the effect of these exercises in developing the endurance of special speed and the achievement of the 400-meter freestyle run among the members of the research sample. And the researcher's hypothesis that there are statistically significant differences between the tribal and remote tests in the research variables among the members of the research sample.

Research methodology and field procedures

Research Methodology: The researcher used the experimental method and designed the experimental and control groups with a pre and posttest as it fits with the nature of the problem to be researched.

The research sample: The research was conducted on a sample of runners from the junior category of (6) runners. The special speed and achievement of running 400 meters freestyle, and the second takes its usual training, (to give the researcher an equal opportunity for all members of the community to be within the selected sample) (Amer, 1999) and in order to know the homogeneity of the research sample members in the variables of height, weight and age (used by researchers) The skew coefficient, which showed the homogeneity of the sample, as shown in Table (1), and the coefficient was between (0.29 - 0.76 - 0.75), which are the values located between (-3, +3), which indicates the homogeneity of the research sample.

Table (1)

It shows the mean distribution of the research sample

STATISTICAL PARAMETERS VARIABLE NAME	**MEASRUING UNIT**	**SMA**	**STANDARD DEVIATION**	**SKEW MODULUS**
height	**poison**	155.89	1.45	0.39
Bloc	**kg**	52.67	3.06	0.72
Age	**year**	17	0.86	0.86

Means, devices and tools used in the research: The researchers used the necessary means and tools, whether they were data, samples or devices, so that they were organized in kind work (with efficiency, accuracy, and with the least effort and in the shortest time) (Muhammad, 1995).

Arab and foreign sources, the information network, personal interviews, the assistant work team, a scale device, a stadium and a field, timing hour's number 6.

Field procedures used in the research:

The first reconnaissance experiment: The first reconnaissance experiment was conducted on the corresponding day / /, to identify the extent to which flexibility tests and tests of the offensive skills selected in the research can be adopted and to identify the appropriate time and time taken to perform the tests and the possibility of their performance by everyone, as well as the knowledge of the assistant work team and their understanding of how to work The method of registration, as well as testing the efficiency of the tools used in the research and the expected difficulties in implementation.

Tribal tests: The tribal tests were conducted on the experimental and control groups in the 600m speed endurance test and the 400m achievement at nine in the morning, which started on Saturday 3/8/2019 and Sunday 4/8/2019 as well as a measurement test (height, weight, age).

Implementation of the training curriculum used in the research: The researchers prepared exercises in the regressive method during the preparation period, especially during the period of implementing the training program, relying on their field training experience and drawing on the opinions of experts and specialists in the field of sports training and scientific sources, which added sufficient scientific immunity in the possibility of applying it to such life stage.

* The approach was started on Tuesday, 6/8/2019, and continued until Sunday 6/10/2019 for the experimental group.

* Implemented for two months (eight weeks) with three units per week (24) training units.

*Training unit days are (Sunday, Tuesday, and Thursday).

Posttests: After the proposed training curriculum was implemented within the specified time period, the researchers conducted the post tests on Tuesday and Wednesday 8/10/2019 in the same manner and conditions as the tribal tests.

Statistical means: the researcher used the social statistical bag system (SPSS).

Presentation, analysis and discussion of the results:

In order to know the results of the tests for the research sample and in light of the statistical data reached by the researchers through the results of the research after conducting the (pre and post) tests for the research sample, the presentation, analysis and discussion of the results were organized in the following order:

1. **Presentation, analysis and discussion of the results of the two research groups in the special speed endurance test (600 meters).**

Table No. (2)

Shows the arithmetic means standard deviations and the value of T Calculated and tabulated in the results of the pre and posttests in the special speed endurance test for a distance of 600 meters

the group	the test	s	p	qq	p	Values T calculated	mistake percentage	The significance of the differences
experimental group	Tribal	1.3480	.01483	.03600	.01342	6.000	.004	moral
	after me	1.3120	00837					
control group	Tribal	1.3540	.01342	00800	.01483	1.206	.294	insignificant
	after me	1.3460	00548					

The difference between the pre and posttests, and according to what the researchers found, came through the correct distribution of the special exercises, as well as dividing the distance of 600 meters into several divisions and repeating them in proportion to the possibility of the sample members, as well as to the distribution of the training load in a parallel way. The ripple was used in the training loads with means and directions that were prepared directly on the development of the level of endurance of speed by using the maximum intensity, and this is confirmed by what (Qasim Hassan Hussein, Abdul Ali Nassif) said that (the most important elements on which the development of the level of special endurance depends is the capacity of endurance The intensity of the distance traveled and the methods of training) (Qasim, 1987). The endurance of special speed also means (the ability of

resistance against fatigue with a near-maximum load with a high intensity of effects mainly and anaerobic energy production) (German, 1986).

2. Display the results of the two search groups in achieving a running distance of 400 meters

Table No. (3)

The arithmetic means show the standard deviations and the value of (t the drawn and tabulated results of the pre and posttests in the achievement test ran 400 meters for the experimental and control group.

the group	the test	s	p	qq	p	Values T calculated	mistake percentage	The significance of the differences
experimental group	Tribal	55.2000	.83666	2.40000	.89443	6.000	.004	moral
	after me	52.8000	.83366					
control group	Tribal	54.8000	.83866	.20000	.83666	.535	.621	insignificant
	after me	54.6000	.54772					

Through the results reached by the researchers in Table (3) that there are significant differences between the pre and posttests in the two groups and the researchers attribute the reason for this development to the method of the training curriculum, as the work was carried out according to the distribution of distance (running 400 meters) and to a number of divisions over the length of time The application of the curriculum to the experimental group, which is a successful, effective, applicable, and generally useful experimental method because it includes various distances and time-limited, both according to the intensity of the curriculum vocabulary and the specific rest period between repetitions (since the regular and programmed training and the use of regulated types of intensity in training using the optimal types of rest between repetitions leads to the development of achievement) (Resan, 1995). The researchers attribute this development in improving the achievement of the effectiveness of the 400-meter run to the use of identical exercises with the abilities of the research sample members, as well as the distribution of these distances at one speed for the purpose of controlling between distance and speed to know how the athlete’s effort is distributed during the race. Hassan Ali and Amer Fakher point out that the use of a training load corresponding to the athlete's abilities is the important and necessary thing in the training process (Hassan, 2006).

Conclusions

After analyzing the results, interpreting them and treating them statistically, the researcher concluded the following:

1- The training method and intensity used led to the development of endurance of special speed and the achievement of the 400-meter freestyle run among the research sample members.

2- Work methods using reflexology exercises led to the development of endurance of special speed and the achievement of the 400-meter freestyle run for the members of the experimental group.

Recommendations

Based on the findings of the study, the researcher recommends the following:

1- Providing opportunities for researchers to conduct similar research at other levels and activities

2- The use of rebound exercises are the most appropriate in developing special speed and achieving a 400-meter freestyle run.

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Supplement (1)

Model exercises for the training curriculum

weeks	**Today**	**training unit**	**training type**	**intensity**	**Repetition**	**Rest between repetitions**
the first	Saturday	1	400 AD - 400 AD - 400 AD = 1200 AD	90%	Each division once	3-4 minutes
	Monday	2	300AD - 300AD - 300AD - 300AD = 1200AD			3-4 minutes
	Wednesday	3	400AD - 400AD - 400AD - 400AD = 1600AD			3-4 minutes