"Effect of special training to develop the performance of the movements of the legs and its relationship to the achievement of the breast- stroke activity 100m for the youth (un16 years)"

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Abstract

Through of the researchers observation the performance of local swimmers, they found that their performance is increasing in the strength and speed of the arms style in swimming on the breast-stroke compared to the legs and that the performance of swimmers depends on the movements of the arms significantly compared to the legs and this led to a decrease in the level of achievement of the event, especially in the effectiveness of the lower limb is highly effect compared to the rest of the swimming events And not to put a suitable mechanism by the trainers to perform in the best way.

so the researchers prepared a study through the introduction of qualitative exercises on the sample consisting of 3swimmers in breast stroke style with new assist training(rundles , bike and rubber ropes to develop the technical performance of the lower limb in accordance with the requirements of performance of the effectiveness of swimming according to the variables of the length of the stroke and its frequency which affects greatly in the performance of swimmers in the short distances(100m).

The researchers have found a large relationship between the length of the stroke and the movements of the legs and thus its effect on achievement, and the researchers have used the pre,post- tests and applied the program and then conducted the researchers reached some conclusions and recommendations including :

- performance of the strokes of the legs of the lower party and its relationship to the achievement :

- the relationship between the variable length of the movements of the legs and the exercises of the legs was Significant.
- The relationship between the variable frequency of the movements of the legs and the exercises of the legs was not Significant.
- The relationship between the variable length of the movements of the legs with the achievement Significant .
- focus on the training programs to the length of the movements of the legs as a variable has a great closeness in the development of performance as are the movements of the arms.
- Take care by selecting swimmers to those who have the length and speed of the frequency of the movements of the legs.
- Focus on the verity of the exercises and how could the swimmers training daily in units to make large advantage development in the variables on this study.

Keywords : special training, breast- stroke activity 100m.

1.Introduction

In every world championship we find that the world records are changing and we as researchers begin to ask why, how and to what new training methods have reached and how the training units are performed to start continuous studies to identify the technical development reached by coaches, which is shown through continuous record recording.

One of these sports is swimming, which is known as the most changing event due to the new world records in its various events, and these events include the breast--stroke style with the special quality training it needs, whether for the upper and lower lambs. Through the researcher's observation to the performance style of local swimmers found that the trainers focus on the performance of the arms compared to the legs where the trainers focus on increasing the force and speed of the arms strokes to get an increase in velocity while not the same on the legs compared to arms and in swimming on the breast-stroke style we find that the swimmer depends on the lower heavily and here can be observed the performance of the legs not in quiet suitable with the performance of the swimmer for arm strokes, which shows not affected with the achievement of the trainers

the importance of this study to show anew training exercises for the legs to developing the strokes length of swimmers in the breast-stroke swimming activity of national team swimmers and the researcher make a special training in this study to solve the problem by preparing a program to train the legs and raise their level to link with the performance requirements of swimmers, which is to reach the swimmer to the best in the technical performance of the race time.

The aim of the research is to:

1 Use Anew Special Exercises Training For The Lower Limbs (Legs).
2 Study The Effect T Of Special Exercises To Developing The Technical Performance Of The Movements Of The Legs.
3 to identify the effects of special exercises on achievement in 100m breast-stroke style .

and the research were:

- **work field**: the closed international people's pool / Baghdad.

- **community of study** : a group of swimmers of the Iraqi national team.
- **Time of the study** : Period from 1/6/2016 to 1/9/2016.

Terms:

- Specific exercises: is a group of exercises specialized in training muscles force according to performance requirements.

2-Research methods and field procedures:

2-1 Research Method:

　　　　The researcher used the experimental method in the style of the single group with pre post-tests

2-2 research community and the sample:

　　　　the research sample included swimmers specialized in swimming on the breast-stroke style for (100 m) of the team swimmers who training in the international people's pool, (3)of swimmers who represent the research community ages 13-14 years.

2-3 search tools and devices used:

2-3-1 means of collecting information:

- Arab and foreign sources and references and the Internet.
- observation
- paper
- Testing and measurement.

2-3-2 Search tools:

- Olympic swimming pool
- abiding bicycle for training
- rubber ropes yellow type
- rundle height 90cm (5) pieces
- underwater swimming glasses (3) pieces
- electric pistol for start
- (3) whistle
- (6) Chinese watches for timing
- -(2) Pentium 4 cumpeotor
- (2) camera video
- Information registration form.

2-4 field procedures:

2-4-1 exploratory experiment:

　　　　The researcher conducted an experiment on a sample of swimmers who do not represent the research sample of the police and army clubs 3 swimmers to know   the conditions and difficulties and the way the exercises performs correctly And select the assistance   team during performance and also to do   the pre post -test.

2-4-2 previous Testing:

　　　　The researcher conducted the pre- test on Thursday, June 2, 2016 at 3:00 p.m. And on the people's pool. On the test below for the group   Where the tests are (one of the important ways to know the level of the swimmers) (3: p11).

2-4-3 The tests used in the research:

The test is one of the most important methods used in scientific research, the information that is used in research and study is collected to solve many of the problems facing scientific progress. And from there.

First - Technical performance test for swimming on the breast stroke- style

- Test name: 100m breast- stroke-style swimming.
- The goal of the test: to measure the time of technical performance of the swimmers in swimming 100m breast stroke-style to measuring:
- time 100m .
- average of the leg movement through 100m.
- average of the legs stroke length in 100m.
- Test description: the time st rated when The swimmer starts from the starting platform into the pool and swims at full speed to complete the race distance (100m)

2-4-4 Homogeneity of the research sample:

The researcher conducted homogenization of the research sample with variables (age in months, body length(cm), body mass in kg, training age in month), and table (1) shows this:

Table (1) Shows the value of the difference factor in the height, age and weight variables of the research sample members

variable	main	Standard deviations	value difference factor	Type of indication
Length(cm)	150	1.121	0.613	No Significant
Ega(year)	13.4	0.162	1.32	No Significant
Weight(kg)	45.13	0.92	1.25	No Significant
training age(month)	3.623	1.253	1.45	No Significant

2-4-5 training design :

The researchers made changes during the performance exercises of the experimental group during the training units by the trainer which consists of(8)weeks divided into(3) units in a week (24) units training (Sunday, Tuesday, Thursday) which contain (abiding bicycle for training**,** rubber ropes yellow type **,**rundles height 90cm sling between areas)all these exercises on the floor and take care desaturation healthy with their abilities .see the unit attachment.

2-4-6 Video recording:

The researcher used a avideo for the purpose of photographing the pre-testand also the post-tests for all swimmers of the research group the camera was moving with swimmers from start to the last touch of the rise to control all the variables in this study.

2 -4-7 Post-test:

The researchers take care with all requirement of photographing the rice 100m breast-stroke style to be similar to pre- test in all conditions in4.00 p.m 28/82016 according to the research variables required by the study of the swimmer for the purpose of extracting the rest of the variables related to the research according to the program of motor analysis (dart fish) to know the results related to the research accurately.

The following variables have been identified:
1 Performance time swimming 100m on the breast-stroke style.
2 The average strike length for the legs .
3 The frequency of the strike for the total distance of the legs .

2-5 Statistical means:

The researcher used the following statistical methods in processing the results obtained through pre and post-tests of the research group:
- the main
- standard deviation.
- median.
- one-sample(t) test
- (t)test for independent samples

3- Presentation, analysis and discussion of results:

3-1 Presentation and analysis of the results the main, standard deviations, , and the t test pre post-tests of the variables the experimental group. :

Table (2) shows the main, standard deviations(t)test the variables for the experimental group

variables	Pre-test		Post-test		(t)	(t)from tables	Type of indication
	main	st deviation.	main	st deviation.			
The average strike length for the legs(m)	1.623	0.0157	1.780	0.0100	13.743	4.30	**Significant**
The frequency of the strike for the legs	62	2	55	1	3.422		**Not Significant**
Achievement(sec.)	**84**	**1.527**	**78**	**1**	**5.376**		**Significan**

below the level (0.05) so there were differences indicative Significant to the post-tests

3-2 discussion of results:

Through the results that appeared it is clear there is no Significant relationship between the frequency of the legs compared to the variables under study where the studies It shows the important the length of the movements of the legs and relationship with the movements of the arms and thus appear the development in breast-stroke style by focusing on the development of the performance of the movements of the legs. In the bast the importance of the movements of the legs where in the race represented 25% of the total performance swimming in the race but at present days the focus on the length of the movements of legs became greater by increasing the exercises on the length of the movements of legs per swimmer, which does not affect the perfect performance of the swimmer, which is an element that requires the study of each swimmer through the physical measurements and Performance requirements for swimming event (100m Where through the analysis of the performance of swimmers in the Brazilian Olympics it became clear that the length of movements of the legs increases in short distances for the purpose of increasing the push for water back and thus increase disorientation forward tests and brought about a change in achievement where the researchers uses abiding bicycle for training ,rubber ropes yellow type ,rundle height 90cm,   sees that the amount of change in the method of training led to shorty of the time of the training unit with the

write application appear the development in training and thus the achievement appear in time of race

Conclusions and recommendations:
4-1 Conclusions:
1 the relationship between the variable length of the movements of the legs and the exercises of the legs was Significant.
2 The relationship between the variable frequency of the movements of the legs and the exercises of the legs was not Significant.
3 The relationship between the variable length of the movements of the legs with the achievement i Significant .

4-2 Recommendations:
1 focus on the training programs to the length of the movements of the legs as a variable has a great closeness in the development of performance as are the movements of the arms.
2 Take care by selecting swimmers to those who have the length and speed of the frequency of the movements of the legs.
3 Focus on the verity of the exercises and how could the swimmers training daily in units to make large advantage development in the variables on this study .

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Extension (1) Model for total size training unit: 2600m intensity: 90% total performance time: 103 minutes(6180 sec.)

Dep.	detail	volume	time	Rest time
Warm up 1500 second	Out pool general for warm up exercises		1500sec.	180sec.x60sec. rest
	Special flexibility all the bady			180sec.x 60sec. rest
	exercises general strength exercises by swimming			480sec.x120sec.rest
	Interior exercises 600m (free style swimming)	600m	360sec. continued	360sec.x60sec.rest
Main part 3420 second	Out pool - abiding bicycle for training (5) fre		450sec.	60sec. work x 30sec.rest
	- rundle height 90cm (5) pieces (10)fre		250 sec.	15secwork x10sec. rest

Dep.	detail	volume	time	Rest time
	inside pool			
	rubber ropes yellow type (10)fre.		1100	Tide the swimmers in pool do legs stroke(55sec work x55sec. rest)
	200m long backstroke	200m	180sec.	60sec.
	10)x (م50rubber suit free style	500m	900sec.	Between 60sec.
	م 200 free style relaxation	200m	180sec	
	10)xم25 (م50m freestyle25+ m butterfly	500m	900sec.	Between 60sec.
Finishing 480sec.	600m م free style relaxation	600m	360sec.	60sec out pool