

THE EFFECT OF RUNNING TRAINING IN THE AQUEOUS MEDIUM IN SOME SPECIAL PHYSICAL ABILITIES AND ACCOMPLISHMENT OF 100 M RUN FOR YOUTH

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Abstract

Aim of the research Preparation Rehearsals ran on hydrosphere to develop physical abilities for running 100 m youth .And effect do workouts on the ability of speed and fast-speed and power and 100 young. You chose 10 of the 100 from hostile young intentional landing way divided into two officer and experimental and applied the tested (30 mm, and 120 mm speed with speed, and five consecutive fast force stability. and test ran 100 m) then applied researcher training different pool ran for ten weeks and two units a week, and the search results have shown that there is an improvement in the level of speed and fast-speed and power for members of the experimental group.

KEYWORDS: RUNNING. AQUEOUS. ACCOMPLISHMENT. YOUTH. MEDIUM.

1. INTRODUCTION

The aqueous exercises considered an important exercises that received an attention in the recent years by the researchers because of their significant role in the integration capabilities of physical achievement, and this type of training is no longer limited to the rehabilitation of injuries or fitness-related health improvement only, but has become a strong base in the preparation of sporting programs for various sporting games and one of the types of sporting training is running in the water and with various levels of depth and which can affect the athletic players.

Aqueous training is considered a parallel style to the ground running and especially for many of the runners who have replaced many of their ground training doses with doses of aqueous training because of fear of the potential seriousness of the injuries and kind of changing the daily routine of the training (1: 165-182). The contest of 100 m is one of the athletics events that needs to move different parts of the body in correlation and sequence one at same time so the locomotor compatibility and rhythm one of matters that have major importance for this contest. The research aims to use aqueous medium for the development of some private capacities of 100m including helping in achieving best skillful and digital levels and identifying the importance of the effect of these exercises on speed and carry the speed and rapid power for development of the level of achievement in run of 100 m for youth .the research aimed to prepare the running training in the watery medium to develop the physical capabilities of 100 m youth and identification the effect of these trainings on the ability of speed and speed bearing and rapid strength and completion of 100 m youth.

"Hossam Eldin Farouq" defines exercises of watery medium as "physical exercises performed in water either free or by using tools or some ways of swimming to develop some special physical abilities and the skillful level" (2:32).

According to "Ne'mat Abd Al-Rahman " that training in the watery medium produces resistance in multiple directions while gravity serve as a single force and this makes the learner achieves what can be achieved on the ground but in half the time and achieves a balance of muscles to resist injuries more easily and faster and more efficient because the water causes a balanced resistance in multiple directions and equally over all surfaces of the body in addition to the use of tools in the water increases the intensity of the training exercise (3: 65).

2. RESEARCH METHODOLOGY AND ITS FIELD PROCEDURES

The researcher used the experimental method

3. RESEARCH SAMPLE

Was selected by the intentional way 10m of the 100 m hostile from youth category of the clubs that participated in the Iraqi championships for young people and players of the specialized school that subjected to ministry of youth and from youth who are trained in Al- Shaab court and court of Faculty of Physical Education - and Specialist Center court for the year 2014 .Their ages are 18 years old- under 20 years old according to the rules of international Association of Athletics Federations. The sample was divided according to the achievements of the sample into two groups control group and the other one is experimental. The researcher conducted on them the principle of equivalence.

4. TESTS USED IN THE RESEARCH

Physical tests included:

1. Test of (30 m) run from a standing position:

- The objective of the test: measuring the speed (the ability to accelerate)
- Tools and supplies: a whistle, a stopwatch.
- Test Description: the experimenter stands on the start line of the high start-line mode and when hears the signal of the running start , the experimenter run with fully speed for a distance of 30 m.
- Registration: record the time that have been taken by each experimenter since giving him the signal until the finish line, given two attempts for each experimenter and calculate best of them.

2. The test running 120 meters (4:44).

- The objective of the test: measuring the speed bearing .
- Tools: stopwatch - Measuring tape in meters.
- Performance description: After giving the signal of start , the player runs from the starting line and toward the end line with minimal time and by this may the player finishes the test.
- Registration: the registrar writes down the time that takes in seconds to the nearest 1% of the second.

3. Five and constancy test.

- The purpose of the test: to measure the rapid force.
- Tools: tape to measure the area of the bounce and stopwatch
- Method of performance: from standing , the player stands on the upgrade foot and come down on the same foot and jumps by the other foot and come down on it and so in the fifth jump lands on both feet, the player is given two attempts and calculates the best of them according the Newton's second law of force.

4. achievement test 100 m according to international law.

5. TRIBAL TESTS

The tribal tests were implemented for the duration from 7- 8/ 1/2014, has been taken into account in the application of these tests be carried out according to the rules of the game regarding run of 100 meters -120 meters (speed bearing) as

well as taking into account the performance of the players for the tests of strength that distinctive with speed and the application of the tests under the supervision of dedicated team as the tests that have been applied ; test of 100 meters and strength which is distinctive with force (5 and stability) in 07/1/2014, and a test of 120 meters (speed bearing) 8/1/2014.

6. THE TRAINING CURRICULUM

The proposed training curriculum have been prepared and the application of its components at 10/1/2014 for a period of ten weeks and the curriculum included 30 training modules and by 2 training units in the week and was used the method of repetitive training and the adoption of increasing the height of water level during training in the watery medium and the beginning was by raising the water 30 cm ,60 cm, 90 cm respectively as the rise represents a specific force when conducting trainings for members of the research sample and the adoption of these rises when performing these movements and get a clear impact of the training by increasing training load (intensity and distribution of exercises with the water height control as resistant medium) and the training module time was 30-35 minutes.

7. POSTERIORI TESTS

The researcher conducted posteriori tests in accordance with the points that taken in the tribal test as location, climatic conditions and measurement instruments, cameras and dated 25/3/2014.

8. DISPLAYING THE RESULTS

8.1. DISPLAYING THE RESULTS OF PHYSICAL TESTS FOR THE TWO GROUPS OF THE RESEARCH

Table (1) Difference of arithmetic means and standard deviations and the value of calculated (t) for the two tests tribal and posteriori in the physical variables for the two groups of research (the control and experimental).

The variable	Group	Unit of measurement	F	F-H	Value of calculated (t)	Significance
Speed 30 meter	control	Sec	0.047	0.215	0.218	Not significant
	experimental		0.267	0.060	4.386	Significant
Speed bearing 120 meter	control	Sec	1.812	0.851	2.129	Not significant
	experimental		2.68	3.978	5.941	Significant
Rapid speed	control	Newton	8.02	3.978	2.016	Not significant
	experimental		31.817	3.560	8.935	Significant

The degree of freedom (5-1) = 4 and the percentage of error 0.05

The table (1) above shows that value of calculated (t) for the control group in all the tests is not significant which means that the training program for this group was not active for the development of this special speed for this group , this means that the differences between the two tests are significant , the training program for this group was not active to develop this ability for this group.

While the results of the differences between the arithmetic means of the experimental group, all are significant in the level of the capabilities of speed, speed bearing and the rapid strength for the experimental group and in the favor of the post-test, it was because of their exposure to the components of the training curriculum, which was reaffirmed in which about the development of the explosive power of the muscles involved in 100-meter running and the emphasis on taking corners of the appropriate muscular work while performing these exercises in the watery medium despite the differences in the body level and speed of the player in the water which was controlled by the researcher which gives an advantage to control parts of the body and the amount of the proper muscle contraction which is one of the scientific issues affecting the development of explosive power, which inevitably will work on the development of speed of performance of the body

and then application of the appropriate real tracks to parts of the body during the performance of this event which gives a good flow through the performance stages (5: 87). The researcher attributed the cause of development of this ability by the experimental research sample to the effectiveness of the exercises that adopted in the training curriculum and in the watery medium and according to the intensity that dependent on the speed of performance in the water , multiple jumping and running trainings and controlling with these two factors making the muscles of the legs have ability to respond rapidly which increase the capacity in the working muscles . These exercises used by the researcher have been imposed on the body high effort and in particular on the working muscles, tendons and joints for this reason that the body must adapt gradually to these types of exercises by starting with low intensity trainings and then the most difficult and the highest intensity (6: 92), therefore the researcher has adopted the principle of load gradient by increasing frequencies relative to size, and increase the body plane and water speed relative to the intensity to match the sample.

The researcher believes that the importance of these capabilities of 100 m runner comes from the importance of speed and speed bearing which occupy the first place among the other physical abilities (7: 69), so you must take a large proportion of time devoted for training and take it out as fast as possible. The ability of speed and speed bearing considered of capabilities that are linked to the skillful performance especially in the performance of 100 m running and this is said by " Abu El- Elaa Ahmad" that the explosive strength and strength characteristic with speed associated with degree of skillful performance " (8: 133), which was confirmed by " Mohammed Hassan Alawy " that this ability has importance specially in the role of skillful performance during the competition and during acquisition of skill (9:54).

While the control group although of being not achieved high development in the explosive power of the leg muscles but there was little differences between the pre and post tests for this group and for the benefit of post-test and the researcher attributes the reason for this that the run of 100 m characterized by the quick reaction that depends on the explosive power of muscles of the two legs and the link between power and speed of muscle contraction per one muscle or the muscles that perform the movement has helped to progress them , however this development of the explosive ability of this group rise up to the significance in the post tests.

8.2.DISPLAYING THE RESULTS OF TRIBAL AND POSTERIORI TESTS OF COMPLETION OF THE TWO GROUPS OF THE RESEARCH , DISCUSSING AND ANALYZING THEM

Table (2) Differences of arithmetic means , standard deviation and the value of calculated (t) and the significance of difference between the pre and post- test in the achievement for the two groups (control and experimental).

Variable	Group	Unit of measurement	F	F-S	Value of calculated t	Significance
Achievement	control	meter	0.09	0.063	1.423	Not significant
	Experimental	meter	0.67	0.101	6.624	significant

the degree of freedom (6-1) = 5 and the ratio of error 0.05

Table (2) shows that the calculated (t) for the completion of the control group was (1.423). And the value of calculated (t) for the experimental group was 6.624 and this means that the differences were significant which means that the training program for this group and the emergence of significant differences in achievement for 100 m running which indicates the presence of development in the level of achievement for the experimental group better than the control group. This indicates that the watery training was the most effective in achieving the best results which appeared in the results of the experimental group, as said by Khairiya Ibraheem (that using the appropriate style of training is to be more effective in achieving the objective of the training) (10: 128). From the view point of the researcher as well as the previous , the trainings that used as resistance trainings within the period of the training curriculum, headed towards the development of rapid and explosive power, speed, and this is evidenced by the results of the differences that had previously noted by the researcher, which is an influential and effective intervention in the development of achievement. All of this made achievement in post-test for the experimental group shows with significant differences higher than what has been achieved in the pre-test, as shown in Table (2) itself, where the progress in the ability level of performance for any skill or sporting event will contribute inevitably in the evolution of the level of achievement of that skill or effectiveness in a positive and effective.

The researcher attributes that that the training curriculum included exercises for the development of the motor performance of running by using various resistance exercises with reference to point that these exercises serve the motor track of performance and the severity of performance ranged from this exercise between slow and medium to fast and

from different modes for the purpose to access to the optimal speed that required by the effectiveness or movement and it is one of the actions that develop the technical performance (9:45) as well as the performance of these exercises led to the mobilization of the largest number of muscle fibers and the recruitment of a greater number of motor units when performing these exercises (24:11) .As well as performing jumping exercises with the body weight in watery medium and with the same motor direction of performance lead to the development of strength and speed of contraction of voluntary muscles which reflected positively in the results of the posttest of achievement 100 m run for the experimental group and as athletic training is regular repeating to perform kinetic paths and doing changes in these tracks and in building internal organs that bear the training load in order to raise the level of achievement which has led to a significant improvement in the technical performance and style of performance in a reflected manner from the exploitation the physical foundations that have been well-earned (86:11). This brings to us the target of the search.

8.3. DISPLAYING THE RESULTS OF POST TESTS OF THE PHYSICAL VARIABLES OF THE TWO GROUPS OF RE-SEARCH AND THEIR ANALYSIS AND DISCUSSION

Table (3) Arithmetic means and standard deviations and the value of calculated (t) and the significance of differences for the groups (control and experimental groups) in physical variables in a posteriori tests.

Variables	Unit of measurement	Control group		Experimental group		Value of calculated (t)	Significance of differences
		A	SD±	A	SD±		
Speed(30) meter	sec	3.547	0.335	3.380	0.46	3.41	significant
Speed bearing	sec	14.32	3.1	13.52	2.01	3.37	significant
Rapid speed	Newton	355.88	15.87	392.47	16.14	3.05	significant
Achievement	sec	11.21	0.88	10.78	1.1	4.94	significant

the degree of freedom (10.2) = 8 and ratio of error 0.05.

Appears from the results of Table (3) above : there were significant differences in favor of the experimental group in a posteriori tests of abilities under study and this confirms that the training curriculum that applied by a researcher for the members of the experimental group had a positive impact in the appearance of this development and that the training using an aqueous environment has enhanced the strength of muscular contraction of the groups which work in the running movements commensurate with achieving the ultimate time for all the tests that carried out by the researcher and what provide full freedom of movement of the legs during pushing to be able to achieve the best frequency and step length without losing speed, it appeared that the training program was effective in achieving fit for the speed of movements through the development of the required time as well as its direct impact on the level of performance in the running movements and this appeared clearly by development of the physical capabilities of the research sample (such as speed and rapid strength and speed bearing) of these tests and in favor of the experimental group that used the aqueous medium exercises.

9. CONCLUSIONS AND RECOMMENDATIONS

9.1. CONCLUSIONS

1. The aquatic exercise affected on the development of speed, strength and fast speed and speed bearing of the experimental group.
2. The prepared program which included watery exercises as assistant method that practiced by the experimental group has contributed in the development of accomplishment of 100 m run significantly.
3. Measurement of the strengths which characterized by speed by imaging and the use of mechanical laws may actually reverse the reality of development of this power in considerations the body mass which was not taken into account when measuring these indicators by meters only.
4. Doing another similar studies.

9.2. RECOMMENDATIONS

1. Necessity of using watery exercise as an aid method in the development of physical abilities and achievement of the young players of the effectiveness of 100 m.
2. Be sure of using watery exercises for the rest of the speed events and the emphasis on such use through training courses.
3. mainstream the exercise that prepared by the researcher on the trainers of this event and training category
4. Conducting similar studies and researches on the effectiveness of these players and other athletics events.
5. The researcher proposes the use of aqueous medium for collective training events as well.

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