

THE EFFECT OF QUICK PERFORMANCE TRAINING USING ASSISTANT MEANS ON DEVELOPING SOME SPECIAL PHYSICAL ABILITIES & ACHIEVEMENT IN THE 200 M DASH

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Abstract

Despite high sport achievements that happen year after a year in high level sports, various sports in general and athletics in particular, one of the reasons for poor achievements in dash races, especially 200 m dash, for the youth in Iraq's clubs and institutions, including Iraqi universities, is: lack of using quick performance training due using assistant means, combining related physical abilities during training and balance among them within training work. Therefore, the researcher decided to set special training for quick performance using assistant means with the aim of developing some special physical abilities and how they reflect on the achievement in the 200 m dash race.

Keywords: quick performance training, assistant means, physical abilities, 200 m dash achievement.

1. INTRODUCTION

Despite high sport achievements that happen year after a year in high level sports, various sports in general and athletics in particular, various factors (practical, physiological or other) combined. Studies, researches and efforts are being exerted to reach facts that help in the training process in selecting means, methods and ways of training. These factors are of a great importance in 200 m dash events training. The training process does not only mean raising physical level, it also includes the development of physical abilities, the way of utilizing, developing and combining them. Hence, the significance of the study is clear in showing the effect of quick performance training using assistant means on developing some physical abilities and achievement in the 200 m dash race.

Problem of the Study

There are various training means and methods that affect on the athletes' needs, especially runners, for a physical preparation that suits their potentials and abilities according to the event and its requirements.

Through the researcher's field experience being one of the former Iraqi and Arab champions in short distance races as well as his participation in many training camps, being a former a trainer and a current international referee, he noticed that one of the reasons of poor achievements in dash events, especially the 200 m dash race for the youth in Iraq's clubs and institutions including Iraqi universities, is: the lack of using quick performance training with using assistant means, combining related physical abilities during training and balance among them within training work. Therefore, the researcher decided to set special training for quick performance using assistant means with the aim of developing some special physical abilities and how they reflect on the achievement in the 200 m dash race.

Objectives of the Study

- 1- Preparing quick performance training through the use of assistant means for members of the study sample.
- 2- Determining the effect of this training on developing some physical abilities and on the achievement in the 200 m dash race.

2. METHODOLOGY

The researcher adopted the empirical method for the purpose of achieving goals o the study.

Sample of the Study

The sample of the study included young runners from Diyala Governorate who represent the governorate for the year 2015 (12 runners). They were tested purposively and divided into control and empirical groups randomly through a poll (6 runners for each group). Next, the researcher conducted homogeneity and equalization of the sample for the variable of the study representing 100% of original population.

Table (1) arithmetic means, standard deviations S.Ds, median and skewness coefficient value for members of the study sample

Serial	Variables / measuring units	Statistical Methods			
		Mean	S.D	Median	Skewness Coefficient
1	Length: cm	1.71.33	4.121	670.100	0.004
2	Weight: kg	67.685	3423	68.00	0.166
2	Age: year	19.002	1586	19.010	0.131

Table (2) arithmetic means, standard deviations S.Ds, counted and tabulated T value between pre- and post-tests for both control and empirical groups for the purpose of equalization

Tests	Measure unit	Empirical Group		Control Group		T counted Value	T tabulated Value	Significance
		Mean	S.D	Mean	S.D			
Maximum speed 30 m	Time	4,88	4,152	4,76	5,621	1,061	1.81	Insignificant
Explosive Strength of legs (jumping on a hole to the farthest distance)	Distance	2,351	3,770	2,360	2,105	1,210		Insignificant
Speed strength, hopping by right & left feet 10 steps hole to the farthest distance	right	24,62	0,320	24,55	0,491	0,069		Insignificant
	Left	23,90	0,708	23,75	0,620	0,945		Insignificant
Speed endurance, 150 m	Second	20,981	0,901	20,471	0,589	0,396		Insignificant
200 m Dash achievement	Second	24,240	0,461	24,191	0,679	0,983		Insignificant

Tabulated T value at freedom degree $12 - 2 = 10$ with error percentage of (0.05) = 1.81

Pre-tests:

Pre-tests were conducted on both groups for their importance to the athlete's case before implementing the training program as follows:

First: Speed Test (Mohamed Sobhy Hassanein: 2001, 290)

- 30 m dash test starting from flying (time: seconds) with the aim of measuring maximum speed.

Second: Strength Test (Ibrahim Abderboh Khalifa: 1993, 143)

- Explosive strength test (jumping from stationary for legs: m – cm)
- Speed strength (right – left hop: 10 steps for both legs to the farthest distance: m – cm).

Third: Endurance Tests (Mohamed Sobhy Hassanin: 2001, 292)

- Speed endurance test (150 m dash) less than achievement distance (time: sec).

Fourth: Achievement 2000 m Dash (time: sec)

The sample was recalled and tests were performed from 29/08/2015 till 31/08/2015 on Diyala Club playground.

Training Course

The researcher applied quick performance training applied on assistant means to determine their effect on some special physical abilities depending on his field training experience with the aid of opinions of experts, specialists in sport field and references adding an educational protection to be applied on an age category.

- The course was started to be applied from 07/09/2015 till 28/10/2015.
- The course was applied for 2 months (two training units a week).

(Monday – Wednesday)

- Using assistant means while applying training.
- Intensity was between (maximum and semi-maximum intensity). As for the rest period among frequencies, it was according to beat rate meaning to return back to (120 beat/min) and rest among groups to return the beat to (90 beat/min).
- The researcher used the principle of grading and waving in performance intensity of training load along the raining course period (load degree should be gradual to raise body organs and systems to achieve more requirements and the ability to increase individual ability as it was before (Mohamed Hassan Allawy: 1976, 96).

Post-tests

After applying the course with the use quick performance training using assistant means and among the dedicated time period, the researcher conducted post-tests on 31/10/2015 till 02/11/2015 using the same conditions on which pre-tests were performed.

3. DISCUSSION & ANALYSIS OF RESULTS

Table (3): arithmetic mean, standard deviation S.D, counted and tabulated T values in pre- and post-tests for the empirical group:

Tests	Measure unit	Pre-test		Post-test		T counted Value	T tabulated Value	Significance
		Mean	S.D	Mean	S.D			
Maximum speed 30 m	Time	4,88	4,142	4,39	0,901	5,862	2.75	Significant
Explosive Strength of legs	Distance	2,351	3,770	2,510	3,480	4,486		Significant
Speed strength, hopping by right & left feet 10 steps hole to the farthest distance	m/cm right leg	24,62	0,320	26,325	1,534	3,675		Significant
	Left leg	23,90	0,708	25,015	1,632	4,910		Significant
Speed endurance, 150 m	Second	20,681	0,901	19,241	0,988	5,267		Significant
200 m Dash achievement	Second	24,240	0,461	23,810	1,935	4,391		Significant

Tabulated T value at freedom degree 6 – 1 = 5 with error percentage of (0.05) = 2.75

Table (4): arithmetic mean, standard deviation S.D, counted and tabulated T values in pre- and post-tests for the control group:

Tests	Measure unit	Pre-test		Post-test		T counted Value	T tabulated Value	Significance
		Mean	S.D	Mean	S.D			
Maximum speed 30 m	Time	4,76	5,621	4,611	1,301	2,531	2.75	Insignificant
Explosive Strength of legs	Distance	2,360	2,105	2,401	3,210	2,910		Insignificant
Speed strength, hopping by right & left feet 10 steps hole to the farthest distance	m/cm right leg	24,55	0,419	24,80	0,430	2,101		Insignificant
	Left leg	23,75	0,620	23,80	1,321	2,629		Insignificant
Speed endurance, 150 m	Second	20,471	0,589	20,21	0,985	2,998		Insignificant
200 m Dash achievement	Second	24,191	0,679	24,111	0,838	1,311		Insignificant

Tabulated T value at freedom degree 12 – 2 = 10 with error percentage of (0.05) = 1.81

Table (5): arithmetic mean, standard deviation S.D, counted and tabulated T values in pre- and post-tests for the empirical and control groups:

Tests	Measure unit	Pre-test		Post-test		T counted Value	T tabulated Value	Significance
		Mean	S.D	Mean	S.D			
Maximum speed 30 m	Time	4,39	0,901	4,611	1,301	2,103	1.81	Significant
Explosive Strength of legs	Distance	2,510	3,480	2,401	3,210	2,822		Significant
Speed strength, hopping by right & left feet 10 steps hole to the farthest distance	m/cm right leg	26,325	1,534	24,10	0,430	1,991		Significant
	Left leg	25,015	1,632	23,815	1,321	1,898		Significant
Speed endurance, 150 m	Second	19,241	0,988	20,21	0,985	2,001		Significant
200 m Dash achievement	Second	23,810	1,935	24,111	0,838	2,111		Significant

Tabulated T value at freedom degree $6 - 1 = 5$ with error percentage of $(0.05) = 1.81$

Table (6): development percentage between pre- and post-tests for the empirical & control group

Tests	Measure unit	Members of the sample	Post-mean	Pre-mean	Development
Maximum speed 30 m	Second	Empirical group	4,39	4,88	11,16
		Control group	4,611	4,76	3,25
Explosive Strength of legs	Distance	Empirical group	2,510	2,351	6,37
		Control group	2,401	2,360	1,66
Speed strength, hopping by right & left feet 10 steps hole to the farthest distance	Right leg	Empirical group	26,325	24,62	6,45
		Control group	24,80	24,55	1,00
	Left leg	Empirical group	25,015	23,90	4,43
		Control group	23,85	23,75	0,41
Speed endurance, 150 m	Left leg	Empirical group	19,241	20,681	7,48
		Control group	20,21	20,471	1,28
200 m Dash achievement	Second	Empirical group	23,810	24,240	1,80
		Control group	24,111	24,191	0,33

4. DISCUSSING RESULTS

Table (3) shows that there are significant differences at all tests for the empirical group. The researcher attributes these differences to the effect of the used tests within the training course and the time period including quick performance as well as type of intensity (maximum and semi-maximum) of performance, its repetitions, number of training groups applied on members of the sample and break periods. The researcher also found that quick performance training performed using assistant means played a

positive role in enhancing quick movement path for quick running athletes. This helped them to be economic in effort and agitated muscular tissues as a result of quick performance of muscular contractions which was positively reflected on developing special physical abilities and, in turn, developing 200 m dash achievement. Performance with maximum speed should be done at training on speed ability (Amer Fakher Shaghaty: 2011, 251). It is known that training on physical abilities is one of the effective factors that enhance performance level in sport activities (Singer, Robert N: 1999, 221). Amer Fakher Shaghaty & Mahdi Kadhem Ali refer that performing moves of correct quick motor performance ensure reaching the highest maximum speed level possible and helps increase dashing speed (Amer Fakher Shaghaty & Mahdi Kadhem Ali: 2012, 27).

If we look at table (4) about the control group, we notice that there is a development of some variables that were significant. The researcher found that this development is attributed to the confirmation of training. As for variables that showed insignificance, the researcher found that they are not necessary need to be enhanced, but there are noticeable results through arithmetic means. If we look at the development percentage among them we will find that there is a clear effect on members of the control group, but positive effect is for the sake of the empirical group.

5. CONCLUSIONS

- 1- Using quick performance training due using assistant means has a positive effect on some special physical abilities and 200 m dash achievement.
- 2- The time period of applying the training course, training intensity and rest affected the development of variables of the study.
- 3- The working method of quick performance training due using assistant means can be used as means of training or as additional to training process.

6. RECOMMENDATIONS

- 1- It is necessary to use quick performance training due using assistant means during training special physical abilities.
- 2- It is necessary to use load components of quick performance training during training special physical abilities.
- 3- Conducting physical descriptive studies on other age categories and sport activities for both males and females.

7. REFERENCES

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