The Effect of a Proposed Training Program on Some Elements of Physical Fitness among Students of the Athletics Training Course at Yarmouk University

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Abstract

The study aimed to identify the effect of a proposed training program on some elements of physical fitness among students of the athletics training course at Yarmouk University. The researchers used the experimental approach, and the study sample consisted of twenty (N= 20) students at Yarmouk University during the first semester of the academic year 2019−2020, who were purposively chosen. The samples were divided into two equal groups: experimental and control groups, with (10) students in each group. To analyze the results, means, standard deviation, Pearson correlation coefficient, paired samples t Test for double samples, and independent samples t Test were used. The results showed statistically significant differences related to the effect of the training program in relation to all study variables between the pre- and post- measurements of the two groups, in favor of the post measurement. The results further showed statistically significant differences among the post measurements in relation to all the study variables between the experimental and control groups in favor of the experimental group. The researchers recommended that the training program should be generalized to the athletics coaches in the Jordanian universities.

Keywords: Training Programmed Fitness Components, Athletics, Yarmouk University Students.

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تأثير برنامج تدريبي مقترح على بعض عناصر اللياقة البدنية لدى طلبة مساق تدريب ألعاب القوى في جامعة اليرموك

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ملّخص

هدفت الدراسة التعرف إلى تأثير برنامج تدريبي مقترح على بعض عناصر اللياقة البدنية لدى طلبة مساق تدريب ألعاب القوى في جامعة اليرموك، واستخدم الباحثون المنهج التجريبي، وقد تكونت عينة الدراسة من (٢٠) طالبا من جامعة اليرموك للفصل الدراسي الأول للعام الجامعي ٢٠١٩-٢٠٢٠، تم اختيارهم بالطريقة العمدية، وتم تقسيم العينة إلى مجموعتين متكافئتين ومتساويتين تجريبية وضابطة بواقع (١٠) طلاب لكل مجموعة، ثم تحليل البيانات بإستخدام المتوسطات الحسابية والإنحرافات المعيارية ومعامل الارتباط بيرسون واختبار (Paired Samples t.Test) للعينات المزدوجة واختبار (Independent samples t.Test) للعينات المستقلة. وقد أظهرت النتائج وجود فروق ذات دلالة إحصائية لأثر البرنامج التدريبي في جميع إختبارات الدراسة لصالح طلبة المجموعة التجريبية بين القياسين القبلي والبعدي ولصالح القياس البعدي، ووجود فروق ذات دلالة إحصائية بين القياسات البعدية في جميع اختبارات الدراسة بين عدائي المجموعتين التجربة والضابطة ولصالح طلبة المجموعة التجريبية، وقد أوصى الباحثون بضرورة العمل على تعميم البرنامج التدريبي على مدربي ألعاب القوى في الجامعات الأردنية.

الكلمات المفتاحية: عناصر اللياقة البدنية، ألعاب القوى، طلبة جامعة اليرموك.

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Introduction:

Training in sport education is an area of interest to scientific research that aims at raising the physical skills and preparing of players to the maximum of their abilities. Training personnel must therefore be aware of the various sciences associated with training methods and techniques (Mustafa, 2008).

Sports training science is recently characterized by modernity and continuous development, which achieves noticeable advancement in all fields through its relatedness to many of the educational sciences. It aims at developing athletes and their abilities to achieve the highest level. All these are made by creating suitable functional adaptations in the body biological systems, through the relevant, codified and suitable training tasks for the individual athlete.

Braiq'e and Al-Sukari (2001) point out the need to focus on training all the body muscles through designed trainings that contribute to the development of the general strength quality, which is the basis in developing the ability and strength endurance. In this case, the body weight could be used as a tool of resistance during the performance of the exercises, as well as through using additional external weights or apparatuses and tools, such as medicine balls, dumbbells, and bars. Gilles (1993) adds that the muscular strength is the base that training relies on in order to approach the highest level of physical fitness. Its development is essential to improve and develop the motor performance as a whole. It also affects the development and improvement of certain physical properties, such as speed, agility and endurance.

Khraibet and Al-Ansari (2002) believe that when performing an athletic training, it is quite essential to focus on the physical fitness components with muscular strength. In this concern, runners in all the running races have certain differences in the body composition and the functional ability levels of the different body organs and systems, in addition to differences in developing the motor functions. These differences have effects on displaying the strength, speed, endurance, flexibility, and adaptation to different external conditions, and on the ability to work and regenerate the strength, and even on the athletic results.

Athletics are in sharp contrast with the other sports because they need high physical fitness due to the nature and type of the sports the athletes perform, which are basically characterized by the need for muscular power.

They are further characterized by the difference in the nature of the performance, such as that the requirements of short distance running are different from the long distance running, while the medium distances are a middle factor between the two types. In the throwing contests, hammer throw is different from javelin throw, shot put, or discus. Therefore, athletics include many different and diversified competitions, which result in differences and variations among the athletic contesters (Abdel Fattah, 2010).

Mazari and Ysefy (2010) point out that sports training is the foundation of competitive athletic activity and an important objective for the consolidation of these principles in society as a result of the physical work and social interaction that it provides, reflected in the spirit of cooperation and decent competition among individuals, thus, achieving the highest standards of athletic results.

Study Problem:

Interest in the physical aspect of the students in the faculties of physical education is a vitally important issue in order to enable them to accomplish a high level of performance and improve their levels in preparation for the course exams. On the other hand, absence of this interest and failure to prepare modern and suitable training programs for the students will lead to a performance shortcoming. Consequently, it will affect their academic results and lead to poor levels and grades.

The researchers of this study have wide experience in sports training in general, and in athletics training in particular, as they train in many of the athletics courses. Through teaching many athletics courses and participation in training many students, they found students' physical performance poor.

Moreover, the current training programs of the students that are given during the classes are insufficient to raise the students' levels, as they are traditional programs in general, and not built on scientific bases. The students' poor performance during running in the courses of athletics training may be the reason for their low grades as found in their academic records. Therefore, the researchers developed a training program that may improve students' physical fitness. This study may be considered as a basic foundation in the training process, so it cannot be ignored in both the training and academic aspects with the students. The researchers believe that it enriches the knowledge of the university teachers and lecturers by introducing them to modern and diversified training programs, which take

into consideration the individual differences among the students and aim at raising their physical performance level. Finally, it will trigger interest and attention to the existence of specific training programs that may develop the physical fitness components of the students and playersin order to enable them reach high performance levels and distinguished sport achievement.

Significance of the study:

The significance of this study is demonstrated by the development of a proposed training program that may contribute to raising the physical level of students and which will promote them to high physical and skill levels.

The importance of the study is shown as follows:

1- Physical training is one of the basic components of the training process and cannot be overlooked in the training and teaching aspects of students.

2- The study is expected to enrich the knowledge of professors and university teachers through access to diverse and modern training programs that take account of individual differences among students and aim at increasing their physical performance.

3- The study is expecyed to raise attention to the existence of training programs for the development of special fitness components for students and players in order to bring them to high performance and high athletic achievement.

Study Goals:

1. Investigating the effect of the training program on certain physical fitness elements of the members of the experimental group.

2. Investigating the effect of the training traditional on certain physical fitness elements of the members of the control group.

3. Investigating the differences in certain physical fitness components in the post-test among the members of experimental and control groups.

Study Hypotheses:

1- There are no statistically significant differences ($\alpha \leq 0.05$) between pre and post measurements in certain physical fitness elements of the experimental group.

2- There are no statistically significant differences ($\alpha \leq 0.05$) between pre and post measurements in certain physical fitness elements of the control group.

3- There are no statistically significant differences ($\alpha \leq 0.05$) in post measurements in certain physical fitness elements between the experimental and the control groups.

Areas of the study:

1- Period of the study: The study was applied in the first semester during the academic year (2019-2020).

2- Place of the study: The study was applied on the track and the field of Faculty of Physical Education at Yarmouk University.

3- Sample of the study: The study sample consisted of (20) male students of the Track and Field course in the Faculty of Physical Education at Yarmouk University.

Terminology:

Strength endurance: individual's ability to face medium intense resistances for relatively long periods, so that the greatest workload falls on the muscular system (Abdel Fattah and Sayid, 2003).

Speed: individual's ability to achieve work in the shortest possible time, which depends on the muscular nervous system of the athlete (Domhorff, 1993).

Speed endurance: athlete's ability to maintain a high level of motor speed within the running frequency during the contest (Amrallah, 2001).

Cardio-Respiratory endurance: ability to perform continuous physical activity without decrease in the performance level for a long period of time (Abu Zaid, 2005).

Previous Studies:

Al-Balbisi (2000) conducted a study that aimed at identifying the effect of the use of the circular training on certain physical qualities and motor skills among football players. The researcher applied the experimental method, and the sample consisted of Nineveh football team players (18-20 years). The results showed that the experimental group outperformed the

control group in developing certain physical fitness components and some motor skills.

Ramadan (2005) conducted a study that investigated the effect of the use of skill plyometric exercises on the muscular ability development and certain physiological and skill variables in football. The researcher applied the experimental method and the sample consisted of (24) players who were chosen intentionally, and who were distributed in two groups (experimental and control). The results showed that the experimental group outperformed the control group in all the post measurements of certain physiological and skill variables in football.

Al-Nu'man (2005) ran a study that examined the effect of the weight and plyometric exercises on the muscular ability and certain skills among young football players. The researcher employed the experimental group, and the sample comprised (28) football players of the Electricity Youth Club in Nineveh (Mosul) Governorate, in Iraq. They were distributed randomly over two experimental groups, each with (14) players and the two programs were distributed over the two groups by the lottery method. The two methods took (9) weeks to implement the muscular ability and certain skills, at the rate of (3) training units per week. The study results showed that the training program using the weight training led to the development of the muscular capacity and certain skills. The results also showed that the training curriculum using the plyometric trainings clearly improved muscular capacity and certain skills.

Taskin (2009) carried out a study that aimed at identifying the effect of the motor-oriented circular training and the performance speed on both the speed and anaerobic endurance components. The researcher employed the experimental method, and the sample included (32) students of the physical education colleges whose average ages were (23.92) years. They were randomly chosen and distributed over two groups: experimental (n=16) and control (n=16) groups. The circular training method was applied through (8) stations at the rate of (3) days per week over (10) weeks. The researcher applied the program intensively up to 75% of the maximum limit of the motor count of every station. The test battery, which was prepared by FIFA Medical Research and Evaluation Center, was used. The pre and post measurements of the participants on the speed and anaerobic endurance components were taken. The results showed statistically significant differences at ($\alpha \leq 0.05$) level on the speed test between the two groups, which was in favor of the experimental group. There were statistically significant differences at ($\alpha \leq 0.05$) level on the anaerobic endurance

between the two groups in favor of the experimental group. Pursuant to the discussions on this topic, the results showed that the circular training for (10) weeks for (3) days per week improved the speed and anaerobic endurance of the study sample.

Dorgo (2009) conducted a study that aimed to identify the effect of the self-resistance training on the strength improvement and muscular endurance using a manual resistor-based program, and a program based on resistance with weights. The researcher applied the experimental method and a design with two groups and two tests (pretest and posttest). The sample consisted of (84) university students who were distributed over the two groups: manual resistor training group and resistance with weight training group. The program was applied over (14) weeks; the results did not show statistically significant differences between the two groups in the muscular strength and endurance in the pretest. Meanwhile, the improvement was in the posttest among the participants of both groups, which was in favor of the experimental group that applied the manual resistors program.

Yahya (2009) conducted a study that aimed at identifying the effect of a mixed training program in order to improve the level of certain body fitness components of the deaf football players at his Highness Prince Ali Bin Al-Hussein Club, Irbid Governorate, in Jordan. The researcher used the experimental method of the two-group design and the pretest plus post-test. The sample included (14) players who were equally distributed over two groups: a) training in the ground (n=7), and b) mixed training (ground and aqua training, n=7). The results showed statistically significant differences in the improvement level of the physical fitness and functional components between the pre and post measurements in all the study variables, which were in favor of the post measurement of the experimental group (mixed training).

Al-Dawood (2011) undertook a study that sought to identify the effect of the training program on the development of the physical fitness and skill elements of the athletes of Al-Hussein Sports Club. The sample involved (32) players who were chosen intentionally, and the researcher applied the experimental method. The results showed statistically significant differences in the effects of the training program in the development of the physical fitness and skill components between the pre and post measurements of the experimental group in favor of the post measurement. In addition, there were statistically significant differences in all the tests of the physical fitness

and skill components in the post measurements of the experimental and control groups in favor of the former.

Bani Melhem (2012) conducted a study that aimed at identifying the effect of certain sports training on some oxygenic and non-oxygenic physical abilities as well as the physiological changes. The researcher employed the experimental method and the single experimental group design in addition to the post-test and pretest. The sample consisted of (38) students of the physical fitness course in Yarmouk University, and the oxygenic and non-oxygenic physical abilities tests were undertaken. The results showed statistically significant differences in favor of the experimental group in the tests of bending and stretching the arms from the oblique prone within (10 seconds); long jump within (30 seconds); sitting from lying down within (30 seconds); and (160 m) running. The results did not show statistically significant differences on the speed test (30 M running).

This study is distinguished from the previous studies by the following aspects:

The targeted category on which the program was applied is the students of athletic training course. The training program included resistance training using both the body weight and the colleague weight, as well as the jump and hopscotch trainings. Furthermore, light weights were used such as 3-kg medical balls, training using 50-cm box, in addition to the speed trainings, speed endurance, and cardio-respiratory endurance.

The researchers benefited from reviewing the previous studies in formulating the hypotheses of the study, defining their variables, designing the training program in a suitable manner to fit the targeted category, and going through the relevant statistical methods that could be applied to this study.

Method and Procedures:

Methodology:

The researchers applied the experimental method as it most fits the study nature to achieve its objectives. The study population consisted of (24) students who are registered in the athletics training course for males in Yarmouk University during the first semester of the academic year 2019/2020. The study sample consisted of twenty (N=20) students from the Faculty of Physical Education who were purposively chosen. The participants were distributed into two equal groups. The first group, the

experimental group, applied the proposed training program, and the second group, the control, applied the regular training program. Four students were chosen from the study population as an exploratory sample for these purposes:

1- To make sure of the validity of the tools, abilities, and the utilities used in the study.

2- To define the problems and difficulties that may face the tests and the possibility of avoiding them; and,

3- To measure the time required to perform the tests.

In order to ensure the equivalence of the study groups (experimental, control), the Independent Samples t-test was applied on the personal variables (age, height, weight), as illustrated in Table (1).

Table (1) Results of the Independent Samples t-test to identify the equivalence of the two groups (experimental and control) on the personal variables with the students of athletics training course in Yarmouk University

Variable	Meas. Unit	Group	No.	M	SD	T Value	Freedom Degree	Sign.
Age	Year	Experimental	10	19.73	0.51	1.511	18	0.052
		Control	10	20.10	0.59			
Height	Cm	Experimental	10	175.22	5.33	1.456	18	0.055
		Control	10	177.01	5.51			
Weight	Kg	Experimental	10	65.29	3.32	1.433	18	0.061
		Control	10	66.89	3.02			

Table (1) indicates that (t) values are not statistically significant at ($\alpha \geq 0.05$) level on the personal variables of the athletics course students in Yarmouk University, which indicates the equivalence between the two groups.

Study Instruments:

Track in the Faculty of Physical Education, Yarmouk University, possesses meter to take the height of every player, scales to take the weight of every player, whistle, and electronic stopwatch, measuring tape, light

weights, medicine balls, registration forms, test results, posts, cones and adhesive tape.

Study Tests:

To achieve the objectives and hypotheses of the study, the researchers collected the data by applying the study tests, which were as follows:

1- Strength endurance (arm muscles): arm bending from oblique prone position test during 60 seconds was used.

2- Strength endurance (abdomen muscles): sitting from lying down position test during 60 seconds was used.

3- Speed: (50 M/S) running test was used.

4- Speed: (200 M/S) running test was used.

5- Cardio-Respiratory endurance: running test (1-mile meter/minute).

The results of these tests were recorded on special forms for data collection, and all the pretests and post-tests were carried out within the same conditions and in the same place.

Study implementation stages:

First: pretests:

The researchers conducted the pretests of the sample (experimental and control) with the cooperation of a number of assistants, and were carried out on the track of Yarmouk University, in Irbid Governorate (Jordan).

Second: application of the training program:

This stage included applying the training program on the experimental group, which was applied for (8) weeks at a rate of (3) training units per week. The time of the training unit was (90) minutes and the program included (24) training units.

Training program (experimental group):

Part one: introductory part (20 minutes):

- Warming up for physiological and physical preparation.

Part two: main part (60 minutes):

- Resistance training using the body weight, the colleague weight, and the jump and hopscotch training.

- Training using light weights, such as 3-kg. medicine balls, and training using 50-cm box (flexibility box).
- Speed, speed endurance, and cardio-respiratory endurance trainings.

Part three: final part (10 min):

- Relaxation training for recovery.

Third: post-tests:

The researchers, after concluding the application of both the training and normal programs, carried out the post-tests of the study sample (experimental and control groups). They were conducted under the same conditions of the pretests, with the same assistants, and on the track of Yarmouk University, in Irbid Governorate.

Time distribution of the training program:

Table (٢) Time Distribution of the Training Program in Minutes

No. of the training units per week	No. of weeks	No. of the training units during the program	Training time in the daily unit	Training time during the week	Total training time of the program
3	8	24	90	270	2160

Study variables:

Independent variables (training program) and dependent variables (results of the study sample in the tests of strength, speed, speed endurance, and cardio-respiratory endurance)

Statistical processing:

To achieve the study objectives, the researchers utilized the following statistical procedures:

1- Means (MS) and standard deviations (SDs).

2- Pearson correlation coefficient between the two applications to obtain the test-retest reliance.

3- Paired samples t-test to identify the differences between the pre and post measurements of the single group individuals.

4- Independent samples t-test to identify the differences between the two groups (experimental and control) on the post measurement.

Results and Discussion:

Results related to the first hypothesis: There are no statistically significant differences ($\alpha \leq 0.05$) between pre and post measurements in certain physical fitness components within the experimental group.

To test this hypothesis, the researchers obtained the means and standard deviations of the pre and post measurements of the experimental group. Paired samples t-test was also applied to identify the differences between the means of these measurements of the experimental group individuals, as illustrated in Table (٣).

Table (٣) T-test application between the pre and post measurements of the experimental group in certain physical fitness components

Test	Meas.	No.	M	SD	T Value	Freedom Degree	Sign.
Arm bending from oblique prone during (60 S)	Pre	10	44.10	0.83	8.235	9	0.000
	Post	10	51.٠2	0.69			
Sitting from lying down during (60 S)	Pre	10	46.65	0.80	7.511	9	0.000
	Post	10	53.64	0.82			
(50 M/S) Galloping	Pre	10	٨.٥٣	0.26	7.241	9	0.000
	Post	10	٧.١٢	0.22			
(200 M/S) Galloping	Pre	10	٣٥.١٤	0.73	8.133	9	0.000
	Post	10	٣٢.٢٥	0.71			
	Pre	10	8.٧٦	0.61			

(1609 M/Min) Running	Post	10	٧.18	0.72	8.334	9	0.000

Table (٣) indicates statistically significant differences at ($\alpha \leq 0.05$) level between the pre and post measurements in tests of g (50 M/S) running, (200 M/S) running, arm bending from oblique prone during (60 S), sitting from lying down during (sit – ups) (60 S), and (1609 M) running with the experimental group individuals. The differences were in favor of the post measurements, which means development in the digital measurements with the students of athletics training course in Yarmouk University.

The researchers explained the major role the training program has in developing the digital level in that it contains multiple training. For instance, the training that uses the body weight and the colleague weight; jumping and hopscotch training; training that uses light weights, such as medicine balls; the trainings that uses the box (flexibility box); the training of strength endurance, speed, speed endurance, and cardio-respiratory endurance. These types of training contributed to the development of the students' physical fitness level, in addition to the regularity in applying the training program and its adherence to the sports' training principles. Allawi and Abdel Fattah (2000) confirmed this explanation as they stated that the regular sports training leads to an increase in the efficiency and adaptation of the various body systems. This efficiency is quite apparent on the muscular system directly in the muscles ability to produce the muscular strength, whether this strength is mobile or fixed. The muscle functional efficiency is achieved through the physiological changes that take place as a result of this training. Dorgo's study (2009) emphasizes that the training program that includes the resistors' training leads to an improvement in the strength and muscular endurance. The researchers further explain this in that the elements of strength endurance (arm muscles, abdomen muscles), speed, speed endurance, and cardio-respiratory endurance are very important fitness components with the students of athletics training course. These sports mostly depend on such components, because the performance, during throwing, running, and other performances, is changeable and continuous due to the various training methods.

The results of this hypothesis are in line with the results of the study of Bani Melhem (2012), which showed statistically significant differences, between the pre and post measurements, which were in favor of the post measurement of the effect of a proposed training program designed to the

experimental group individuals. The effect was in the form of an improvement in the tests of speed endurance, (200 m) running, arm bending and stretching from oblique prone position during (30 S), sitting from lying down during (30 S), and (1609 M) running.

The results of this hypothesis are not in line with that of the study of Bani Melhem (2012), which did not show statistically significant differences between the pre and post measurements in the speed test (20 M galloping).

Results pertinent to the second hypothesis: There are no statistically significant differences ($\alpha \leq 0.05$) between pre and post measurements in certain physical fitness components within the control group.

To test this hypothesis, the researchers obtained the means and standard deviations of the pre and post measurements of the control group, and t-test was applied, as illustrated in Table (٤).

Table (٤) t-Test application between the pre and post measurements of the control group in certain physical fitness components

Test	Meas.	No.	M	SD	T Value	Freedom Degree	Sign.
Arm bending from oblique prone during (60 S)	Pre	10	41.51	0.75	7.344	9	0.000
	Post	10	45.62	0.75			
Sitting from lying down during (60 S)	Pre	10	45.13	0.82	8.120	9	0.000
	Post	10	49.54	0.80			
(50 M/S) Galloping	Pre	10	٨.٩٥	0.23	8.244	9	0.000
	Post	10	٨.٢٣	0.20			
(200 M/S) Galloping	Pre	10	٣٦.٧١	0.62	7.110	9	0.000
	Post	10	٣٤.٩٦	0.60			
(1609 M/Min) Running	Pre	10	٩.18	0.61	7.343	9	0.000
	Post	10	٨.٠١	0.67			

Table (٤) indicates statistically significant differences at ($\alpha \leq 0.05$) level between the pre and post measurements in the tests of (50 M/S) galloping, (200 M/S) running, arm bending from oblique prone during (60 S), sitting from lying down during (60 S), and (1609 M) running with the control of group members. The differences were in favor of the post measurements, which mean development in the digital measurements with the students of athletics training course in the control group.

The researchers assume that the delayed development of the digital level of the study test among the control group is due to the particulars of the training program, which is prepared for them and based on the scientific methods but in a traditional manner. The program did not employ resistor training, such as light weights and medicine balls, which were used in the training program of the experimental group individuals. Accordingly, the traditional program of the control group did well in improving the digital level, but not as effectively as that of the experimental group.

Results related to the third hypothesis: There are no statistically significant differences ($\alpha \leq 0.05$) in post measurements in certain physical fitness elements between experimental and control groups.

To test this hypothesis, the researchers obtained the means and standard deviations of the post measurement of the control and experimental groups, and t-test was applied, as disppalyed in Table (٥).

Table (٥) t-test results between the experimental and control groups in certain physical fitness on the post measurement

Test	Meas.	No.	M	SD	T Value	Freedom Degree	Sign.
Arm bending from oblique prone during(60 S)	experimental	10	51.02	0.75	6.604	18	0.007
	control	10	45,62	0,85			
Sitting from lying down during (60 S)	experimental	10	53.64	0.82	6.353	18	0.011
	control	10	49.54	0.80			
(50 M/S) Galloping	experimental	10	7.12	0.27	7.120	18	0.017
	control	10	8.23	0.26			
(200 M/S)	experimental	10	32.25	0.74	6.321		0.014

Galloping	control	10	34.96	0.63		18	
(1609 M/Min) Running	experimental	10	7.18	0.75	7.063	18	0.019
	control	10	8.01	0,72			

Table (٥) indicates statistically significant differences at ($\alpha \leq 0.05$) level between the two groups (experimental and control) in the post measurement of the tests of (50 M/S) galloping, (200 M/S) galloping, arm bending from oblique prone during (60 S), sitting from lying down during (60 S), and (1609 M) running. The differences were in favor of the experimental group, which mean that the development in the digital level was better for the members of the experimental group.

The researchers ascribe the outperformance of the experimental group over the control group to the fact that the members of the experimental group underwent the training program which took into account the sports' training principles to a large extent. The program also included specific training units directed to develop the strength endurance elements (arm muscles, abdomen muscles), speed elements, speed endurance elements, and cardio-respiratory endurance elements. This standpoint is further supported by Abu Zaid (2005), who emphasized that when setting up training programs, specific training specifications should be considered, which are compatible with the needs of the widely held performance of the game. This can be achieved by directing the training of the meant groups toward the technical direction including all the physical aspects and by focusing on the specific training-related needs.

The researchers explain this set of results in the light of the fact that the training directed to the experimental group members led to development in the strength of the leg muscles through frequencies, which are characterized by the quick and strong muscle contractions that, in turn, led to an increase in the momentum of the legs. It is established that the more the muscle contract, the more strength is generated, and, then, the more the speed is achieved. The program further included the use of aiding instruments, including light weights, such as the medicine balls, and flexibility boxes. In this regard, Abu Tami'e (2007) stated that diversification and good use of the aiding instruments greatly contribute to the learners' ability to learn quickly and master the skills.

The results of this hypothesis are in agreement of the results of other studies; Al-Dawood (2011) showed statistically significant differences in all of the tests of physical fitness and skills components in the post measurements of both the experimental and control groups, which were in favor of the former. Results of Ramadan's study (2005) indicated statistically significant differences between the experimental and control groups, which were in favor of the former, who employed the plyometric training in the improvement of certain variables. The results of the study of Al-Nu'man (2005) were also in line with the current study, which showed that the training programs that apply the weight training and plyometric training led to the development of the muscular strength. Al-Balbisi (2000) further indicated that the training program using circular training has an effect on certain physical properties for the football players. It also showed that the experimental group outperformed the control group in developing certain physical elements. Finally, the study of Taskin (2009) showed statistically significant differences between the experimental and control groups in favor of the experimental one, whose group members underwent circular training, which was directed to the motion and performance speed so that it could improve the digital level of the speed test (40 M) and anaerobic endurance test (150 M). In conclusion, the training program has a role in advancing the students and bringing them to higher levels of physical performance.

Conclusions:

1- The training program has a positive effect on the development of certain physical fitness components: strength endurance, speed, speed endurance, and cardio-respiratory endurance of the experimental group members.

2- The traditional program has a positive effect on the development of certain physical fitness components: strength endurance, speed, speed endurance, and cardio-respiratory endurance of the control group members.

3- The training program has a positive effect on the development of certain physical fitness components of the experimental group members as compared to the control group.

Recommendations:

1- These (modern and diversified) training programs should be continuously introduced to the athletics students.

2- Generalizing the training program on the athletics coaches in the Jordanian universities.

3- Carrying out similar studies on other categories or players, taking into consideration the sports' training loads (volume, intensity, and density).

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