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THE EFFECT OF PHYSICAL EXERCISES IN TERMS OF THE (LUMP) TABLE ON DEVELOPING THE PHYSICAL PROFICIENCY OF ADVANCED FOOTBALL PLAYERS

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ABSTRACT

The problem of the study is represented in that the players' performance during matches regarding certain technical and planning aspects does not elevate to the high level despite the fact that these players play in the premier league and possess a good skill level. This has led the researchers to guess that the players' physical proficiency is not at the required level. This is confirmed by conducting the physical proficiency test for the players. They found it as (42), which in turn is considered a weak estimate for the premier league players of the advanced class. Therefore, the researchers have decided to prepare physical exercises in terms of the (Lump) table, wondering whether these exercises have an effect on the level of physical proficiency for the advanced football players.

The study aims to reveal the following:

The effect of physical exercises in terms of (lump) table on the physical proficiency of advanced football players. There are differences between the pre and post- tests of the experimental group in the physical proficiency of advanced football players. There are also differences between the two post- tests of the two groups (control and experimental) in the physical proficiency of advanced football players.

Research hypotheses :

- There are statistically significant differences between the results of the pre and post-tests of the experimental group in the physical proficiency of the advanced football players.
- There are statistically significant differences between the results of the two post-tests for the two groups (control and experimental) in the physical proficiency of advanced football players.
- The researchers used the experimental design for its suitability and the nature of the research. The main research sample is determined via the non-random sampling method taking samples from the football players of Al-Alam Sports Club for the sports season (2021-2022) in which the sample consists of (25) players. After conducting the physical proficiency tests for the players, (20) players are selected representing the experimental research sample, which is divided into two groups (experimental and control) using the pairing method. They are then specified by lot to (10) players for each group after a section of the players is excluded for the purposes of experimental control. The researchers have relied on conducting the homogeneity of the two research groups (experimental and control) in the variables (age, training age, height, mass). The researchers conducted a parity between the two research groups (experimental and control) in the aspect of physical

proficiency under study. As for the main research steps, it is performed through conducting exploratory experiments on physical exercises with their suitability to the research sample and determining their times, repetition and intermittent rest periods. The training program for physical exercises is implemented by the team coach and the assistant work team. After the completion of the implementation, the post-tests of physical proficiency are carried out with the same procedures used to implement the pre- tests, and the results are treated statistically to detect the statistical differences between them.

Keywords: physical exercises, physical efficiency, football, schedule (Lump)

1- INTRODUCTION OF RESEARCH:

1-1 Introduction and Significance of Research:

The process of preparing the football player is a coherent and consistent process in terms of aims. This is to provide the player with general and special physical and functional bases to achieve high levels of adaptations according to performance requirements during matches through a variety of exercises in different directions, which must be commensurate with the abilities the player possesses and the age and training stage s/he is going through. Modern football is characterized by high performance speed, which requires levels of physical fitness and the corresponding functional adaptations for the body systems and organs with the speed of performance. It also requires other qualities such as agility, fitness, strength, muscular ability and endurance, where the running rate in the match reaches 14 km or more interspersed with repetitive bouts of speed, change of direction and leaps (Al-Bassati, 2016:15).

Physical efficiency is one of the important concepts in the sports field, which expresses high-intensity efforts for the longest possible period. This indicates its association with the morphological and functional characteristics of football players.

Raysan Khouribet (2014) indicates that physical proficiency indicators are greatly affected by training. This perhaps appears clearly when comparing the indicators of ability, size, and the effectiveness of biological energy production processes for athletes with the difference in sports skills for each game or event. The performance efficiency of athletes reveals logical changes that are proportional to their age. The potential for aerobic energy production doubles with the physical maturity of the body, the completion of human sensory circuits, the increase in the number of basic enzymes for aerobic and anaerobic exchange, as well as the activity and stability of these enzymes in action. The reserve of energy materials in the tissues is doubled and the work of the systems responsible for delivering oxygen and nutrients to the muscles and excreting food decomposition products is completed, and these indicators usually reach maximal values at the ages of 20-25 as the functional puberty of the human body is achieved. The best results are usually achieved in those sports where high energy production is required (Raysan Khouribet, 2014: 223-227).

The goal of the training process is to raise the physical proficiency of the player in order to bring about the required adaptation to the needs of the game and in line with the length or shortness of the competition time. Physical proficiency is an expression of the level of functional adaptation of the various internal body systems and the level of integration in work during performance with economy of effort and speed of return to the normal or semi-natural state

during periods of rest. This adaptation results from the effect of the training load to bring the player to the highest possible level by releasing the energy needed to produce a kinetic ability that enables the player to achieve the best results during matches. That is why physical proficiency is one of the important indicators to determine the level of the athlete, as it expresses the level of biological and physiological adaptation and the level of motor and physical efficiency with the economy of effort and short periods of rest in between. This confirms the level of close interdependence between all these aspects that are mentioned.

The physiological properties of physical proficiency are (maximum consumption of oxygen Co2, increased aerobic capacity, permanence of the anaerobic system for long periods, raising the efficiency of the work of the heart and circulatory system, increasing the metabolic rate and releasing the energy needed during muscle work and during rest periods).

From here, the importance of the research appears in the use of physical exercises according to the(Lump table) in order to develop and raise the level of physical proficiency, as it has a direct impact on the level of performance of advanced football players.

Physical proficiency: is the physical and functional state that the player reaches through the use of exercise according to the scientific foundations in the training year, by controlling the components of the training load (size, intensity, comfort and mass). It is a true expression of the sports format and this is confirmed by Muhammad Othman (2019, 234), where he mentions that sports form is the best physical and functional condition (the level of physical proficiency) that the athlete reaches through the use of the scientific method in training (Mohammed Othman, 2019 :234).

1-2 Research Problem

Through the researchers' experience and their follow-up to the matches of the Salah Al-Deen Governorate Clubs League / for the category of advanced players for the season (2017-2018) and being former players and coaches for many years for clubs in the governorate, as well as being academics, they have noticed that the players' performance during the matches regarding some technical and planning aspects does not rise to a high level despite the fact that the players play in the premier League and possess a good skill level. This has led researchers to guess that the players' physical proficiency is not at the required level. This is confirmed when the players' physical proficiency test is conducted and found to be (42) which in turn is a poor estimate for first-class premier league players and for the advanced category.

1-3 Aims of Research:

The research aims to reveal the following:

- The effect of physical exercises in terms of (lump) table on the physical proficiency of advanced football players.
- The differences between the pre and post- tests of the experimental group in the physical proficiency of advanced football players.
- The differences between the two post-tests of the two groups (control and experiment) in the physical proficiency of advanced football players.

1-4 Research Hypotheses

- There are statistically significant differences between the results of the pre and post-tests of the experimental group in the physical proficiency of advanced football players.
- There are statistically significant differences between the results of the two post-tests of the two groups (control and experiment) in the physical proficiency of advanced football players.

1-5 Research Fields:

- Human field: Al-Alam club advanced players for the season 2021-2022 .
- Spatial field: Al-Alam Sports Club stadium.
- Temporal field: for the period from 28/Aug./2021 to 28/Oct./2021.

2-1 Theoretical Studies:

2-1-1 Physical proficiency:

Physical proficiency is the body's efficiency in producing aerobic and anaerobic energy during sports activity. It includes both directions in energy production (Abu El Ula Abdul-Fattah,2003:23). Rafea Saleh and Hassan Ali (2008) also mention that physical proficiency is the body's proficiency in production of aerobic and anaerobic energy during physical activity, as well as the body's ability to provide aerobic and anaerobic energy materials necessary to perform the maximum mobile muscular work and continue for the longest possible period of time (Rafea Saleh and Hassan Ali, 2008:14).

2-1-2 Lump's Table:

Lamp (1984) suggests a method of forming training loads to develop anaerobic capacity by the interval training method (Raysan Khouribet, Abu Al-Ula Abdel-Fattah, 2015:2-07) as shown in Table (1):

Table (1)

Number of weekly training doses	Number of repetitions	Intermittent rest period	Intensity	Exercise time
4-3	30-20	10ث	100	10 seconds
4-3	20-10	15	100	20 seconds
4-3	18-8	2-1 دقيقة	100	30 seconds
4-3	15-5	5-3 دقيقة	100-95	One minute
4-3	10-4	15-5	100-90	Two minutes

3- Field research procedures:

3-1 Research methodology:

The researcher has used the experimental method for its suitability and the nature of the research.

3-2 Research sample

The main research sample is determined in an intentional way from the football players of Al-Alam Sports Club who applied for the sports season (2021-2022). The sample consists of (25) players. A number of (20) players are selected representing the experimental research sample,

which is divided into two groups (experimental and control) through the pairing method. It is then determined by lot to (10) players for each group, after a number of the players are excluded for the purposes of experimental control, as in Table (2).

Table (2) Research community, sample, and excluded players

Percentage	No.	Variables
%100	25	Main Research Sample
%80	20	Experimental Research Sample
%20	5	Excluded players

3-3 Determining the tests of the variable under study for Al-Alam Football Club Advanced Players:

- The Physical Proficiency Test (Harvard Test) (Ali Fahmy Al-Baik et.al., 2009: 166-167).

Objective of the test: measuring physical proficiency.

Tools used: wooden box, stopwatch.

Performance method: The height of the box varies, and the performance time varies according to age and sex, as shown in Table (3).

Table (3) Shows the difference in the height of the box and the difference in performance time according to age and sex

Performance time (minutes)	Height(cm)	Age & Sex
5	50	Men
5	43	Women
4	50	Boys 8-12 years
4	40	Girls 8-12 years old

- The working timing for all is (30) ups and downs per minute. The timing is set to 120 beats per minute, and each consists of four counts (going up, going up)... (going down, going down).
- The ascent and descent must always start with the same foot, and it is allowed to switch the foot during work several times. If the player is not able to perform at the same time within (20) seconds, the test stands and records the time at which the player stops and uses the time in the abbreviated equation when evaluating physical proficiency.
- The tester performs the test, then the pulse is measured for (30) seconds in the second, third and fourth minutes after the test is completed.

Recording method:

- Physical proficiency is calculated by the following equation.

Physical proficiency Index = 100 x Performance time per second / (Pulse 1 + Pulse 2 + Pulse3) x 2

- Where pulse 1 is the number of heartbeats for a period of (30) seconds in the second minute after the end of the effort, a pulse 2 in the third minute, and a pulse 3 in the fourth minute of the end of the test.
- Physical proficiency can be divided according to Harvard results by disclosing the test results in the criteria table reached by Matthews, as shown in Table (4).

Table (4)
Harvard physical proficiency test

Test results	Proficiency level
More than 90	Excellent
89-80	Good
79-65	Average
64-55	Less than average
Less than 55	Poor

Table (5) Agreement percentage of the specialists' opinions on the most important candidate tests for the variables under study

Percentage	Repetition of agreement	Tests recommended by the experts	Variable under study
%100	7	Physical proficiency Test (Harvard Test)	Physical proficiency

3-4 Homogeneity and equivalence of the two study groups:

3-4-1 Homogeneity of the two study groups:

The researchers have relied on conducting the homogeneity of the two research groups (experimental and control) regarding the variables (age, training age, height, mass) according to Table (6).

Table (6) Homogeneity of the experimental and control groups

Skew coefficients	Median	Standard deviation	Mean	measuring unit	Statistical parameters / Variables
0,269	24,65	0,438	23,866	year	Age
-0,090	4	0,739	8.208	year	training age
-0,213	172	4,025	172,125	cm	Height
0,435	68,50	2,94	69,33	Kgm	mass

From Table (6), it is clear that the values of the skew coefficient range between (±1) and this indicates the normal distribution of the research sample.

3-4-2 Equivalence of the two study groups:

The two researchers conducted an equivalence between the two research groups (experimental and control) regarding the physical proficiency under study, as shown in Table (7).

Table (7) Means, standard deviations, calculated (T) values, (sig) values and the significance of the differences for the physical proficiency under study.

Significance of differences	Sig values	Calculated T values	Experimental group		Control group		Unit of measure	Statistical factors / Research variables
			Standard deviation	mean	Standard deviation	mean		
Non-significant*	0.418	0,850	4,217	42	3,735	42	Mark	Physical proficiency

*Significance at probability level ≤ (0.05)

- It is evident from Table (7) that the value of (T) calculated for the physical proficiency in question amounts to (0,850). Since the value of (sig) for physical proficiency is (0.418), which is greater than the value (0.05), this indicates that there are no significant differences in the physical proficiency variable, which in turn refers to the equality of the two groups concerning the aforementioned variable.

3-5 Means of Data Collection:

The following means are used to collect data (content analysis, questionnaire, personal interview, measurements and tests).

3-5-1 Measurements and tests under study:

- Measurements:

The measurements performed by the researchers are: (total body length, body mass, age).

3-6 Scientific basis for the test:

3-6-1 Test Stability:

The researchers have used the testing and re-testing method and fixing the conditions as much as possible on the same individuals who are the sample of the first exploratory experiment numbering (4) players. The physical proficiency test is performed on Saturday (28-Aug.-2021) and repeated on Monday (30-Aug.-2021). The Pearson simple correlation coefficient is extracted, as the results show the stability of the test with a high degree, as shown in Table (7).

3-6-2 Test validity:

For the purpose of verifying the validity of the test in question, the researchers use the following types of validity, which are as follows:

- **Content validity:** This type of validity is inferred through a comprehensive inventory of the specialized scientific sources and references (measurement, evaluation and sports training) in football to determine the tests of physical efficiency in question.
- **Intrinsic validity**: This type of validity is extracted by calculating the square root of the reliability coefficient as shown in Table (8).

3-6-3 Test Objectivity:

To ensure the objectivity of the test, two arbitrators (*) are relied upon to record the test results at the same time. The results are calculated according to the simple correlation coefficient. The test results show a high correlation coefficient in the test used, and this confirms the objectivity of the test as shown in Table (8).

Table (8) The tests' validity, reliability, and objectivity coefficients of the variables under study

Objectivity	Intrinsic validity	Stability	Test under study	No.
0,90	0,92	0,86	Physical efficiency	1

3-7 Experimental Design:

The researchers have used the experimental design, which is called "the design of randomly selected equal groups of controlled pre- and post-tests" (Muhammad Khalil Abbas et. al., 2012: 192).

3-8 Field procedures employed in the study:

3-8-1 Specifying times and repetitions of performance for each exercise:

This procedure is implemented on the second exploratory experiment sample who are the sample of the study, numbering (10) players, to identify the time and number of repetitions of performance for each exercise approved in the study.

3-8-2 Specifying the approved rest periods between repetitions and totals:

The rest periods between the repetition times of the experimental group are determined according to the (Lump) table of the interval training method, which is to give an incomplete rest between one repetition time and another, i.e. when the pulse returns to (120-130) beats per minute and according to the second exploratory experiment, and between the groups according to the high intensity interval training method which is from 3-5 minutes.

3-9 Exploratory Experiments:

3-9-1 First Exploratory Experiment:

This experiment is conducted on Saturday 28-Aug.-2021 on a group of (4) players from the research community and the aim is the following:

1- Ensuring the validity of the tools and devices used.

2- Identifying the administrative difficulties as well as the errors that occur during the measurement process and attempting to avoid it.

3- The same experiment is repeated on the same individuals on Monday 30-Aug.-2021 to detect the scientific factors for the physical aptitude test under discussion.

3-9-2 Second exploratory experiment:

This is conducted on a number of the experimental group players and their number is (10) to find the times of the exercises and to determine the rest period between the repetitions and the groups according to the (lamp) table on Wednesday 1-Sep.-2021.

3-10 Final research procedures:

3-10-1 Execution of pre-tests for the variable under study:

The pre- tests for the variables under study were conducted on Wednesday 4-Sep.-2021.

3-10-2 Performing the physical exercises:

Physical exercises began on the experimental group on Saturday 7-Sep.-2021, and all special units were completed on the players of the experimental group on Wednesday 23-Oct.-2021, coinciding with the training curriculum prepared by the trainer and applied to the control group.

3-10-3 Performing post-tests:

After completing the physical exercises for the experimental group, the post tests are performed in the same manner as the pre- tests for the two groups (experimental and control) on Monday 10/25/21, which are the physical aptitude tests under discussion for the advanced football players.

3-12 Statistical Tools:

The statistical tools used by the researcher are:

- (SPSS) Statistical System

4- Presentation and discussion of results:

4-1 Presentation of results:

4-1-1 Presentation of the results of the pre and post- tests for the experimental group:

Table (9)

Means, standard deviations, calculated (T) values and the level of probability for the pre and post - test of physical proficiency under study for the experimental group

Significance of differences	Sig values	Calculated T values	Experimental group		Control group		Unit of measure	Statistical factors / Research variables
			Standard deviation	Mean	Standard deviation	mean		
Non-significance*	0.000	12,160	3,910	63	4,217	42	Mark	Physical proficiency

*Significance at probability level ≤ (0.05)

From Table (9), the following becomes clear:

- There are significant differences between the averages of the pre and post- tests in the variable under study in the experimental group, as the calculated (T) value reaches (12,160) and at a probability level of (0.000), which is less than (0.05).

4-1-2 Presentation of the results of the physical proficiency under study for the post-tests of the experimental and control groups:

Table (10)

Means, standard deviations, computed T-values and probability level for the variable under study for the two post-tests of the experimental and control groups

Significant differences	Sig values	Calculated (T) values	Post-test for control group		Post-test for experimental group		Unit of measure	Statistical factors / Research variables
			Standard deviation	Mean	Standard deviation	Mean		
Non-significance*	0,000	6,244	3,529	50	3,910	63	Mark	Physical proficiency

*Significance at probability level ≤ (0.05)

- There are significant differences between the mean of the two post-tests for the variables under study for the control and experimental groups, as in Table (10). The value of calculated (T) has reached (6,244) at the level of probability (0.000), which is less than (0.05).

4-1-3 Presentation of the results of the physical proficiency under study for the pre and post - test of the control group:

Table (11)

Means, standard deviations, calculated (t) values and the probability level for the variable under study, of pre and post – test of the control group

Significant differences	Sig values	Calculated (T) values	Post-test for control group		Pre-test for control group		Unit of measure	Statistical factors / Research variables
			Standard deviation	Mean	Standard deviation	mean		
Non-significance*	0,000	7,259	3,529	50	3,735	42	Mark	Physical proficiency

*Significance at probability level ≤ (0.05)

From table (11), the following becomes clear:

There are significant differences between the mean of the two tests, pre and post- tests of physical adequacy under discussion in the control group, as the calculated value of (T) has reached (7,259) at the level of probability (0.000), which is less than (0.05).

2-4 Discussion of Results

There are significant differences between the results of the pre and post- tests for the experimental group in the physical proficiency test in favor of the post- test as shown in Table

(9), and the two post tests for the experimental and control groups in the physical proficiency test in favor of the experimental group as in Table (10), as the experimental group is the one who carried out the physical exercises according to (lamp) table. The researchers attribute this development to the good preparation of the exercises, depending on the scientific sources and the scientific and practical experience of the researchers in the field of specialization, which is football training. The exercises are taken from some cases of playing during matches, and the qualities and physical abilities prevailing for football players in developing the physical aspects and bringing about the functional adaptations required for these aspects. This is confirmed by Amr Allah Al-Basati in that " the physical and functional condition refers to the level of the basic and necessary elements of physical fitness for the player and the proficiency of each of the functional devices and energy production systems on which the player is situated. The level of the components of the physical and functional state of the player is linked to the nature and dynamism of performance in football" (Al-Basati,2016:12) .

In addition, there is the clarity of the objectives for which the physical exercises are set according to the (lamp) table with regard to improving and developing the physical aspect, the commitment of the research sample to training and continuity with it and taking into account the principles of sports training in terms of the specificity of the game, legalization and harmony between the components of the training load (size, intensity, and comfort). There is also studied scientific progression in order to increase the volume of exercises by increasing repetition when moving from one small training course to another and when moving from one medium course to another and continuing on these exercises to bring about the required adaptations and install them and move to a higher degree in training load. This is confirmed by Uwais Al-Jabali (2001:57) in that "the correct gradation In the components of the training load provides the opportunity to bring about the required adaptation". Salama (2000:28) adds that "when we regularly train for weeks and months, the physiological adaptation to this effort or work will occur, which works to improve the individual's physical and functional capabilities as well as improving various other technical aspects related to the specialized activity" .

The diversity of physical exercises according to the needs of the football player in terms of quality and physical abilities such as strength training, speed, flexibility, agility and compatibility ... etc. in a short period of time and with high intensity and using the method of interval training according to the schedule (lamp) allowing the player to work intermittently to work at high intensity with suitable breaks according to the requirements of the football player has led to the development of the work of the internal organs related to the development of qualities and physical abilities, which in turn led to the development of physical proficiency. This is confirmed by Abdel-Zahir (2014) in that during short and quick performance periods of periodic work, part of the muscle stock is depleted for each of ((ATB-PC), while rest periods allow a part of this stock to be restored depending on the aerobic energy system, which helps to provide energy again for subsequent periods of periodic work and delays the player's dependence on the anaerobic system. This means that the process of lactic acid accumulation does not occur quickly (Muhammad Mahmoud Abdel-Zaher,2014: 223).

The researchers also attribute this development in the physical proficiency of the research sample to the development of the work of the circulatory and respiratory systems as a result of preparing and diversifying physical exercises according to the (lamp) table, which allows work

under the anaerobic system while performing these exercises. Adnan Muhammad (2017) indicates that physical proficiency means the amount of work that the football player can perform with maximum intensity. With the improvement of the functional state of the player's body, s/he is able to perform more work with an economy of energy expended. This indicates an increase in the coefficient of physical adequacy, as physical adequacy is gained through training and its level rises when it is linked to an increase in the efficiency of the circulatory and respiratory systems (Adnan Muhammad Shanawa,2017:36). Abu Al-Ula (2003) adds that physical efficiency is the body's efficiency in producing aerobic and anaerobic energy during sports activity, as it includes both directions in energy production (Abu Al-Ula Abdel-Fattah, 2003:23). As mentioned by Rafea Saleh and Hassan Ali (2008), physical proficiency is the body's efficiency in producing aerobic and anaerobic energy during physical activity, as well as the body's ability to provide aerobic and anaerobic energy materials necessary to perform the maximum muscular movement work and its continuity for the longest possible period of time (Rafea Saleh and Hassan Ali, 2008:14).

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PHYSICAL EXERCISES

Exercise (1):

Exercise name: Varied running.

Exercise goal: speed

Performance specifications: starting at full speed from the first person to the second person, which is 10m away from the first, and then returning by jogging to the first person and repeating the performance in the same way until the end of the exercise time as in Figure (1).

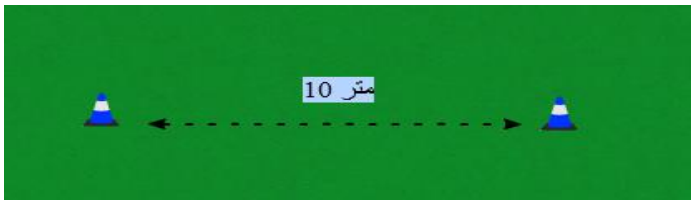

Figure (1)

Exercise (2):

Exercise name: jumping and diving.

Goal of the Exercise: fitness

Performance specifications: The player dives from the bottom of the barrier, which is 1 m high, and free jumps over the second barrier, which is 2 meters away from the first and at a height of (50) cm, and then returns to the first barrier and repeats the performance to the end of the exercise as in figure (2).

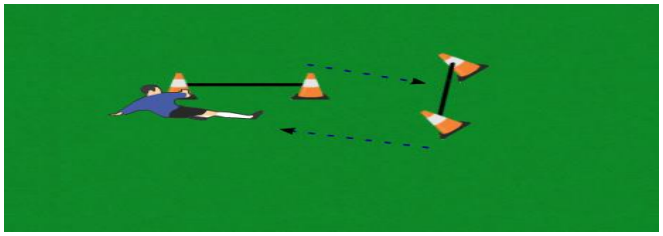

Figure (2)

Exercise (3):

Exercise name: Varied jump with running.

Goal of the Exercise: strength and speed

Performance specifications: The player jumps with both feet on the side of four barriers, at a height of (30) cm in the form of a square, runs at maximum speed to a person 5 m away from the opposite side of the last barrier and then walks fast and repeats the performance until the exercise time ends, as in Figure (3).

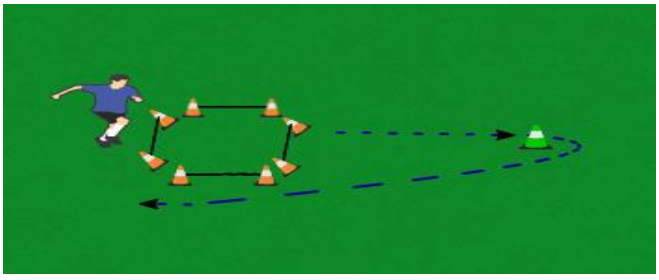

Figure (3)

Exercise (4):

Exercise name: running with double jump.

Goal of the exercise: speed with strength.

Performance specifications: Running at full speed from the first sign to the second sign, in which the distance between them is (5) m, then returning to the first and starting running to the third sign, which is away from the first by (10) m and along the second sign which is a distance of 5 m away from him/her, and then returning to the second sign and completing the run to the third sign with a front double jump over three barriers at a height of (50) cm with the distance between them (1) m and returning to the starting line as in Figure (4).

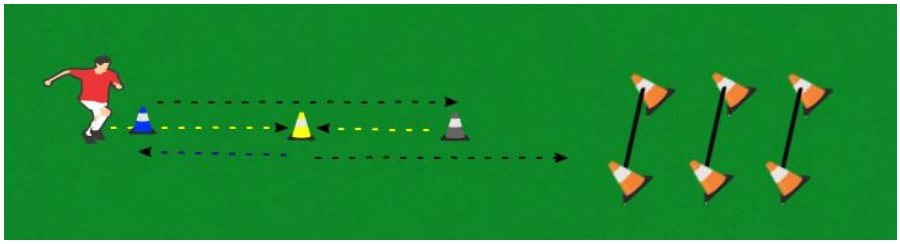

Figure (4)

Exercise (5):

Exercise name: for the abdomen with the torso.

Goal of the Exercise: strength, speed, fitness.

Performance specifications: The player performs an abdominal exercise for a period of (10) seconds, and at the coach's signal, the player starts at full speed to pass from the bottom of a barrier with a height of (1) m which is away from the player by (10) m, and then returning by jogging to the starting line, as in Figure (5).

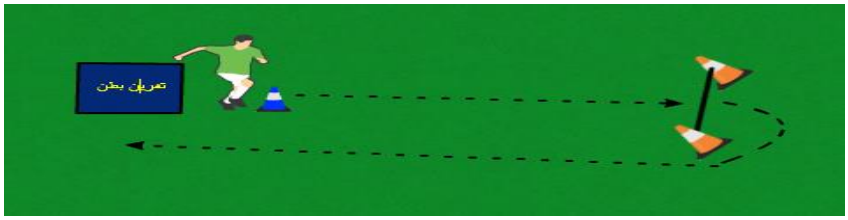

Figure (5)

Exercise (6):

Exercise name: Bend and extend the arms with running.

Goal of the Exercise: strength with coordination.

Performance specifications: From the front position, bending and extending the arms for a period of (10) seconds. When the trainer signals, running alternately between the two legs on four barriers, with a height of (30) cm, and the distance between one barrier and the other is (1) m, as in Figure (6).

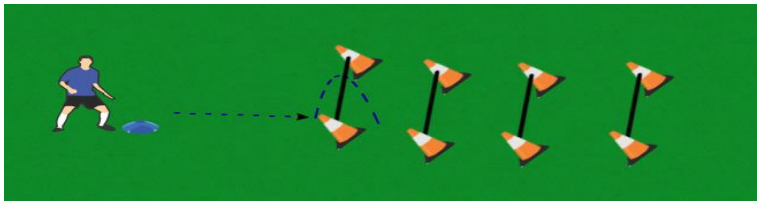

Figure (6)

Exercise (7):

Exercise name: hopscotch with one leg in succession.

Goal of the exercise: developing the strength of the legs.

Performance specifications: Upon hearing the signal from the coach, hopscotch with the right leg and pulling the knee to the chest from the first person to the second person, which is (5) m

from the first person, and then jogging back to the first person and the hopscotch on the second leg to the second person. The performance continues until the completion of the exercise time, as in Figure (7).

Figure (7)

Exercise (8):
Exercise name: Bounce to the two sides with one leg.
Goal of the Exercise: strength with coordination.
Performance specifications: Six rings, the radius of each ring is (50) m, each three are on one side and overlapping among themselves, as in the figure, and the distance between each one to that next to it and from all directions is (2) m. When the coach's signal is heard, the player standing at the starting point jumps with the left leg inside the first ring, then fixing on it for a short period, and then jumping with the right leg to the second ring on the opposite side and fixing. Thus, the performance continues to the rest of the rings alternately and returns to the starting point, and the exercise continues to its end as in Figure (8).

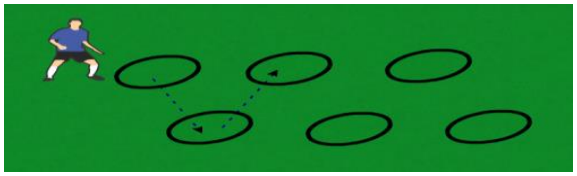

Figure (8)

Exercise (9):
Exercise name: step frequency on the two sides.
Goal of the exercise: kinetic speed.
Performance specifications: (10) cones, the distance between each one and the next is (30) cm. When hearing the signal of the trainer, making a frequency of a quick step to the right. When reaching the end of the cones, walking back to the first cone from the opposite side and making a fast step frequency to the left side. The performance continues to the end of the exercise as in Figure (9).

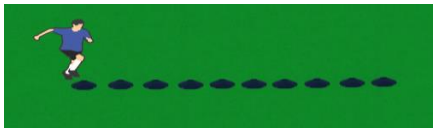

Figure (9)

Training Program

Average load size for a training week / load time (6760) seconds

Total exercise time with rest between exercises (180) seconds	Total exercise time in seconds	Average rest time between groups in seconds	Number of groups	Average rest time between repetitions per second	number of repetitions	Average exercise time in seconds	Intensity	Exercise	Day
seconds2996	1070	180	5	10	4	10	Ideal	First exercise	Saturday
	747	180	3	15	4	21	Ideal	Third exercise	
	1179	180	3	90	3	31	Ideal	second exercise	
seconds3058	1090	180	5	10	4	11	Ideal	fourth exercise	Monday
	762	180	3	15	4	22	Ideal	seventh exercise	
	1206	180	3	90	3	34	Ideal	fifth exercise	
seconds3027	1110	180	5	10	4	12	Ideal	ninth exercise	Wednesday
	747	180	3	15	4	21	Ideal	eighth exercise	
	1170	180	3	90	3	30	Ideal	sixth exercise	

High load volume for a training week / load time (7386) seconds

Total exercise time with rest between exercises (180) seconds	Total exercise time in seconds	Average rest time between groups in seconds	No. of groups	Average rest time between repetitions per second	number of repetitions	Average exercise time in seconds	Intensity	Exercise	Day
seconds 2454	1170	180	5	10	5	10	ideal	First exercise	Saturday
	1179	180	3	15	5	21	ideal	Third exercise	
	1059	180	3	90	3	31	ideal	second exercise	
seconds 2520	744	180	5	10	5	11	ideal	fourth exercise	Monday
	690	180	3	15	5	22	ideal	seventh exercise	
	1086	180	3	90	3	34	ideal	fifth exercise	
seconds 2412	687	180	5	10	5	12	ideal	ninth exercise	Wednesday
	675	180	3	15	5	21	ideal	eighth exercise	
	1050	180	3	90	3	27	ideal	sixth exercise	

Maximum load volume for a training week / load time (9657) seconds

Total exercise time with rest between exercises (180) seconds	Total exercise time in seconds	Average rest time between groups in seconds	No. of groups	Average rest time between repetitions per second	number of repetitions	Average exercise time in seconds	Intensity	Exercise	Day
seconds 3180	720	180	5	10	5	10	Ideal	First exercise	Saturday
	675	180	3	15	5	21	Ideal	Third exercise	
	1785	180	3	90	5	31	Ideal	second exercise	
seconds 3264	744	180	5	10	5	11	Ideal	fourth exercise	Monday
	690	180	3	15	5	22	Ideal	seventh exercise	
	1830	180	3	90	5	34	ideal	fifth exercise	
seconds 3213	768	180	5	10	5	12	Ideal	ninth exercise	Wednesday
	675	180	3	15	5	21	Ideal	eighth exercise	
	1770	180	3	90	5	27	Ideal	sixth exercise	

Second average cycle				First average cycle				Type of load
week eighth	week seventh	week sixth	week fifth	week fourth	week third	week second	week first	
								Extreme
								High
								average
112,66	160,95	160,95	123,10	112,66	160,95	123,10	112,66	Average load time in a week

Figure (10)

The ripple of the weekly load movement for two intermediate cycles of the training load depending on the increase in repetition.