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Competition exercises and its impact on the development of speed endurance and dribbling that ends with accurate scoring and some offensive skills for young players in handball

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Abstract:

The study aims at:

Identifying competition exercises and its impact on developing speed endurance and dribbling that ends with accurate scoring for young handball players.

Identifying competition exercises and its impact on developing some offensive skills for young handball players

The researchers hypothesize the following:

There are statistically significant differences between the two groups (experimental and control) for the pre and post-tests in the development of speed endurance and dribbling that ends with accurate scoring for young handball players.

There are statistically significant differences between the two groups (experimental and control) for the pre and post- tests in the development of some offensive skills for young players in handball.

There are statistically significant differences between the two groups (experimental and control) for the post-tests in the development of speed endurance and dribbling that ends with accurate scoring with some offensive skills for young handball players.

Conclusions:

Competitive exercises must be applied in a gradual and regulated manner according to the category for which these exercises are developed.

The application of competitive exercises in a variable way between high effort at times and at other times with medium effort makes players in desire to perform the exercises in a better manner.

Competitive exercises between players cannot be applied only physically, but must be physical and at other times skillful. At other times, there is a need to combine the physical and the skillful to diversify the exercises and raise the degree of enthusiasm and not to perform the exercises at the same pace

Keywords: (competitive exercises, endurance, scoring accuracy, handball, offensive skills)

Introduction:

Handball is one of the most important team games that have spread very quickly all over the world. It is one of the interesting games for viewers and practitioners alike, due to the beauty of its individual and collective performance, and the speed and strength of this beautiful activity, whether defensive or offensive, in the performance of the player in particular and the team in general. This has helped push the organizers of this event to pay attention to the physical, skill and tactical requirements when using special exercises and choosing the best training methods to be applied in order to keep pace with everything new and to continue the development that handball has reached, and progress to reach the highest levels, win matches and achieve various championships at the local, regional and global levels. This is conducted by using modern

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training methods and following the correct scientific foundations in sports training. (Dick Bate and Jan Jeffreys) find that some activities, including handball, differ in speed of competition and in requirements from other games because the player begins to move in different directions when preparing for the attack, and thus the distance and direction differ from one attack to another. In addition, competition exercises must be linked with the skill that the player uses for all players, as they represent the team defensively and offensively [**1**].

The great development can be played or contributed by different abilities such as physical abilities or skills in order to highlight a high level of performance, which is done through the use of different exercises, including competition exercises. These exercises are a very important and necessary factor that must be used in the training units. The preparation of the players and their participation in these exercises helps raise their levels to achieve good performances in the official matches. Therefore, it is one of the most important and best ways to develop the abilities and skills of handball players. This is due to the fact that its use during training pushes players to exert high physical effort as well as advanced skill performance, which in turn helps to prepare for entering competitions and performing matches at a high level and with a good preparation that enables them to achieve goals determined to win matches. (Al-Bassiti) believes that training must be similar to the conditions of the match and sometimes higher than that to obtain an effective level, as the coach must subject the player to various forms of training [**2**].

The training of young people at the present time has been given great importance due to the importance of this class. Moreover, the exercises of this training overlap between the physical and skill aspects. Also, there is the rapid developments of this game that obtained the law, which has made its rhythm fast and has helped the player to be in continuous movement on the field. There is also the players' need for many physical qualities, the most important of which is speed endurance, especially if we know that the half time is (30) minutes and the players need this quality in a large proportion. When a quick attack occurs, the player needs to use speed in the attack and return to defense after the attack ends with the same readiness as well as performing all the required skills, offensive or defensive, which makes him/her need exercises similar to competitive matches that reflect the player's ability to withstand the conditions of matches. (Mufti Ibrahim) confirms that "the player achieves good performance automatically through continuous repetition of performance" [**3**].

(Naktal) stresses that the repetition of exercises and the skill to be developed is very important if the coach wants to bring his/her players to a high level of good performance and continue in this performance as long as possible [**4**].

From the researchers' experience in their field of work and their observation of the quality of the exercises practiced by the team, they have found that players need exercises that are similar in performance and in harmony with the nature of competitive matches to develop what they lack in physical abilities. This is considered by the researchers as very important in order to improve the players' physical and skill levels through competitive exercises that make a change in the level of the players and achieve what the research aims at.

(Kawthar) emphasizes that competitive exercises with tools is used for the purpose of facilitating the task and encouraging responses so that this training is effective in the competitive or real situation [**5**].

The study aims at:

- Preparing exercises by means of competition and its impact on developing speed endurance with dribbling ending with accurate scoring and some offensive skills for young players in handball.
- Identifying competition exercises and its impact on developing speed endurance with dribbling that ends with accurate scoring for young handball players.
- Identifying competition exercises and its impact on developing some offensive skills for young handball players

The researchers hypothesize the following:

- There are statistically significant differences between the two groups (experimental and control) for the pre- and post-tests in the development of speed endurance and dribbling that ends with accurate scoring for young players in handball.

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- There are statistically significant differences between the two groups (experimental and control) for the pre and post -tests in the development of some offensive skills for young players in handball.
- There are statistically significant differences between the two groups (experimental and control) for the post-tests in the development of speed endurance with dribbling that ends with accurate scoring and some offensive skills of young players in handball.

Method and Tools:

The researchers used the experimental approach by designing the experimental and control groups with two tests, pre-test and post-test, due to its relevance with the nature of the problem of the current study. The research community is represented by the young players in Salah Al-Deen Handball Club for the sports season 2021/2022 and with the number of (22) players. Six players are excluded because of their participation in the exploratory experiment, bringing the number of players representing the sample to 16 players, constituting (72.72%) of the total research community. The players are divided into two groups with (8) players for each. The first group (experimental) which includes (8) players with a percentage of (36.36%) used competition exercises prepared by the researchers. As for the second (control) group, whose number is also (8) players, and constitute(36.36%), followed the exercises of the coach.

Exploratory Experiment:

The researchers conducted the exploratory experiment on Saturday, 15/Jan./ 2022 at exactly four o'clock in the afternoon in the Tikrit Youth and Sports Forum Hall in the city of Tikrit, on a sample of (6) players who were later excluded from the research sample. The aim of conducting this experiment is to identify the time taken, the suitability of the tests given to the sample, to ascertain the tools used, in addition to identifying the obstacles that researchers may face in conducting the tests and knowing the readiness of the assistant work team (Appendix 2).

Pre-Test:

The researchers conducted the pre-tests on the research sample of the experimental and control groups on Saturday 29/1/2022 at exactly four o'clock in the afternoon in the Tikrit Youth and Sports Forum Hall. The researchers were interested in fixing the conditions related to the tests in terms of (time and place), in addition to the tools that were used to conduct the tests and the method of implementation. The results were recorded in a form dedicated to collecting data to be processed statistically.

A number of research tests are used:

- Medium speed endurance test (8×25m) (Kamal and Sobhi) **[6].**
- The dribbling test that ends with accurate scoring (107 m) (Hammodi Essam) **[7].**
- Handling and Receiving Speed Test (Sardar) **[8].**
- The accuracy of scoring from the forward jump test (Hamouda) **[9].**

Competition exercises used in the study:

A set of similar exercises(competition exercises) have been prepared for playing, which aim to develop speed endurance and dribbling that ends with accurate scoring with some offensive skills (physical exercises, skill exercises, compound exercises, exercises with and without the ball, exercises with varying intensity). These exercises are divided into two medium sessions of (8) weeks. Each week consists of (3) training units, and the total number of training units is (24) training units. As exercises designed by the researchers are used with (3) exercises in each training unit and are applied on (Sunday, Tuesday and Thursday) of every week. **Appendix (1)**

These exercises are applied in the main section of the training unit using the used load ripple (3:1), starting on Sunday, 30/Jan./2022.

Post-Test:

The researchers conducted the post-test on the two groups (experimental and control) on Saturday 26/3/2022. The researchers were interested in providing the same conditions as well as the sequence of tests that were applied in the pre-test.

Table (1): Arithmetic means, standard deviations, calculated (t) value, (sig) value, and level of significance for the two pre and post- tests for the research variables of the experimental group

Significan	(sig)lev	T-	Post-test	Pre-test	Measur	Test	No

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ce	el	Value	Y	X	Y	X	ing unit		.
significant	0.000	9.830	1.630	47.350	1.420	51.970	second	Medium speed bearing	1
significant	0,008	4,357	1.024	22.128	1.256	26.630	second	Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the right square	2
significant	0,007	4,269	1.019	21.980	1.261	26.720	Second	Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the left square	3
significant	0.000	22.76	0.86	28.96	0.79	18.78	No.	Handling and receiving Speed	4
significan	0,000	10,795	0,483	3,700	),541	2.1	No	Scoring from the forward jump	5

Results:

Table (2): Rates of development between the pre and post-tests of the research variables for the experimental group

Development Rate	Arithmetic mean		Measuring unit	Test	No.
	Post	pre			
% 9.757	47.350	51.970	Second	Bearing medium speed	1
% 20.345	22.128	26.630	Second	Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the right square	2
% 21.565	21.980	26.720	Second	Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the left square	3
% 35.151	28.96	18.78	No.	Handling and receiving speed	4
% 43.24	3.700	2.1	No	Scoring from the forward jump	5

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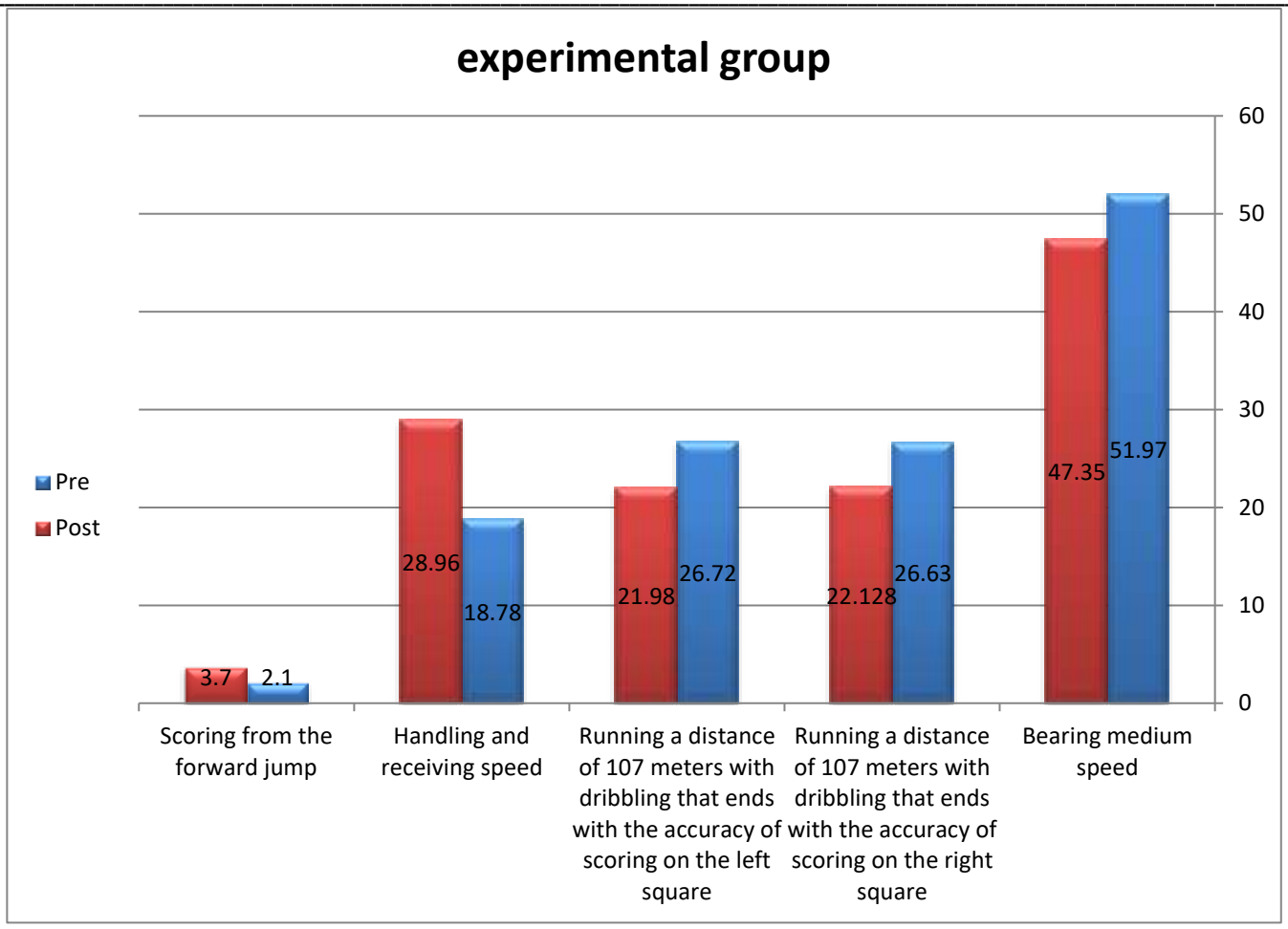

Table (3): Arithmetic means, standard deviations, calculated (t) value, (sig) value and significance level for the two tests, pre and post- tests of the research variables for the control group

Significance	(sig) level	T value	Post-test		Pre-test		Measuring unit	Test	No.
			Y	X	Y	X			
significant	0.004	8.360	1.580	49.800	1.410	51.560	Second	Bearing medium speed	1
insignificant	0.065	5.950	1.180	24.970	1.250	26.570	Second	Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the right square	2
Insignificant	0.060	5.860	1.175	24.860	1.253	26.650	Second	Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the left square	3
significant	0.001	14.55	1.74	24.62	0.81	19.10	No.	Handling and receiving speed	4
significant	0.104	1.790	0.490	2.750	0.479	2.200	No.	Scoring from the forward jump	5

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Table (4): Rates of development between the pre and post-tests of the research variables for the control group

Development Rate	Arithmetic mean		Measuring unit	Test	No.
	post	pre			
% 3.534	49.800	51.560	second	Bearing medium speed	1
% 6.407	24.970	26.570	second	Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the right square	2
% 7.200	24.860	26.650	second	Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the left square	3
% 22.420	24.62	19.10	No.	Handling and receiving speed	4
% 2(	2.750	2.200	No.	Scoring from the forward jump	5

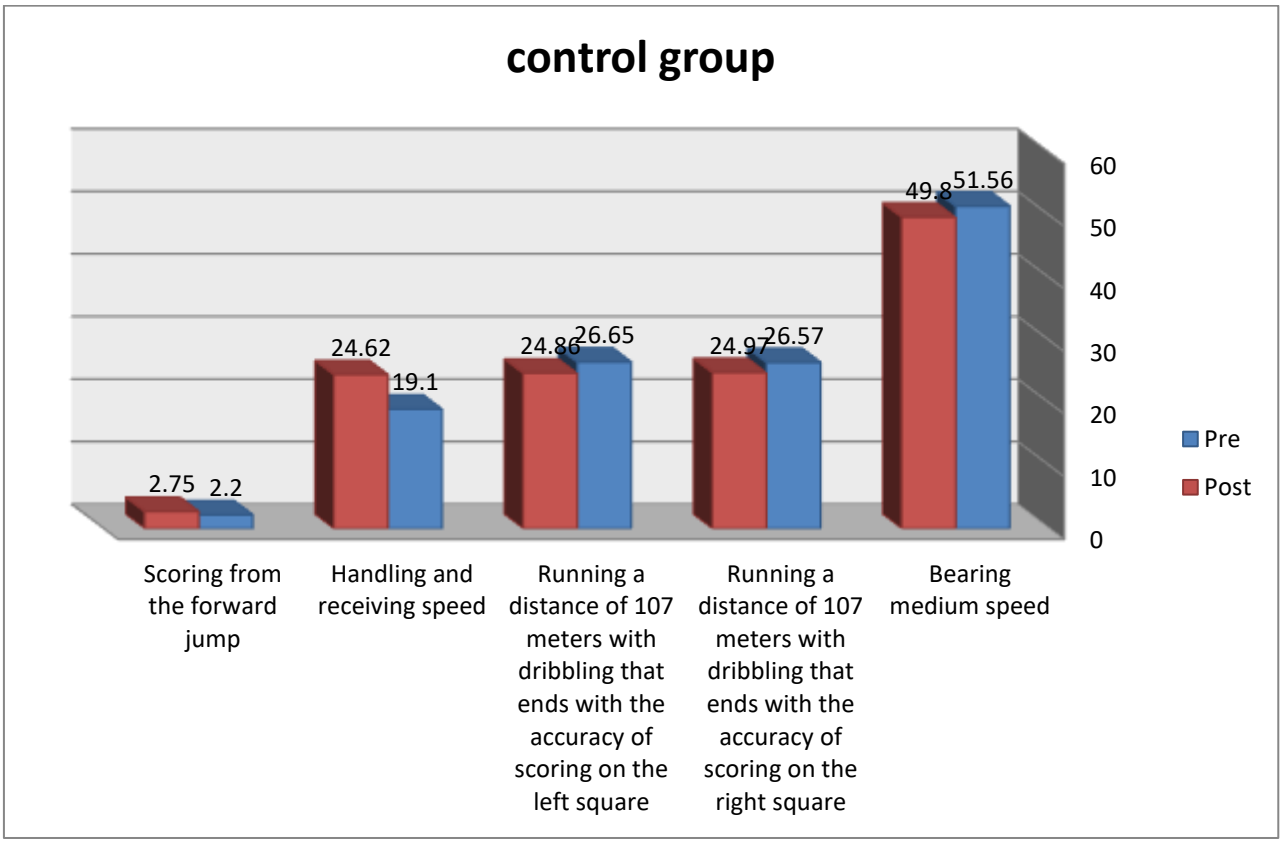

Table (5): Arithmetic means, standard deviations, calculated (t) value, (sig) value and significance level for the post-tests of the research variables between the experimental and control groups

Significance	(sig) level	T-value	Control		Experimental		Measuring unit	Test	No.
			Y	X	Y	X			
	0.003	8.590	1.580	49.800	1.630	47.350	second	Bearing medium	1

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significant								**speed**	
significant	**0.026**	**4.400**	**1.180**	**24.970**	**1.024**	**22.128**	**second**	**Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the right square**	**2**
significant	**0.024**	**4.380**	**1.175**	**24.860**	**1.019**	**21.980**	**second**	**Running a distance of 107 meters with dribbling that ends with the accuracy of scoring on the left square**	**3**
significant	**0.001**	**9.70**	**1.74**	**24.62**	**0.86**	**28.96**	**No.**	**Handling and receiving speed**	**4**
significant	**0.002**	**5.080**	**0.490**	**2.750**	**0,483**	**3,700**	**No.**	**Scoring from the forward jump**	**5**

Discussion:

When observing Tables (1), (3), (5) for the experimental and control groups, we find that all the physical and skill variables have gained the degree of significance, except for the variable of dribbling that ends with accurate scoring which has not risen to the degree of significance for the right and left sides. After comparing the results of the two groups in the post tests, we notice a clear superiority of the experimental group that used competition exercises. Thus, we find that the development of physical and skill abilities needs a gradation commensurate with the levels of the players, as well as the use of appropriate stresses and intensities for the nature of the variable that the researchers want to develop. Rabid believes that "What is important in developing speed endurance is the gradual use of intensity from low to medium and from pre-maximum to maximum" [**10**].

The researchers attribute that the exercises of a competitive nature and the regulation of the intensity used have had a great impact on the development of these variables, which is reflected on the physical and skill aspects. On the other hand, competition exercises are characterized by a high physical nature, especially if these exercises are combined with the use of a ball to raise the degree of enthusiasm among the players and that the quality of these exercises develops the physical and skill aspects at the same time (Gerges) confirms that these exercises are the path of excellence to reach the distinguished skill performance and that training using the ball is to raise the physical level of the player next to the skill level at the same time, and thus these exercises serve these two aspects [**11**].

The researchers of the current study find that the integration of physical and skill performance requires a close interrelationship between the type of exercises performed in the training unit and the goal that the trainer wants to reach by applying these exercises. This is confirmed by (Khaled and Ashraf) in that skill performance is characterized as a set of interconnected and integrated movements that the player performs according to the requirements of the situation s/he is going through during the competition to achieve a goal, depending on his abilities and physical powers [**12**].

The researchers believe that the game of handball is not a repetitive effort that must be made constantly and without periods of rest or that it is high and low effort because the body needs appropriate periods of rest after every high effort as well as a change in the effort exerted. This is what has been applied in the competition exercises, which are varied between high and medium effort, which in turn is reflected in the development of experimental research variables. (Hamoudi) finds that the game of handball is one of the

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games that require different physical effort according to the requirements of the game, as it may be a high effort at times, and may drop to the middle effort at other times [**13**].

It is very necessary that the exercises bear an important principle of sports training, which is the gradual increase in the degree of load. The researchers have been keen that these exercises be consistent with this principle by giving an appropriate timing for each exercise, taking into account the increase in the degree of load to ensure that there is a development in the variables investigated. (Othman) stresses the need to work to secure the principle of gradual increase in the training load during certain periods and to reach certain timings by which the peak of the load is reached [**14**].

The researchers have also been keen that the competition exercises be of a distinctive nature by creating an enthusiastic and interesting atmosphere during the implementation of the training units through the application of exercises characterized by excitement with exercises of different numbers, type and goal. (Al-Busati) believes that competitive training is characterized by suspense and the lack of training at a single pace. It also has positive aspects, especially with the trend of modern training towards increasing the values of the exercises. As the period in which the player performs a different type of training from the previous one is considered a period of rest for the organs and systems that are affected by the previous load [**15**].

The researchers have made sure to provide an appropriate atmosphere for the implementation of these exercises of a competitive nature. This has led to the achievement of the aims of the study as well as achieving significant differences for the tests that have been developed to show the differences between the pre and post – tests, which were compared with the control group. Therefore, the researchers consider it very necessary to use a variety of exercises of a competitive nature among the young players to create a training atmosphere different from what is sometimes found in the daily training units.

Conclusions:

- The competition exercises achieved a qualitative development in the variables studied for the young emerging players.
- Competition exercises must be applied in an interesting and enjoyable way because of their impact on creating a competitive and training spirit at the same time.
- Competition exercises must be applied in a gradual and regulated manner according to the category for which these exercises are developed.
- The application of competitive exercises in varying ways, between high effort at times and medium effort at other times, motivates players to perform the exercises in a better manner.
- Competitive exercises cannot be applied between players only physically, but must be physical at times, skillful at other times, and combine physical and skillful aspects at times to diversify the exercises, raise the degree of enthusiasm and not perform the exercises at a single pace.
- Competitive exercises have achieved an advantage in implementation regarding the offensive aspect and better than that of the defensive aspect.

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target % intensity	Work time + rest time per second	Total rests per second	Total work per second	Total rest time per	number of groups	Rest between	Repetition	Target exercise in time	Exercise

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Appendix (1): A sample of the training units used in the study

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80	880	700	180	240	2	110	2	45	3 vs. 2 competition exercise by carrying out a physical duty in their own half and then moving on to a conditional offensive duty.
	-1250 1280	104 0	-210 240	300	2	110	3	40-35	Dribbling the ball from the goal line to the middle of the arena for two times, then handling it to a colleague then running and handling with the colleague towards the opposing team's goal and deceiving and then scoring at one of the corners of the goal.
	-1280 1298	104 0	-240 258	300	2	110	3	43-40	A competitive physical exercise between two players with the ball starting from the goal line to the midline back and forth for three times and then running to the opposite goal on the tambourine to shoot at one of the corners of the goal from the forward jump between 6 and 9 meters.
	-3410 3458								Total in seconds
	56.83- 57.63								Total in minutes

The rest used is the return of the pulse to approximately 110-120 beats per minute

Appendix (2): Assistant Work Team

No.	Name	Degree	Place of Work
1	Nazar Faeq Saleh	Ph.D. in Physical Education and Sports Sciences	Tikrit University - College of Physical Education and Sports Sciences
2	Wissam Awny Saleh	Ph.D. in Physical Education and Sports Sciences	Tikrit University - College of Physical Education and Sports Sciences
3	Marwan Khero Yaseen	M.A. in Physical Education and Sports Sciences	Tikrit University - College of Physical Education and Sports Sciences
4	Mohammed Saad Humood	B.A. in Physical Education	Tikrit University - College of Physical Education and Sports Sciences