

# The Effect of Complex Exercises on Some Motor Abilities and Enduring the Skillful Performance of Football Players

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**Abstract---** *This method of training, which includes complex exercises, has an important impact and a significant impact on developing the capabilities of the teams that use it in all aspects, the most important of which is the skill side, as global teams attach this type of training great importance to their feeling that it is one of the ways and means that contribute to raising the physical and skill capabilities of the players.*

*The aim of the research was*

- 1. Learn about the effect of complex (physical - skill) exercises on some of the motor abilities of youth football players.*
- 2. Knowing the effect of combined (physical - skill) exercises in bearing the skillful performance of youth football players.*

*The researchers used the experimental approach to its relevance and nature of research. As for the research sample, it was determined from Al-Adhamiya Sports Club for youth football (17-19 years) and officially registered in the statements of the Iraqi Central Football Association for the current season (2018-2019) and the number (34) player was chosen in the intentional way. After that, 26 players were chosen from them, two goalkeepers, one injury player and five players were excluded from the piloting experience. The researcher selected Al-Adhamiya Sports Club as a sample to search in an intentional way.*

*Through what was collected from the results and after statistically processing, the most important conclusions were reached, as follows:*

- 1. It was found that there were statistically significant differences for the pre and posttests of the experimental and control groups and the motor abilities and bearing the skill performance in favor of the post test.*
- 2. The combined exercises (physical - skill) that were used in the training method obtained the objectives that were set for the development of research variables.*

**Keywords---** *Complex Exercises Motor Abilities and Enduring.*

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## I. INTRODUCTION

Football exercises are an important and basic means by which coaches seek to achieve their goals, as they work to develop the skills and physical aspects of the football player. It meets more than one skill or physical character in one exercise, so it is always focused in the general preparation phase on the exercises (physical and skill).

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That these exercises mean the use of more than one case in one exercise, for example, the trainer can give exercises that include technical skill and give exercises (physical - skill) . The exercises, which consist (are composed) of several basic activities and principles, are based on basic exercises that the players have already mastered .<sup>1</sup>Likewise, the combined exercises are "that are close and similar to the competition cases provided that they are subject to the law of the game, and that would complement the physical, skill and psychological numbers to reach the situation through which the player can enter the competition atmosphere as well as a training unit".<sup>2</sup>

Moreover, combined exercises can be used to develop basic football skills, and exercises can be performed with the presence of a negative defender, for example, fixed signs, obstructions, contraindications, or positive cannons any real cannons. "The combined exercises mainly work to develop motor abilities and these exercises are necessary, because they work On the direct construction of the high athletic level of the players and on the integration of the skill and physical performance of the players ".<sup>3</sup>

The combined exercises are "a training form in which the components of the various training cases can be linked and speed up the suitability and validity of the physical and tactical aspects of the competition requirements, and these exercises work on the feeling of carrying the competitions as well as overcoming the fear factor and a sense of confidence and eliminating skepticism and hesitation that occurs in Competitions ".<sup>4</sup> It is also "the ability to use skills according to the requirements of the rapidly changing situation and the ability to reshape. The special agility in football is (the ability of a player to change his direction quickly and in a proper timing and it is the consistency of the player's body movements when performing the movements that are characterized by muscular nervous compatibility and we see these Movements in head-butting, ball-bouncing or scoring after deception or deception before passing is the player's ability to perform various football activities in different directions in a rapid and surprising manner with the ability to change direction quickly and suddenly stand using the ball .<sup>5</sup>

The basic skills are the first pillar for achieving achievement in football matches, as they occupy an important aspect in the daily training unit, where they are trained for long periods of time until they are mastered, because the degree of mastery of basic skills for the type of activity practiced is one of the important things that the implementation of plans in the positions of play depends Different.<sup>6</sup>

Flexibility works with other physical abilities to fully integrate the player physically. And it helps to reduce injuries, and contributes greatly to the performance of movements in a smooth, effective and effective manner. It also helps to save energy and time, and make the least effort possible. The effectiveness of players in many activities is determined by the degree of overall body flexibility or the flexibility of one of the specific joints, and the player with high flexibility makes less effort than the less flexible player. Flexibility exercises that use low-rhythm performance help reduce muscle pain and even remove it altogether in some cases, and the wide range of movement in the joints of the body gives the opportunity for the muscles to operate at the appropriate length for contraction. Thus, it will allow the production of greater strength, flexibility is a decisive factor in Skill performance as it helps to achieve an acceptable level of skill education and performance proficiency.<sup>7</sup> Play exercises are the effective tool and one of the field solutions for all the problems facing the team during the competitions, and whenever these exercises are realistic and take into account the levels of the players, the closer to the real competition atmosphere,

which contributes to developing the skill and physical performance of the players, which the coach relies greatly on during the training process for its effective and vital impact. In dealing with the problems that appear during the training period and competitions.

Through the researcher's follow-up to the Al-Adhamiya club's matches, he identified some weaknesses of the team's players, and in order to identify those points that the researcher identified for the purpose of formulating a research problem in a precise scientific manner, he videotaped two matches for Al-Adhamiya Sports Club for youth football and after analyzing the two recorded games it showed. We have the results of the analysis, the absence of correlation in physical and skill performance whenever the match progressed, and these results confirmed the research problem identified by the researcher, and it was summarized in the presence of a decline in the level of some physical abilities.

This scientific diagnosis of the research problem called the researcher to study it in a research methodology according to Scientific contexts followed in the fields of scientific research and sports training, in an effort to address them for the benefit of the players and coaches of them.

Training the players within specific areas will lead them to correct behavior and quick and sound decision-making at the right time, since the performance of skills and linking them with each other is more difficult than performing them individually, and training within specific areas to master these skills provides us with close cases of what is going on in the game, that this method of training Significant importance and impact in developing the capabilities of the teams that use it in all aspects, the most important of which is the skill side, as global teams attach this type of training a great importance to their feeling that it is one of the ways and means that contribute to raising the physical and skill capabilities of the players.

### ***Research Objective***

1. Learn about the effect of complex (physical - skill) exercises on some of the motor abilities of youth football players.
2. Knowing the effect of combined (physical - skill) exercises in bearing the skillful performance of youth football players.

### ***Research Hypotheses***

1. There are statistically significant differences for pre and posttests of kinetic abilities in favor of the post test.
2. There are statistically significant differences in the pre and posttest in bearing the skill performance in favor of the post test.

### ***Research Fields***

- The human field: Al-Adhamiya Youth Sports Club footballers for the 2018-2019 sports season.
- Time field: 1/7/2019 - 11/11/2019.
- Spatial field: Sulaikh Sports Stadium.

## **II. RESEARCH METHODOLOGY AND FIELD PROCEDURES**

### ***Research Methodology***

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

### ***Research Community and Sample***

The researcher chose the research community from the Iraqi youth clubs participating in the Iraqi youth league, for the season 2018-2019 and registered in special statements with the Iraqi Central Football Association.

### ***The Research Sample***

The research sample has been determined from Al-Adhamia Sports Club for youth football (17-19 years) and officially registered in the statements of the Iraqi Central Football Association for the current season (2018-2019) and the number (34) player was chosen in the intentional way. After that, 26 players were chosen from them, two goalkeepers, one injury player and five players were excluded from the piloting experience. The researcher selected Al-Adhamiya Sports Club as a sample to search in an intentional way.

### ***Devices, Tools and Means of Collecting Information***

1. The wooden box is 50 cm high
2. A medical scale for measuring height and weight for ideen wilt players.
3. Stopwatch number / 4.
4. Canon video camera.
5. Football field.
6. Legal football number / 10.
7. Persons, contraindications, flags, whistles. Tape measure.
8. Arab and foreign sources.
9. Observation, experimentation and analysis.
10. Information Network (Internet).

### ***Motor Skills and Endurance Skills Tests***

#### ***Bend the Stem Forward from Standing***

The purpose of the test: Measuring the elasticity of the spine (measuring the frontal elasticity of the trunk)

Tools: Wooden box height (50) cm ruler or tape measure divided from (0 - 50) cm in accordance with the downward direction and from (0 - 50) cm negative in the upward direction vertically installed on the box so that the number (0) parallel to the surface of the seat and number (50) ) Cm parallel to the bottom edge of the seat.

Performance specifications: - The lab stands above the seat and feet clenched with toes fixed to the edge of the seat and the knees extended, the laboratory slowly bends the torso to the maximum distance

*Possible below the instep level and stability for (2-3) seconds.*

### ***The Conditions***

1. The test must precede the warm-up period
2. The distance is measured from the end of the finger phalanges
3. Each laboratory is given three attempts

**Registration:** The laboratory calculates the distance the middle and nearest fingers reach (0, 50) cm and record, the distance is positive if it is below the surface of the box and negative if it is higher.<sup>8</sup>

### ***Rolling Ball Run***<sup>9</sup>

The goal of the test: Running fast with the ball to measure agility with the ball.

Tools needed: legal football, stopwatch, 5 people

### ***Measures***

1. Layout of the test area as shown in Figure 3-2
2. The player stands with the ball behind the starting line, and when he gives the starting signal, he runs the ball with the foot between the bars according to the figure shown in the drawing.
3. Each player is given two transformers.
4. Time is calculated for the nearest tenth of a second.

Score: The player's score is the total time taken to complete the two trials.

### ***Skill Tolerance Test***

The name of the test: Running winding with the ball and without the ball, jumping instead of the bus and scoring

The goal of the test: to measure performance endurance

Tools: football field, football, 13 characters, ball catch, stopwatch, ground ladder, number 7 spears.

Performance specifications: The laboratory stands on the starting line which is (2 meters) from the first person and when the signal is given, it rolls the ball between five people and the distance between one person to another is (1 meter) and after passing the characters it stops the ball and runs at the fastest speed for a distance (30 meters) and then turns quickly And the movement of winding running between five people and one person away from the other by a distance (1 meter) and then running quickly and jumping towards a ball hanging with a rope which is (2 meters) from the last person and the ball height (40 cm) from the length of each player and the height changes according to The player's length (in case the ball is not hit by the head, one second is added to the performance time) and then he runs Above the ground ladder, which is 3 meters in length, knowing that the number of ladder spaces is (15) spaces, either its dimensions (15 cm), and then he plays a mural with the coach who is (3 meters) from a ball placed at a distance of (2 meters) after the ladder ( Double bus) and then scoring towards the goal as shown in Figure (1).

Recording: timing starts from the starting signal until the scoring goal.<sup>10</sup>

### **III. FIELD RESEARCH PROCEDURES**

#### ***The First Pilot Study***

The researchers conducted a friendly match for Al-Adhamiya and Sulaikh Football Clubs for youth, which was filmed (video shooting) and analyzed by experienced and specialized experts and coaches on (Friday) (12/7/2019), which aims to:

- Standing at the level of physical and skill performance of the players.
- Knowing the skills in which the error rate is high in games.
- Confirmation of the research problem.

#### ***The second pilot study***

The researchers, together with the assistant team, conducted the application of the second exploratory experiment for physiological tests, motor abilities and endurance of football performance on (Saturday) (7/13/2019) on a sample of the research community of (5) players, aiming at:

- Ensure that the test venue is valid and appropriate.
- To find out the competence of the auxiliary team and the appropriate number of tests.

#### ***The Third Pilot Study***

Before starting the implementation of the training program, the researcher and the assistant work team conducted the third exploratory experiment on (Sunday) corresponding to (14/7/2019) on the same players of the first and second exploratory experiment sample, in which a training unit was conducted which aims to:

- Ensure that the training program is valid.
- Knowing the suitability of the exercises developed for playing and used with the level of the sample members.
- Knowing the necessary and appropriate time to implement the training units.
- Exceeding errors and negatives that may appear when carrying out the main experiment.

### **IV. FIELD EXPERIENCE**

#### ***Pre Tests***

Pre tests were performed) after creating all the appropriate conditions in terms of time, place, tools used and the assistive team at exactly five o'clock at the Sulaikh Sports Club football stadium. They included:

1. On (Tuesday) corresponding to (16/7/2019), the match was conducted for the research group, which was photographed (video shooting) and analyzed by experienced and specialized, and this analysis was considered a pre-test for the experimental program.

On (Wednesday) corresponding to (15/7/2019), the kinetic capabilities of the research group were conducted.

2. On (Thursday) corresponding to (16/7/2019), a performance test for the players in the research group was performed.

### ***The Main Research Experience***

The main research experiment was started on (Saturday) corresponding to (18/7/2019), which ended on (corresponding to (18/9/2019)), and by (3) training units per week, as the number of the total training units reached (24) A training unit, the researcher used the main part of the training unit for three days (Saturday, Monday and Wednesday). The exercises used included several things, the most important of which are:

- The researcher should consider the principle of suspense and excitement in the exercises used, as they were all exercises are applied with balls and with the presence of a competitor and keeping players out of boredom as a result of replay exercise again.
- (25) compound exercises were used that included physical and vocational aspects, motor abilities and endurance of skill performance were applied in the main section and for the experimental group only.
- The application of the exercises used began on (Thursday) corresponding to (18/7/2019) and ended on (Wednesday) corresponding to (18/9/2019) for a period of 8 weeks.
- The training size was determined on the basis of the number of iterations of exercises in the research group and on the basis of the exercise performance time. The researcher took into account the severity used for the training unit.
- Rest was determined between the repetitions on the basis of the return of the pulse between (110-120 minutes), so that no full recovery of the player is allowed between the repetitions. Between (2-4) minutes so that the player can perform the exercises in the next group well.
- The intensity used to perform the exercises ranged between (70-100%) of the maximum ability for the player, the maximum intensity of the exercises used in the scouting experience was determined for each player.
- The exercises used in the preparation phase of the medium and high intensity training methods (70-90%) and repetitive training (90-100) divided into the training program were applied.
- Formation of the training load between 1: 3 weeks, that is, three weeks go up and one week down.
- (3) training units were given per week, with a 1: 2 training load formation, use gradation in pregnancy by two units up and a training unit down and table (3-1) shows the ratethe daily, weekly, monthly, and college intensity of the training program.

Table 1: Determines the Intensity in the Program

First	70%	74%	72%	72%	76%	Moderate intensity training
Second	75%	77%	76%	76%		
Third	78%	80%	79%	79%		
Fourth	76%	78%	77%	77%		
Fifth	80%	84%	82%	82%	86%	High intensity interval training
Sixth	85%	87%	86%	86%		
Seventh	88%	90%	89%	89%		
Eighth	86%	88%	87%	87%	96%	Repetitive training
Ninth	90%	94%	92%	92%		
Tenth	95%	97%	96%	96%		
Eleventh	98%	100%	%	99%		
Twelfth	96%	98%	97%	97%		
Program intensity rate						86%

### Post-test

Post-test were carried out after the completion of the main research experiment of the research group at the Sulaikh Sports Club stadium according to the following dates.

1. On (Thursday) corresponding to (19/9/2019) the second match of the research group was conducted in the same circumstances in which the pre tests were performed. They were photographed (video shooting) and analyzed by experienced and specialized, and this analysis was considered a post-test.
2. On (Friday) corresponding to (20/9/2019), the group's motor abilities tests were performed search.
3. On (Saturday) corresponding to (9/21/2019), a test of bearing the skill performance of the two research groups was conducted.

## V. RESULTS AND DISCUSSIONS

Table 2: Shows the mean for pre and posttest tests and the mean for differences and deviationthe normative and calculated value (t) of the kinematic variables of the two research groups

Groups	Variables	Units	Pretest		Posttest		Mean diff.	SD diff.	(t) calculated	Type of indication
			Mean	SD	Mean	SD				
Experimental	Flexibility	Degree	2.38	1.21	4.15	0.86	1.76	1.31	4.88	Sig.
	Agility	Second	13.53	1.49	10.46	0.49	2.84	1.51	6.92	Sig.
	Accuracy	Degree	1.76	1.04	3.46	0.63	1.69	0.72	8.45	Sig.
Control	Flexibility	Degree	2.07	1.20	2.61	0.83	1.30	0.72	6.5	Sig.
	Agility	Second	14.46	1.21	13.15	1.35	1.30	0.60	8.12	Sig.
	Accuracy	Degree	1.15	0.98	2.15	0.66	0.92	0.61	5.75	Sig.

Table (2) shows the differences between the pre and posttests in some kinetic abilities of the experimental and control groups. Whereas, the calculated value of (t) for the experimental group was (4.88 -6.92 - 8.45), whereas the control group reached (6.5 - 8.12 - 5.75) in the variables of some kinetic capabilities (flexibility - agility - accuracy), since the calculated value of (t) for all tests For the two research groups, the tabular value was greater than (t) in

front of the degree of freedom ( $13 - 1 = 12$ ) and at the level of significance (0.05). This means that the differences are a statistical function in favor of the Post-test tests.

What the researcher attributes to the approach followed by the researcher (the experimental group) and the approach followed by the trainer (the control group) where these two approaches contributed to upgrading the level of kinetic abilities of the players, because the exercises were close to the reality of competitions and unevenly and in it a kind of suspense that makes it Two search samples perform exercises. If exercises are well-chosen, program developed, used, and evaluated, you can inspire the player, arouse his interest, expand his experience, and help him understand. It sharpens the idea and helps him in teaching skills and developing directions.<sup>11</sup> The use of training programs in a proper and appropriate way for the players' kinetic abilities helps that develop the kinetic abilities of the players and The use of the training load in a proper way leads to success in the training process and thus increases the level of performance and achieving the best results.<sup>12</sup>

The training process aims to qualify and develop the level of the player who is exposed to training programs according to scientific methods and these developments come as a result of adherence to the basic principles of training science and one of those principles is the rule for gradual training and a rule that suits the training load with Athletic Abilities and Capability<sup>13</sup>, the researcher states that if the exercise is built correctly, it helps in raising the level of kinetic abilities of the players, Building a proper exercise leads to developing the skill and reaching it to the automatic in performance and the ability to know and identify the error.<sup>14</sup>

And when defining the error, it is possible to put in place the appropriate treatment for the error and promote the correct performance and fix it with the players, the best training methods in the ball are to guide the learner to mistakes and correct them with repetition of the correct performance to advance the skill level.<sup>15</sup>

Table 3: Shows the mean for the pre and posttests, the mean for the differences, standard deviations and the calculated value of (t) to bear the skill performance of the two research groups

Groups	Variables	Units	Pretest		Posttest		Mean diff.	SD diff.	(t) calculated	Type of indication
			Mean	SD	Mean	SD				
Experimental	Endure skillful performance	Second	63.76	1.71	26.16	1.11	7.05	1.24	20.73	Sig.
Control	Endure skillful performance	Second	37.07	2.46	28.20	1.61	4.96	1.52	11.80	Sig.

The special table (3) showed the differences between the pre and posttests in the skill performance of the two research groups (experimental and control) and that the calculated value of (t) for the experimental group (20.73), while the control group had (11.80) in the skill performance variable. As the value(t) for the tests for the two research groups were greater than the tabular value of (t) in front of the degree of freedom ( $13-1 = 12$ ) with a significance level (0.05) and this means the differences are statistically significant and in favor of the post-test of the two research groups.

When the exercises prepared by the researcher and the approach followed by the control group contributed. Where the exercises were close to the reality of the competitions and helped in the development of performance, the skills training should be under conditions similar to the atmosphere of the game<sup>16</sup>. Since the development got two research groups, but in varying proportions, we can say that any training program helps in developing skillful

performance the more the training period of the player increases, the more his experience and skills increase in different playing sites .<sup>17</sup>

And the researcher's use of different training methods in the training program also helped in developing skillful performance according to the conditions and requirements of the game.<sup>18</sup>

## VI. CONCLUSIONS

1. It was found that there were statistically significant differences for the pre and posttests of the experimental and control groups and the motor abilities and bearing the skill performance in favor of the post test.
2. The combined exercises (physical - skill) that were used in the training method obtained the objectives that were set for the development of research variables.
3. The choice of training ripples weekly (1-2) and monthly (3-1) in the training program stage had a clear impact on the endurance of the skilled physical performance of players during competitions.
4. The development that occurred in the experimental group is better than that of the control group as a result of using the training program for the researcher by the trainer and in conditions similar to the conditions of competitions.

## REFERENCES

- [1] Sami Al-Saffar and others: Foundations of Training in Football, Iraq, Mosul, *Ibn Al-Atheer House for Printing and Publishing*, 1990.
- [2] Zuhair Qasim Al-Khashab and others: Football, updated 2nd edition, Iraq, Mosul, *Dar Al-Kutub for Printing and Publishing, University of Mosul*, 1999.
- [3] Thamer Mohsen and Sami Al-Saffar: Fundamentals of Training in Football, *Baghdad, Baghdad University Press*, 1988.
- [4] Dia Al-Khayat and Nawfal Muhammad: Handball, Mosul, *Dar Al-Kutub for Printing and Publishing*, 2001.
- [5] Abdullah Hussein Al-Lami, The Scientific Bases in Athletic Training, Amman, *Al-Taif for Printing*, 2004, p. 72.
- [6] Zuhair Qasim Al-Khashab and others: a previously mentioned source, 1999.
- [7] Mowaffaq Asaad Mahmoud, basic learning and skills in football, 1st floor, Amman, *Dar Degla*, 2008, 71.
- [8] Khayriyah Ibrahim al-Sukkari and Muhammad Jaber Bareeqa, an integrated training series for the hero's industry 6\_18 years, *Al-Maaref Establishment, Alexandria*. 2001.
- [9] Ali Salman Abdul-Tarfi: Applied Examinations of Physical Education, *Baghdad*, 2013
- [10] Mowaffaq Asaad Al-Hiti: Tests and Tactics in Football, *Degla Press* 2018.
- [11] Riyadh Muzhir Khoreibet: Designing and codifying complex physical and football tests for first-class players, PhD thesis, College of Basic Education, *Diyala University*, 2016.
- [12] Rasha TalebDhiab: Using Proposed Exercises to Transfer the Impact of Learning to Preferred and Preferred Hand for Correction in Basketball, Master Thesis, Diyala University, *College of Athletic Sports*, 2007.
- [13] Abu El-Ela Ahmed Abdel-Fattah: Carrying Training and Athlete Health, Cairo, *Dar Al-Fikr Al-Arabi*, 1999.

- [14] Saad Menem El-Sheikhly: The effect of using a suggested training program on the results of the Cooper Football Referees' test (research published in the Journal of the Faculty of Physical Education, Volume 13 No. 1) 2002.
- [15] Yahya Mahjoub: Learning and Scheduling Training, 1st edition, Amman, Zael Publishing House, 2001.
- [16] Adel Fawzi: The Impact of Immediate Knowledge of Errors on Skill Performance by Hand, Scientific Conference for Studies and Physical Education Research, *Alexandria*, 1988.
- [17] Salam Omar Al-Balbisi: The Effect of Using Circular Training Method in Some Physical Attributes and Motor Skills of Football Players, *Master Thesis, University of Mosul, College of Physical Education*, 2000,
- [18] Shams Jassim Muhammad Hassan: The effect of mental training exercises and kinesthetic perception in learning and retaining some basic skills in volleyball, *PhD thesis, University of Baghdad, College of Physical Education*, 2007.