

## SPECIAL CROSS-SECTIONAL EXERCISES AND THEIR IMPACT ON THE DEVELOPMENT OF SOME PHYSICAL ABILITIES AND PERFORMANCE OF THE BASIC SKILLS OF FOOTBALL FOR YOUNG PLAYERS

Muneer Abdulsahib Mohammed<sup>1</sup>, Maytham Habeeb Sabhan<sup>2</sup>, Emad Kazim Abed<sup>3</sup>

<sup>1</sup>Football Training, Physical Education and Sports Sciences, University of Baghdad, Baghdad, IRAQ;

<sup>2</sup>Football Training, Physical Education and Sports Sciences, University of Baghdad, Baghdad, IRAQ;

<sup>3</sup>Rehabilitation of sports injuries Football, University of Information and Communication Technology, Baghdad, IRAQ

**Abstract:** The main objective of the sports training process is to try to get the player to integrate in athletic performance and achieve results using the best scientific methods available in all sports, including football. The researchers used the experimental method for its suitability and the nature of the research and formed a sample of 15 players from the oil Football club. The research presents the results and discusses them through the use of a number of statistical means. Conclusions that have to do with the effectiveness of the method of experimental cross-sectional exercises in the development of physical abilities and the extent of their reflection on the performance of skills in football according to the exercises in the training program as a guide for the work of football coaches and taking into consideration the method of cross-sectional exercises that have, Performance.

**Keywords:** Physical Education, training, performance, physical preparation.

### INTRODUCCIÓN

The effective training in football should be based on the specific duties required of the players to implement. This will be achieved only by the adoption of systems, laws, rules, and theories focused on the knowledge and experience in the field, analysis, and investigation, commensurate with the activity of specialization in order to reach the goals and invest everything that could affect positively in players and to improve their level of skills, physical abilities, and increase the spread of football game in the world and its development in all aspects of physical, skill and planning and the existence of interdependence in all these aspects has become important to overcome all the difficulties in training process, especially with regard to football because it is a recent spread it needs to overcome all the traditional things in the training process and efforts of the coaches to guide their thinking in the progress of this game in order to raise the level of physical preparation and skills because they both are considered as the basis of performance and cornerstone in the football game.

The requirements of modern football play require the player to reach a high level in all aspects of training, including in particular the physical and skill side, as well as the compatibility, consistency and good use of these two aspects.

In order to achieve the desired level, you must choose the best and appropriate exercises that achieve the goal. Multi-Joint Exercises are one of the important exercises in football that develops on both sides of the skill and physical, As well as that the Motions and requirements imposed by the nature of these exercises are close to

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Dirección de contacto: Muneer Abdulsahib Mohammed,  
Football Training, Physical Education and Sports Sciences,  
University of Baghdad, Iraq  
Correo-e: muneer.a@sc.uobaghdad.edu.iq

what happens in the game actually, These exercises are simple, varied and exciting in practice and can be used in all stages of players preparation.

The training process should be fruitful and enhance its results through the use of modern science and technology, from training in a cross-sectional exercise method and keeping pace with development which requires searching for new solutions and innovative means to help advance the process by finding alternative means that are more useful than traditional methods used in sports field. The cross-sectional exercises have dramatic effects on the endurance of the aerobic and anaerobic of the athlete, along with improvements in muscle strength, endurance, flexibility, and agility, all of which contribute to improving the athlete's performance in his or her original sport (Jaber, 2014, p. 61)

The importance of research is that training should be used cross-sectional exercises method to develop some physical abilities of football players in accordance with the muscular training necessary for these activities, which works to develop the ability of the muscles working during the motion performance through the same performance or work similar to the performance in the race or competition. The same direction of muscular action.

### Research problem

As the requirements of modern football require the possession of a high level of different types of speed, especially the speed of movement of players during the various duties in the game to improve the chances of success and excellence in achieving the goals required. Therefore, through the humble experience of the researchers which that they have worked in the field of football as players and trainers, and through field follow-up of many football matches, as well as taking the opinions of some experts. They noted that there is a weakness in the physical abilities of young players that do not match the requirements of modern football, which has become a major feature of playing football at the present time.

In the light of this fact, the researchers followed the field of several training units of football teams (youth category) in Baghdad, and met with a number of trainers of these teams, it turned out later that one of the reasons for weakness in physical abilities is that most of these trainers use traditional exercises in training progress. In other words, there is no physical exercise that used in

training progress suits the requirements of modern play in terms of the extent of their reflection on the skill performance. Therefore, the researchers resorted to a study that addresses this important phenomenon to suit the requirements of modern football, in comparison with the level of that age group and the experience of cross-sectional exercises method to develop the performance of the Players skills of football

### Research objectives

- Prepare special cross-sectional exercises and its impact in the development of some physical abilities and performance of the basic skills of football for youth players.
- To recognize the special cross-sectional exercises and their impact in the development of some physical abilities and performance of the basic skills of football for youth players.

### Research hypothesis:

There are statistically significant differences between the results of Pre and Post -tests of the physical and skills tests of football players.

#### 1.5 Limits of the Research:

1.5.1 The human limits: oil Football club players.

1.5.2 The time limits: 15/1/2019-20/ 3/2019.

1.5.3 The locative (location) limits: The stadium of the oil Football club.

### Materials and Methods

**Research Methodology:** The researchers used the experimental Approach in the research, which is "the most accurate type of scientific Approach that affects the independent and dependent variables in the experiment, because the experimental approach is the method through which the researcher can test the hypotheses related to cause-effect relations" (Khreibit, 1987, p. 99) and for its suitability for the nature and the problem of research.

The Population and the Sample of the Research:

The research population consisted of the players of the Premier League where the researchers chose the Oil football Club/youth group for the research. 15 players were chosen as Purposive sample from the football Club, these players are participants in the Premier League for the football season (2017-2018).

1 The tools, instruments, and devices that used in the research:

- Tests, data collection forms, measurements and test results, researchers observation, and experimentation, training program, Arabic and foreign sources.

Devices Used in Research

- One Chinese-made Sport Timer type Electronic stopwatch (1/100 seconds).
- One Inches and Metric Measuring Tape for measure the length.
- 12 Chinese-made official football.
- Legal Football Stadium.
- 2 Aluminium Football Goals.

### Field Research Procedures

Broad Jumps test (Hassanein, 1995, p. 305)

Name of the test: Broad Jump test.

Test objective: - Measure the Explosive Power of the legs.

Tools: - Tape measure (metric), and Chalk to determine the starting line.

The Specifications of broad jump Performance: The participant in the test takes the standby position at the edge of the starting line, the participant bending the two legs down and opening the arms aside. When the signal is given, the participant begins to jump with maximum force to cross as much distance as possible.

Bent-stretch knees test in 20 seconds (stand position) (Dyson, 1971 , p. 39) .

Purpose of the test: Measure the speed of the legs

Tools: - Electronic stopwatch and whistle.

Performance description:

The participant stand and the legs are open with a standard opening (chest width). When the signal is heard, the participant will bend and extend both legs as quickly as possible for a period of 20 seconds.

The conditions of the test:

- Not allowed to stop.

- The participant is not allowed to rely on any part of his body on the ground and anything else.

- The participant is allowed to perform two attempts after giving him the appropriate time to rest between the attempts.

- The best attempt is recorded.

- 20 meters distance ball rolling test (Kamil, 2003, p. 101).

The objective of the test: - Measuring the speed of the rolling ball (speed of performance).

Tools:-

1- One football. 2- Measuring tape. 3 - whistle. 4. Stopwatch. 5 - two of football training cone.

Performance Method: The player stands with the ball behind the first cone. When the player heard the whistle, he rolls the ball for a distance of 20 meters until he reaches the second cone. after that, He turns around the cone and returns to the starting point.

Recording Method:

- The researchers record the time to the players when they cross 20 meters when rolling the ball and return to the starting point, the researchers giving the player two attempts and record the best of them.

The Test of handling the football in the direction of the wall (Kamil, 2003, p. 103)

The purpose of the test: - Measuring the speed of handling (speed of performance).

Types of the equipment used in the test:-

1 - 2 footballs.

2 - Measuring tape.

3 - Whistle.

4 - Portable wall.

5 - Electronic stopwatch

6 - Recording form.

Performance Method:

When the whistle is heard by the player, the ball is hit from 3 meters and the player continue handling after the ball bounce from the wall for (20) seconds, as shown in Figure (8).

Performance Instructions: -

- The bounce ball from the wall is only hit from behind the starting line.
- If the ball is out of control the player takes the other ball with nonstop.
- The player can hit the ball with any foot and any part of it.

Record method: - the researchers give the player a single attempt and they counted the number of ball handling performed within (20) seconds.

Exploration experiment:

Experts in the field of scientific research often stress the necessity of carrying out the experimental experiment for the tests used in the research because it is considered as a preliminary study by the researchers on a small sample before the main research, in order to obtain reliable results and necessary information to be used when conducting the main experiment. In order to give a clear and accurate picture of the axes of the tests used to serve the training progress. After determining the sample of the research and determining the physical and skill tests, the researchers conducted the exploratory experiment for Wednesday and Thursday, 16-17/1/2019 on a sample of 10 players of Al-Sulaikh football club from outside of the basic search sample.

The aim of the exploratory experiment was as follows:

- 1) To identify the size of the difficulties encountered by the researchers.
- 2) Identify the safety of the devices and tools used in the research.
- 3) Identify the adequacy of the supporting team.
- 4) Adjust the timing and frequency needed to perform the tests.

The Pretest:The researchers conducted the pretests in the outside arena of the Oil football Club on Sunday 20/1/2019.

Implementation of the Training Curriculum by using (Cross-Sectional) exercise:

After viewing a lot of related studies, research, thesis, and reports in the training curricula and taking the opinions of experts and specialists in the field of sports training, the researchers prepared (Cross-Sectional) exercise to put it in the Training Curriculum to develop the explosive force of the legs, speed and strength of the oil football club members from Monday 21/1/2019 until Thursday 21/3/2019 with three training units per week for a period of (12) weeks. And this equates (36) training units, on Sundays, Tuesdays, and Thursdays of each week.

- ❖ The Period of training units (12) weeks.
- ❖ The Number of training units was (36) units.
- ❖ The number of training units was (3) units per week.
- ❖ The period of each training units was (60-100) minutes.
- ❖ The intensity of the training load started from 50% and reached 95% of the maximum capacity of the participant for each exercise.
- ❖ Rest between repetitions was until the pulse returned to (120) per minute.

Posttest:The researchers conducted posttests in the outdoor stadium of the Oil football Club on Sunday 22/3/2019.

Statistical Means: The researchers used the statistical SPSS program in processing the search results to extract the values of the arithmetic mean, the standard deviation, and the T-test of the interrelated samples.

Axis IV

. Presentation and discussion of the results:

4.1 Present and discuss the results of the pre-post tests of the experimental group in the research variables.

4.4.1 Review the arithmetic mean, the standard deviation of the pre-post tests and the T-test of the following physical and skill tests (Broad Jumps, the flexion

**Table 1.** The table below shows the arithmetic mean, the standard deviation of the pre-post tests and significance of the differences for the pre and post-tests of the research groups.

|   | Statistical data Groups                              | Pretest |                    | Posttest |                    | Average differences | Deviation of differences | Mistake percentage | Significance of differences |
|---|------------------------------------------------------|---------|--------------------|----------|--------------------|---------------------|--------------------------|--------------------|-----------------------------|
|   |                                                      | mean    | standard deviation | mean     | standard deviation |                     |                          |                    |                             |
| 1 | Broad Jumps                                          | 2.0560  | .02271             | 2.3830   | .04347             | .01535              | .04855                   | 0.00               | Significance level          |
| 2 | The flexion and extension of the knees in 20 seconds | 15.1000 | 1.1972             | 22.7000  | 1.15950            | .49889              | 1.57762                  | 0.00               | Significance level          |
| 3 | Rolling the ball for a distance of (20 m)            | 9.1000  | .73786             | 6.8000   | 1.13529            | .49554              | 1.56702                  | 0.00               | Significance level          |
| 4 | Handling the ball in the direction of the wall       | 10.5000 | .70711             | 13.5000  | .97183             | .33333              | 1.05409                  | 0.00               | Significance level          |

\*Significance at the Error level (0.05) if the error level is less than (0.05).

\* Degree of Freedom (10-1 = 9).

and extension of the knees in 20 seconds, rolling the ball for a distance of (20 m) and handling the football in the direction of the wall).

### Results and Discussion

By observing Table (1), the cross-sectional exercises that were applied to the members of the experimental group had a positive effect on the development of the explosive force and the outstanding power in speed of legs, as a result, the development of the explosive force was based on training with special cross-sectional exercises, however, the kinetic trajectories of these exercises were similar to those of the football players in the field and influenced the integration of motion performance for players, which helped to improve the performance of the experimental group as it requires the efficiency of the muscles working in this performance, which include the muscles of the legs and have a direct impact on the development of the performance of football skills. And this is also confirmed by (Ibrahim, 2008, p. 103). "He pointed out that the use of well-designed and implemented training programs lead to the development of physical performance is one of the reasons for superiority in sports" (Ibrahim, 2008, p. 39) Thus, the development of the explosive force of the legs, which emerged through the results of special tests have confirmed that the varying use of exercises that similar to the real performance in the field such as kicking the ball, however this exercises such as the jump with body weight and different weight training was aimed to achieve a higher load than the production of conventional strength training, which caused the emergence of clear differences between the results of the group for the same test as well as the positive impact of these exercises to the level of compatibility and control the movements of the ball kick. , besides Accreditation the repetitive method of performing strength exercises has a positive effect on the players, and through the training curriculum used by this sample on the performance of exercises strongly and high speedily, during the performance of explosive power exercises, researchers must be taken into consideration the individual differences of players through the maximum strength of each exercise and each player, which confirms by (Mohammad Reza Ibrahim 2008) when he pointed that "the maximum strength of athletes in one attempt per exercise, or performing the largest number of repetitions in a given exercise to determine the maximum strength of the muscles working for each exercise, which represents the percentage of each exercise which is 100% " (Mohammed, 2002, p. 65).

As for the test of bending and extending the knees in 20 seconds on each leg and measuring the distance used in the field experience of research has a high correlation with muscle capacity, which was focused on during the training program In the cross-sectional exercises used by the researcher on the members of this group, accordingly, the development in the results of these tests indicated the impact of these exercises in the development of muscle groups working in the movements of bending and extending on the joints related to these movements, so that the time of the strength of contraction As minimum as possible which can be expressed The ability of the individual to exert the highest speed and explosive power to obtain the lowest rate of acceleration, So that the time of the force of contraction and expansion as little as possible, which reflects the ability of the individual to make the highest rates of rapid and explosive power to obtain the lowest rate of acceleration reflects the player to get the highest speed is represented by a short time cut this distance (test distance) Where most of the specialized studies indicated that the increase in force is inversely proportional to time and Directly proportional with velocity with relative stability of mass. The used of cross-sectional exercises which is similar to real football playing in the field led to increased rapid muscle strength, explosive and rapid response to produce the highest muscle ability according to the type of resistance used and upgraded Which is reflected in the increase in speed during the 01 meters. Some researchers believe that muscle fibers have the ability to produce a large force during the change of the type of resistance compared to constant resistance which depends on non-change,

The Number of motor units will increase and their capacity to produce kinetic energy will increase accordingly.

As for the skills tests, the researchers refer the development to the training factor, which is distinguished by the organization and accuracy of the work and the use of the cross-sectional exercises within the training program of the coach in accordance with the principles and scientific foundations. This method contributes to the player's good experience and a higher skill level. "The cross-sectional exercises performance method effectively contributes to the development and improvement of the player's experience and develops skillful performance." (hakob, 2001, p. 39).

"Selecting the appropriate training for the desired goal and training it according to the cross-sectional exercises approach contributes to the advantages of modern football playing." (jak, 1997, p. 109) (Mufti Ibrahim, 1999) Also pointed that (to get the player to achieve a good level of skill performance in the game must focus on the skill improving in the Training and good selection of targeted exercises and putting the player in competitive training conditions especially close to the conditions of the game, the cross-sectional method is one of the training methods, which can raise the efficiency of skill performance to match the performance in the game) (Hammad, 1999, p. 56).

As that the use of high intensity training emphasis and special training exercises and apply it in accordance with the method of competitive performance and appropriate rest periods, as well as the use of the principle of gradual increase in the training loads that the researchers were able to achieve in the rationing of research Sections within the training program based on the principles of sports training science and the opinions of experts and specialists, however, with appropriate frequency has had a clear impact on the development of the level of speed of performance of the skills in research experiment. Jassim Majid, 2007, also indicates that "the use of the gradient principle in increasing training stress leads to adaptation and readiness for new loads, and the continued change in intensity used preserves acquired adaptations and leads to higher levels" (Joud, 2003, p. 93).

(BUCK, 1990) also states that "the training strategy must evolve to increase the success rate in skills performance, mainly based on the similar repetition of playing in the real match " (Harrison, 1995, p. 33).

and this is what the researchers adopted in the implementation of the section of the training program for research. Therefore, in order to motivate the player to exert an effort and a high level of training close to or above the level of the real match, and in order to achieve the performance of the skills according to the requirements of the game, accordingly, the training depends on to the cross-sectional method can achieve those goals.

### Conclusions

Through the research results, the researcher reached the following conclusions:

- 1- The use of cross-sectional exercise was effective in the development of some physical abilities in the members of the research sample
- 2- Exercise has a distinct effect in developing the basic skills of football in the members of the research sample

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