

# The Effect Of Hindering Strength Training In Developing Some Physical And Skill Abilities Of Young Football Players

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***Abstract: The game of football is characterized by the diversity of its performance and skills and depends on the physical, skill, planning and psychological abilities the player exerts to achieve the best levels for the players. This may be due to the use of training curricula based on sound scientific foundations and modern training methods that develop all physical and skill aspects. In this research, the researchers wanted to find special exercises using obstructive force and note their effect on some of the physical and skillful abilities of young football players in Diyala Sports Club for the category (14-16) years, after the researchers found that there is a weakness in this aspect of the club's soccer players. The researchers used the experimental approach for its suitability to the nature of the study by designing one group with two pre and post- tests. Special exercises were prepared for the use of obstructive force in the air (misleading of all kinds) and in water. By (3 units) training per week for a period of (8 weeks). As the researchers reviewed the Arab and foreign sources in order to choose tests for physical capabilities (explosive strength and distinctive force velocity) and skill tests (for running speed with the ball and the power of kicking the ball) and after statistical treatments, the study concluded that special exercises for obstructive strength have an effect on all the tests under study and in statistical terms. For the benefit of the post test.***

***Key words: impaired strength, physical and skill abilities.***

## 1. INTRODUCTION:

The development, harmony and integration in the game of football was not spontaneous and random. Rather, it came as a result of the coaches 'reliance on the knowledge of training based on other sciences," which achieve the best levels and results because it has been scientifically proven that the response of the body's systems to sports training has a special importance in knowing physical and functional improvement. For athletes "(Muwaffaq Asaad Mahmoud, 19,1988), in addition to the state of creativity, innovation and development in methods and means of sports training through the use of the foundations and principles of sports training and what is required from scientific planning to prepare comprehensive training curricula. It is known that recent trends in sports training are from During the studies carried out by scientists and researchers focus on the physical and skill of football, because of its great role in this game. The physical preparation of football players has become a primary concern of the technical equipment in preparing and planning for the training season through codified programs to carry training, and placed on scientific foundations for the players to reach the highest possible level of fitness for football, which depends on the endurance of strength, speed and force characterized by rapid and explosive The most important physical

abilities in the daily, weekly, monthly and yearly training plans, as well as the skillful abilities represented in running in the ball and the power of kicking the ball, using different training methods in preparing players, hence the importance of research in developing a training curriculum using impeding strength exercises to develop these physical and skill abilities in Air and water.

*Research problem:*

Through the work of researchers in the field of sports training in football, they noticed, and through the youth soccer tournaments in the governorate, there are remarkable deficiencies in the physical and skill aspects of the players, and it may be due to the lack of use of training curricula based on sound scientific foundations and modern training methods that develop all physical and skill aspects. Researchers have a lack of interest in modern training methods and a focus on traditional methods. Hence, the research problem appeared, which lies in creating training curricula using modern methods and methods, including obstructive strength training in the air and water to develop these physical abilities and skills for young football players.

research aims

Preparing exercises using obstructive force for young football players.

- Identify the effect of inhibiting strength training on the development of some physical and skill abilities of young football players

Research hypotheses

- There are statistically significant differences between the pre and post test results in the development of some physical and skill abilities by using the inhibiting force for young football players.

Research areas

- The human field: Players of Diyala clubs in youth football and participating in the Governorate League for the 2019-2020 season.

- Time domain: the period from 1/2/2019 to 1/8/2020

Spatial area: Diyala Football Club Stadium - Summer swimming pool in New Baqubah.

Search procedures:

## **2. RESEARCH METHODOLOGY:**

The researchers used the experimental approach due to its suitability to the nature of the problem to be investigated to achieve the objective of the research and its imposition. The experimental method is considered "the true test of cause-and-effect relationships, and it represents the most honest approach to solving many practical problems in a scientific way" (Muhammad Hassan Allawi, Osama Kamel Ratib, 1998: 217). The researchers used the experimental design "the one group that is exposed to a pre-test to find out their condition, then inserting the experimental variable, and then the group is exposed to a post test, so the difference in the results of the two tests results from the effect of the experimental variable" (Nuri Al-Shawouk, Rafie Al-Kubaisi, 2004: 25).

*Community and Sample Research:* -

The research community included Diyala governorate football clubs for the youth participating in the governorate tournament for the 2019 season, which numbered 7 clubs (Diyala, Khalis, Shahraban, Muqdadiya, Hehhab, Balad Ruz, and Jadidah Al Shat Club).

As for the research sample, it was (10) players from Diyala Football Club's youth, and it was chosen by the deliberate method for the cooperation of the club's administration with the researcher and the proximity of the pool to the club.

Devices, tools used and means of collecting information in the research: -

Research tools mean “the means by which the researcher can collect data and solve his problem to achieve the research objectives, whatever those tools are data, samples and equipment” (Wagih Mahjoub, 1988: 133).

Devices and tools used in the research: -

- HP computer (laptop) made in China, number (1).
- (1) Sony HDD video camera (made in Japan).
- Stopwatch type (Pc396Tian Fu), made in China, number (3).
- Manual calculator type (Kenko) made in China, count (1).
- football stadium.
- Swimming pool.
- Brush diameter of 1.5 m and 2 m.
- 30 football.

Field research procedures: -

The researchers prepared obstructive strength exercises (water exercises) (air exercises).

The researchers have identified the variables that are intended to be measured

1- Force characterized by velocity (leg muscles).

It is measured by testing the partridge on one leg for a distance of (30 m). (Mowafak Asaad Mahmoud: 2007)

2- The explosive power (of the leg muscles).

- It is measured through a test of the broad jump from stability. (Mowafak Asaad Mahmoud: 2007)

3- Running speed with the ball.

Running speed with the ball is measured and controlled for a distance of 50 meters. (Mufti Ibrahim: 1994)

4- Kicking the set ball to the farthest distance.

The force of kicking the ball is measured with the foot for the farthest distance (Muhammad Abdo Salih and Mufti Ibrahim: 1994)

Homogeneity of the sample.

To prevent the effect of individual differences in growth indicators that affect the results of the experiment, the homogeneity of the sample was required by the normal distribution curve. The researchers used the law of the coefficient of torsion.

Pre-test:

The researchers conducted skill tests of the players on Sunday 3/3/2019. On Tuesday 5/3/2019, physical abilities tests were conducted to determine the level of the players before the introduction of hindering strength exercises in the training curriculum used by the coach.

Training curriculum: -

In this research, the researchers wanted to find special exercises using obstructive force and note their effect on some of the physical and skillful abilities of young football players in Diyala Sports Club for the category (14-16) years, after the researchers found that there is a weakness in this aspect of the club's soccer players. The researchers used the experimental method for its suitability to the nature of the study by designing one group with two pre and post- tests, as special exercises were prepared for the use of obstructive force in the air (misleading of all kinds) and in water. By (3 units) training per week for a period of (8 weeks). As the researchers reviewed the Arab and foreign sources in order to choose tests of physical capabilities (explosive force and distinctive force velocity) and skill tests (for running speed with the ball and the power of kicking the ball).

As the researchers adopted the introduction of obstructive strength exercises in the training unit with a time of 30 d of the main section time of 70 d and a training unit 90 d for days

(Sunday, Tuesday, Thursday) of each week. The exercises were carried out using high-intensity repetitive training (80-100%).

Post -test:

After the training curriculum of the trainer was completed, the researchers measured the research variables according to the measurement of the first test and the availability of the same conditions on Wednesday and Thursday 16-17 / 5/2019.

### 3. RESULTS OF PRE AND POST -TESTS IN SEARCH VARIABLES :

Table (1) shows the arithmetic mean and standard deviations for the pre and post- tests of the research variables.			
Variables	Test	A	SDT
Explosive force	Pre-test	2.554	1.04
	Post-test	3.154	1.07
Fast power	Pre-test	16.3	3.54
	Post-test	23.3	3.54
Running with the ball	Pre-test	3.99	0,39
	Post-test	2.99	0.30
Kick the ball	Pre-test	57.43	6.06
	Post-test	64.72	6.37

Table (2) shows the mean difference and their deviations, the calculated value (t), the error rate and the statistical significance in the pre and post -tests of the research variables.				
Variables	A / D	STD/D	T	Sign
Explosive force	0.599	0.068	27.699	Sign
Fast power	7.000	0.471	46.957	Sign
Running with the ball	1.000	0.073	43.122	Sign
Kick the ball	7.292	1.937	11.904	Sign

The results obtained in Table (1) and (2) regarding the research variables for the pre and post tests of the research sample. There were significant differences between the two tests and in favor of the post test.

The researchers attribute these results to the training curriculum using (obstructive strength) exercises in air and water. This is to contain the exercises on the correct organization.

"The obstructive force is generated when the player moves in a water or air medium, which requires the player to exert muscular work to overcome this obstructive force resulting from this medium. It can be said that the player must do work with sports work to develop muscle strength and develop special speed as well as The development of conditions for the angles, inclination and mechanics of the body when moving according to the motor path of the skill, and for this reason, this force can be used in training by calculating this obstructive force using the equation: "(Sarih Abdul Karim Al-Fadhli: 320: 2009)

$1/2$  Medium density x obstructed surface area x handicap factor x velocity squared

"This force can play a fundamental role in training joggers in particular, as parachutes (parachutes) of different sizes were used as a training method to generate resistance (obstruction) on the surface of these parachutes when linked to the runner during jogging training, as this method provides the runner with the opportunity to take the appropriate position The joints of his body as well as an appropriate angle of inclination that the runner takes to overcome this force during movement. Use the muscle strength of the working groups

as reactions to this resistance, which will inevitably increase the efficiency of these muscles and their development in proportion to achieving ideal ratios between step length and frequency. The use of these delusions as a hindering force on both the surface area exposed to air, the speed of the player at which it moves, the density of air as a obstructive medium, and the obstruction constant, meaning that the increase in the velocity of air is also greater the more this obstructive force increases, in addition to that this force increases with the density of the medium that is related to a decrease Air volume These relationships can be used in designing training and increasing the intensity or difficulty of it, by using various types and sizes of parachutes and tying them tightly behind the player and running to different distances. Each type of parachute can be designed to develop a specific characteristic and according to the distance traveled, based on the mechanical relationship mentioned above. (Sarih Abd al-Karim al-Fadhli: 2009: 321).

The researchers believe that it is important to take into account the overlap between mechanical factors that determine performance in most sports, for example we find that most of the mechanical determinants that are involved in the formulation of mechanical equations that are essential factors in the application of most kinetic performances such as friction, centrifugal force and air resistance forces Or the force of fluid resistance, which affects the acceleration and speed of the body. These forces can be hindering at some or helpful at others.

The obstructive strength exercises used in the training curriculum introduced by researchers for young soccer players include the muscle groups of the lower extremities that contribute to the performance of various types of basic skills according to the requirements of the football game. (Hara: 163: 1990) indicates that “the choice of various strength exercises is done. On the basis of the requirements of the sporting activity for the ability of strength and on the basis of the personal training situation in the multiple training

The choice of obstructive strength exercises within the training curriculum must be appropriate with the requirements of the practice activities through which the amount of muscle strength that the athlete needs and how to use it in the development of technical performance is developed, and this is consistent with what was indicated by the mechanism (Raysan Khuraibet: 1995: 561). The share of special exercises increases with the advancement of the training age, because it develops and refines the strength of the special muscle, and the special exercises must match the requirements of the race in terms of composition, trajectory, the amount of special strength and moments of use.

The use of obstructive strength exercises in the training curriculum of young soccer players had a positive effect on the development of the special physical abilities (explosive strength, force characterized by speed) of the two men of the research sample, as well as greatly influenced the development of technical and skillful performance (running with the ball and kicking the ball).

Through the foregoing, the following conclusions were reached: -

1- The use of obstructive strength exercises in the training curriculum prepared by the researchers had an impact on the development of some special physical abilities (explosive force, force characterized by speed) of the two men among the members of the research sample.

2- Obstructive strength training helped greatly in developing the skillful performance of soccer players (increasing the running speed with the ball and the power of kicking the ball).

Through the findings of the findings, the researchers recommend the use of obstructive strength exercises by workers in the field of soccer training, and by paying attention to the physical aspect when training soccer players and to know the most important physical abilities of the specialized activity and how to develop them according to the requirements of skillful performance.

#### 4. REFERENCES:

- [ 1] Muhammad Hassan Allawi and Muhammad Nasr al-Din Radwan; Measurement in Physical Education and Sports Psychology, Cairo: Arab Thought House, 2000.
- [ 2] Muhammad Hassan Allawi and Osama Kamel Ratib; Scientific Research in Physical Education and Psychology, Cairo: Arab Thought House, 1998.
- [ 3] Nuri Al-Shawk, Rafeh Al-Kubaisi; Researcher Handbook for Writing Researches in Physical Education, Baghdad: Baghdad University Press, 2004
- [ 4] Meal withheld; Methods and Methods of Scientific Research, 1st Edition, Baghdad: Dar Al-Hikmah for Printing and Publishing, 1988.
- [ 5] Mwafak Asaad Mahmoud; Tests and Tactics in Football, Amman, Jordan, Tigris Publishers and Distributors, 2007.
- [ 6] Sarih Abd al-Karim al-Fadhli; Biomechanical applications in sports training and motor performance: Baghdad, University of Baghdad Press, 2009.
- [ 7] Muhammad Abda Salih and Mufti Ibrahim; Football Fundamentals, 1st Edition: Cairo, House of Knowledge Knowledge, 1994
- [ 8] Mufti Ibrahim Hammad; New in preparing the skills and planning of football players: Cairo, Dar Al Fikr Al Arabi, 1994.
- [ 9] Resan Khuraibet; Applications in Physiology and Mathematical Training: Baghdad, Noon Printing Office, 1995
- [ 10] Hara (translation) Abd Ali Nassif; The Origins of Training: 2nd Edition: Baghdad, Baghdad University Press, 1990.