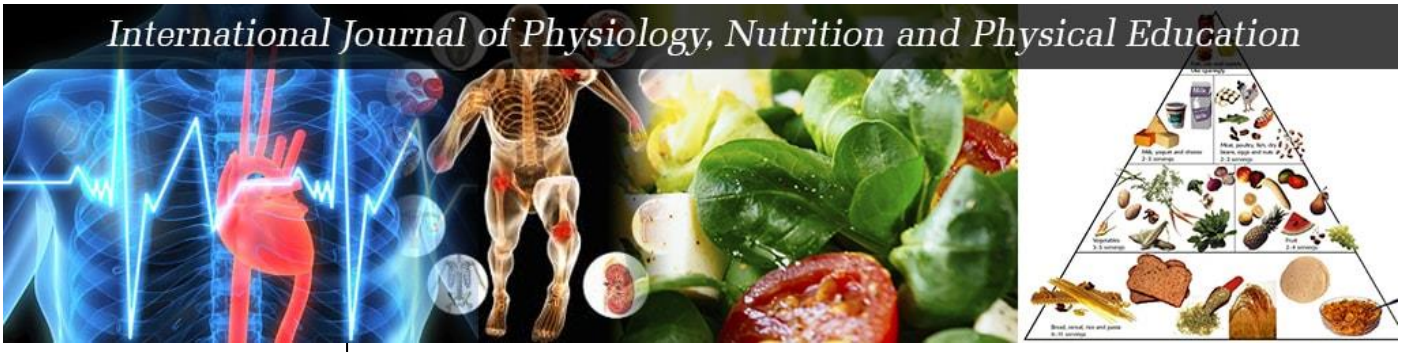

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The effect of exercises using training aids with restricting blood flow to develop some physical abilities and scoring for young football players

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Abstract
The importance of the research comes through the use of training methods while restricting blood flow by reducing the effort exerted during training, as it is applied within medium limits of intensity in exercises of physical abilities, which is reflected in the masterful performance that achieves the desired goals of training and winning the match, in addition to the introduction of new training elements that give The exercises are a kind of joy and motivation for training far from the traditional routine. The problem of the research came from the lack of use of aids to develop physical abilities as the basic rule for all basic skills, the most important of which is the skill of scoring, which needs excellent strength and speed, especially shooting from areas far from the goal, which poses a great danger to the opposing team and the fact that scoring is the final result of winning the match. The study aims to identify the differences between the pre and post-test results and the three groups of physical abilities and Scoring skills for soccer players. The research sample was from the youth of the Prince Sports Club. The researcher used the experimental method to solve the research problem. The researcher concluded the effect of the training program exercises by restricting blood flow on the physical abilities and scoring of young football players.

Keywords: Blood restriction, physical abilities

Introduction
The current era has witnessed tangible scientific progress reflected in all areas of life. Since the practice of sports occupies an important place, it has become a significant part of the lives of many individuals, whether to achieve championships, maintain health, or work. Therefore, it has become imperative for specialists in the field of sports to work diligently to discover modern methods and methods that shorten the effort and time to reach skilful, physical, tactical, mental, psychological, and other performance, in addition to the physiological and morphological aspects of the athlete. The science of sports training plays a significant role in the development of sports levels according to the intensity, size, and rated comfort that suit different sports levels, in addition to the use of training methods and tools, including rubber ropes, balls, and light weights to increase muscular resistance and restrict venous blood flow, which is one of the modern techniques in training, which works on Increasing muscle strength while reducing the effort exerted by the player on which body movements are based, such as muscular endurance, athletic ability, and the transitional speed that the player needs to perform skills with high accuracy and efficiency. Muscular strength is directly related to developing other elements, such as endurance, speed, flexibility, agility, and coordination, in addition to the game's technical performance. Al-Hajj (2017) [3] states, "The athlete always seeks to develop his strength to improve his kinetic performance according to the arts and technique of the game through distinctive qualitative exercises to reach the largest possible amount of kinetic production. He can't step forward with his physical abilities." (Al-Hajj, 2017) [3].
And the game of football requires the player to build an integration that includes all the characteristics of the game that enable him to perform well, whether individually or collectively, with the team to reach the final result, which is to win the match by scoring goals. Hence the importance of the research through the use of training methods while restricting blood flow while reducing the effort exerted during training, as it is applied within medium

limits of intensity in exercises of physical abilities, which is reflected in the masterful performance that achieves the desired goals of training and winning the match in addition to the introduction of new training elements It gives the exercises a kind of joy and motivation for an activity far from the traditional routine.

Research problem

Through the researcher's observation of many coaches and their lack of use of modern techniques and aids in the development of the elements of physical fitness for football, especially the muscular strength that works on building the player's body and improves the skill performance and makes the player able to face the difficulties in training through training and in the game during the implementation of duties The tactical as well as the effort exerted against the opposing player while participating and docking to obtain the ball, handling it, or while shooting it towards the goal to score the goal, especially from areas far from the plan. This is reflected in the players' performance, especially by scoring goals to achieve victory and crowning the team's performance with success. Hence the problem of the research through the lack of use of aids to develop physical abilities as the basic rule for all basic skills, the most important of which is the skill of scoring, which needs excellent strength and speed, especially payment from Areas far from the goal that pose a significant danger to the opposing team and that scoring is the result of winning the match.

Research aims

1. Get to know the differences between the pre and post-test results for the three groups of physical abilities and scoring for young football players.
2. Identifying the best three groups in the post-tests for young football players.

Force search

1. There are significant differences between the pre and post-tests for the three groups of young football players.

Research methodology and field procedures-2

Research Methodology

The researcher used the experimental method for its suitability to the nature of the study. Chosen the research sample was from the Prince Sports Club youth in Maysan, which numbered (24 players) for the season (2020-2021). Blood flow and the third apply the program prepared by the trainer only.

The tests used in the research

First: Partridge test on one leg for a distance of 30 meters. (Al-Rubaie & Al-Mawla, 1989) [6]

Second: Transitional speed test (50m). (Taha & others, 1989) [19].

Third: test jump the long from constancy (Al-Tarif, 2013) [13]

Fourth: is the scoring test (Ismail & others, 1990) [9].

The researchers made homogeneity for the research sample

Table 1: Shows the uniformity of the model for physical variables, physical abilities, and scoring

T	Variables	measuring unit	Arithmetic mean	A standard deviation	Variation coefficient
1	height	x m	168.77	4.68	3.60% _
2	weight	kg	56.045	4.467	8%
3	the age	year	1 8.54	0.510	3.3%
4	Scoring accuracy	points	6.23	1.16	18.61%
5	Transition speed 50 m	second	7.542	0.332	4.40%
6	The speed characteristic of the legs	The	7.472	0.282	3.77%
7	The explosive power of the legs	m see	2.12	0.068	3.20%

Through the results of Table No. (1), it shows that the sample in the variables (Height, weight, age, transitional speed, shooting, explosive power for the legs, and force characteristic of rate for the legs) are distributed in a regular way, where it was The coefficient of variation is less than (30%), and therefore the sample is considered homogeneous.

Exploratory experience

The two researchers conducted an exploratory experiment on 30/7/2020 on (4 players) who were randomly selected from the same sample to find out the suitability of the devices and tools used in the research for now the total time of the training unit, as well as to know the mechanism of performance of the training unit and the efficiency of the assistant staff. Examination of the players by the specialist (arterial blood pressure and heart rate) to ensure the safety of the players' health and that the course of exercises, arterial blood pressure, and heart rate are not affected during their application when placing rubber belts on the muscles.

Tribal exams

The researchers applied the tribal measurement to the research sample in the variables of physical abilities and scoring for the three groups on 2/8/2020 at 5 pm.

Main experience

The researchers applied the exercises to the two experimental groups of young football players in proportion to their abilities, where the end of the thigh muscles are bundled after marking them to determine the required pressure according to the thigh circumference of each player. The link is made during exercise only and opens at rest time between activities in the first group training unit that uses blood flow restriction. The second group uses practices without means without restricting blood flow, and the third group applies the training curriculum prepared by the trainer. By three units per week on days (Sunday, Tuesday, and Thursday) for a period of (8 weeks) by (24 units) of training in the stadium of the Prince Sports Club. The researchers used the method of periodic training of medium intensity and in the period of special preparation.

Dimensional tests

After completing the exercises prepared by the researchers, the post-test was conducted on the individuals of the research sample on 9/26/2020, and the researchers created the same conditions in terms of time, place, devices, tools, and method of implementation.

Presentation and discussion of the results-3

Table 2: It shows the calculated and tabulated (F) value between the three groups of physical abilities and the scoring for the tribal tests.

Variables	Sources variance	Sum of squares	Degree of freedom	Mean squared variance	Calculated F value	F. Value tabular	Indication
Transition velocity _	Between groups	0.426	2	0.213	2.109	3.47	Insignificant
	Inside the totals	2.121	21	0.101			
	the total	2.547	23				
Speed power	Between groups	0.060	2	0.030	0.337		Insignificant
	Inside the totals	1.871	21	0.089			
	the total	1.913	23				
The explosive power of the legs	Between groups	0.110	2	0.055	0.437		Insignificant
	Inside the totals	2,639	21	0.126			
	the total	2.749	23				
Scoring	Between groups	7.000	2	3.5	3.11		Insignificant
	Inside the totals	23,625	21	1.125			
	the total	30.625	23				

Significance level (0.05)

Table 3: It shows the calculated and tabulated (F) value between the three groups of physical abilities and the post-test scoring.

Variables	Sources variance	Sum of squares	Degree of freedom	Mean squared variance	Calculated F value	F. value tabular	Indication
Transition velocity	Between groups	0.6 7 8	2	0.84 5	17, 573	3.47	Moral
	inside the totals	1.0 2 8	21	0.04 7			
	the total	1.70 1	23				
The power of speed	between groups	1.56 7	2	0.4 7 2	6.523		Moral
	inside the totals	1.54 9	21	0.074			
	the total	3.11 6	23				
The explosive power of the legs	between groups	1.4 6 4	2	0.7 4 7	10,518		Moral
	inside the totals	1.4 80	21	0.07 1			
	the total	2.9 44	23				
Scoring	between groups	84.0 1 0	2	42.0 2 1	.75, 842		Moral
	inside the totals	11.6 3 5	21	0.55 6			
	the total	95.6 4 5	24				

Significance level (0.05)

The researcher used the least significant difference (LSD) test, through which it is possible to know the preference of which of the three groups scored the difference in physical abilities and scoring under study, as follows:

First: It is clear from Table No. (4) to test the transitional velocity that the value of the least significant difference reached (0.187), which is smaller than the value of the arithmetic mean of the difference between the three groups, and this indicates the presence of a significant difference in favor of the first group, followed by the second group, then the third group.

Table 4: It shows the results of the test of the least significant difference between the three groups in the transitional velocity

Groups	Arithmetic means between sums	The difference between the aggregates	LSD Level 0.05	Indication
M 1 - M 2	6.912 - 7.191	0.279 -	0.187	Moral
P1 - P3	6.912 - 7.560	0.648-		Moral
M2 -3م	7.191- 7.560	0.369 -		Moral

Second: It is clear from Table No. (5) that the power characteristic of speed is that the value of the least significant difference amounted to (0.160), which is smaller than the value of the difference of the arithmetic means of the three groups, and this indicates There is a moral difference in favor of the first group, followed by the third group, and then the second group

Table 5: Shows the results of the least significant difference between the three groups in the speed-distinguished force variable

Groups	Arithmetic means between sums	The difference between the aggregates	LSD Significance level 0.05	The result
M 1 - M 2	6.832- 7.243	0.411 -	0.160	Moral
P1 - P3	6.832 -7.446	0.614-		Moral
M2 -3 م	7.243 - 7.446	0.203 -		Moral

Third: It is clear from Table No. (5) for the variable response speed that the value of the least significant difference amounted to (0.227), which is smaller than the value of the arithmetic mean difference for the three groups, and this indicates the presence of a significant difference in favor of the first group, followed by the second group and then the third group.

Table 6: It shows the results of the least significant difference between the three groups in the explosive power of the two legs

Groups	Arithmetic means between sums	The difference between the aggregates	LSD Significance level 0.05	Indication
M 1 - M 2	2.1 4 5- 2. 101	0. 1 33	0.227	Moral
P1 - P3	2.145 - 1. 90 8	0. 239		Moral
M2 -3 م	2. 101 - 1.908	0. 1 93		Moral

It is clear from Table (6) scoring that the value of the least significant difference amounted to (0.639), which is smaller than the value of the arithmetic mean difference for the three groups, and this indicates the presence of a significant

difference in favor of the first group, followed by the second group and then the third group.

Table 7: Shows results in the least significant difference in scoring among the three groups for football players

Groups	Arithmetic means between sums	The difference between the aggregates	LSD Significance level 0.05	The result
M 1 - M 2	10.125- 7.125	3	0.639	Moral
P1 - P3	10.125 – 5.625	4.5		Moral
M2 -3 م	7.125- 5.625	1.5		Moral

The researcher attributes that the reason for the development of the first group is the effect of the exercises used with training methods that work on developing Physical variables in addition to the organization of training units based on activities using the tools required in training. Muhammad Abdullah (1997) [1] "Giving regular exercises consistent with the correct scientific method enhances the efficiency of the joint muscle groups in the performance of the motor skills and physical qualities that the player acquires during training." (Abdullah, 1997) [1]. Muhammad (2008) [16] states, "The programmed and organized training works to develop the work of the internal organs with the effect of the exercises performed by the athlete during the training units, which constitute an essential and vital factor in the required adaptation events. (Muhammad, 2008) [16].

Al-Khouli and Bayoumi (1991) [4] mention Devices are prepared. The tools are one of the training methods used in the sports field, and among these tools, for example, medical sticks and balls, ladders, small mattresses, sandbags, hoops, and are all valuable tools in the training process to improve and develop skills for their significant role in the process of raising the level of (Al-Khouli & Bayoumi, 1991) [4] achievement. There is a relationship between the improvement of physical abilities, which is due to the advancement of skill performance, and it is considered a solid basic rule on which version is based, especially in games that last long periods and require strength, speed, thinking, and accuracy. The high allows the player to carry out what is required of him in the match, as in football, as it requires high physical abilities to enable the player to perform well and win the game, and this is what Confirmed (Singer 1990) [17] "The training of physical abilities is one of the effective factors for improving the level of performance, and that motor skill is achieved only in the presence of physical abilities, the more these abilities improve for the type of activity practiced, the higher the level of performance (Singer, 1990) [17]. " The researcher believes that the development of the physical abilities of the two experimental groups is due to the prepared exercises and their organization through the training methods by restricting blood flow, and he mentions (Loenneke 2012) [15] the results showed a significant improvement in the element of transitional speed after the training of blood flow restriction combined with different training methods than the traditional methods (Loenneke J, & Bemben, M, 2012) [15]. Strength training is also the basis and base for the rest of all motor abilities and skills. It confirms Hussein and Bastawisi (1995) [8] "Training with different weights and tools has a significant impact on the development of the strength characteristic of speed, as these exercises depend on increasing the speed of muscle contraction because the goal of creating muscle strength is to obtain rapid strength." (Hussein & Bastawisi, 1995) [8].

Ela (1997) sees, "The distinctive strength is related to speed with the degree of mastery of skill performance, which brings the player to the best levels and thus achieves the goal of the skill or movement." (Abu al-Ela, 1997) [12] According to Watkashi Abi, *et al*., Abe T, *et al*. (2012), Souse, J, B, C, *et al*., (2017) when using this type of exercise, it leads to an increase in muscle strength, an increase in muscle cross-section, an increase in muscle endurance, an increase in oxidative enzymes, and a speed of glycogen formation in muscles. In addition to improving general fitness indicators as a result of this combined training with restricting blood flow, restricting blood flow contributes to the development of muscular strength and endurance over traditional training methods. (Abo, T., Loenneke, J. P., Rossow. I, M, & Bemben, M.G., 2012) [11] (Sousa, JBC, Santos H, Araujo JP, & Cirilo-Sousa, M. S, 2017) [18]. Kazem sees (2015**)** [14], the concept of auxiliary training aids is not new in the sports field. They are devices and tools that may exist or be manufactured that the coach uses in the training process to raise the efficiency of the physical side and the skill side. Positive sports training services and physical and skill performance development, including the change in the exercise, suspense, and excitement method, also helps the trainer plan many activities to serve the skillful execution (Kazem, 2015) [14]. The study of Mohamed Ahmed and Khaled Ahmed (2018) indicated that the integration of muscular endurance training that light loads or low intensity with blood flow restriction training, which expresses a modern approach to a particular training method, enables it to achieve very significant benefits at the level of physical or technical performance (Al-Gamal & Ahmed, 2018) [2]. The researcher considers football as one of the sports in which achieving victory has become of essential thing. Still, it depends on the player's physical abilities, skill, planning, and the aspects that require training. Continuous use of modern techniques in exercises and training tools used. The researcher believes that scoring is one of the essential and decisive skills in the match, and (Youssef 1984) [20] stresses that the importance of scoring increases because it is a skill characterized by difficulty and is one of the most challenging skills to play (Youssef, 1984) [20]. The proficiency in scoring and the ability of the team players to be accurately Hitting the goal gives the possibility to raise the morale of the team's players, escalate their capabilities and raise the level of ambition Players, improve their status, and make the highest effort to win (Khalif, 1999) [10].

Muwaffaq A. Saad (1997), scoring is a skill it is essential in football. Through it, the results of matches can be decided (Asaad, 1997) [7]." As for Abdullah Al-Lami (2002) [5] defines it as "the primary goal of all offensive activities that the team draws and through scoring, to obtain the team's plans that qualify them to win (Al-Lami, 2002) [5]. Abdul Ali Jaafar confirms on the authority of Dia Munir (2008) that scoring is one of the essential basic skills in football; it occupies a large percentage of the player's skill development. (Muhammad, 2008) [16].

Conclusions and Recommendations-4

Conclusions

1. The effect of the prepared program exercises on the physical abilities and scoring of young football players.
2. The superiority of the first group by using training methods and restricting blood flow over the second and third groups of young football players.
3. The superiority of the second group using the training program without restricting blood flow over the third group of young football players.

Recommendations

1. The necessity of using training aids by restricting the blood flow in preparing training programs to develop young football players' physical abilities and scoring skills.
2. Using training aids to restrict blood flow with other variables is necessary.
3. Using training aids to restrict blood flow with samples and other games**.**

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