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THE EFFECT OF STRENGTH EXERCISES USING RUBBER ROPES IN DEVELOPING THE LEVEL OF MUSCLE ELECTRICAL ACTIVITY AND SOME BASIC FOOTBALL SKILLS

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Abstract:

Where the importance of the research was evident that through their follow -up to a group of club training, the researchers have noticed a great weakness by some coaches using rubber ropes in raising the physical level of the players, especially for the types of strength, and because of its role in raising the skill and functional level of the neurological signals of the structural muscles, and from here lies the importance of Research in strength exercises because of its role in the success of performance for some basic skills as well as its impact on the level of electrical activity of the muscles, while the problem of research was in finding appropriate solutions to the skill performance of some basic skills through strengths for strength using rubber ropes as well as its effect on raising the functional level of effectiveness The electrical activity of the structural muscles of the legs for the players was the most important

Conclusions:

1- Power exercises with rubber ropes have a positive role in developing the types of strength, basic skills, response capacity and frequency moving muscle contraction.

2- The study showed that adaptation to the nervous and muscular system occurred due to strengths of strengths with rubber ropes of a specialized nature Football players.

Keywords: Strength Exercises; Rubber Ropes; Muscle Electrical Activity; Football Skills

1 - DEFINITION OF RESEARCH:

1-1 Introduction Research and importance:

The development and progress in the football game is one of the important things to apply the foundations of sports training as much as possible and related to other sciences, such as chemistry, chemistry, psychology, and other sciences that help in raising the physical, skill, planning and functional levels for the players and this is only by using means and devices that specialize to know the changes occurring in those devices Functionalism.

Football is characterized by the multiplicity of private physical abilities and basic skills with rapid and surprising movement by the player to achieve his goal by overcoming the competitor and this is only by having high physical abilities that help him to perform accurately according to the circumstances of the match, which includes strength of all kinds, which is one of the most important physical capabilities in preserving The balance and ability of the player when performing the skill and motor performance under the pressure of the opponent or when he moves quickly from changing his direction or free running to exchange centers with a colleague or coverage, he needs physical strength to move with it and accomplish his duties as well as the integrity of the neurological signals of the muscles operating in the production of the force made by the player, Where the measurement of the electrical activity of the structural muscles is one of the important and influential measurements that provide the trainer with significance and digital values that can be inferred through electrical muscles activity, through which it helps him to determine how to develop all kinds of strength, which the trainer can detect the differences in the level of electrical activity of the structural muscles as that The individual who is characterized by a capacity, frequency and fast time is more appropriate for the speed of production and the accompanying A high skill and evidence of the progress of the players skillfully due to their provision of these important physical capabilities and thus knowing the importance of using training means that helps to raise the level of strength and improve their performance through the different rubber

ropes, but researchers through their follow -up of a group of club training have noticed a great weakness By some coaches using rubber ropes in raising the physical level of the players, especially for the types of strength and its role in raising the skill and functional level of the neurological signals of the structural muscles, and from here lies the importance of research in strength training because of its role in the success of performance for some basic skills as well Its effect on the level of electrical activity of the muscles.

1- 2 Research problem:

Physical and skilled performance is characterized by a high privacy ball because of its association with many physical capabilities, especially the strength, which limited the training workers to find the methods and methods that rise to the level of players physically and skillfully and that qualify them to enter the competition with high ability, and this ability with physical and skill is only with special training for some capabilities Physical as the power, which is using rubber ropes, which is one of the most recent training and consistent with the development of strength and economic training with training with no contact with a colleague or devices that occur to the player as well as its effects on the speed and frequency of the nerve signals of the working muscles and thus strengthening the electrical activity of the muscles because of it, and from here it was evident The problem of research in finding suitable solutions to the skill performance of some basic skills through force training using rubber ropes as well as its effect on raising the functional level of the effectiveness of the electrical activity of the structural muscles of the legs in the players.

1-3 Research objectives:

1- Prepare strength exercises using rubber ropes for football players.

2- Learn about the tribal and remote differences of the types of strength and some basic skills between the experimental and control groups.

3- Learn about the level of electrical activity of the legs of the legs of the football players between the experimental and control groups.

1-4 Research hypotheses:

1- There are moral differences between the experimental groups and the control level of strength and some basic skills.

2- There are moral differences between the values of the electrical activity of the legs between the two groups.

1-5 Research fields:

1-5-1 The Human field: Al -Zubair youth football club players

1-5-2 Spatial Area: -Zubair Club Stadium- physiology Laboratory, Faculty of Physical Education and Sports Sciences

1-5-3 Time for the period from: 5/1/2022 TO 1/4/2022.

2-THEORETICAL STUDIES

2-1 Rubber Ropes

The rubber cord exercises are also known as "Resistance Bands", and applied using two types of ropes: the rubber flat cord without handle, the rope that surrounds the hands while performing the exercise, and the rope with plastic handle at both ends. The "colors of those ropes also differ, knowing that the color indicates the intensity of the exercise". (https://www.sayidaty.net/node/1205011)

3 - RESEARCH APPROACH AND FIELD PROCEDURES:

3-1 Research Curriculum:

The researchers used the experimental curriculum with two groups equal to its suitability.

3-2 Sample OF Research:

The research sample was determined in the intentional way of players of Al-Zubair Club and participating in the Football League for the season 2021-2022 and by (20) players out of (27) players, and thus the percentage of the members of the sample (74%) was represented by the players, where the players were distributed to two experimental and controlled groups by The lottery, and by (10) players in each group, represented the first experimental group and the second control, and homogeneity was made between them in schedule (1) for length, weight, age, and training changes

Table (1)

It shows the calculations, normative deviations, difference factories, and value (T) calculated for the variables (length-weight-age-life training) of the experimental and control groups.

Verbal	Experimental group			Control group			T Collected Value	Sig
	Mean	Std. Deviation	difference factories	Mean	Std. Deviation	difference factories		
Age	18.2	2,4	%13.1	18.1	1،8	%9.9	1,2	random
Training Age	3.4	0.88	%25.8	2.8	0.79	%28.2	0،83	random
Length	173،2	3،7	%2,1	175،2	4،9	%2،7	1،1	random
Wight	72،8	3،06	%4،2	71،3	2،3	%3،2	1،6	random

Value (1,6) at a degree of freedom (18) and a significant level (0.05)

3-3 Means of collection of information and data:

1- Arab and foreign sources
2- International information network
3- The tests and measurements used

3-3-1 Research devices and tools used:

1- (EMG) type (MYOTRACE 400 Noraxon) American-made
2- Footballs- Swedish terraces- destinations of different sizes- timing clock- barriers and ropes.

3-4 Field Research Procedures

3-4-1 The Tests used to Research:

First / The explosive force test: the broad jump test of stability. (Mowaffaq Asaad Mahmoud: 2009)
Second / Testing the Distinguished Power by Speed: The Partry Test for the maximum of (10) seconds (Qasim Hassan Hussein &Bastwaisi Ahmed: 1979)
Third / Test of the Power: Test of the Ball hitting the head and foot for a minute (Taha Ismail &others: 1989)
Fourth / Test of the handling skill: handling towards a small goal (10) meters (Zuhair Al -Khashab & others: 1999)
Fifth/ Test of the dodging skill: the winding running between five people back and forth (Zuhair Al -Khashab & others: 1999)
Sixth/ Test Surveying Skill: Criticism towards a divided goal (Mufti Ibrahim Hammad: 1994)

3-4-2 measurements used:

Measuring the capacity of the electrical response and the rate of its frequency when performing the muscle contraction. (Qusai Saleh: 2007), where the measurement is made for all of (central moving contracting - the decentralized moving) of the legs and by testing the scoring by linking the EMG device (EMG)

3-5 Exploratory Experience:

In order to avoid obstacles and overcome them and know the nature of tests and measurements, as well as special exercises for strength, as an exploratory experience was conducted on (6) players for a period of three days from 5-8/1/2022. The aim of the exploratory experience was

1- Knowing the assistant team on the nature of conducting the tests
2- Knowing the special times of the exercises used and determining their strictness
3- Learn about the appropriate tests and measurements used for sample individuals
4- Ensure the safety of devices and tools used to Research.

3-6 Main Experience:

3-6-1 Tribal Tests:

Tribal tests were carried out on the two Research groups on 15/19/2022

3-6-2 -The Experimental Curriculum:

Force exercises were implemented using the proposed rubber ropes that were legalized in a way that suits players and football privacy in terms of performance and by (8) weeks from the date of 20/1/2022 until 20/3/2022 where (3) training units were implemented per week for days (Saturday -Monday -Wednesday) The exercises were approved in the main section of the training unit. The method of telecommunication and repetitive training was used to implement the exercises, and 70% to 100% were started and it was identified by using the maximum pulse in its challenge, while the comfort was adopted 120 z implementing the exercises in a way that is high in intensity.

3-7-Post Tests:

The researchers assisted, with the assistant working group, conducting post-tests on 25-29/3/2022

3-8 Statistical Means:

The statistical data obtained by the researchers was processed by using the statistical bag (SPSS / ver 21).

4- PRESENTING, ANALYZING AND DISCUSSING RESULTS:

4-1 View and Discuss the Results of the Differences for Tribal and Post Tests

Table (2)

Shows the computational circles, standard deviations, and the value of (T), which is affiliated with the types of strengths of the two groups

Groups	Verbal	Tribal Tests		Post Tests		T Collected Value	Sig
		Mean	Std. Deviation	Mean	Std. Deviation		
Experimental	explosive force/ m	14.2	21.0	39.2	16.0	6.2	moral
	Fast muscle strength/m	6.32	09.1	5.39	093	8.4	moral
	Endurance strength/ count	28.3	2.09	35.02	1.87	5.03	moral
	explosive force/ m	11.2	16.0	22.2	0،9	5.1	moral
	Fast muscle	08.33	83.0	7.36	51.0	05.10	moral

Control	strength/ m						
	Endurance strength/ count	27.56	3.02	31.23	2.34	8.3	moral

Value (2.1) at a significant level (0.05)

Through Table (2), we find that the calculated values (T) is greater than the tabular (2.1) at a degree of freedom (9) and the level of significance (0.05). The use of appropriate training methods to develop the types of strength in the special numbers period, which showed this moral for the two groups, and this is what Abu Al -Ela Ahmed indicates, "The use of the training carrying a proper way leads to the success of the training process, so the level of performance rises and the results are achieved" (Abu El -Ela Ahmed: 1996).

Table (3)
Shows the calculations, standard deviations, and value (T) calculated for the basic skills of the two group

Groups	Verbal	Tribal Tests		Post Tests		T Collected Value	Sig
		Mean	Std. Deviation	Mean	Std. Deviation		
Experimental	skill of handling/ degree	10.4	2.3	19.4	2.4	7.1	moral
	dribbling skill/ Sec	21.6	1.2	18.6	1.21	6.9	moral
	skill of the goal/ degree	15.6	1.4	22.2	1.2	8.03	moral
Control	skill of handling/ degree	9.2	1.7	18.4	2.1	7.7	moral
	dribbling skill/ Sec	22.5	1.3	19.5	0.77	6	moral
	skill of the goal/ degree	16.2	1.5	20.7	1.7	7.7	moral

Table (2) value (2.1) at a significant level (0.05)

Through the Table (3) we find that all the values (T) calculated are greater than the tabular (2.1) at a degree of freedom (9) and the level of significance (0.05). The researchers explain this morale to the role of exercises guaranteed by the curriculum that focused on strength exercises that have a role By raising the skill performance by linking rubber rope exercises with some skill performances for players during a period of time, it had a great role in upgrading basic skills, and this is what Taha Ismail and others refer to, "The training of football must mean the development of strength to the greatest extent to increase the ability of the player's ability Which elevates his kinetic performance. (Taha Ismail and others: 1989)

This is also the of (Ibrahim Hammad,) "The positive response degree to developing physical qualities contributes positively to developing the level of skill performance" (Mufti Ibrahim Hammad: 1998)

Table (4) Shows the calculations, standard deviations, and value (T) calculated for the tribal and posttest.

Groups	Measurement Type	Type	Tribal Tests		Post Tests		T Collected Value	Sig
			Mean	Std. Deviation	Mean	Std. Deviation		
Experimental	Femur muscle test (UV) of the movement	Response	467.8	19.5	554.2	2.17	6.78	moral
	Leg muscle test (UV) of the movement	Response	286.9	04.9	334.5	3.11	53.10	moral
Control	Femur muscle test (UV) of the movement	Response	5.470	2.22	4.529	2.15	8.5	moral
	Leg muscle test (UV) of the movement	Response	266.7	7.10	319.6	8.8	8.9	moral

Value (2.1) at a significant level (0.05)

Table (5) Shows the calculations, standard deviations, and value (T) calculated for the tribal and post - test of the frequency of the moving shrinkage of the two legs of the two groups of the two groups.

Groups	Measurement Type	Type	Tribal Tests		Post Tests		T Collected Value	Sig
			Mean	Std. Deviation	Mean	Std. Deviation		
Experimental	Femur muscle test (UV/MS) of the movement	contraction frequency	3.84	6.6	2.96	4.4	1.4	moral
	Leg muscle test (UV/MS) of the movement	contraction frequency	3.69	7.2	4.85	2.2	3.12	moral
Control	Femur muscle test (UV/MS) of the movement	contraction frequency	7.85	6.5	3.91	2.4	4.2	moral
	Leg muscle test (UV/MS) of the movement	contraction frequency	4.70	7.2	3.81	3.1	2.9	moral

Through Tables (4-5) we find that all calculated values (T) is greater than the tabular to measure the capacity of the moving shrinkage of the muscles of the legs and explain this morale due to the adaptation of the muscular system as a result of the continuous training of two evils with the diversity of training and the types of strength during the exercises used It had a great impact on the increase in the muscle hill that plays a major role in the production of muscle strength, especially for football players, which has a high degree of strength because of the performance required to carry out their other motor duties such as speed and skill performance, and this requires a rise in the degree of overlap of the threads of the Active and the matinée and this is what (Gaytone & Hall) confirmed, "The muscle contraction occurs when there is a maximum composition between the threads of the accents and the crosses of Miocene yarns, which supports the idea that the greater the number of transit bridges that pull the threads of the Actin, the greater the intensity of the contraction" (Gaytone & Hall: 1997)

4-2 View and Discuss the Results of the Differences Between Tests and Remote Measurements

Table (6)

It shows the calculations, standard deviations and value (T) calculated for the dimension test of the force between the two groups

Verbal	Experimental		Control		T Collected Value	Sig
	Mean	Std. Deviation	Mean	Std. Deviation		
explosive force/ m	39.2	16.0	22.2	9.0	1.3	moral
Fast muscle strength/m	5.39	093	7.36	51.0	7	moral
Endurance strength/ count	35.02	1.87	31.23	2.34	2.8	moral

(T) Value (1.9) at the level of significance (0.05)

Through Table (6) we find that the calculated values (T) is greater than the tabular and in favor of the experimental group and explain this morale to the use of strengths of all kinds during the weekly training course and its hospitalization periods between the types of strength, which allows them to properly muscle construction, and this is confirmed by Mohamed Hassan And Abu Al -Ala Ahmed, "The repetition of physical pregnancy for several weeks includes functional and buildings as a result of training, so that these changes lies the body from responding more easily."(Muhammad Hassan Allawi and Abu Al -Ela Ahmed Abdel -Fattah: 2000)

We also add that training force with rubber ropes of different sizes has the effect of raising the level of strength for players, as the ease of performing these exercises with the correct (technique) performance of the path of the strength produced while linking the ropes In the legs, as well as for any movements by the player, as well as being

economical by training and integrating more than one quality and physical purpose, and this is what Hossam El -Din indicates that "the use of rubber ropes gives different powers to double the efficiency of exercises because it helps in doubling the movement of the movement in the joints" (Hussam al -Din Taha and others : 1997)

Table (7)
Shows the calculations, standard deviations and value (T) calculated for the dimension test of the basic spices between the two groups

Verbal	Experimental		Control		T Collected Value	Sig
	Mean	Std. Deviation	Mean	Std. Deviation		
skill of handling/ degree	19.4	2.4	18.4	2.1	2.02	moral
dribbling skill/ Sec	18.6	1.21	19.5	0.77	2.5	moral
skill of the goal/ degree	22.2	1.2	20.7	1.7	3.07	moral

Table (T) value (1.9) at the level of significance (0.05)

Through the Table (7) we find that the calculated values (T) is greater than the tabular and in favor of the experimental group and explain this morale that occurred in the basic skills, because the experimental group was subjected to a special training curriculum to develop force with rubber ropes according to scientific foundations that take into account the skill performance. When using rubber ropes of light or medium strength It leads to improving the skill of the striking man as in the scoring or handling while giving an additional power to guide the ball, and this is what (Al -Khouli and Al -Bayoumi indicate) "The need to use the devices and auxiliary tools has become essential in the training process, as simple and uncomplicated training methods can be used with the possibility of their availability to use It has the trainer in developing a movement and gaining a certain skill, and despite the great importance of devices and tools, we should not forget the role of the coach in implementing the training process using these devices and tools "(Amin Al -Khouli and Adly Bayoumi: 1991)

Table (8)
It shows the calculations, standard deviations and value (T) calculated for the dimension test of the legs of the two legs between the two groups

Groups	Measurement Type	Type	Tribal Tests		Post Tests		T Collected Value	Sig
			Mean	Std. Deviation	Mean	Std. Deviation		
Experimental	Femur muscle test (UV) of the movement	Response	554.2	2.17	4.529	2.15	2.02	moral
	Leg muscle test (UV) of movement	Response	334.5	3.11	319.6	8.8	2.5	moral
Control	Femur muscle test (UV) of movement	Response	2.96	4.4	3.91	2.4	3	moral
	Leg muscle test (UV) of movement	Response	4.85	2.2	3.81	3.1	6.1	moral

Table (T) value (1.9) at the level of significance (0.05)

Through the Table (8) we find that the values (T) calculated is greater than the tabular, which indicates the morality of the differences and in favor of the experimental group, and we attribute this moral morale to the prepared and codified exercises of the specialized nature by force according to the use of rubber ropes that suit the football training in football, which caused the adaptation of muscles In its constitution quickly and high frequency, as well as the muscular inflation resulting due to these rubber ropes, and this is confirmed by Mohamed Hassan and Abu Al -Ela Ahmed, "muscle inflation is one of the basic factors related to muscle strength. It is known that training increases the size of the muscles and the percentage of muscle tissue in the body that can be It reaches 50-55% of the entire body weight for athletes. (Muhammad Hassan Allawi and Abu Al-Ela Ahmed Abdel-Fattah: 2000)

This is what we find through the kinetic performance of the skills that were developed due to the raising of the kinetic capacity of them using rubber ropes with different powers that help external resistors such as the competitor

or its internal powers to shed the ball with full force by scoring or handling and other movements, it collects many kinetic units after stimulating nerve cells This confirms the role of strength exercises with rubber ropes, and therefore there is a productivity and economic in the work of the basic collision muscles without the need for additional muscles, and this is what Abu Al -Ela Ahmed indicates that "physiological adaptation occurs based on the improvement of the processing of recruiting the types of muscle fibers participating in muscle contraction as well as developing characteristics and coincidences The activity of the internal kinetic units as well as the work of the external muscles coincided with the use of the muscles designated with the work "(Abu Al -Ela Ahmed Abdel -Fattah: 2003).

We also add the increase in the frequency of strength exercises by special means of rubber ropes that have a great impact by increasing the efficiency of sensory receptors in the muscles operating of the legs, which led to the improvement of the work of the nervous system in the response capacity and then hesitation in muscle contraction better, that is, without increasing or decreasing the electrical signal For the working muscles.

5-CONCLUSIONS AND RECOMMENDATIONS

5-1 Conclusions:

1- Power exercises with rubber ropes have a positive role in developing the types of strength, basic skills, response capacity and frequency moving muscle contraction.
2- The study showed that adaptation to the nervous and muscular system occurred due to strengths of strengths with rubber ropes of a specialized nature. For football players.
3- There is an increase in the response capacity and frequency of the moving muscle contraction through the results that were reached for the muscles under study.

5-2 Recommendations:

1- Adopting exercises prepared to train football players.
2- Adopting the search results when early sporting selection to learn how to reach it to adaptations.
3- Emphasizing the importance of strength training in rubber ropes during the preparation of players and all periods of numbers because they have a major role in raising the physical, skill and functional levels for the players

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