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Strength training with increased neuromuscular activation to developing strength characterized by speed and accuracy of football dribbling skills for advanced students

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Abstract

The importance of the research was to develop the physical capabilities to serve the skill side of the players and to form appropriate, rapid and sudden motor programs, as well as to improve the work of muscle memory for the purpose of performing the dribbling skill economically, with effort and with high efficiency. The objectives of the research were to prepare neuromuscular activation exercises in multiple axes in physical abilities, muscle memory, and accuracy of the dribbling skill. Soccer for applicants, and to identify the effect of neuromuscular stimulation exercises on muscle memory. The researchers assumed that there were significant differences between the pre- and post-tests of the research group in physical abilities, muscle memory, and accuracy of the soccer dribbling skill for the applicants.

The research community included the clubs of Wasit Governorate participating in the Iraqi League, the second division in football, which numbered (3) clubs (Al-Hay, Al-Kut and Al-Numaniyah). The total research community reached (52) players distributed among (3) clubs (Al-Hay 16 players, Al-Kut 18). The researchers selected their research sample in a simple random way by drawing lots among the three clubs, and Al-Kout Club was chosen. The study was conducted at the Olympic Stadium of Al-Kout Sports Club for the period from 22/3/2023 - 1/6/2023.

The researchers identified the physical and skill abilities that serve the current study, which are the instantaneous ability of the legs, rapid strength, and the dribbling skill, and conducted tests for them and applied neuromuscular stimulation exercises for performing the dribbling skill, which targeted the lower extremities. The exercises were within the cycle of lengthening and shortening in an unbalanced manner, as the exercises were according to work axes, taking into account performance using a method of strength training of different amounts, which was applied to a part of the body. After completing the exercises, the researchers conducted post-tests, extracted their results, analyzed them statistically, and discussed them to reach the conclusions and recommendations that came out after conducting the research.

Keywords: Strength training, neuromuscular activation, dribbling skills

Introduction

The scientific and technological developments taking place in the sports fields have imposed new horizons in all directions and sports sciences, including sports training, which is witnessing a wide development based on modern foundations and theories, especially after the intersection of sciences among them and the emergence of the computer and the Internet (the Internet), which contributed significantly to the flow of information from which it benefited. Many specialists and researchers in this field brought about this mathematical development. Whereas football is a sport that requires strength, speed and precision in movements to achieve success on the field. One of the basic skills that players must acquire is the skill of dribbling the ball, which is one of the important movements for getting past opponents and finding suitable opportunities to pass or shooting.

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Football is one of the team games that requires the presence of such scientific developments, in addition to its players having physical abilities at a level that serves the game or event, and a great compatibility between those abilities, and muscular strength plays an essential role in achieving this, and this compatibility between them does not happen until after Codified training is based on solid scientific foundations and is reflected in the development of the level of performance of its players in muscular strength. In this case, the focus is on special muscular strength that mainly serves the motor duty of specialized skills. Which achieves high achievement and decisiveness in matches, as the skill of dribbling is considered one of the most important skills through which victory is achieved, which requires workers and experts in this field to adopt modern training curricula and plans on the one hand, and to identify the levels of players and their abilities in the specialized requirements of the game (Physical, functional and skill). Which makes it possible to identify their rates of development on the other hand.

To improve the strength, speed and accuracy of soccer dribbling, modern training techniques such as increased neuromuscular activation can be utilized. This type of training aims to develop maximum muscle strength and increase the ability of muscles to capture and transform nerve signals with high speed and accuracy. Strength training is one of the essential aspects of sports training programs, as it helps increase muscle mass and improve physical performance. Among the available training methods, muscle activation by neurons stands out as an effective method for enhancing muscle strength.

Strength training with increased neuromuscular activation provides a unique way to achieve significant progress in muscular endurance and strength. Neuromuscular activation occurs when the nervous system sends signals to the muscles, causing them to contract and move. The stronger the nerve activation, the greater the muscle force generated. The idea of strength training with increased neuromuscular activation revolves around increasing the amount of neural activation of the muscles over time. This type of training depends on performing strength exercises repeatedly and continuously, which leads to improving the nervous system's response to those exercises.

Based on the above, the importance of research is highlighted in developing the physical capabilities to serve the skill side of the players and forming appropriate, rapid and sudden motor programs, as well as improving the work of muscle memory for the purpose of performing the dribbling skill economically, with effort and with high efficiency. According to the researchers' opinion, this does not happen unless a training method based on neuromuscular activation in multiple axes in physical abilities and muscle memory, which serves the skill of dribbling by achieving a point with the least effort and highest efficiency that we see in international leagues.

The research problem

The optimal progress of strength training often goes through several stages, represented by the stage of anatomical adaptation, the stage of muscle hypertrophy, as well as achieving maximum strength, the stage of achieving strength conditions in competition according to specialized skills, and the stage of maintaining the level of strength, as these concepts depend, of course, on the structure of the season. Sports, as the competitive season is relatively long for the first division league compared to the preparation period, and

through monitoring the researchers, they noticed that the performance of offensive skills, especially dribbling, is characterized by one characteristic, which is the player's inability to change the direction of the ball and correct his body position to get rid of the opponent. If he tries to change, he loses the ability to direct the ball effectively, and this is largely due to the nature of the exercises, which are mostly of one style and do not simulate the muscles working according to the multiple axes of the skill, as most coaches are in the nature of their training on known axes, and their pattern prevails (Focusing on the axis One while performing the exercise), and the nature of the dribbling skill requires three-dimensional axes and at special levels, as each axis has its own muscles that facilitate performance on it in an ideal manner, the muscle is able to perform the duty assigned to it in a balanced and strong manner with economical effort. It also clearly appeared to the researcher that the ranges of motion on the muscles working according to the axes of the dribbling skill are clearly weak as a result of not showing importance to the type of these exercises. Make it a basic pillar during the main part of the training unit, especially when the training unit is specific to muscular strength.

More precisely, the use of rubber exercises is adopted by some trainers at timings that researchers believe are not at the effective level, as their importance is not taken into account according to the stages of physical preparation, as they are used in the same proportions in all stages of this period, in addition to not giving them importance and neglecting them greatly in special preparations. If it is given during the training unit, it is given only in the preparatory part, such as warm-up exercises, or in the concluding part, such as cool-down exercises for the muscles, in a simple manner. While it should take up a large space in the main part, that is, after strength or speed exercises, then the muscles will be prepared to lead to an adaptation of the parts responsible for sensation within the muscles and joints, which has the primary effect of increasing the range of motion, flexibility, and strength of the joints, tendons, and muscles working on it.

Objectives of the research

1. Preparing neuromuscular stimulation exercises in multiple axes in physical abilities, muscle memory, and accuracy of the football dribbling skill for applicants.
2. Identify the effect of neuromuscular stimulation exercises on muscle memory.

Research hypothesis

There are significant differences between the pre- and post-tests of the research group in the physical abilities, muscle memory, and accuracy of the football dribbling skill of the applicants.

Fields of Research

The Human Field: Al-Kout Sports Club football players for applicants.

The time field: From 22/3/2023 to 1/6/2023.

The space field: Al-Kout Sports Club Olympic Stadium.

Definition of terms

Multi-axis neuromuscular stimulation exercises

Unbalanced strength training: These are strength training of different amounts that are applied to the body or parts of the body, and express the body's velocity. That is, they are all the exercises that are carried out on the human body and part of that body by increasing or decreasing its real weight, such as

weights, resistances, and others, and they have many forms, including (Al-Fadhli, 2020, p. 74) [7].

Muscle memory: It is the ability to perform various muscle tasks with ease and complete fluency.

Research methodology and field procedures

Research methodology

The nature of the problem facing the researcher is what necessitates him to choose the appropriate research method to solve this problem and achieve the goals set for his research. The method used in scientific research is of great importance, as the scientific method “is the scientific step that the researcher follows to solve a specific problem, and the research methodology must be compatible with the goals and the problem to be addressed and to maintain adherence to the independent and dependent variables. Since the research problem is of an experimental nature, the researchers used the experimental method because it suits the nature of the research problem and by designing two equal groups with pre- and post-tests, as this design is tightly controlled and suitable for the research procedures.

The research community and its sample

The process of selecting a sample and the method through which it is selected are necessary for scientific research, and it is a condition for achieving the success of the research. Selection of the sample is sometimes related to the extent of its representation of the research community, from which it

also gained the possibility of generalizing its results to the community concerned with the study.

The research community included the clubs of Wasit Governorate participating in the Iraqi League, the second division, in football, which numbered (3) clubs (Al-Hay, Al-Kut and Al-Numaniyah). The total research community reached (52) players distributed among (3) clubs (Al-Hay 16 players, Al-Kut 18). 18 players and Al-Numaniyah, as the researchers selected the research sample in a simple random way by drawing lots among the three clubs, and Al-Kout Club was chosen.

Therefore, the research sample included Al-Kout Sports Club players for the applicant category, numbering (18) players. Four players were excluded due to their inability to attend during training hours, and thus the total research sample reached (12) players only, and they represent (35.3%) of the research community.

Homogeneity and equivalence of the research sample

For the purpose of starting from one starting line and verifying that the results are moderately distributed among the members of the research sample and that the experimental method has an effect in creating differences between the two research groups, the researchers carried out homogeneity and equality of the sample, as the researchers carried out homogeneity using the law (Coefficient of skewness) and Coefficient of variation and Levine in the variables (Weight, height, training age, and chronological age), as shown in Table 1.

Table 1: Shows the homogeneity of the sample in extraneous variables, where the means, standard deviations, median, and skewness coefficient were found for the variables under investigation (height, weight, chronological age, training age) for the research sample

Variables	Measuring Unit	Mean	Median	Std. Deviation	Levin
Length	Cm	1.709	1.705	0.042	0.328
Mass	Kg	74.122	75	5.102	0.144
Chronological age	Year	17.583	17	0.996	0.461
Training age	Year	5	5.125	1.206	0.334

It is clear from the table above that Levene's homogeneity test is not significant, and this is an indication that confirms the

homogeneity of the research sample in the previous variables.

Table 2: Shows the equivalence of the research group in the pre- and post-test in physical abilities variables

Variables	Measuring Unit	Pre-test		Post-test		T-Value	Error Rate	Sig type
		Mean	Std. Deviation	Mean	Std. Deviation			
The instantaneous ability of the legs	Watt	2035	63.85	2007.83	95.26	0.928	0.375	Non sig
The strength and speed of the legs	Newton	1384	95.21	1352	83.62	0.881	0.937	Non sig

Table 3: Shows the equivalence of the research group in the pre- and post-test in the accuracy of the dribbling skill.

Variables	Measuring unit	Pre-test		Post-test		T-Value	Error Rate	Sig type
		Mean	Std. Deviation	Mean	Std. Deviation			
Dribbling the ball between three checkers	Second	12.87	0.6	13.7	0.97	2.10	0.511	Non sig

Tabular T-Value = (2.228) at a significance level of (0.05) and a degree of freedom (10).

Significant at the significance level (0.05) if the error level is \leq or $=$ (0.05).

Means, tools and devices used in the research

In order for the researcher to work on completing his research, he must use the tools, devices, and means that allow him to do so. Means and research tools mean the method or means through which the researcher can arrive at a solution to his problem, whatever those tools may be, devices, data, samples (Mahjoub, 1988, p. 133) [11].

Means of collecting information

- Note.
- Measurements and tests.

- Personal interviews.
- World Wide Web.

Tools used in the research

- Whistle number (2).
- Medicine balls of different weights (6).
- Swedish chair (6).
- Legal football number (8).
- (14) Jumping hurdles of different heights.
- Weights of different weights (10).
- Measuring tape.

- Rug number (2).
- Leather belt for fastening purpose.

Equipment used in the research

- Electronic stop watch (2).
- A medical scale to measure weight.
- Laptop (HP).

Field research procedures

Determine physical capabilities

The researchers identified the physical abilities that serve the current study.

Table 4: Shows the physical abilities variables

N	Variables
1	Vertical jump from a standstill
2	Standing long jump

Description of the physical abilities tests used in the research

1. **Name of the test:** Vertical jump from a standstill (Hasnain, 2006, p. 378) ^[12]
2. **Purpose of the test:** To measure the instantaneous power of the legs
3. **Name of the test:** Standstill long jump (Hasnain, 2006, p. 382) ^[12]
4. **Purpose of the test:** To measure the strength and speed of the legs

Description of the skill tests used in the research

Test of dribbling the ball between the blocks.

Exploratory experience

The researchers conducted the exploratory experiment on (Wednesday) of (22/3/2023), at (4 pm) at the local administration stadium of Al-Kout Sports Club on (6) players from the category of applicants from within the research sample.

This experiment is practical training for the researcher to identify all the positives and negatives that he may encounter while conducting the main experiment in order to avoid them (Al-Mandalawi, 1989, p. 107) ^[8]. The goal of the exploratory experiment was the following:

- Identify all the problems that researchers may face during the main experiment.
- Verify the suitability of the place for the research sample.
- Determine the appropriate time for the tests used by the study.
- Taking into account the safety of the tested players in terms of the suitability of the floor of the closed hall.
- Identify the number and efficiency of the assistant work team

The researcher's exploratory experiment demonstrated the suitability and suitability of the playing field for conducting the main experiment and tests and the efficiency of the auxiliary team.

Pretests

The researchers conducted the tests (Study Variables) over a period of two days and on the field of the local administration of Al-Kout Sports Club and the research group, and after giving the necessary information on how to perform the tests and their sequence, the researchers began conducting the tests in the research, as it took place on the first day (Friday)

24/3/2023 Tests for physical abilities at three o'clock in the evening, and on the second day (Sunday) 26/3/2023, the researchers also conducted the skills test at three o'clock in the evening and at the stadium of the local administration of the Al-Kout Sports Club. The researchers provided the necessary equipment and tools and the assistant work team, in the presence of a coach. The team to complete the tests while providing all appropriate conditions for the success of the tests.

The exercises used

The main experiment included the application of neuromuscular stimulation exercises for performing the dribbling skill, which targeted the lower extremities. The exercises were (Within the cycle of stretching and shortening in the unbalanced method), as the exercises were according to the work axes, taking into account performance in a strength training method of different amounts, which were directed at a part of the body in addition to on the body as a whole, this was done by increasing or decreasing the actual weight of the body or part of the body, in addition to the training method (Fixation and relaxation with contraction of the motor muscles) and the neuromuscular stretching method, the researchers prepared the exercises in a way that was compatible with the requirements for solving the problem that the researchers studied in order to find solutions that would raise the skill level of dribbling. The exercises simulated the nature of the skill, taking into account its suitability to the level and nature of the sample was to avoid injuries as the qualifying league for the first division was close. The purpose of the training was to improve physical abilities according to the nature of football performance.

The training was as follows

1. The training method used in unbalanced exercises and stabilization exercises - relaxation with contraction of the motor muscles - was the repetitive training method.
2. The researchers applied the exercises during the special preparation period, and they lasted (8) weeks, at a rate of (3) three training units per week. The days were (Saturday, Monday, Thursday), and the total number of training units reached twenty-four training units.
3. After completing the application of the special exercises, it is followed by neuromuscular facilitation exercises (fixation, relaxation, and contraction of the moving muscles).
4. The exercises began to be implemented on Saturday 1/4/2023 and were completed on Thursday 25/5/2023. The design and selection of the exercises were based on scientific foundations by the researchers in terms of:
 - a) Adapting the exercises to the level of the research sample members and their physical abilities.
 - b) Taking into account the purpose of preparing these exercises.
 - c) Researchers take into account the appropriate composition of the training load in terms of (intensity, volume, and rest).
 - d) The researchers took into account the correct scientific sequence in performing the exercises during one training unit and distributing them according to the working muscle groups, in order to avoid exhaustion or fatigue, which leads to injuries to them.
 - e) The researchers adopted repetitions based on the levels of severity.

Post-tests

After completing the application of the exercises used and prepared by them, the researchers conducted the post-tests on Sunday, 28/5/2023, for two days, in the same manner as the (Pre-tests), taking into account the location, time, circumstances, sequence, and auxiliary team, equipment, and tools as much as possible.

Statistical methods

The researchers used the statistical package (SPSS) to obtain the research results.

Presentation, analysis and discussion of the results

In order for the researchers to reach the objectives of his research and achieve his hypotheses that he set, he presented the arithmetic means and standard deviations in illustrative

tables after performing all the necessary statistical operations, in order to facilitate the process of observing the results, and to make a comparison between the results of the research group's tests in the tests (pre- and post-tests) as well. By interpreting and analyzing the results of each test to determine the differences and their statistical significance, according to precise scientific principles to achieve the objectives and hypotheses of the research.

The researchers placed the test results obtained through statistical treatments appropriate to the objectives and hypotheses of his research, in the form of statistical tables, for analysis and discussion, as follows.

Presenting, analyzing and discussing the results of the pre- and post-tests on the physical abilities of the research group

Table 5: Shows the means and standard deviation for the variables related to physical abilities between the pre- and post-tests and for the research group

Variables	Measuring unit	Pre-test		Post-test	
		Mean	Std. Deviation	Mean	Std. Deviation
The explosive ability of the legs	Watt	2035	63.85	2587	61.86
The strength and speed of the legs	Newton	1384	95.21	1717.83	75.92

Table 5 shows the data that the researchers extracted for the research group, as it shows the values of the arithmetic means and standard deviations between the pre- and post-tests for the

sample, which represent the nature of the research tests on physical abilities variables.

Table 6: Shows the difference of the means, its standard deviation, the calculated t-value, and the result of the differences between the results of the pre- and post-tests in the physical abilities tests for the research group.

Variables	Measuring unit	means Difference	Std. Deviation Difference	T-Value	Sig level	Sig type
The explosive ability of the legs	Watt	552	172.9	7.820	0.001	Sig
The strength and speed of the legs	Newton	333.8	144.99	5.64	0.002	Sig

Table 6 shows the data that the researchers extracted for the experimental research group, as it shows the values of the difference of the arithmetic means, the deviation of the differences, the calculated t-value and the level of confidence between the pre- and post-tests of the sample, which represent the nature of the research tests in the variables of physical and mechanical abilities, and through the table above it is shown The results are significant in favor of the post-test.

Discussing the results of the pre- and post-tests of the research group on physical abilities variables

The researchers presented and analyzed the results of the pre- and post-tests for the experimental research group in Tables 5 and 6. It appeared that there were significant differences between the pre- and post-tests in the variables of the study. The researchers attribute the reason for this to the nature of the training exercises for football players and the skill of dribbling, which It aimed to develop physical abilities by working on activating the muscles, so that the exercises simulated the nature of the dribbling skill in a codified scientific manner, in which the researchers used exercises within the circuit of stretching and shortening using the unbalanced force method, which was determined by manipulating the relative weights of the body parts in addition to a partial change in the nature of The flat ground on which players train, prepared by researchers, which depends on the application of scientific foundations, the nature of the formation of the exercises, and their suitability to the nature and level of the sample for training this skill, which targets the muscles participating in the performance, and the most special thing is that these exercises

were consistent with the requirements of the dribbling skill and suitable for developing (Physical abilities) through these exercises containing these elements to develop strength and speed in addition to maintain balance while performing the exercise as they are essential elements for developing this skill and achieving the desired achievement, and this is consistent with what was mentioned by (Farhan and Sajet, 2017: 23) ^[1].

The training methods or special exercises implemented to achieve an effective training effect must be exercises taken from the game or sporting event that work to engage the muscles that have the greatest scope in speed, strength, and direction of movement for the skill.

The special exercises within the circuit of shortened stretching are one of the most effective forms of developing abilities (explosive ability and rapid strength), as these exercises impose physical effort on the body, especially on the muscles and tendons working in performance, which leads to improving muscle strength specific to the nature of the specialized activity, and then gives A positive result in improving the results of the post-tests.

The researchers also attribute the development of the research variables to the scientific method in changing the training pattern, as simulating unbalanced strength training according to the axes of work is considered a new method for developing all participating muscles and achieving muscular balance while taking into account the rates of participation in muscular work, as the majority of exercises are of a traditional pattern according to one axis. Therefore, the researchers intended to involve more than one axis in one exercise, taking into account what happens during the

competition, and here we must strive to focus on the form of exercises that simulate the mechanics of the reality of the skill, as (Al-Fadhli, 2020: 77) ^[7] emphasizes.

Multi-axial strength training in linear movements contributes effectively to achieving high balance for the working muscles. Likewise, there are strength training exercises in rotational movements, which are much more important than linear strength training. Or rather, rotational strength training according to the axes of movements is the basis on which training depends. The strength of the human body is in accordance with the specificity of the human body in the presence of types of levers and joints, which are linked to all types of movements according to the third axis. Therefore, all movements of the body and its parts are considered rotational movements because they are linked to axes of rotation (Joints) and the masses of the body parts are distributed around these axes.

Also, training according to scientific foundations and the appropriateness of the nature of special training to the skill works greatly to raise the level of physical abilities in a distinctive and noticeable manner and within an appropriate period of time, and that special training during the training units was found to help improve skill performance, which depends mainly on the type of training unit and the training task. The exercise is designed to help improve motor performance. The method depends on the level of the performer, the type of movement, and other movements that he has learned, so the quality of training is very important.

The researchers confirm that training according to the stretching and shortening circuit by placing standardized weights according to the relative weights of the body parts by changing the weight from one part to another so that the performance within the stretching and shortening circuit is unbalanced. During the performance, the athlete tries to maintain the body position and maintain the apparent shape of the exercise despite the situation of increasing difficulty, which works to stimulate Muscles work greatly to overcome resistance and maintain muscular balance by raising the level of nervous stimulation in relaying instructions from sensory receptors, which give procedural information about the change in the body's position.

Autogenicity is the process in which the body can change muscle contraction in direct response to information about external forces, giving it the ability to sense your body's orientation in its environment despite external changes that affect performance. Researchers also attribute the development to unbalanced strength training within the circuit of lengthening and shortening by manipulating parts of the main section by making the ground unbalanced so that the general situation of the exercise is unbalanced in order to increase the difficulty setting before performing the final section.

Unbalanced force is the force of different magnitudes that is exerted on objects, and expresses the body's velocity. That is, it is all the exercises that are carried out on the human body

by increasing or decreasing its real weight, such as weights, resistance, or performing on unbalanced surfaces. These exercises work to raise the level of physical capabilities in a way. It is important towards achieving a goal, which is the general balance of the working muscles in addition to the balance of the body parts by stimulating the proprioceptive systems located in the muscles, joints and tendons.

The researchers confirm that strength training with central and eccentric contraction in a stabilization method and relaxation with contraction of the motor muscles, which the players train during their training units in conjunction with strength training for balance and concentration on the muscles that participate effectively in the dribbling skill, which are the muscles (Arms, torso, and legs) helped to create a high and important balance in the development of abilities. Physical by allowing parts of the body to reach the maximum extent within the anatomical range, and that neuromuscular facilitation methods are among the important methods used in developing flexibility and strength, in addition to many other physical characteristics such as muscular ability and motor speed.

(Ahmed, 2014: 92) ^[3] pointed out the importance of developing muscular strength alongside flexibility during training units, by codifying special exercises for each of them, which are determined by the physical ability of the players, as well as codifying special exercises for both strength and flexibility, as the work of the body's joints is linked. It is closely related to both the strength of the working muscles and the level of lengthening of the corresponding muscles. The researchers confirm that proprioception exercises using the method of stabilization, relaxation and muscle contraction contributed to the muscles reaching the maximum possible extent in order to benefit from elastic energy and release it explosively in the shortest possible time.

On the other hand, researchers confirm that the nature of the exercises used greatly stimulates the proprioceptors, which have a significant impact on the process of force production and avoiding injury as a result of the incoming and exporting of information for the purpose of preserving the safety of vital organs within the body and creating muscular balance between the (working) muscles. Antagonist, auxiliary) protects the muscles and produces force economically and with high productivity through the study, the researchers concluded that the increase in strength was accompanied by a decrease in time, and this is a clear indication that the increase in strength was positive without loss of effort. All of these factors participated in the development of some physical abilities that help in facilitating and developing the performance of the dribbling skill. Therefore, the integration of the appropriate neuromuscular system it is necessary and essential for motor and quantitative performance, and indeed elasticity is what balances the process of this integration.

Presentation and analysis of the results of the research group in the pre- and post-test of the skills test

Table 7: Shows the arithmetic mean, the standard deviation, the calculated t-value, and the statistical significance of the pre- and post-measurements for the research group

Variables	Measuring Unit	Pre-test		Post-test		T-Value	Sig level	Sig type
		Mean	Std. Deviation	Mean	Std. Deviation			
Dribbling the ball between three checkers	Second	13.45	0.6	11.78	0.49	3.23	26.2	Sig

Table 7 showed that the mean of the research group in the ball dribbling test between three signs in the pre-test was (13.45), while the standard deviation was (0.6), while in the post-test

the mean was (11.78) with a deviation A standard value of (0.49) and the value of (t) calculated between the two tests was (3.23) and in favor of the post-test, which is greater than

the value of (t) tabulated (2.26) under a degree of freedom (9) and a level of significance (0, 05).

Discussion of the results

After reviewing the results shown in Table 7, which shows the results of the research group in the pre- and post-measurements of the test under study, the development appeared clear after its members applied the special exercises in developing the speed of dribbling the ball. It appeared that all the calculated t-values between the pre-and post-measurements of the test used in the research, the value of the tabular (t) was greater than the degree of freedom (9) and the level of significance (0.05). This means that all the differences between the pre- and post-measurements of the test were differences of significant value.

The researchers, before preparing the special exercises through which the goal was to develop the speed of dribbling the ball, were fully convinced that the speed of skill performance is one of the important characteristics of the football player. In order for the player to be able to perform these skills at the ideal speed, the coach must carefully choose exercises that are completely similar to. What happens in the matches and the players train on them with a gradual progression of performance until the players get used to performing them with the same force and speed with which they must be performed during the matches.

Regarding this, (Mukhtar, 1989, p. 93) ^[4] points out that the speed of skill performance is one of the important characteristics of the football player, and in order for the player to be able to perform the skills during matches at the ideal speed, the coach must choose exercises that are exactly similar to what happens during the matches and train the players on them. With a gradual progression in performance until the players get used to performing it with the same force and speed with which it must be performed during the match.

The researchers attribute the development of the research group that applied the exercises to develop the speed of football dribbling to the fact that the special exercises were largely identical to what happens during the match. The researchers were careful for the players to perform these exercises with the intensity placed in front of each exercise. The researchers also took into account that the performance of exercises for both feet so that the player can perform the dribbling skill at all times and in various circumstances. The researchers also made sure that the exercises were diverse and comprehensive on the various situations that the player might go through during the match, taking into account the diversity in the player's starting distances with the ball and in different directions. And from variable positions.

Regarding this, Osama Kamel points out that good training curricula are in themselves a driving force for athletes, and (Hammad, 1998, p. 9) ^[10] points out that "the development of the training situation in specialized sports comes through the meeting of several Ingredients include working to reach training volumes and planning to achieve the maximum balance between training loads for preparation and competitions, as well as taking into account the relationship between intensity and rest, all of which are factors that help the athlete to make steady and noticeable progress without any side effects."

Conclusions and Recommendations

Conclusions

1. Neuromuscular stimulation exercises have a positive effect on developing the abilities related to the football

dribbling skill.

2. Neuromuscular stimulation exercises have a major role in developing muscle memory indicators.
3. Neuromuscular activation exercises led to a positive effect in developing the accuracy of the football dribbling skill for the applicants, and the accuracy and efficiency of performance were very clear through the actual performance of the research sample.

Recommendations

1. Using neuromuscular stimulation exercises because of their significant impact on developing some forms of strength.
2. Paying attention to neuromuscular stimulation exercises and making them a basic pillar in developing football skills.
3. Interest in using neuromuscular stimulation exercises to develop motor abilities in addition to physical abilities because this method synchronizes strength training and stretching.
4. Conducting other studies and research using neuromuscular stimulation exercises on other samples, such as youth and adolescents.

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