

The Effectiveness Of Muscle Relaxation In Increasing Physical Performance In Soccer Players

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Abstract:

This study aims to highlight the effectiveness of muscle relaxation in improving the level of physical performance among football players, the researcher used the descriptive approach to its suitability this study, on a sample consisting of 12 players, the results were analyzed using the statistical program and the results came as: there are no statistical significance between the experimental group and the group control in the tribal test, as the results showed differences of statistical significance between the group Experimental and group control group

KEY WORDS : MUSCLE RELAXATION. PHYSICAL PERFORMANCE. SOCCER

المخلص:

تهدف هذه الدراسة الى ابراز فعالية الاسترخاء العضلي في تحسين مستوى الاداء البدني لدى لاعبي كرة القدم , استخدم الباحث المنهج الوصفي لملائمته هذه الدراسة , على عينة مكونة من 12 لاعب , تم تحليل النتائج باستخدام البرنامج الاحصائي وجاءت النتائج كتالي : انه لا توجد فروق ذات دلالة إحصائية بين المجموعة التجريبية والمجموعة الضابطة في الاختبار القبلي , كما اظهرت النتائج فروق ذات دلالة إحصائية بين المجموعة التجريبية والمجموعة الضابطة في الاختبار البعدي

الكلمات المفتاحية: الاسترخاء العضلي. الأداء البدني. كرة القدم .

1-Introduction:

The recent years have witnessed increasing interest in the integrated preparation of football players, and this is evident through the complementary relationship between the various aspects of training, which includes different training, which includes the physical, skill and planning side, in addition to the psychological side and to achieve high sporting levels requires the sports individual to use his body, skill, planning and psychological capabilities in an integrated manner in order to try to achieve the best possible level. Modern training for various group games and sports events is an educational process based on scientific foundations aimed at reaching the players to the finest levels with integrated, developed and rapid performance that the countries of the world seek, and most of these countries have been keen to prepare their elections and provide their coaches with a new ideology to perform their country in international championships(Ahmed.2012.p7)

Increasing interest in the study of human behavior in the sports field and interest in the field of training in terms of field applications that seek to improve the level of athletes in various skills and activities , so anxiety in the life of an individual is one of the psychological phenomena to which an individual is exposed .The intensity and repeated exposure to which may lead to negative effects on his health and performance during competitions, and it has been associated in the last decade with various and multiple fields , even including the sports field, whether players, administrators, coaches or referees, and considering that the player has become a commodity to be bought and sold, so interest in sports psychology began as an important science for achieving excellence In sports performance

From here, the need has emerged to accentuate the effectiveness of progressive muscle relaxation in improving physical performance in football players, because, as some researchers believe, in general, some psychological variables that affect physical performance are considered as a feature of poor concentration, fatigue and psychological stress, which are considered as a feature of life, at some levels they may be required if not necessary in order to motivate psychological effects such as psychological burnout And physical exhaustion .

Based on these repercussions and symptoms that affect the individual's performance during competitions, this study came as an

attempt to find out the effectiveness of muscle relaxation to highlight the difference between the feeling of tension when muscle contraction and the feeling of relaxation when the muscles of the body are stretched, therefore, and in order to diagnose the effectiveness of muscle relaxation in raising the level of physical performance the family and social environment of the player .

Through the above, the sports field is full of positive and negative emotions, which are necessary to achieve good and appropriate for the level of athletes, as it works to achieve and develop the motivation of the athlete and motivate him to work more, and this is achieved by good psychological preparation of the athlete that allows to face negative pressures and control them.

Mental training is one of the strategies of sports training technology that has received the attention of many specialists in this field because of its positive and effective role in developing the level of performance, especially after mental and psychological skills have become important in improving the level of performance, that the ability to mental training is one of the important variables that affect performance, where it is used for the purpose of embodying performance and by mentally reviewing the skill , and this includes getting rid of errors by visualizing the correct method of performance, and that most of those who have a clear idea of the main aspects of the skill can, through mental training , compare their responses with optimal performance, and then corrects erroneous responses . (Zaid M R.2015.P2)

Through the above, we refer to some studies, whether in the Arab or foreign environment, which gave importance to the study of muscle relaxation in the sports field and multiple fields vary according to their nature and practice activities, we mention some of these studies.

As many studies indicate, including the study of ben rkia Abed and others (2019), the results of the study came to the existence of significant differences between the tribal and remote tests of the experimental sample in terms of confronting competition anxiety and skill performance , and also the study of Janet Ortiz (Janet Ortiz .2006) and Adi adeyeye et al . (2013) the results of the study showed that progressive relaxation as a psychological pain assessment therapy had a significant impact on the ability of athletes to cope with sports injuries. She also pointed out that self-talk has a positive and effective role in dealing with sports injuries among students.

Also , in 2001, lahus and others conducted a comparative study between the effects of progressive muscle relaxation and visualization-based relaxation training on the physiological and subjective responses of children , as well as the study of kissari Ali , which concluded the effectiveness of progressive muscle relaxation in alleviating competition anxiety for football players, as well as the study of Zaid Mohammed Rauf Al-khafaf (2015), the results of which showed that there are high moral differences between the tribal and dimensional skill tests of the experimental group compared to the moral differences of the tribal and dimensional tests of the experimental group the reason is because the experimental group was learning through two forms of the first training It is represented by the skill educational curriculum, the second form focused on mental training .

Through the above, we refer to some studies, whether in the Arab or foreign environment, which gave importance to the study of muscle relaxation in the sports field and multiple fields vary according to their nature and practice activities, we mention some of these studies.

The relevance of our research depends on the extent to which mental training is related to the processes of controlling thoughts, physical movements, regulating motor behaviour, exploiting appropriate positive phrases and thoughts to help the ability to train, improve the skill aspect and reduce the physical burden by reducing muscle contractions through the regular breathing process .

The study of Osama Yahya (2016) to reveal the role of a collective counseling program for muscular relaxation in reducing psychological pressure and anxiety of sports competition through a comparison between an experimental group and another controlled, as this research was interested in examining the relationship of some variables (age, sex and specialization) with psychological pressure and anxiety of sports competition and to achieve the goals of this research and answer its questions and achieve its assumptions, the selection of a sample made of consisting of 38 athletes distributed into two equal groups.

The researcher reached a number of results, the most important of which are the following: There are statistically significant differences between tribal and post measurement on the Kumiti Experimental Group in favor of the dimension in the degree of psychological pressure and the concern of competition, unlike the

control group. There are no statistically significant differences between tribal and post measurement on the experimental kata group in favor of the dimension of the degree of psychological pressure and the concern of competition. There are no differences between the tribal measurements of the two groups controlling and experimental in the degree of psychological pressure and the concern of competition. There are differences between the two dimensions of the two controlled and experimental groups in the degree of psychological pressure - There are no statistically significant differences between the two dimensions of the two groups, the competence of the position in the degree of concern of competition.(osma.2016.p1)

The measurement was then used using the pressure perception scale and the scale of sports anxiety. After collecting data and conducting analyzes and statistical processors..(Janet Ortiz .2005.p1)

Ben Bisha and others (2017) also a study aimed at identifying the difference between the two types of central and traumatic muscular contraction in terms of muscle inflation, and we used in our study the experimental approach to a sample consisting of 10 athletes practicing bodybuilding sport that was selected from the research community in a meantler way to collect data. We used physical measurements tests that include measurements of the oceans of each of the chest muscle perimeter, the arm of the arm and the vicinity of the thigh muscle, as well as we used maximum strength tests 1 RM in order to codify the training loads, and after collecting the results and tackling them statistically, there were differences between tribal and dimensional measurements in favor of dimensional measurements in terms of the training program and also reached the presence of differences between the two groups in favor of the group The second experimental (decentralized contract)

That the training process requires the player to make great efforts in various aspects, whether technical, physical or psychological, so the researchers sought to study the effectiveness of muscle relaxation in raising the level of physical performance of football players

To answer the question requires finding statistical differences between the control and experimental groups in the previous and subsequent tests of the sample of individuals, which is the problematic situation in this study .From the above, the following general question can be asked :

- Does muscle relaxation contribute to improving physical performance among soccer players ?

By defining the research problem, we ask the following question:

- Are there any significant differences between the pre-and post-test of the control and experimental groups?

2-General hypothesis:

Based on the identification of the research problem, the researcher has identified a general hypothesis that .

- Muscle relaxation contributes to improving physical performance in soccer players .

Hypotheses:

- Through the general assumption, the researcher has defined the research assumptions in the following wording

- There are significant differences between the pre-and post-test of the control group and the experimental

The proposed sports counseling program is effective in reducing symptoms of depression and raising the level of self-esteem among middle school students.

2- Objectives of the study:

The study sought to highlight the mechanisms of improving physical performance through good recovery after training, as well as competition and how to deal with it according to the training program for soccer players.

3- Defining research concepts

Relaxation: “relaxation means the complete cessation of all muscle contractions and contractions associated with tension (Shimon.M.A.1996.P 168)

Physical performance : Eckert defines it as:" the ability of an individual to perform repeated and mastered motor performance in the direction of achieving a goal ".It is also the level of what an individual achieves in the specialized sports activity he practices," he said .

Football: football is a team sport adapted to all types of society, and before it became an organization, this game was practiced in the most attractive places, where the practitioner of this game felt that

turning this ball into a sport based on a basic rule. (Salim A .1988. P. 12)

4 -Materials and Methods.

The study uses theoretical analysis, systematization, and generalization of scientific literature, documentary sources.

- **Research method:** the researcher used the experimental method to suit the nature of the current study.

4-1- Sample: the research sample in this study represents football players from the middle category.

4-1-1 / - Research journals

Research areas: the basic study phase was from 04 February 2025 to 10 March 2025

Spatial field: the study took place on the playground intended for the training of this category

The study sample included two experimental groups of 06 players and the control group of 06 players.

4-2 - Exploratory study

4-2-2 - Objectives of the survey study

- Preparing and testing research tools, and measuring research variables in the Algerian environment.

- Find out the time taken by the research tools in the application and find out the best conditions and methods for conducting the basic study.

4-3 / - The time of application of the survey study

We started the initial study from december2024 in which the scale was distributed to the players through which the psychometric coefficients of the tool were calculated .

4.3 / - Results of the survey study

4-4/ - Stability of the scale

Then the stability was calculated after a period of two weeks from the first and second application on a survey sample consisting of 6 players , who were later excluded from the basic study sample .

The correlation coefficients between the first and second test of the relaxation ability scale were, by calculating the simple "Pearson" correlation coefficient, where the total correlation coefficient of the relaxation ability scale was equal to (0.732)

4-4-1 / - The authenticity of the scale:

The scale was presented to a group of competent professors, until the final image of the scale was obtained to apply it to the Algerian environment.

4-5 / - Study tools

4-5-1 / - Muscle relaxation technique

4.5.1.1 - / - Muscle relaxation program

Content and chronological distribution of the program implementation

The content of the training program was based on multiple sources through the literature that shed light on the problem that the program was designed to address, as well as with reference to various Arab and foreign studies that were conducted on the problem through which Sessions with training objectives were designed. At the rate of two training sessions per week , the time of each class is 10 minutes .

4.5.1.2 Program arbitration

The researchers presented the proposed relaxation program to a number of professors and experts for evaluation

4.6 / - Relaxation ability scale

This scale was originally developed by Frank vital (1971) under the title your ability to relax and prepared for Arabic by Mohammed Hassan Allawi and Ahmed Mustafa al – S.(1981).

The scale consists of 15 phrases that allow the laboratory to express its abilities to relax voluntary muscular and mental by verbal responses to the phrases of the scale, and this scale is valid for both sexes and all ages and consists of four dimensions (always – sometimes – rarely-never). (Benrkia A.2019. P 45)

4.7 / - Physical tests:

Some field physical tests were used to measure some physical fitness qualities namely :

- **Speed test: 50-Meter Speed Test**

A 50-meter run, the purpose of which is to calculate the maximum possible speed to achieve the shortest possible time (Chenouf .Kh et al. 2019. P 11)

- **Agility T Test**

The test aims to measure agility and the ability to change the movement of the body in different directions and quickly control the position of the body (Bahrain Olympic Committee . P 17)

- **Cooper Test**

The test aims to measure the circulatory and respiratory systems (aerobic endurance) during running

7 / - Statistical tools

Retrieving the forms the data has been unpacked and encoded in preparation for computer input, so that we have numerical variables

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that can be measured using the statistical analysis program (SPSS)(Mohamed B, Z & Abbas, T . 2004)the statistical package for social sciences is one of the most widely used statistical programs by researchers in the educational, social, technical, engineering and agricultural fields in conducting the necessary statistical analyzes (Zaghloul.S. Bashir. 2003), the following statistical methods have been used:

- The arithmetic mean and the standard deviation are
- The correlation coefficient is given by: Pearson

5- The methodological procedures used in the study:

• View Results:

The first hypothesis:

The first hypothesis states that there are no significant differences between the control group and the experimental group in the pre-test

Table-01

Significance of Mean between the control and experimental groups in the pre-test

		N	control groups		experimen tal group		T Calc	T Tatble	Sig
			Mean	SD	Mean	SD			
The ability to relax		12	53.5	3.87	55.75	3.09	-0.90	1.94	0.7
physical tests	Agilit T Test		8.36	.34	8.51	0.45	0.23		0.6
	Cooper Test		2399.6	59.5	2429.5	54.4	0.90		0.1
	50-Meter Speed Test		43.75	12.52	41	7.54	1.52		0.2

*. Correlation is significant at the 0.05 level

Table No. (01) shows the results of the pre - test of the experimental and control group, where the results of the test of the ability to relax showed the value of (T), which is equal to (- 0.908), which is less than the tabular value of (T), therefore the calculated (T) is less than table(t). According to the results, table no. (01), There

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were no significant differences between the control and experimental groups in the pre-test.

As the results of the pre-test of the control and experimental groups showed in (zigzag run-Cooper Test-50-Meter Speed Test), the results respectively showed the tabulated t-value is (0.232, 0.90, 1.52), their values are smaller than the tabulated t-value is equal to (1.934), therefore there are no significant differences between the control and experimental groups in physical tests .

Therefore, from the above, there are no significant differences between the experimental group and the control group in the pre-test

The second hypothesis:

The first hypothesis states that there are significant differences between the control group and the experimental group in the post-test

Table-02

Significance of Mean between the control and experimental groups in the post-test

		N	control groups		experimental group		T Calc	T Tatbl	Sig.
			Mean	SD	Mean	SD			
The ability to relax		12	50.5	5.88	58.66	2.28	3.16	1.943	0.79
physical tests	Agility Test		7.04	.065	7.8750	.642	2.57		.001
	Cooper Test		2459.6	82.8	2556.5	84.25	2.00		.230
	50-Meter Speed Test		31.50	5.44	40.500	12.81	1.29		0.03

*. Correlation is significant at the 0.05 level

Table No. (02) shows the results of the pre - test of the experimental and control group, where the results of the relaxation ability test showed the value of (T), which is equal to (3.16), which is greater than the tabular value of (T), therefore the calculated (T) is greater than table(t). According to the results, table no. (02), There were

significant differences between the control and experimental groups in the post- test.

As the results of the dimensional testing of the control and experimental groups showed in (zigzag run-Cooper test-50-Meter Speed Test), the results respectively showed the tabulated t-value is (2.57 , 2.00), their values greater than the tabulated t-value are equal to (1.934), therefore there are no significant differences between the control and experimental groups in physical tests . While there are no significant differences in the test (t), they are less than the tabular Value (t).

Therefore, from the above, there are significant differences between the experimental group and the control group in the post – test.

5.2 Discussion and interpretation of the results:

The study explained the importance that the topic of muscle relaxation was given by scientists and researchers through Arab or foreign studies. The researcher's vision of the justifications for the problem was consistent with the goal he set in order to study this phenomenon and its extent related to the extent of suffering of players during the game and after training, by highlighting the effectiveness of muscle relaxation

The results of the first hypothesis showed that there were no significant differences between the experimental group and the control in the pre-test, because the values of (T) drawn were less than the values of (T) Tabular

The results of the second hypothesis also showed that there are statistically significant differences for the control and experimental group in the dimensional test , because the calculated values (T) are greater than the tabular (T)

The results of the hypothesis can be explained that the members of the research sample of the experimental group were practicing a training program represented in muscle relaxation exercises, while the control group did not practice any training program, which explains the presence of significant differences, unlike the control group, which did not show any differences between the pre-and post-tests .

The results of the hypothesis can be explained by what Mohamed Elaraby Shimon stated that " relaxation is the skill of being able to face important competitions, or meet a high level of nervous stress and anxiety of various kinds and overcome them, and

not relaxation by traditional steps, a comfortable place and proper lighting, but those that need continuous hard training before and during competitions and in stressful life situations . It is also known as the absence of activity and stress “ (Shimon. 1999.P 273).

This study is consistent with the results of Janet Ortiz's study Janet Ortiz (2006), where the results showed a significant improvement over the experimental group, as opposed to the control group, which did not experience a significant change. And also the study of Alwan (2013). This is consistent with a study conducted by Lohaus and others in 2001, which showed that the relaxation effect is caused by the players ' individual preparation for the progressive muscle relaxation technique. it should be noted that increased work on training , relaxation, tranquility and good psychological preparation are among the factors that help players cope with fatigue and improve the physical performance of the match for an athlete,

Also, khiwan (2002) pointed out that many athletes fail to achieve motor duty because of the nervous tension and anxiety that accompanies performance, which leads to contraction of other muscles instead of the contraction of the muscles involved in the performance of the skill only, and it should be noted that just focusing on muscle relaxation will isolate the brain from other influences and the focus is on the muscles and with the required skill to think about it, the researcher explains this being the research sample The results of this study agree with the study of Bakar Suleiman Bakar (1994) is the presence of significant differences at a significant level ($0.05 \alpha=$) between the control and experimental groups in telemetry, and the study agrees with a study conducted by Mervat Ahed Theeb and Hashim Adnan al-Kilani (2011) that there is a positive effect in favor of telemetry and on all the skills under study. This explains why the experimental group was affected by the muscle relaxation method compared to the control group, which remained in the same conditions similar to the tribal test while doing the post-test, and also agrees with the study of Zahra al-Mahdi Muhammad Ali (2013), which indicates that the progressive muscle relaxation program has an effective effect in reducing psychological stress, and in light of the research results, the relaxation method is considered a preventive method for students suffering from psychological stress, and also agrees with the study conducted by Ali Boldi Risha Hari and others

(2013) that progressive muscle relaxation is effective in reducing anxiety in athletes, and also what is confirmed by researcher merniz Amna (2011), as well as the study of Akla Salman Al-Houri (2010), the study of the nadim shaker, the study of Anita (2011) and Adeyeye (2013) to the effectiveness of using the relaxation skill because it helps players control their emotions.

what can be drawn from some problems that need further research and in-depth, and this is what we propose as future problems :

- The effectiveness of muscle relaxation in alleviating some mental disorders
- Expanding the study community to include coaches, referees and various teams of other age levels

Mustafa Hussein Bahi and Abd-el-Kader Hussein point out that "mental skill is important in the performance of sports skills, as it enables the athlete to reach a mental state in which negative and distracting thoughts are prevented from entering the athlete's activity" (Khadroui et al. 2018. P 97)

Through the above, it is clear relaxation plays a positive role in the development of physical, motor and skill performance and planning, and then the development of sports performance, which gives a smoother in providing mental responses correctly

6-Conclusion:

Finally, the muscle relaxation approach gave the group members an opportunity to learn the relaxation skill through multiple different responses that result in relaxation and relaxation of the muscles, which contributes to the psychological and physical comfort of the player.

Therefore, the importance of the experimental construction of research based on the technique of muscle relaxation in improving the psychological state of an athlete and raising his performance, based on what some researchers have pointed out on the importance of relaxation in raising sports performance, if we consider that the sports field contributes to the player facing several situations that are associated with some psychological disorders such as pressure, especially and lack of physical performance in sports competitions, and in this regard, Hiba Mohammed Nadine Labib, quoting John Curtis (1994), points out that "the importance of relaxation lies in raising the level of performance to increase concentration and get rid of stress, development and activation of mental perception forces, as well as increasing the ability to work for long periods in addition to

The physical, psychological and physiological benefits that can be achieved through the ability to relax "

Through the results of the research, which was mainly aimed at finding out the effectiveness of muscle relaxation in improving the physical performance of soccer players , and through the results of the study, we can conclude that:

- There are no significant differences between the experimental group and the control group in the pre-test
- There are significant differences between the experimental group and the control group in the post – test

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