

DOI: <https://doi.org/10.54702/ncf3a924>

The Effect of some Special Exercises for the Explosive Ability of the Distinct Leg, which is Developing the Accuracy of Performing the Pressing Skill in Football Tennis

Zahraa Ahmed Breesim¹ ✉, Sahar Hurr Majeed² ✉

1&2Physical Education and Sport Sciences College for Women/ University of Baghdad – Iraq

Received: 08/05/2024, Revised: 14/05/2024, Accepted: 03/07/2024, Published: 30/09/2024



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). © Modern Sport

Abstract

The importance of the research came from using special exercises in learning the pressing skill in football Tennis, the level of performance of some physical abilities and defensive rules for the research sample. The problem of the research lies in knowing the effect of special exercises in learning the skill of pressing football tennis because of the working muscles during the performance stage and because of the lack of use of modern training aids and tools in learning. After the two researchers reviewed the sources and references, it was proven that there is a problem in the skill of pressing football tennis in terms of motor performance. For the player in which flexibility is the basis, the objectives of the research are to know the effect of special exercises in developing the accuracy of performing the pressing skill in football tennis. As the two researchers used the one-group experimental method to suit the nature of the research (the problem), the research community was chosen from the juniors of the Dream Football Tennis Academy, numbering (25) players. The sample was chosen from the original community in a random manner, numbering (10) players. The two researchers conducted a pre-test on 12/10/2023 (Sunday) at three o'clock in the evening on a sample of (10) players. The two researchers conducted a pre-test on 12/13/2023 for members of the research sample (10 players) before the main experiment, and then they conducted the main experiment. On 12/20/2023, corresponding to Wednesday, at three o'clock in the evening, at the Dream Football Tennis Academy, and after confirming the validity of the tests in the exploratory experiment and applying the tests related to the research, the two researchers then applied the exercises related to explosive power for a period of (6) weeks and at a rate of (3) units. Training session per week, and after conducting the main experiment, the two researchers conducted the post-test on 1/25/2024 AD under the same conditions as the pre-test. After obtaining the results, the two researchers processed them through the statistical package, and after analyzing the results, the two researchers reached conclusions, the most important of which is that special exercises for explosive ability have a positive effect on developing the distinctive leg and thus developing the accuracy of the pressing skill in football tennis. and this achieves one of the sustainable development goals of the United Nations in Iraq which is (Good Health).

Keywords

special exercises, explosive ability, performance accuracy, football tennis

Introduction:

The world is witnessing great development in all fields, including the sports field. It has taken great strides in various sports, and this indicates the

extent of the interest of specialists and researchers in developing the training and educational process. The game of football tennis is one of the distinguished sports that has received the

attention of nations because it is one of the games in which performance has reached the point of creativity and innovation, and it also works to develop psychological and mental characteristics, boldness and courage, and develop motor abilities, as a result of the scientific development and technological progress that man has achieved in the modern time, which It led to a group of scientific discoveries that provided all the means, devices and tools that enabled a person to complete all the requirements of his daily life with physical effort commensurate with the followed behavior” (Ali Ishraq Mahmoud and Muhammad Nour) (1).

As for the training of applicants, it confirms the mastery of the specific technical performance of the practiced activity, and that the training of applicants is the continuation of training for young people and is linked to it in terms of developing physical, motor, muscular and psychological abilities, which are the elements that determine an individual’s readiness for the high level in a specific activity. Explosive power as a concept was defined by (Qasim Hassan Hussein and Bastawis Ahmed). Explosive power means “the maximum force in the shortest possible time... and it is similar in meaning to the term rapid force, provided that the force is maximum” (3), and explosive power, as the two researchers see it, means The ability of the muscle groups working and participating in the performance to unleash maximum force in the shortest possible time, which is instantaneous maximum force, is found in motor skill performance and the necessity of diversifying the training methods and methods used, whereby combining methods and methods to achieve several training goals at the same time, and thus retaining With a high level of performance for the longest possible period.

Hence the importance of the research through knowing the effect of some special exercises for the explosive ability of the man, which is distinguished by developing the accuracy of performing the pressing skill in football tennis for

juniors, because of this type of importance in football tennis, and it is a scientific contribution whose purpose is to focus on this type of shooting and follow the best ways in it. Developing it and developing the training process.

The game of football tennis requires high physical abilities, and explosive power is one of these physical abilities that combines the qualities of strength and speed, which is performed only once. Many of the skills related to football tennis require the use of explosive ability as a physical characteristic in their performance, including the pressing skill, which is One of the crucial skills in football tennis is that it enables the player to score points quickly and easily. Therefore, we find that the players’ proficiency in this skill depends on the physical abilities the player possesses in addition to the technical performance.

The problem of the research lies in knowing the effect of special exercises for the explosive ability of the distinctive leg in performing the pressing skill for football tennis because of the muscles working during the performance stage and because of the lack of use of modern training aids and tools in training. After the two researchers reviewed the sources and references, it was proven that there is a problem in the accuracy of performing the pressing skill for tennis. Football in terms of the player's motor performance, in which flexibility, agility and motor response are the basis that makes the player able to take different positions with his body as a whole or the different parts of it in the required good performance. Through continuous research into the field of football tennis, it became clear that there is little use of special exercises for the explosive ability of the distinctive leg, which is the basis for performance. This is what prompted the two researchers to prepare some special exercises for the explosive ability of the distinctive leg that contribute to developing the accuracy of performing the pressing skill, as the explosive ability A special leg is one of the basic requirements in the sport of football tennis, on the basis of which the result of the match may be

determined when the levels in the tournament are close. Naturally, there is a difference in the explosive ability of the distinctive leg from one player to another and the extent of its impact on the performance of the pressing skill in football tennis for juniors, and in order to shed light in line with its importance in such an event, and in order for the players to be prepared to develop in the future.

Research objective:

1-Identify the effect of special exercises on the man's explosive ability, which is characterized by developing the accuracy of performing the pressing skill in football tennis.

Search hypothesis:

2-There are statistically significant differences between the results of the pre- and post-tests for the same group regarding developing the accuracy of performing the pressing skill for football tennis.

Research fields:

1- **Human field:** Juniors of the Dream Football Tennis Academy, numbering (10) players for the year (2023).

2-**The time field:** from 12/5/2023 AD to 3/15/2024 AD.

3-**Spatial field:** Halls of the Dream Football Tennis Academy in Baghdad.

Method and procedures:

Research methodology: The nature of the problem determines the research methodology used, as the two researchers used the experimental method with one group to suit the nature of the research (the problem).

Research community: The research community was chosen from the juniors of the Dream Football Tennis Academy, numbering (25) players. The sample was chosen from the original community in a random manner and numbered (10).

Table (1)

It shows some variables among the members of the research sample

| Specifications | the middle Arithmetic | Standard deviation | Coefficient of variation % |
|----------------------|-----------------------|--------------------|----------------------------|
| Age (years) | 44,17 | 2,11 | %4,79 |
| Length(cm) | 140,1 | 3.44 | %0.024 |
| Weight (kg) | 36.4 | 2,45 | %0.067 |
| Training age (years) | 2,75 | 1,28 | %0.46 |

The original community was randomly generated and numbered (10).

N1=10 N2=10 is below the significance level (0.05)

Search tools:

Used equipment:

Arabic sources and references

Tennis and soccer balls (5).

Results registration form.

Rubber ropes (10).

Free weights.

Balls of different weights.

computer (HP).

(3) medicine balls weighing (3, 4) kg.

First test: Explosive capacity test (4) (Mays Mahmoud)

Test name: Mays test for explosive capacity.

Purpose of the test: To measure the explosive ability of the leg preferred by junior football tennis players.

Tools used: Mega Strike device, legal court, legal tennis ball, and a 2.50 cm high stand to install the device.

Description of performance: The tester stands 2 m away from the net and then throws the ball high

Tests used in the research:

Suitable (preparing it for himself and then hitting it with maximum force on the place marked with an asterisk).

Mega Strike device.

Recording: The numbers that appear on the device screen (the stroke number and the special number) are recorded

In time), then the correction equation is used to convert the device values to momentum,

The following equation: through

$$Mr = (0.780 \times \text{Mega strike Value}) + 17.90$$

Then convert momentum (Mr) to force (F) in newton's, through the following equation:

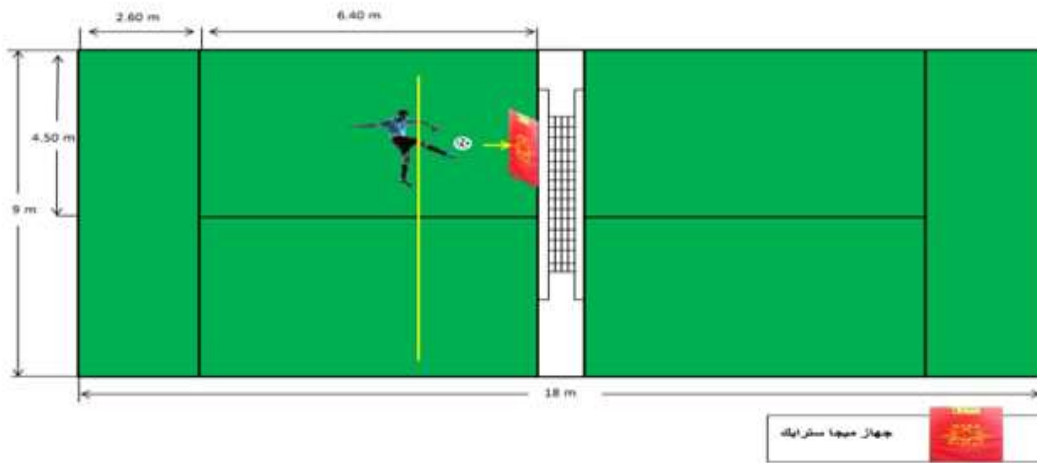
Mr.

Force = -----

Time from Mega strike

Notes:

- 1-Each laboratory is given two attempts, and the best attempt is counted.
- 2-The attempt is considered a failure if the ball does not touch the device.
- 3-The attempt is considered a failure if the player hits the ball before the device issues an audio alert.



The second test: Mays' test of pressing skill in soccer tennis (5) (Mays)

Test name: Mays test of football pressing skill

Purpose of the test: to measure pressing accuracy

Tools used: (a legal playing field, a measuring tape, dirt paint (spray), two poles (2 meters high), a rope (5 mm thick and 2 meters long), (6) legal balls).

Performance description:

1-The test area is determined on half of the competitor's field and is defined by nine areas bearing the numbers from (1-5) as shown in Figure (39).

2-Place a rope 2 m high (higher than the player's height) parallel to the side line of the court and 2 m away from the net. The coach will stand behind it to throw the ball over it into the laboratory in

order to ensure that the ball bounces appropriately.

3-The tester stands and squeezes the ball after it bounces off the ground, after the coach throws it to him over the rope placed next to him, trying to drop the ball in the area with the highest score.

Test instructions:

- 1-The ball must pass over the rope when thrown by the coach.
- 2-The ball must bounce off the ground before performing the press.
- 3-The player is given (6) attempts, (3) before the center line and (3) after the center line.
- 4-If the ball falls on the line between two squares, the tester takes the higher score
- 5-If the ball falls inside the field but outside the designated areas, the laboratory takes (zero).

Registration method:

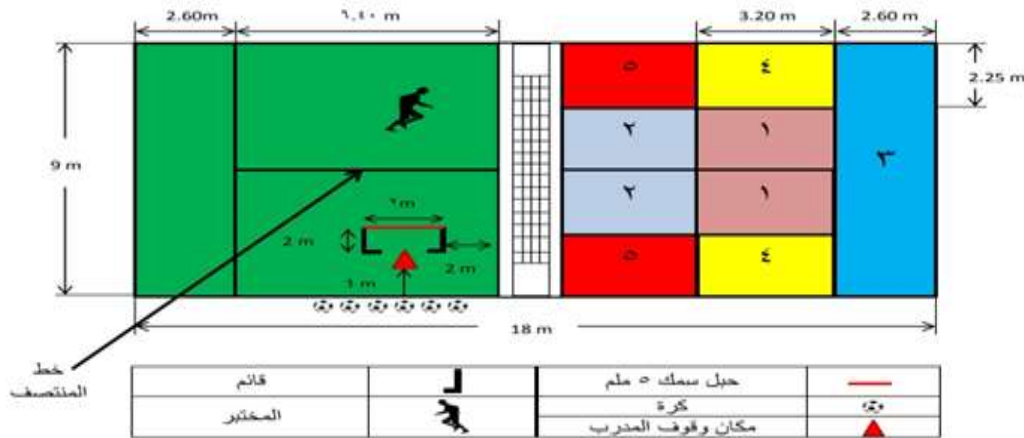
The grades for the (6) attempts are totaled, where the attempt grade is taken from the place where the ball was dropped. The tester gets five grades

Exploratory experience:

The two researchers conducted the exploratory experiment on 12/10/2023 (Sunday) at three

when the ball is dropped in area No. (5), and gets four grades when the ball is dropped in area No. (4), and so on... and it is higher. The score for the test is (30).

-Testing the accuracy of the pressing skill in football tennis.



الشكل (٣٩)
اختبار مهارة الكيس

o'clock in the evening on a sample of (10) players. The purpose of the exploratory experiment was: -

Knowing the negatives that may surround the research, knowing the time required to carry out the tests, understanding the sample members of the tests used in the research, and ensuring that the supporting work team.

Pretests:

The two researchers conducted the pre-tests on (Wednesday) corresponding to 12/12/2023 AD at (3) pm in the halls of the Iraqi Football Tennis Federation with the help of the assistant work team and in the presence of the football tennis specialists, at the specific time and place for the test that the researchers specified during the exploratory experiment and on the day. Under all circumstances, the tests were appropriate to conduct the test, and the tests were carried out in a sequence as follows:

-Testing the explosive ability of the leg to perform the precise pressing skill football tennis.

Main experience:

The main experiment was conducted by the two researchers on 12/15/2023 AD until 1/28/2024 AD, corresponding to Sunday at (three) pm, where special exercises were applied to the explosive ability of the leg characterized by the pressing skill of tennis and the selected football under study using the auxiliary tools. Special exercises (6) weeks, with (3) training units per week for days (Saturday, Monday, Wednesday). The total number of training units is (18) training units that were prepared by the two researchers. The two researchers gave the exercises that were prepared to the trainer with an explanation of the exercise. And a special explanation of the skill required to be performed, with a focus on performing the exercise that was given. The two researchers took into account the performance regarding the application of the special exercises and the skill under research in terms of its basic steps and the most important mistakes and difficulties facing the player during implementation, and all of this was done through

the assistant work team in football tennis. Where special exercises were applied for the explosive ability of the distinctive leg that were prepared by the researcher, where the time taken for one training unit was determined from (90) minutes, divided into the preparatory section (15 minutes) and the main section (the educational part (20 minutes) and the applied part (40 minutes). The final part is (15 minutes), in addition to knowing the appropriate number of repetitions to perform each exercise, the rest time that the player needs, and everything related to the main experience.

Posttests:

The two researchers conducted the post-tests on (Tuesday), corresponding to 3/5/2024 AD, at (3) pm, in the halls of the Iraqi Football Tennis Federation, with the help of the assistant work team and in the presence of the football tennis specialists, at the specific time and place for the

test that the researchers specified during the exploratory experiment and on the day. Under all circumstances, the tests were appropriate to conduct the test, and the tests were carried out in a sequence as follows:

- Testing the explosive ability of the leg to perform the precise pressing skill of football tennis.
- Testing the accuracy of the pressing skill in football tennis

Statistical methods:

The two researchers used the Statistical Portfolio (SPSS) program on the computer to identify the research results.

- 1-Arithmetic mean.
- 2-Standard deviation.
- 3-Pearson correlation coefficient

Results:

Table (2)
Shows the results of the pre- and post-tests of pressing skill in soccer tennis

| Variables | Pretest | | Posttest | | test(t) | Significance level | نوع الدلالة |
|--------------------|-----------------|--------------------|-----------------|--------------------|---------|--------------------|--------------|
| | Arithmetic mean | standard deviation | Arithmetic mean | standard deviation | | | |
| Explosive capacity | 2,20 | 0,78 | 5,30 | 0,94 | 8,18 | 0,00 | Significance |
| Pressing skill | 6,62 | 1,05 | 0,2 | 0,66 | 0.818 | 0,00 | Significance |

Discussion:

Through Table (2), which shows the arithmetic means and standard deviations for the pressing skill in football tennis and the differences between the pre- and post-tests, where the arithmetic mean in the pre-test was (2.20/point) and the standard deviation (0.78), and the results of the post-test were as follows: The arithmetic mean is (5.30/degree) and the standard deviation is (0.94). The result of the t-test was (8.18) and the significance level was (0.00), which is less than (0.05). This means that there are statistically significant differences. Significant between the pre and post tests and in favor of the post test.

The researcher attributes this development in the post-tests to the nature of the specific exercises that were used, as these exercises were arranged and prepared in a manner commensurate with the nature of the skill and the level of the sample members, in addition to the gradual progression in giving the exercises from easy to difficult. Appropriate repetitions were also taken into account and immediate errors were corrected through nutrition. The continuous return. (Iyad Saadoun) (2)

The process of using diverse and appropriate training methods with the learner's ability and gradually teaching the skills will leave a clear impact on the player's psyche and enter into the

pleasant experiences associated with successful situations. The easier the learned skill is and the more it is mastered well, the more it will be retained for the longest possible period. (5) (Hamoud Mukhtar)

The skill of pressing in football tennis is one of the important skills and has a real impact on the outcome of the match because it is through it that most points are scored in the match. It is also one of the skills that require motor and physical aspects that the player must possess, due to the player's proximity to the net while performing most of the points, which requires the player to possess high coordination, speed, agility, and the ability to react highly, and this is what the researcher intended to employ in the exercises that were prepared and applied to the research sample.

The study (Rand and Suhad) (8) also confirmed that the use of special exercises has a positive effect in developing explosive power, characterized by speed and anaerobic endurance, and that the vocabulary and application of the implemented exercises contributed to the effectiveness of the implementation of the exercises by the players and their continuous commitment throughout the duration of the experiment, which had an impact. Positive in explosive power and characterized by speed and anaerobic endurance specific to the subject of the research among members of the research sample. The study (Diana, Aseel) (9) also confirmed that the application of the exercises prepared by the two researchers and the resulting positive and effective role in focusing on the work of the muscle groups related to the long jump and their correct path, in a way that ensures economy of effort and guarantees the flow of movement, as skill is an attribute. A function of the effectiveness of performance, as the learner develops some motor responses in a new motor organization, and every motor skill requires organizing and arranging the work of specific muscle groups and in a specific direction.

The two researchers attribute the improvement of the members of the research sample in the results of the explosive ability of the distinctive leg to the special exercises used, as they included various exercises for muscular ability and for most of the muscles in the lower part of the body in general and for the distinctive leg in particular, thus increasing the force production of the distinctive muscles of the leg, in addition to giving these exercises At the appropriate time during the main section of the training unit, which led to a positive effect in developing the accuracy of performing the pressing skill for football tennis (as muscles are the source of movement in humans, because they are the source of the force that causes movement and the performance of most sporting activities depends on them, and individuals who They have muscular ability and can score a high degree of general physical ability (7) (Kamal Abd)

Conclusions:

According to the research objectives and based on the research results, it was possible to reach the following conclusions:

- 1-The members of the research sample have a weak level of explosive ability of the distinctive leg and accuracy of performing the pressing skill in football tennis.
- 2-Special exercises for explosive ability have a positive effect in developing the explosive ability of the leg, which is characteristic of the members of the research sample.
- 3-Special exercises for explosive ability have a positive effect on developing the accuracy of performing the football tennis skills for members of the research sample.

Recommendations:

Based on the conclusions reached by the researchers, the researchers recommend the following:

- The necessity of using special exercises for the explosive ability of the leg, as it has a positive

impact on developing the accuracy of the pressing skill in football tennis.

-Applying special exercises for the distinctive explosive ability of men across age groups because of their positive role in developing some of the basic skills of football tennis.

-Conducting research and studies on other physical abilities because of their great importance in developing the accuracy of the skill performance of tennis players, football in particular, and other games in general.

Assistant work team:

| N0. | the name | Workplace |
|-----|--------------------|---|
| 1 | Miss Kamer AbdAoun | Iraqi national tennis and soccer team player |
| 2 | Samah Shaker | Iraqi national football tennis team player |
| 3 | Ali Jalil | Player of the Iraqi national football tennis team and coach of the youth football tennis team |
| 4 | Abdul Rahman Ahmed | Iraqi national youth football tennis team player |

Author's declaration:

Conflicts of interest: None

We confirm that all tables and figures in this article are ours and written by the researchers themselves.

Ethical-Clearance: this manuscript approved by local ethical committee of physical education and sport sciences college for women on (May /2024)

Author's contributions:

All contributions of this study were done by the researchers (Z.A. and S.H.) who get the main idea and work on writing and concluding also with number of experts, the researchers themselves in Statistics, Huda Shihab in revision, Taj Al-deen Alaa Al-deen in translating, Ali Makki in proofreading

Facilitate the task: this study was supported by Iraqi Football Tennis Federation / Baghdad – Iraq

References:

1-Ali Ishraq Mahmoud and Muhammad Nour Hoyt Abdel Nabi, (2019), he Cross fit Training on Some Physical Abilities in Fitness Participants Aged 25 – 35 Years Old, Journal of the College of Sports Education, University of Baghdad, Volume Thirty-One, Issue One. [https://doi.org/10.37359/JOPE.V31\(1\)2019.814](https://doi.org/10.37359/JOPE.V31(1)2019.814)
2-Iyad Saadoun Abdel Reda. (2020). The explosive power of the legs and its relationship to the accuracy of shooting by jumping high for

players of the Mesopotamia Handball Club. Journal of Sports Sciences, 12(44), 427 – <https://doi.org/10.26400/sp/44/36>

3-Bastawisi Ahmed and Qasim Hassan Hussein, (1979), Isotonic muscle training in the field of sporting events, Dar Al-Fikr Al-Arabi; Cairo; 1st edition.

4-Mahmoud, Mays Salman, (2019), evaluating the level of performance of the most important basic skills for junior tennis and soccer players aged (13-15) years, College of Physical Education and Sports Sciences for Girls, University of Baghdad, Master's thesis.

5-Mahmoud Mays Salman, (2022), Building and codifying tests for the most important physical and motor abilities of junior tennis and soccer players in the Specialized School, College of Physical Education and Sports Sciences for Girls, University of Baghdad. Doctoral thesis.

6-Hanafi Hammoud Mukhtar, (1994), Scientific Foundations of Football Training, Cairo, Dar Al-Fikr Al-Arabi.

7-Kamal Abdel Hamid and Muhammad Sobhi Hassanein, 1997, Physical Fitness and Its Components, Cairo, Dar Al-Fikr Al-Arabi.

8-Rand Issa, & Suhad Qassim. (2022). The effect of special exercises to develop explosive power, speed and anaerobic endurance for soccer players. Modern Sport, 21(3), 0074. <https://doi.org/10.54702/msj.2022.21.3.0074>

9-Diana Ghanim, & Aseel Jaleel. (2022). The effect of special exercises in developing some physical abilities and achieving the long jump

under 20 years for young women. Modern Sport, 21(1), 0092.
<https://doi.org/10.54702/msj.2022.21.1.0092>

Appendix 1 Special exercise model

Pressing exercises:

- The player holds the ball in his hand. The player moves forward and tries to perform the pressing technique.
 - The coach stands with several balls next to him. He throws the balls one by one over the net, and the player repeats the pressing motion for each ball.
 - Hanging balls are placed near the net, and the player presses these balls onto the court.
 - The player throws the ball in front of him near the net, and when the ball bounces off the ground and settles at the highest height, he presses it.
- The exercise is repeated, but from different sides of the court behind the net.
Throw the medicine ball at a possible point and hit it
- The player pulls the rope tied to a fixed point by moving the leg towards the rope's fixed point.

تأثير بعض التمرينات الخاصة للقدرة الانفجارية للرجل المميزة بتطوير دقة أداء مهارة الكبس لتنس كرة القدم

زهراء احمد بريسم 1 ، سحر حر مجيد 2

2&1 جامعة بغداد / كلية التربية البدنية و علوم الرياضة للبنات – العراق

جاءت أهمية البحث في استخدام تمرينات خاصة في تعلم مهارة الكبس لتنس كرة القدم مستوى أداء بعض القدرات البدنية والقواعد الدفاعية لعينة البحث . تكمن مشكلة البحث في معرفة تأثير تمرينات الخاصة في تعلم مهارة الكبس لتنس كرة القدم لأن العضلات العاملة اثناء مرحلة الاداء وبسبب قلة استعمال الوسائل والأدوات التدريبية المساعدة الحديثة في تعلم وبعد الاطلاع الباحثان على المصادر والمراجع اثبتت وجود مشكلة في مهارة الكبس لتنس كرة القدم من حيث الاداء الحركي للاعب التي تكون فيها المرونة هي الاساس حيث ان اهداف البحث هو معرفة تأثير التمرينات الخاصة في تطوير دقة أداء مهارة الكبس لتنس كرة القدم . اذ استخدمت الباحثان المنهج التجريبي ذات المجموعة الواحدة لملائمة طبيعة البحث (المشكلة) تم اختيار مجتمع البحث من ناشئين اكااديمية الحلم لتنس كرة القدم البالغ عددهم (25) لاعب فقد تم اختيار العينة من مجتمع الاصل بالطريقة العشوائية والبالغ عددهم (10) لاعبين , قامت الباحثان بأجراء التجربة الاستطلاعية بتاريخ 2023/12/10 ليوم (الأحد) في الساعة الثالثة مساءً على عينة مكونة من (10) لاعبين , قامت الباحثان بأجراء اختبار القبلي 2023/12/13 لأفراد عينة البحث (10 لاعبين) التجربة الرئيسية , وبعدها قامت بأجراء التجربة الرئيسية يوم 2023/12/20 الموافق يوم الأربعاء وفي الساعة الثالثة مساءً في اكااديمية الحلم لتنس كرة القدم وبعد التأكد من صلاحية الاختبارات في التجربة الاستطلاعية وتطبيق الاختبارات المعنية بالبحث , وبعدها قامت الباحثان بتطبيق التمرينات الخاصة بالقدرة الانفجارية لمدة (6) أسابيع وبواقع (3) وحدات تدريبية في الأسبوع , وبعد اجراء التجربة الرئيسية قامت الباحثان بأجراء الاختبار البعدي بتاريخ 2024/1/25م في نفس الظروف للاختبار القبلي , وبعد الحصول على النتائج قامت الباحثان بمعالجتها عن طريق الحقيبة الاحصائية وبعد تحليل النتائج توصلت الباحثان إلى استنتاجات أهمها , إن للتمرينات الخاصة للقدرة الانفجارية تأثير ايجابي في تطوير الرجل المميزة وبالتالي تطوير دقة أداء مهارة الكبس لتنس كرة القدم. وهذا ما يحقق احد اهداف التنمية المستدامة للامم المتحدة في العراق (الصحة الجيدة).

مستخلص البحث

التمرينات الخاصة ، القدرة الانفجارية ، دقة أداء ، تنس كرة القدم

الكلمات المفتاحية