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THE EFFECT OF TWO TRAINING METHODS (PENDULUM AND PLAY) ON DEVELOPING SOME MOTOR ABILITIES FOR ADVANCED TENNIS PLAYERS

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Abstract
The importance of the research is the combination of science and training to find the best training methods in achieving good results for tennis players. With science, it is possible to determine the extent of the player's ability to perform physically at a constant level and without fatigue during competition and throughout the match period, which sometimes exceeds more than (6) hours. After knowledge, it is possible to develop the appropriate training method to adapt to that environment, as in the pendulum training and playing methods, and continue training in it for the purpose of entering the competition and completing the match without falling in level. The research community was limited to the advanced players of Basra Governorate tennis clubs, which numbered (3) clubs.
The most important objectives of the research were:
Identifying the effect of the two training methods (pendulum and play) on developing some motor abilities of advanced tennis players.
It was concluded:
The two training methods (pendulum and play) achieved the goals of sports training in developing some of the motor abilities of advanced tennis players.

Keywords: pendulum training, playing training, motor abilities, tennis

Introduction

Certainly, every sports game has its own specificity in training, in addition to the type of group that will be trained and their level, and this in itself requires a training method that is in line with the players' ability. Therefore, players with an advanced level are the pinnacle of giving and creativity, and they have a physical, skillful, and tactical aspect that suits their level of progress and achievement of sporting achievements, so The training method that is used must give results that are close to and higher than the level of the competitor
In the game of tennis, which is one of the types of individual sports, it has a motor, skill, and tactical aspect that is not easy to acquire over a short period of time. Rather, it requires

continuous training and the use of training methods that make the player able, during the long hours he spends in the match, which sometimes reach (6) six hours. Maintaining energy, physical aspect, movement and skills. Therefore, training in an atmosphere similar to the atmosphere of the match and competition will allow the player to adapt to complete the match and achieve results.

For this reason, we find that the best training method for these tennis players is similar training without a competitive atmosphere, such as pendulum training in which competitive exercises are used, as well as the playing training method in which all the rules of the game are applied for the purpose of adapting to them. These methods and other methods, when tested and investigated, will certainly emerge. We have scientific facts on the development of the motor and skill aspect of tennis players. Hence, the importance of research is to combine science and training to find the best training methods in achieving good results for tennis players. Therefore, with science, it is possible to know the extent of a player's ability to perform motor performance at a constant level and without fatigue during competition. The length of the match exceeds more than (6) hours in some cases

After knowledge, it is possible to develop the appropriate training method to adapt to that environment, as in the pendulum training and playing methods, and continue training in it for the purpose of entering the competition and completing the match without dropping the level. Therefore, the researcher decided to study this problem by investigating the scientific facts in training with the pendulum and playing methods, and explaining their importance in raising the motor level, as well as which of them is better, especially for advanced tennis players.

The objective of the study

Identifying the effect of the two training methods (pendulum and play) on developing some motor abilities of advanced tennis players.

2- Identify the results of the differences between the pre- and post-tests and the two experimental groups in developing some of the motor abilities of advanced tennis players.

3- Identify the results of the differences in the post-tests between the two experimental groups in developing some motor abilities of advanced tennis players

Methods and structure of the study

Experimental approach to the problem

The experimental method was used as it is the most appropriate method to address the research problem and achieve its objectives, especially the two equal (experimental) group design

Participants

The research community was limited to (3) advanced Basra Governorate tennis club players, and Al-Mina Sports Club (Al-Mina) was chosen for the purpose of developing my training method (pendulum and playing).

As for the sample, it was selected intentionally, represented by Al-Minaa Club's advanced tennis players, who numbered (14) players. (12) players were selected and divided randomly into two (experimental) groups: the first training group (pendulum training method) and the

second training group (pendulum training method). Training and playing) The number of each group was (6) players, and the applied sample was homogenized within each group using the coefficient of variation for the research variables. The two groups were also equalized using the t-test for uncorrelated samples.

Procedure

The researcher used - Arab and foreign sources. - Tests used (designed). - Personal interview (Appendix 1). - Manual stop watch (2). - HP personal calculator (1). - Tennis balls (10) sets. - Tennis rackets (20). .- Legal tennis court.- Whistle (1)- Measuring tapes (2)

Define search variables

Based on references, sources and previous studies, the necessary motor abilities for tennis players have been identified, which are:

1-Agility

2-Flexibility

3-Compatibility

Tests used:

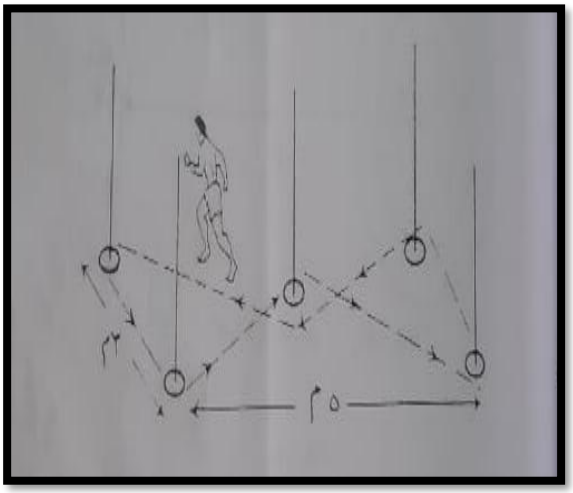
Agility test: running zigzag between legs (5: 128)

Purpose of the test: to measure agility

Tools used: stopwatch - legs 120 cm high.

Description of the performance: Running around the posts is used in the form of an intersection between the posts, so that the distance between each post and the post in the middle is 5m. The start and finish lines are drawn on both sides of the center post. When the start signal is heard, the player runs from post number (1) to go around it so that the post is on his right and returns. To the center post, it rotates around it and heads to number (2), as in Figure (1).

Recording: The time closest to 0.01 seconds is recorded for the best attempt



2 Flexibility test: (9: 112)

Test name: Touching the four rectangles.

Test objective: This test measures the flexibility of the dynamism and speed of bending and extending the legs and rotating the spine.

Test specifications: A test that measures dynamism, speed, and bending and extending the legs.

Testing tools: two wooden stands with two rectangular leather belts and a stop watch attached to them.

How to perform the test: The tester stands so that the legs are placed on either side of him with the arms fixed by the belt. When he hears the start signal, the tester turns to the right and left and touches the upper rectangles, then bends the knees and touches the lower rectangles until the end of the signal within (30) seconds.

Directions: Do not count the counts after or before the end of the signal and for a period of (30) seconds.

Coordination test (throwing and receiving balls) (9:400).

Purpose of the test: To measure eye-hand coordination.

Tools: Tennis ball, wall, draw a slave line after (5) meters from the wall.

Performance specifications:

The tester stands in front of the wall and behind the line drawn on the floor, where the test is carried out according to the following sequence:

1- Throwing the ball five times in a row with the right hand, with the experimenter receiving the ball after it bounces off the wall with the same hand.

2- Throwing the ball five times in a row with the left hand, with the ball being received by the tester after it bounces off the wall with the same hand.

3- Throwing the ball five times with the right hand, with the experimenter receiving the ball after bouncing it off the wall with the left hand.

Scoring: For each correct attempt, the laboratory is credited with a score, meaning the final score is (15) points

Measures

Exploratory experience:

The researcher conducted a reconnaissance experiment on 1/106/2023 on some of the players of the original research sample (Al Mina Advanced Sports Club) for the purpose of codifying the exercises used and finding the appropriate training load in terms of intensity, volume, rest, and calculating the total time.

Scientific foundations of the tests: We relied on standardized tests that were valid, reliable and objective.

Pretests: Pretests were conducted on 10/8/2023

My training method used

The exercises for ground tennis were developed and were applied in the pendulum style, which contains competition exercises and playing, which is in the style of playing, and the exercises were applied according to the conditions:

1- The intensity ranges from 10-90%. 2- The number of repetitions depends on the intensity set. 3- Rest was measured according to the pulse as an indicator of rest between repetitions (120-130 RPM) and between groups (120-130 RPM).

The training included the following:
- Number of months: two months. - Number of weeks: (8) weeks. - Number of units: (24) training units. - Unit days: Sunday, Tuesday, Thursday.
After completing the construction of the required exercises in the final form and conducting the exploratory experiment on them, it was programmed in the main section of the training units for the trainer, and it was applied during the special preparation period, and the application of the training program began on 10/9/2023 and ended on 12/4/2023.
Post-tests: The post-tests were conducted on 12/5/2023

Analyses
The statistical program (spss) version 22 was used and extracted

Results
Presentation, analysis and discussion of results
Table (2)
It shows the arithmetic means, the pre- and post-test standard deviations, and the calculated and tabulated (T) values for the first experimental group (pendulum training method) in motor ability tests.

Level of significance	T	Standard error	Posttest		Pretest		measuring unit	Motor ability tests
			Stand	Man	stand	Man		
moral	2.747	0.551	0.674	8.042	0.542	9.556	second	Agility
moral	3.011	0.769	0.865	24.741	0.745	22.425	number	Flexibility
moral	2.932	0.669	0.547	11.712	0.367	9.75	degree	Compatibility ق

The tabular value of (T) at a degree of freedom (5) and a probability of error (0.05) = 2.015

Table (3) It shows the arithmetic means, the pre- and post-test standard deviations, and the calculated and tabulated (T) values for the second experimental group (playing training method) in motor ability tests.

Level of significance	T	Standard error	Posttest		Pretest		measuring unit	Motor ability tests
			stand	Man	stand	Man		
moral	2.656	0.535	0.587	8.241	0.674	9.662	second	Agility
moral	2.637	0.861	0.975	24.845	0.845	22.574	number	Flexibility
moral	2.712	0.713	0.633	11.614	0.347	9.68	degree	Compatibility ق

Table (4) It shows the arithmetic means, the post-test standard deviations, and the calculated and tabulated (T) values between the two experimental groups in the post-motor ability tests

Level of significance	T	Standard error	The second training group Training style playing		The first training group Pendulum training method		measuring unit	Motor ability tests
			stand	Man	stand	Man		
moral	8.042	0.498	0.587	8.241	0.674	8.042	second	Agility
moral	24.741	0.178	0.975	24.845	0.865	24.741	number	Flexibility
moral	11.712	0.262	0.633	11.614	0.547	11.712	degree	Compatibility ق

After presenting Tables (2) and (3) for the pre- and post-tests and for the two experimental groups, we found that the two groups had made progress in the motor variables in favor of the post-tests, and this indicates that the two groups had made progress and achieved the training goal, as both Marwan Abdel Majeed and Mohammed Jassim Al-Yasiri mentioned (2010) "The goal of the sports training process is to bring the individual athlete to the highest level of athletic achievement in the event or activity in which the athlete specializes" (12: 22).

Amer Abbas Issa (and two others) believe, "The goal of training science is to use any training method or method and implement it according to sound scientific foundations, which works to raise the level of performance, and this is the goal of training" (4: 23). (Aldewan et al., 2022)

Also, the duties of every coach are to choose purposeful and effective exercises and work to codify them according to what he deems appropriate for the level of the players, which is inferred through the continuous evaluation of the players' development and the achievement of results or through tests, and this is the success of the coach's work in training, as Muhannad Abdel Sattar (2001) sees it.) "There is a scientific fact that must be taken into consideration, which is that the exercises used in the training curricula lead to the development of performance if they are built on scientific foundations in organizing the training process, using the appropriate load, observing individual differences, under good training conditions and under the supervision of specialized trainers, as the training programs are codified and organized in accordance with Scientific foundations work to develop the physical and skill level of players" (13:89).

Adel Majeed Khazal and Mahasin Hussein Fadel saw that modern sports training "has taken an organizational structure consistent with the state of new development by using modern means in the process of sports training, that is, changing those traditional methods that were previously relied upon and adopting new means and methods according to a codified method that leads to knowing the effect of Sports training in developing many physical, skill and functional indicators" (Khazaal & Fadel, 2024) (Hummadi et al., 2024)

Training in an atmosphere similar to the conditions of the match, whether pendulum or playing, especially in the game of tennis (Oudah et al., 2022), carries a large load that helps raise the required motor level. This is why Mohsen Aziz Ahmed and Safaa El-Din Taha believe that "the physical and functional work facing... Tennis players during training and

competition are very intense, and the requirements of this work for aerobic and anaerobic capabilities are very high, "and it requires high functional efficiency of the player's body organs and systems, to meet those requirements, and the high training load leads to raising the level of the athlete" (Ahmed et al., 2023).

It became clear to us from displaying Table (4) in the post-tests between the two experimental groups that there are no differences between the two groups in developing the motor abilities under study, that is, the first experimental group according to the pendulum training method and the second experimental group according to the playing training method, and this is the result of the load and the exercises put in place were similar to the conditions of the race and this What is required of training, as Muhammad Abdullah (1997) believes: "Giving regular exercises consistent with the correct scientific method enhances the efficiency of the muscle groups involved in performing motor skills and the physical qualities that the player acquires during training" (10:42).

As (Mohamed Reda Ibrahim 2008) sees it, "The conditions of sports training depend on the level of development of its components, the higher the level of achievement according to the needs of the race" (11: 164).

Training by playing has many benefits in terms of the physical and functional aspects, as Lamia Jabbar Kazem believes, "The training used, which is more like the atmosphere of the match, played a major role" in regulating the pulse and its decrease and reducing the effort on the heart through the regular pulse during effort and in the respiratory rate is due to the high intensity that helped. On evolution" (7: 281)

Tahseen Hosni Tahseen, quoted by (Khalil 2003), believes that "the development that occurs in basic skills does not come by chance or randomly unless there is a systematic and effective implementation of the curricula, and that the curricula are based in their development and formulation on the correct scientific foundations in their formation to achieve skill performance and goals." For which it was created" (Tahseen, 2024)

Also, interest in the motor aspect comes due to its importance in the game of tennis. Therefore, choosing the training method is important and fundamental to the success of training and development. This is why both (Kamal Nader and Rizkar Majeed) believe, "Coaches seek to choose the best types of training methods and methods."

The result of following scientific methods in the strategic planning process for sports training, arriving at the most appropriate methods that are most comprehensive and comprehensive of the training process, and applying the most appropriate methods and using the latest methods that are appropriate to the type of specialized activity with the aim of achieving the investment of the most important capabilities in the specific type of activity because of its direct impact on increasing the level of performance. Physical, motor, and skill" (Kamal Nader Faqi & Razkar Majeed, 2024

CONCLUSIONS

1- The two training methods (pendulum and play) achieve the goals of sports training in developing some of the motor abilities of advanced tennis players.

2- Training under conditions similar to the conditions of the match in terms of style, time, and the law of the game gives the players adaptation in competing under the same conditions and stability of the results obtained

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