



**THE EFFECT OF PLAYING EXERCISES ON DEVELOPING COMPATIBILITY
AND THE SKILLS OF HANDLING, RECEIVING, AND SCORING FOR THE
PLAYERS OF THE AL- MUTHANNA GOVERNORATE EDUCATIONAL TEAM IN
FUTSAL FOOTBALL**

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Abstract

The current research aims to prepare playing exercises and apply them to the players of the Al-Muthanna Governorate Intermediate Educational Team in futsal, and to know their effect on the development of compatibility, ability to handle, receive, and score in futsal. To achieve this goal, the researcher used the experimental method by designing two equal groups. As for the research population, it was represented by players in middle schools of general education in Al-Muthanna Governorate, who were (13-15) years old and numbered (30) players. (12) players were chosen by the coach to represent the team. The sample was chosen intentionally and they were randomly divided into two control groups and another experimental one with (6) players per group. Then the researcher identified the variables, which were (compatibility, handling, receiving, and scoring). Then the researcher applied pre-tests to the research sample, and after obtaining the results, the researcher conducted equalization between the two research groups, and after that he began applying playing exercises to the sample, the experimental group, for a period of (8) weeks at a rate of (3) training units per week, as the training was implemented on (Tuesday, Friday, and Saturday) of each week, and thus the total number of training units reached (24) training units. After completing the application of the prepared playing exercises, the researcher began applying the post-tests on the players of the research sample, and after obtaining the results, the researcher used the statistical program (SPSS) for the purpose of analyzing the data. Accordingly, the researcher concluded that the prepared playing exercises have a positive effect in developing compatibility, handling, receiving, and scoring with the ball. The experimental group outperformed the control group in the post-tests and for all variables. The diversity of playing exercises increases the excitement and suspense factor and has a significant impact on the quality of harmony and perseverance, which facilitates the process of developing bio-motor capabilities and complex attacking skills in futsal. The researcher recommends the need to pay attention to adopting playing exercises prepared by the researcher for middle school players in futsal.

Introduction

Sports training is a complex and intertwined process and is not easy. Training depends on the coach, the players, the program and all other sciences, as these are important tools for achieving the desired goal and achieving this goal. Training is no longer random, but rather due to good

planning using a scientific methodology aimed at developing compatibility, handling, receiving and scoring for players in the field. All levels, and good preparation requires codified programs based on scientific foundations that take into account the principles of training science and the form and nature of the activity practiced. Futsal is one of the most important types of motor sports activities. It receives wide attention because it is distinguished by a number of diverse and complex basic skills as basic requirements for its practice, in addition to the high abilities this game requires, which interest in it has become one of the most important foundations for raising the level of modern futsal.

Compound skill performance in futsal has come to require a large degree of quality and new modern training methods and methods, which aim to combine two or more skills and develop offensive and defensive skills by developing the ability to use basic skills and practice them in complex playing situations. In its training, the game of futsal football relies on different forms and types of exercises to raise the level of performance of the player's basic skills and make him able to combine them with each other to implement skills such as handling from stability or movement, then receiving - handling, then receiving, scoring, and other complex skills that require a high physical and motor level. In terms of compatibility. Hence, it was necessary for the researcher to prepare training exercises in a way of playing that are similar to the conditions of playing a match, and that are concerned with most of the details of the game in addition to paying attention to the physical and motor aspects that the player needs during the performance. From the above, we see the necessity of using modern methods and techniques in the process of sports training, as well as playing through them. It can serve the coach in whatever he deems appropriate during competition, especially with the diversity of these methods by competitors. The importance of the research lies in knowing the extent of the impact of playing exercises on the development of compatibility and the ability to handle, receive and score for futsal players in a step aimed at strengthening the sports field with practical experiments and serving researchers in the sports field.

Research problem

Neuromuscular coordination is of high importance in the game of futsal, as it plays a fundamental role in this game, and its development requires a high effort of concentration and arousal, and it has a major impact in developing complex offensive skills, which is the main goal of our research, as the researcher follows the team's training and is one of the former players. For the Al-Muthanna Education team for this game, as well as through the results of the tests conducted by the coach every year, the researcher noticed that there is a weakness in compatibility, handling, receiving and scoring, whether from the motor side or the physical side, as well as the low level of scoring goals, which came from a weakness in the players' level of combined and individual attacking skills and therefore The researcher wanted to delve into this aspect to develop compatibility, handling, receiving and scoring to raise the level of goal scoring by training complex attacking skills and using different playing exercises in different methods.

Research aims

- 1- Preparing complex playing exercises to develop the neuromuscular coordination of futsal players.
- 2- Knowing the effect of complex playing exercises on developing handling, receiving, and scoring for futsal players.

Research hypotheses

1. There is a positive effect of prepared playing exercises in developing the muscular coordination of futsal players.
2. There is a positive effect of the complex exercises prepared in developing handling, receiving, and scoring accuracy for futsal players. 1
3. Human field: Muthanna Governorate Education Team (2022-2023).
4. Time frame: from 2/3/2023 to 4/6/2023.
5. Spatial area: The closed hall for the Muthanna Educational Football Team’s indoor football training sessions.

Research methodology and field procedures:

Research Methodology:

The researcher used the experimental method by designing two equal groups (experimental and control) with pre- and post-measurements that fit the nature of the research problem and achieved the desired goals.

Table (1) shows the experimental design of the research

Make comparisons		Dimensional measurement	Experimental treatment	Pre-measurement	Groups
The difference between the two groups in the posttest	Pretest For study variables ,compatibility	Posttest of study variables	Exercises prepared by the trainer	Pretest For study variables ,handling ,receiving and scoring	Female officer
	,handling receiving and scoring	Posttest of study variables	Play drills		Experimental

The research community and its sample

The researcher identified the research community of players in middle schools, general education, Al-Muthanna Governorate, ages (12-16) years, in futsal football, and it is in three directorates, namely (Al-Khader Education, Al-Rumaitha Education, and Al-Samawa Education). The total number of members of the community reached (30) players, as (12) were selected.) A player by the coach (research sample) They represent the Muthanna Governorate Education Team. The research sample was chosen intentionally and was divided randomly into two groups: experimental (6) players and control (6). The sample was distributed by dividing the players into two groups, and the selection was done randomly. By lottery, the first experimental group applied the exercises prepared by the researcher, while the control group applied the offensive duties exercises that are usually applied in the coach’s curriculum, and Table (2) shows the sample used.

Table (2) shows the research sample

Exercises	Al-Muthanna Education	the number	the sample
Prepared by the researcher	Al-Muthanna Education	6	Experimental

Trainer training	Al-Muthanna Education	6	Female officer
the society	Al-Muthanna Education	2	Reconnaissance and scientific foundations
		14	the total

Table (3) Homogeneity in the variables under study for the two research groups

Statistical significance	Significance level	value LEVEN E	Experimental group		Control group		measuring unit	Variables
			A	s	A	s		
homogeneous	0.970	0.002	0.733	6.740	0.740	6.757	second	Compatibility
homogeneous	0.439	0.649	0.116	0.415	0.100	0.388	degrees/s	,Handling receiving and scoring

Parity for individuals in the research sample:

The researcher conducted equality for the experimental and control groups in the research variables, to prevent influences that affect the results of the experiment for the individuals in the research sample, as shown in Table (4).

Table (4) shows the equivalence between the two research groups (experimental and control) in the variables studied

Statistical significance	Significance level	value	Experimental group		Control group		measuring unit	Variables
			A	s	A	s		
Insignificant	0.970	0.039	0.733	6.740	0.740	6.757	second	Compatibility
Insignificant	0.672	0.437	0.116	0.415	0.100	0.388	degrees/s	,Handling receiving and scoring

Methods, devices and tools used in the research:

Means of collecting information:

- Arab and foreign sources and references.
- Personal interviews(*).
- The questionnaire.
- Special forms to record test results for players.

Devices and tools used in research:

- Legal playing field.
- Legal footballs (15)
- Whistle number (1)

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- Coach Tactic Boardic Futsal program) futsal coach tactic board.
- Collars (8)

DMK KOLOING medical scale

- Measuring tape (40) meters.
- Special forms to record players' test results.
- Adhesive tape to fix measurements.
- Smooth surface, 3 meters long and 2 meters high.
- Signs number (10)

Defining research variables and testing them:

Determining biomotor capabilities and testing them:

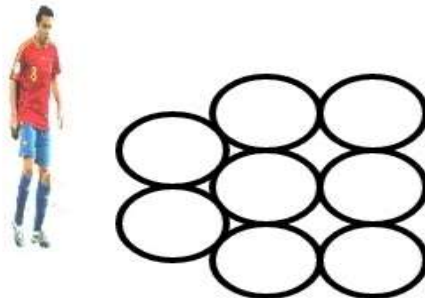
Identifying complex offensive skills and their tests:

- Compatibility
- Receiving, handling and scoring.

Compatibility test (numbered circles)

- The aim of the test: to measure the coordination between the eyes and legs.
- Tools: A stop watch. He draws eight circles on the ground, each with a diameter of (60 cm), and numbering them according to Figure No. (6)
- Description of performance: The tester stands inside circle No. (1), and upon hearing the start signal, the tester jumps with his feet together to circle No. (2), then to circle No. (3), then to circle No. (4)... until circle No. (8), this is done at full speed.
- Recording: The laboratory records the time it takes to move through the eight circles. The unit of measurement is time (the second and its parts)

Figure (6) shows the force-velocity test



Test: Handling, receiving and scoring

The aim of the test: to measure the speed of performance of the handling, receiving and scoring skills.

Tools used: five-a-side football field, football goal, five-a-side footballs, (5) stopwatch, measuring tape, whistle, signs to determine the start and end.

Performance specifications: Determine the total distance of the test from the start point to the end, which is (12 m). The student stands on the left side of the tested student, and the handling distance between the tested student is (5 m), and scoring from a distance of 7 m on a goal

divided into four sections with each corner of the goal.

Performance method: The tested player stands at the beginning of the distance with the ball, and upon hearing the start signal, the tested player handles the ball to the left side and then receives the ball from the same player and again performs the scoring process from the designated mark.

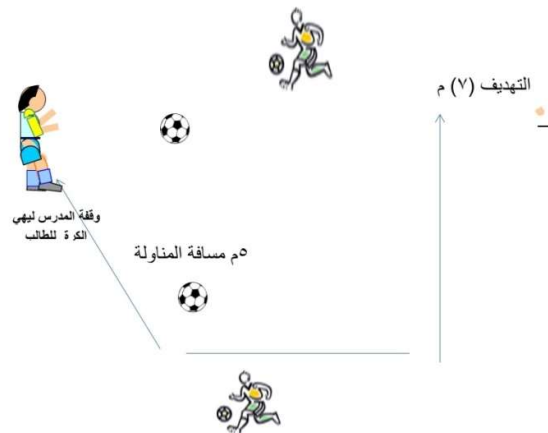
Test conditions:

- Each laboratory is given two attempts.
- The ball must be handed to the player on the left side.
- The player uses his preferred foot when handling, receiving, and scoring.

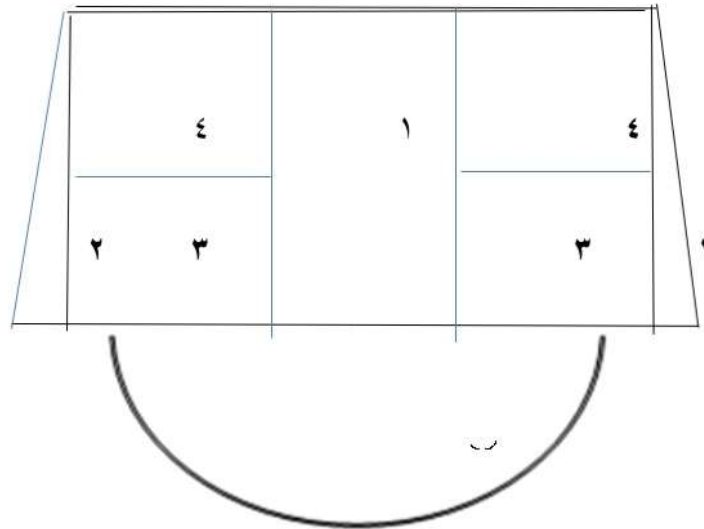
Register

- The time taken by the player during the test distance is calculated.
- The player is given (4 marks) if the ball enters the upper square from both sides.
- The player is given (3 marks) if the ball enters the bottom square from both sides.
- The player is given (2 marks) if the ball hits the upper small goal post.
- The player is given (2 marks) if the ball hits the bottom small goal post.
- The player is given (1 score) if the ball enters the middle rectangle.
- The player is given zero marks if the ball goes far from the target.
- Total (final) score: dividing the accuracy result by time.

Figure (9) shows the handling, receiving and scoring test



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Exploratory experience:

The first exploratory experiment:

The researcher conducted the exploratory experiment to test compatibility, handling, receiving, and scoring, accompanied by the assistant work team (*), at exactly four o'clock in the afternoon on Tuesday, 1/24/2023, and its purpose.

1. Explanation of the duties of the assistant work team for the tests that will be conducted.
2. Knowing the readiness of the places for the tests.
3. Knowing the adequacy of the supporting work team.
4. Determine the location of the signs, distances, starting point, and how to determine the direction of the players' movement in turns.
5. How to record test scores, times and number of attempts.
6. Suitability of devices and tools used in tests.

The second exploratory experiment:

The researcher conducted a reconnaissance experiment for the curriculum prepared for playing exercises at four o'clock in the afternoon on Wednesday, January 25, 2023, to know the training times (exercises), as well as the duration of one training unit, the intensity of each exercise, and how to perform it.

Scientific basis for test results

First: The validity of the test results

It is "the extent of the validity of the test or scale in measuring what it was designed for." The researcher verified this by using experimental validity. This type of validity is calculated by finding the correlation coefficient of the test with an external or internal criterion, as the correlation of the test score with an internal or external criterion is an indicator of the validity of that test. If the researcher did not have a suitable external criterion, he resorted to the total score of the test, as it is the best criterion in calculating this relationship. Accordingly, the researcher relied on the Pearson correlation coefficient between the scores of the subtests and the total score of the test in calculating the honesty coefficient, and Table (5) shows this. .

Second: The stability of the test results

Consistent means “that the test gives the same results or close results if it is repeated more than once on the same group and under the same conditions.” The stability of the test was calculated using the method (test and re-application of the test), as the test was repeated on the same exploratory experiment sample and under the same conditions to which the exploratory experiment was applied. Accordingly, the tests were repeated on the players a week after the exploratory experiment was conducted, and the reliability coefficient was extracted between The two tests were conducted using the Pearson correlation coefficient law, and the results showed that there is a high correlation in the test results, because (the closer the reliability value is to (+1), it indicates that the tests have a high degree of reliability, as shown in Table (5)

Third: Objectivity of test results

Objectivity means “the tests used are not affected by the change of arbitrators” as objectivity was taken for the tests in the presence of two arbitrators, as the Pearson correlation coefficient was calculated between the results of the first arbitrator and the results of the second arbitrator, as shown in Table (5) showing this.

Table (5): Scientific foundations for the results of the research variables

Objectivity factor		Stability coefficient		Honesty coefficient		Variables
Significance level	value R	Significance level	value R	Significance level	value R	
0.000	0.995	0.000	0.940	0.000	0.903	Compatibility
0.000	0.997	0.000	0.988	0.000	0.822	,Handling receiving and scoring

The table above shows that the significance level value of the Pearson correlation coefficient test for (validity, reliability, and objectivity) was smaller than the error rate (0.05), and this indicates the significance of the correlations, which means that the results of the variables enjoy (validity, stability, and objectivity).

Field research procedures:

Pretests:

Pre-tests for the research sample were conducted under the supervision of the researcher and carried out by the assistant work team, which were implemented on Thursday, February 2, 2, 2023, at four in the afternoon, in the closed hall for the training of the Muthanna Education Futsal team.

Stomach exercises:

The researcher prepared and organized the exercises through play based on the personal experience of the supervisor.

- Time period (8) weeks.
- Number of units per week (3 units), represented by days (Tuesday, Friday, Saturday).(
- The researcher used the playing method to implement the prepared exercises in different ways.
- The training implementation time ranges between (35-40) minutes of the main section of the training unit.

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- The maximum intensity of the playing method was determined from (playing rhythm) during a time period of (10) minutes, and thus the number of playing attempts was determined.
- The number of exercises in the main section of the experimental group (3-4.)
- The ratio of work to rest is 1:2.
- All of the researcher's training was during the special preparation period and semi-competitions, and the prepared curriculum was started on Tuesday, February 7, 2023.

Post-tests:

After completing the implementation of the training curriculum, which lasted (8) weeks, post-tests were conducted for the research sample (experimental group and control group) under my supervision and implemented by the assistant work team, which were implemented on Thursday, corresponding to (4/5/2023), as the compatibility test was implemented. Handling, receiving and scoring took place in the closed hall of the martyr Alwan Salman. The researcher was committed to the same procedures that were used in the pre-test, taking into account the temporal and spatial conditions of those tests.

Statistical methods:

- Using the spss package for statistical processing.
- Mediator.
- standard deviation.
- Arithmetic mean.

Presentation, analysis and discussion of results:

Presentation, analysis and discussion of the results of the control group's biomotor capabilities:

Presentation and analysis of the results of the control group's biomotor abilities:

Table (6): Arithmetic means, standard deviations, calculated t value, level of significance, and significance of differences between the pre- and post-tests of compatibility for the control group sample

Statistical significance	Significance level	value t (	Posttest		Pretest		measuring unit	Variables
			A	s	A	s		
moral	0.038	2.791	0.487	6.278	0.740	6.757	second	Compatibility

Table (6) shows the values of the arithmetic means, the standard deviations, and the significance of the differences between the pre- and post-tests for the control group in the compatibility test. In the compatibility test, the arithmetic mean in the pre-measurement reached (6.757) with a standard deviation of (0.740), while the arithmetic mean in the post-measurement reached (6.278) with a standard deviation. Standard (0.487) and to demonstrate the truth of these differences, the researcher used the selection of (T. TEST) for the correlated samples, where the calculated (T) value reached (2.791) and the level of significance (0.038), which is less than the error level (0.05), which indicates the presence of a significant difference between the two pre-tests. And the posttest, and in favor of the posttest.

Presentation and analysis of the results of the control group's complex offensive skills:

The arithmetic means, standard deviations, calculated t value, level of significance, and

significance of the differences between the pre- and post-tests of the composite skills for the control group sample.

Statistical significance	Significance level	value)t (	Posttest		Pretest		measruing unit	Variables
			A	s	A	s		
moral	0.005	4.743	0.088	0.547	0.100	0.388	degrees/s	,Handling receiving and scoring

Table (7) shows the values of the arithmetic means, the standard deviations, and the significance of the differences between the pre- and post-tests for the control group in the test: handling, receiving, and scoring. In handling, receiving, and scoring, the arithmetic mean reached (0.388) in the pre-measurement, with a standard deviation of (0.100), while the arithmetic mean reached (0.547) in the test. Post-measurement with a standard deviation of (0.088) and to demonstrate the truth of these differences, the researcher used the selection of (T. TEST) for the correlated samples, where the calculated (T) value was (4.743) and the significance level was (0.005), which is less than the significance level (0.05), which indicates the presence of a significant difference. Between the pre- and post-tests and in favor of the post-test.

Discuss the results of the control group

Presentation, analysis and discussion of the results of the experimental group:

Presentation and analysis of the results of the experimental group's biomotor abilities:

Table (8): Arithmetic means, standard deviations, calculated t value, level of significance, and significance of differences between the pre- and post-tests of biomotor abilities for the experimental group sample

Statistical significance	Significance level	value)t (	Posttest		Pretest		measruing unit	Variables
			A	s	A	s		
moral	0.009	4.060	0.456	5.098	0.733	6.740	second	Compatibility

Table (8) shows the values of the arithmetic means, the standard deviations, and the significance of the differences between the pre- and post-tests for the experimental group in the compatibility test. In the compatibility test, the arithmetic mean in the pre-measurement reached (6.740) with a standard deviation of (0.733), while the arithmetic mean in the post-measurement reached (6.740). (5.098) with a standard deviation of (0.456). To demonstrate the truth of these differences, the researcher used the selection of (T. TEST) for the correlated samples, where the calculated (T) value reached (4.060) and the significance level was (0.009), which is less than the error level (0.05), which indicates there is a significant difference between the pre- and post-tests, in favor of the post-test.

The arithmetic means, standard deviations, calculated t-value, significance level, and significance of the differences between the pre- and post-tests of the composite offensive skills

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for the experimental group sample.

Statistical significance	Significance level	value)t (Posttest		Pretest		measruing unit	Variables
			A	s	A	s		
moral	0.000	8.937	0.070	0.865	0.116	0.415	degrees/s	,Handling receiving and scoring

Table (9) shows the values of the arithmetic means, the standard deviations, and the significance of the differences between the pre- and post-tests for the experimental group in the handling, receiving, and scoring test. The arithmetic mean reached (0.415) in the pre-measurement, with a standard deviation of (0.116), while the arithmetic mean reached (0.865). In the post-measurement, with a standard deviation of (0.070), and to demonstrate the truth of these differences, the researcher used the selection of (T. TEST) for the correlated samples, where the calculated value of (T) was (8.937) and the level of significance was (0.000), which is less than the level of significance (0.05). Which indicates that there is a significant difference between the pre- and post-tests and in favor of the post-test.

Presenting, analyzing and discussing the results of the control and experimental groups in the post-tests:

Presentation and analysis of the results of the biomotor abilities of the control and experimental groups in the post-tests:

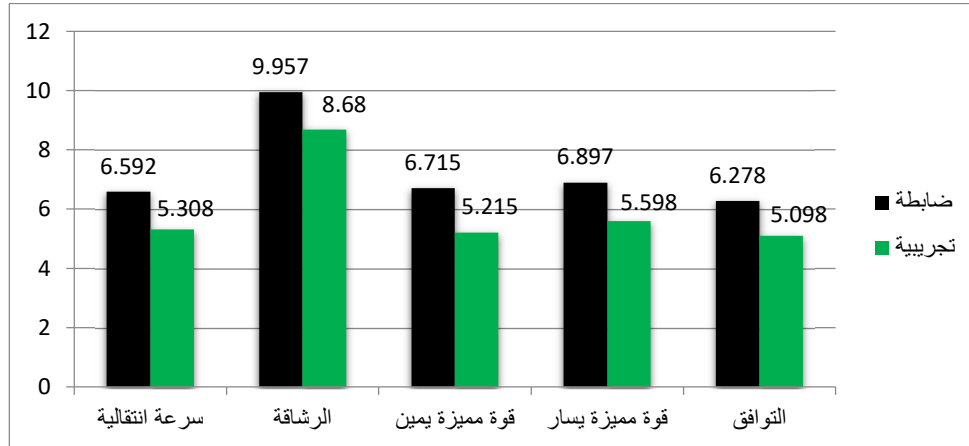


Table (10): Arithmetic means, standard deviations, calculated t value, level of significance, and significance of differences between the control and experimental groups in the posttests of biomotor abilities

Statistical significance	Significance level	value)t (	Posttest		Pretest		measruing unit	Variables
			A	s	A	s		
moral	0.001	4.332	0.456	5.098	0.487	6.278	degrees/s	Compatibility

Table (10) shows that the value of (t) for the independent samples of the variables (transitional speed, agility, strength distinguished by speed for the right and left leg, and compatibility) came (4.332, 3.918, 4.315, 3.346, 4.564), respectively, while the significance level values came (0.001, 0.003, 0.002, 0.007, 0.001) respectively at a degree of freedom (10), and all of these values are smaller than the error rate (0.05). This indicates the presence of significant differences between the pre- and post-tests and in favor of the post-tests for the experimental group sample (14).

It shows the arithmetic means between the control and experimental groups in the post-tests of biomotor abilities

Presenting and analyzing the results of the experimental group's composite skills

Table (11): Arithmetic means, standard deviations, calculated t value, level of significance, and significance of the differences between the pre- and post-tests of the composite skills for the experimental group sample

Statistical significance	Significance level	value)t (	Experimental group		Control group		measruing unit	Variables
			A	s	A	s		
moral	0.000	6.955	0.070	0.865	0.088	0.547	degrees/s	Handling receiving and scoring

Table (11) shows that the value of (t) for the independent samples of the variable (handling, receiving, scoring, and dribbling) came (6.659, 6.955, 6.130), respectively. As for the significance level values

(0.000 ,0.000 ,0.000)came respectively at a degree of freedom (10), and all of these values are smaller than the error rate (0.05). This indicates that there are significant differences between The pre- and post-tests are in favor of the experimental group.

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