



## THE EFFECT OF SELF-KINETIC EXERCISES IN DEVELOPING THE SKILL OF RECEIVING SERVE IN VOLLEYBALL FOR VOLLEYBALL PLAYERS

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### **Abstract**

The current research aims to prepare self-kinetic exercises and apply them to the players of Al-Rumaitha Club in volleyball and to know the effect of exercises in developing the skill of receiving the serve in volleyball. To achieve this goal, the researcher used the experimental approach by designing the two equal groups, as it is more appropriate to the nature of the research problem. As for the research community, it was represented by the volleyball players of Al-Rumaitha Club, who numbered (12) players for the sports season (2022-2033 AD), as they were randomly divided into two control and experimental groups, with (6) players for each group. After that, the researcher proceeded to apply the tribal research tests on the research sample, and after collecting the results, he divided the research sample into two groups and made sure of their homogeneity and equivalence, and then proceeded to apply the psychomotor exercises on the experimental research sample for a period of 8 weeks, at 3 units per week, and after completing the application Psychomotor exercises proceed with post-tests. After collecting the data, the researcher used the statistical program (SPSS v27) for the purpose of analyzing the results, and accordingly, the researcher concluded that the psychomotor exercises prepared by the researcher have a role in developing the skill of receiving the serve in volleyball, and this was shown by the results, as the experimental group that applied the kinesthetic exercises excelled the control group that applied the trainer's exercises.

### **Introducing**

#### **Introduction to the research and its importance**

The psychological training process contributes to the athletes reaching high levels through receiving integrated transmissions for all physical, skill, planning and psychological aspects, which made experts and specialists search for modern and diverse means that include a training pattern that supports the educational and training methods used to raise the level of performance of athletes, including psychological exercises or mental training Which includes effective cognitive procedures and means to have a positive impact on motor performance. Psychomotor exercises are also one of the ways to obtain ((the ability of the player to control, pay attention and focus, as the latter represents a direct type of mental training, as through it the mind is cleared and reorganized)) It is noted that in all team and individual games, when the players perform their motor skills in a state of self-confidence, they get positive results in their performance. Volleyball is one of the team games that need to be performed

with a high degree of self-confidence. ((One of the factors that directly contribute to improving the level of performance of the volleyball player is his ability to focus and distract the player's thoughts and his lack of self-confidence and concentration are among the difficulties that affect the accuracy of performance and the skillful ability of strikes)) and due to the nature of the volleyball game in terms of time and the nature of effort Psychological and physical performance of some offensive and defensive skills, making the volleyball player's employment of his psychological and mental abilities and capabilities well the main element to enhance and develop his level of performance. In order for his mental potential to be utilized to the maximum extent possible, it requires a high level of self-confidence. The psychokinetic exercises are somewhat modern exercises, and there is no doubt that the intellectual openness presented the individual and the need to study it increases, and this is evident through the psychokinetic exercises that are given to players, especially volleyball players, and based on the foregoing, the importance of the research lies in the possibility of using psychokinetic exercises in The game of volleyball due to the need to quickly reduce the gap that separates the players themselves or between the players and the training staff, as well as to link training methods and skills with psychological exercises, to be able to control and control negative thoughts, develop self-confidence, intelligence, physical movements and skills, organize motor behavior, and exploit positive ideas and appropriate models to contribute to development Skill aspects and improving the level of performance to achieve the research objectives under study.

### **Research problem**

The research problem lies in answering the following questions:

1. What is the reality of the skill level of receiving the serve for the players of Al-Rumaitha volleyball club?
2. Does self-kinetic exercises affect the skill of receiving the serve in volleyball for the players of Al-Rumaitha Club?

### **Research Objectives**

1. Preparing self-kinetic exercises and applying them to the players of the Rumaitha Volleyball Club.
2. Identifying the effect of psychomotor exercises on developing the skill of receiving the serve in volleyball for the players of Al-Rumaitha Club

### **Research Hypotheses**

The kinetic exercises have a positive effect on the skill of receiving the serve in volleyball for the players of Al-Rumaitha Club.

### **Areas Of Research**

- The human field: first class volleyball players for the sports season (2021-2022)
- Time range: for the period from (15/1/2022) to (// 2022)
- The spatial field: the Western Youth Forum in Rumaitha and the Martyr Muhammad Ali Al-Hassani Hall.

### **Research methodology and field procedures**

#### **Research Methodology**

The researcher used the experimental method by designing two equal groups (a control group and an experimental group) with a pre and post test that fits the nature of the problem.

#### **Research community**

The researcher identified his research community, which is represented by the volleyball players of Al-Rumaitha Club, who numbered (12) players for the sports season (2022-2033 AD), and they were divided into two equal groups (a control group and an experimental group) with (6) players for each group.

### **The means, tools and devices used in the research**

#### **Means of collecting information**

1. Arab and foreign sources.
2. Testing and measurement.

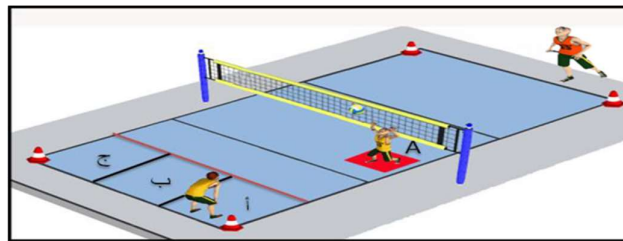
#### **Equipment and tools used in the research**

1. A LENOVO computer.
2. A handy calculator.
3. Electronic stopwatch H.
4. Volleyball court.
5. Volleyballs.
6. whistle.
7. Test results registration forms.

Description of the tests used in the research

#### **Third - Testing the accuracy of receiving transmissions from below (a)**

1. The objective of the test: measuring the accuracy of transmitting reception.
2. Tools used: a legal volleyball court, 5 legal balls, and colored tape to divide the court.
3. Test procedures: The defensive section of the stadium is divided into three zones (A, B, and C) equally, the area of each zone is (3 x 1.5) m.
4. Performance specifications: The tested player stands in area (A), where he receives the ball and then directs it to the prepared player in area (A), who in turn receives the ball and directs it to the receiving player, who in turn moves from point (A) to point (B) and receives The ball is directed back to the equipment and moves to (c). As for the prepared player, he receives the ball and directs it to point (c)
5. Performance Conditions: The receiver performs the transmission in accordance with the legal conditions for performing the skill.
6. Registration: The tester performs (3) attempts on each area as follows:
7. The ball aimed at the equipment (4) degrees.
8. The ball is inside the square in which the setter stands. (3) degrees.
9. The ball away from the stomach and inside the attacking area. (1) Degrees.
10. Wrong transmission received. zero
11. The maximum score for the test is (36) degrees.



Appearance (1) The test demonstrates the accuracy of receiving serve from below with a

volleyball ball

### Exploratory Experience

Scientific research experts recommend conducting exploratory experiments for the tests used in research in order to obtain the necessary reliable results and information, to benefit from them when conducting the main experiment. (1), and in a random way, (6) players from Al-Rumaitha Club were selected, as this experiment was applied in the closed hall of the Martyr Muhammad Ali Al-Hassani, designated for the Al-Rumaitha Volleyball Club, on Sunday, 10/2/2022 AD, with regard to the ball transmission reception test.

**The aim of conducting the exploratory experiment is based on several points.**

1. Identifying the appropriateness of the tests for the sample members.
2. Identify the negatives and positives that meet the researcher in the main tests.
3. The adequacy of the assistant team and their comprehension of how to apply the test vocabulary and their distribution to know their tasks when conducting the tests for the research sample
4. The appropriateness of the time specified for the test for one player and for the rest of the players in defensive skills.
5. Extracting the scientific foundations of the tests (honesty, reliability, objectivity)
6. This experiment achieved its purpose.

### Scientific basis for test results

#### The validity of the test results

It means that the test actually measures the ability, trait, attitude, or willingness that the test was set to measure. That is, it actually measures what it intends to measure One of the basic concepts related to the validity or validity of the test is its ability to distinguish between the two sides of the ability that it measures, meaning To distinguish between strong performance and weak performance. If the test scores were close, this indicates poor validity because the test did not carry out the main task in the measurement process, which is to show individual differences among the sample members. Accordingly, the researcher verified the validity of the tests used in the current research by comparing the scores of the higher section with the scores of the lower section in the tests, that is, they used the method of comparing the parties - which is one of the methods of experimental validity - and the comparison is done by calculating the statistical significance between the average scores of the two sections ( the highest and the lowest), and if there is a statistically significant difference between the two averages, it can be said that the tests are valid. The results were compared between the two groups for each test using the (t) statistic for two independent samples, and the table (1) shows that.

Table( 1) The validity of the test results

Statistical significance	significance level	T Value	lower group		senior group		Unit of measure	variants
			p	s	p	s		
moral	0.000	5,716	2,257	19,220	1,838	26,660	degree	Transmitter receiving skill

The table (1) shows that the values of the level of significance for the value of (t) for the

independent samples and for all variables were less than the error percentage (0.05), and this indicates that there are significant differences between the members of the upper group and the members of the lower group, which indicates the validity of the tests.

**Stability of test results**

The fixed test "is the test that gives similar results or the same results if it is applied more than once in similar conditions" the test was re-tested on the same (10) players under the same circumstances after seven days on 8-9/ 10/2022 AD, taking into account the attempt to stabilize all the conditions in which the first test is carried out, and the stability coefficient between the two tests was extracted by the correlation coefficient law (Pearson), and the results showed that there is a high correlation between the tests, because ((the closer the value of stability is from (+1) ), indicating that the tests have a high degree of stability as shown in Table .

Table ( 2) stability of test results

Statistical significance	significance level	Person value	The second test		The first test		measuring unit	variants
			p	s	p	s		
moral	0.000	0.968	3,886	22,910	4,375	22,940	degree	Transmitter receiving skill

The table (2) shows that the values of the significance level of the Pearson correlation coefficient and for all variables were smaller than the error rate (0.05). This indicates that there is a significant correlation between the first and second tests, which means that the results of the tests are stable.

**Objectivity of test results**

Objectivity is one of the conditions of the task for a good test, which means “the lack of influence of subjective judgments by the researcher, or that objectivity is available without bias and subjective interference by the experimenter, that is, the more subjectivity does not affect judgments, the greater the value of objectivity as the tests were conducted in the presence of two arbitrators □ , and using Pearson's correlation coefficient for their results, which were significant at the level of significance (0.000)

**The main experience**

**Pre-tests**

The researcher conducted tribal tests on the players of the Rumaitha Volleyball Club on (6) players, and the results of the reconnaissance experiment were adopted, and thus the number became (12), as the tests were applied in the closed hall of the martyr Muhammad Ali Al-Hassani, which is designated for the Rumaitha Volleyball Club, as the tests were applied on Thursday, corresponding to 10/13/2022 A.D. to test receiving transmissions in volleyball. All the conditions related to the tests in terms of time, place, equipment, tools and method of implementation have been established in order to create the same conditions in the post-exams as much as possible.

**Homogeneity and equivalence of the research sample**

In order to avoid influences that may affect the results of the research due to the individual

differences in the players, and in order to reach a single and equal level for the sample in the research variables, which are influential in the experiment, it must be controlled, and for this the researcher conducted homogeneity and equivalence, and the tables show that

Table( 3)Homogeneity within research groups

Statistical significance	significance level	value LEVEN	experimental group		the control group		measuring unit	variants
			p	s	p	s		
homogeneous	0.845	0.040	1,963	10,150	1,866	10,317	degree	Transmitter receiving skill

Table (4) shows that the significance level of the (Leven) test was greater than (0.05), and this indicates the existence of homogeneity among the sample members of each group.

Table (4) Equivalence of the two research groups in the variables

Statistical significance	significance level	T value	experimental group		the control group		measuring unit	variants
			p	s	p	s		
non-moral	0.883	0.151	1,963	10,150	1,866	10,317	degree	Transmitter receiving skill

Table (4) shows that the significance level values for the (t) test were greater than (0.05), and this indicates that there are no significant differences between the control and experimental groups.

### Same Movement Exercises

The researcher prepared self-kinetic exercises for the players of the Rumaitha Sports Club in volleyball, and under the direct supervision of him and by the supervisor, he applied the exercises to a sample of the experimental group of (6) players, on Saturday corresponding to 10/22/2022 AD until Wednesday 14/ 12/2022 in the Hall of the Martyr Muhammad Ali Al-Hassani in Al-Rumaitha, as the researcher intended **To Include The Following Kinesthetic Exercises**

1. The psychomotor exercises took (8) weeks, with (3) units per week.
2. The number of units for exercises is (24) units.
3. The kinesthetic exercises were carried out on (Saturday - Monday - and Wednesday) days of each week.
4. The psychomotor exercises were applied at the beginning of the main section and immediately after the warm-up, in order for the player to be at a level of mental and physical readiness and neuromuscular compatibility to achieve the goal of the exercises.

### Post-tests

After applying the kinesthetic exercises, the researcher proceeded to conduct the post-tests on the research sample, which numbered (12) players in the closed hall of the martyr Muhammad

Ali Al-Hassani, dedicated to the Rumaita Volleyball Club. Where the time, place, tools and devices are necessary, and with the help of the same auxiliary work team in the pre-test, as the test was applied on Thursday 1/26/2022 AD.

**The statistical methods used in the research**

The obtained data were processed using several statistical methods that are compatible with the research objectives in order to reach knowledge of the results through the use of the statistical bag (SPSS)

1. Arithmetic mean.
2. Standard deviation.
3. The value of the LEVEN test.
4. The t-test for correlated samples.
5. T-test for independent samples.

**Presentation, analysis and discussion of results**

**Presenting and analyzing the results of the pre and post test for the control group**

Table (5) Arithmetic means, standard deviations, (t) value, and the significance of the differences between the pre and post tests in the skill of receiving transmission for the control group

Statistical significance	significance level	(value calculated)	Post -test		_ Pretest		measuring unit	variants
			p	s	p	s		
moral	0.004	5,139	1,733	26,883	2,020	19,183	degree	Transmitter receiving skill

The results of the table above show that the significance level values of the (t) test for correlated samples in volleyball skills (the skill of receiving transmission) were smaller than the error percentage (0.05), and this means that there are differences between the pre and post tests and in favor of the post test for the control group sample.

Presenting and analyzing the results of the pre and post test for the experimental group:

Table( 6)Arithmetic means, standard deviations, (t) value, and the significance of the differences between the pre and post tests in the skill of receiving serve in volleyball for the experimental group

Statistical significance	significance level	value calculated	Post -test		_ Pretest		measuring unit	variants
			p	s	p	s		
moral	0.001	9,847	1,497	30,917	2,041	19,367	degree	Transmitter receiving skill

The results of the table above show that the significance level values of the (t) test for correlated

samples in volleyball skills (the skill of receiving transmission) were smaller than the error percentage (0.05), and this means that there are differences between the pre and post tests and in favor of the post test for the sample of the experimental group.

Presenting and analyzing the results of the control and experimental groups in the post-test: Table (7) Arithmetic means, standard deviations, (t) value, and the significance of differences between the control and experimental groups in the post-test in the skill of receiving serve in volleyball

Statistical significance	significance level	value calculated	experimental group		the control group		measuring unit	variants
			p	s	p	s		
moral	0.002	4,315	1,497	30,917	1,733	26,883	degree	Transmitter receiving skill

The results of the table above show that the significance level values of the (t) test for the independent samples in volleyball skills (receiving skill) were smaller than the error percentage (0.05), and this means that there are differences between the control and experimental groups in the results of the post-test and in favor of the experimental group.

**Discuss the results**

**Discuss the results of the control group**

The tables show that there are differences between the pre and post tests of the control group sample and in favor of the post tests. The researcher attributes these differences to the curriculum prepared by the coach, which contributed to the skill of receiving the serve in volleyball. The researcher attributes these differences as a result of the group's commitment to the curriculum prepared by the trainer through participation in the performance and its repetition, as well as the effect of the usual method followed by the trainer. predictable movements and timing) The researcher believes that the process of developing performance has a close relationship with practice and experience, which leads to a constant change in performance, as both are essential elements in the development of the individual, and this was confirmed by (Nahida Al-Dulaimi) that the learning process is a behavior that changes with experience and experience, which is all that one acquires. Sciences, inclinations, abilities, attitudes, and motor skills, whether intentional or unintentional The researcher believes that the experimental group excelled in the post-tests, that the psychomotor exercises prepared by the research, which contributed to the development of the skill of receiving the serve in volleyball The researcher also attributes the difference in development to the experimental group's use of aids in the training curriculum associated with psychomotor exercises, which had an effective impact on the development of the offensive performance of the players in the skill (receiving the serve) (because the aids help the players to address deficiencies, especially those whose responses are slow It also increases the effectiveness of the training unit Therefore, we see that volleyball specialists pay clear attention to some of the tools that are used within some training programs, including psychomotor exercises, through which the coach can raise the level of the technical and tactical player. During the sessions to correct the performance



and stay away from mistakes, and thus the player will get performance stability because his thinking will be focused on performance only, and also the importance of receiving the serve in volleyball appears in that it is the basis of the attack, and this was clear to the players in the exercise sessions, where the researcher explained that the skill of receiving the serve is The first step, if done correctly and well, the success of the attack will be high. Therefore, whoever carries out this task must first know the importance of his role in achieving victory, because he is the planning mind inside the field and the distributor of the balls according to the requirements of the game plan, so the prepared player can be responsible. For preparing all the balls that reach him with high accuracy and efficiency for the attackers

### **Conclusions and recommendations**

#### **Conclusions**

1. The psychomotor exercises prepared by the researcher have a role in the skill of receiving the serve in volleyball for the volleyball players of Al-Rumaita Club.
2. The sample of the experimental group outperformed the control group in the volleyball reception test.

#### **Recommendations**

1. The researcher recommends the trainers to include psychomotor exercises in their training curriculum, as it has a role in developing the skill of receiving the serve in volleyball.
2. Conducting other studies to detect the application of psychomotor exercises to activities other than volleyball.
3. Researching modern approaches and exercises and applying them to volleyball players.

#### **References**

1. Muhammad Al-Arabi Shamoun. Mental training in the sports field, Cairo, Dar Al-Fikr Al-Arabi, 1996, p.4.
2. Azhar Abdel Wahab; Designing a set of tests and codifying them for some volleyball skills, Master Thesis, (University of Baghdad, College of Physical Education, 2010), p. 65.
3. Qasim Al-Mandalawi (and others). Tests, measurement and evaluation in physical education. Baghdad: Dar Al-Hikma, 1989, p. 107.
4. Muhammad Jassim Al-Yasiri: Theoretical foundations for physical education tests. Dar Al-Diyaa for printing and publishing. Al-Najaf Al-Ashraf, 2010, pg. 72
5. Thouqan Obeidat and others: Scientific research - its concept, tools and methods, 6th edition, Amman, Dar Al-Fikr for printing, publishing and distribution, 1998, p. 195.
6. Wajih Mahjoub 1993: Scientific Research Methods and Approaches, Dar Al-Hikma for Printing and Publishing, Baghdad, p. 225.
7. Mezan, S. O., Jabbar, A. H., Hamzah, M. Q., Tuama, A. N., Hasan, N. N., & Agam, M. A. (2018). Synthesis and Characterization of Zinc Sulphide (ZnS) Thin Film Nanoparticle for Optical Properties. *Journal of Global Pharma Technology*, 10(07), 369-373.
8. Schmidt. R.A. craig.A. Wrisberg. Motor learning and performance. Second Edibion 2000, p.p63.
9. Nahida Abd Zaid Al-Dulaimi: Fundamentals of Motor Learning, 1st edition, Methodology House for Publishing and Distribution, Amman, 2015, p. 29.

10. Eileen Wadih Farag: Volleyball, Teacher, Coach and Player Guide, Manshaat Al Maaref, Alexandria, 1996, p. 77

11. Saad Muhammad Qutb and Louay Ghanem Al-Sumaida'i: Volleyball between theory and practice, Wissam Library Publications, Mosul, p. 86.

exercise (1) The objective of the exercise is to develop handling skills Tools used / wall, colored boards, volleyballs, whistle 3 colored boards, the area of which is (1) square meter divided, placed on the wall, as the player stands at a distance from the wall (4) meters, and the coach throws balls at him so that he handles the balls to the square mentioned by the coach.



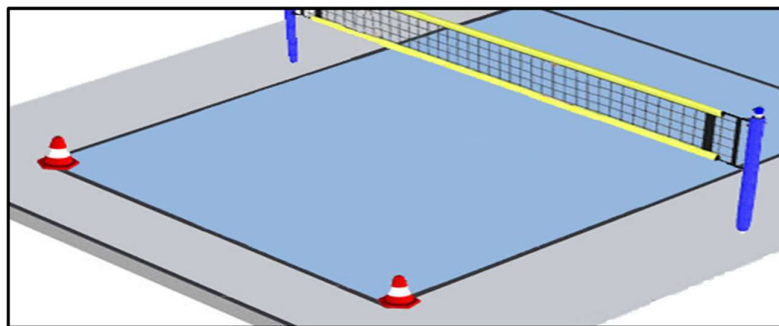
exercise (2) The objective of the exercise is to develop handling skills Used tools / colored volleyball, wall, colored boards, whistle 3 colored boards, the area of which is (1) square meter, divided and placed on the wall, as the player stands at a distance of (4) meters from the wall, and the coach throws colored balls to handle the colored ball to the same color as the square.



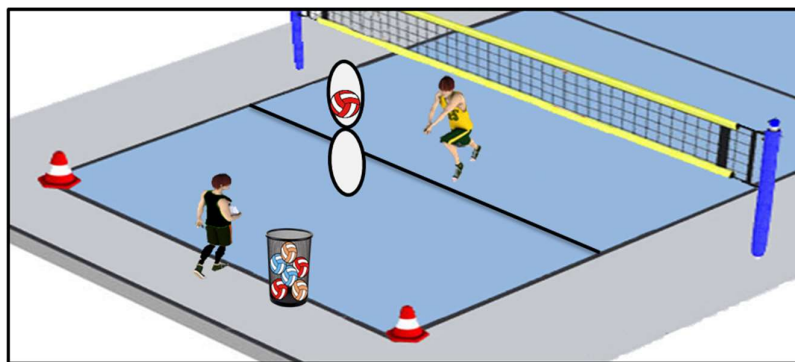
exercise (3) The objective of the exercise is to develop handling skills Equipment used / , volleyball, volleyball court, whistle The player stands 3m away from the coach, with baskets on the opposite side, and the coach throws the ball towards the player, and the player has to handle to get the balls into the existing baskets. Passing to the right side once and to the left side once according to the coach's opinion



Exercise (4) The objective of the exercise is to develop handling skills Tools used / colored volleyball, volleyball court, whistle, colored boards The player stands 3 meters away from the coach with colored boards on the opposite side placed on the ground, and the coach throws the colored ball towards the player, and the player must handle the balls to enter the board that bears the same color as the ball.



Exercise (5) The goal of the exercise is to develop passing skills Equipment used / colored volleyball, volleyball court, rings, whistle The player stands 6 meters away from the coach. He passes through the colored rings and uses colored balls so that the player passes the red ball from the ring below, and then passes the yellow ball from the ring above.



exercise (6) The goal of the exercise is to develop passing skills Equipment used / volleyball, volleyball court, whistle, rings The player stands 6 meters away from the second player and

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they pass through the colored rings and use two rings one above the other so that the player passes the ball from the ring below and then passes from the ring above

