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## The effect of exercises with a device to develop the motor disposition of the skill of hitting the crushing volleyball from a sitting position

**Ali Sabhan Sikhee****Abstract**

The first chapter included the introduction of the research and its importance. The researcher dealt with the importance of using scientific methods and modern technology in the educational and training process, which branched out and entered the joints of sports in general, as well as the importance of research that emphasized the development of the overwhelming beating skill by developing exercises using a device to develop motor behavior for the accuracy of the hitting skill. The overwhelming game of volleyball from the sitting position. As for the problem of research, it crystallized in the lack of use of modern devices to develop the skill of crushing hitting. Therefore, the researcher decided to prepare exercises with a device to develop the motor behavior for the accuracy of the skill of crushing hitting and reaching the skill to the best possible level. As for the research goals, they were:

1. Preparing exercises with a device to develop the motor behavior for the accuracy of the skill of crushing the volleyball from a sitting position.
2. To identify the effect of exercises by using a device to develop the motor behavior of the skill of crushing hitting the volleyball from a sitting position.

As for the research hypothesis, they were

1. There are statistically significant differences between the results of the pre and post tests of the experimental and control groups in the motor behavior of the accuracy of the skill of crushing the volleyball from the sitting position.
2. There are statistically significant differences between the results of the post-tests of the experimental and control groups, in favor of the experimental group in the motor behavior of the accuracy of the skill of crushing hitting the volleyball from the sitting position.

The second chapter included a detail in the research methodology and field procedures, as the researcher used the experimental method in the style of the experimental and control groups, with two pre and post tests, due to its suitability to the nature of the problem. Choosing the research sample by the intentional method, which is (12) players, where (2) of the players were excluded as free players, the rest (16) players, and (4) players were excluded from the exploratory experiment on whom the exploratory experiments were conducted for the tests and exercises set, as the percentage of the research community and sample reached (66%) After that, the sample was divided into two experimental and control groups, in a random manner by drawing lots. The number of each group is (6) players. As for the third chapter, the extracted statistical results were presented in charts, with the analysis of those results and their discussion according to the theoretical knowledge foundations based on the references. Scientific, and in the light of the experiment carried out by the researcher and the results achieved through tests and statistical methods, he reached the following conclusions:

1. The correct scientific method of the exercises used with the device in the gradation from easy to difficult helped the experimental group to reach the desired goal, which is to develop the motor behavior of the accuracy of the crushing skill of the volleyball players from a sitting position.
2. The use of multiple training and educational methods according to modern devices helps players develop their abilities, as well as controlling the use of means and devices to increase the degree of difficulty during training (which is therefore somewhat similar to the conditions and atmosphere of the game), which adapts the player to those stimuli and increases experience and then increases his potential for proper motor behavior in matches.
3. The proposed exercises prepared by the researcher using the device helped in developing the motor behavior of the crushing skill of the experimental group more than the exercises used for the control group.

As for the recommendations, they were

1. It is possible to rely on the tests used in the research to identify the performance level of the motor behavior of the crushing skill.
2. The researcher recommends providing auxiliary devices and tools in sports halls for the purpose of developing basic and technical skills, and suitable for volleyball players from a sitting position.
3. Instructing the trainers to give importance in their training to developing the motor behavior of the various skills, especially the crushing skill.

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**Keywords:** Exercises with a device, motor disposition, the accuracy of the crushing skill, volleyball from a sitting position

## 1. Introduction

### 1.1 Introduction to the research and its importance:

We have recently witnessed a lot of developments in various sports achievements, and this development and progress came as a result of the efforts made and the use of scientific means and modern technology in the educational and training process, which branched out and entered the joints of sports in general, as well as these means and technology interacted significantly and positively with the results of research and studies that It was conducted by specialists who seek this development, and thus the attention of specialists and workers in different countries tended to care and help towards this matter in order to develop the specific game and raise its level and its various aspects, whether physical or skillful, tactical, educational and others.

And the sitting volleyball game is one of the games that adopts careful scientific planning in order to raise the level and capabilities of its players, as the sitting volleyball game requires speed in performance, in addition to that it needs accuracy during implementation, and therefore volleyball entered into Sports forums seriously, as it has become one of the games that take a large part in the Olympiads and sports competitions, as it is one of the games of a competitive nature and it cares for an important segment of society, namely the disabled. Difficult situations in it, and the motor behavior is an important aspect, which has an effective role when implementing the crushing hitting skill and being one of the important and decisive skills in volleyball for normal people, as well as for volleyball from a sitting position.

The importance of the research lies in the fact that the development of technical skills in volleyball from a sitting position, especially the crushing hitting skill as well as the motor behavior, has an important role during matches, and its performance requires high accuracy, so it is necessary to work hard for the purpose of developing it well and correctly by using the accuracy of the correct guidance of the crushing balls, and this What the researcher is seeking by developing exercises using a device to develop the motor behavior of the accuracy of the crushing hitting skill in the game of volleyball from a sitting position.

### 1.2 Research problem

The game of volleyball from a sitting position is one of the collective games in the private sport, which is distinguished by the nature of the competition in it and in all its technical skill, whether defensive or offensive, by the necessity of the player's ability to act correctly and accurately in directing the balls in the correct place and through the researcher's experience as a coach of the game and the importance of the crushing skill in deciding Matches and the lack of use of modern devices to develop this skill, so the researcher decided to prepare exercises with a device to develop the motor behavior for the accuracy of the crushing hitting skill and reaching the skill at the best possible level.

### 1.3 research objectives

- 1- Preparing exercises with a device to develop the motor behavior for the accuracy of the skill of crushing the volleyball from a sitting position.
- 2- To identify the effect of exercises by using a device to develop the motor behavior of the skill of crushing hitting the volleyball from a sitting position.

## 1.4 Research Hypotheses

- 1- There are statistically significant differences between the results of the pre and post tests of the experimental and control groups in the motor behavior of the accuracy of the skill of crushing the volleyball from the sitting position.
- 2- There are statistically significant differences between the results of the post-tests of the experimental and control groups, in favor of the experimental group in the motor behavior of the accuracy of the skill of crushing hitting the volleyball from the sitting position.

## 1.5 Research areas

- **The human field:** Iraqi youth volleyball team players from a sitting position for the 2019-2020 sports season.
- **Time range:** Duration 10/11/2019 to 3/15/2020
- **Spatial field:** The indoor sports hall in Wissam Al-Majd Sports Club.

## 2. Research methodology and field procedures

### 2.1 Research Methodology

The researcher used the experimental approach with two experimental and control groups, with two pre and post tests, due to its suitability to the nature of the problem.

### 2.2 Research community and its sample

The community was determined by the intentional method, and it was represented by the national youth volleyball team from the sitting position, which numbered (18) players. (4) players for the exploratory experiment who were subjected to exploratory experiments for the tests and exercises set, as the percentage of the research community and sample reached (66%) and then the sample was divided into two groups, experimental and control, in a random manner by drawing lots, the number of each group (6) players.

### 2.3 Tools, devices and means of collecting information

#### 2.3.1 Tools used in the research

- A legal seated volleyball court.
- Legal (molten) volleyballs, number (25).
- Laser discs (CD). number (5)
- FOX whistle number (3)
- Colored adhesive tapes.
- Metric scale
- Electric motor wire 25 meters (3 x 1.5 mm)

#### 2.3.2 The devices used in the research

##### A wall device

The idea of the device is based on the work of a moving model for blocking wall players formed in the front defensive line of the players and the formation of defensive formations to block balls and benefit from it during the performance of exercises and offensive plans to play. Its movement to the sides is convergent or divergent according to matching the exercise used or to be used and at different speeds for the sides as well as with different heights and speed of the arms as well, and it is controlled through buttons adapted for that, and by the coach in proportion to the exercise, and as a result of the different lengths of the players and the difference in their arm lengths, the device was designed and manufactured In a way that takes into account this, and it is possible to lengthen and shorten the arms according to the exercise, and all of this serves the educational and training process because of its economy of effort and time, and its consumption of

electricity is proportional to a rational way, as some of its parts operate by an electric motor (motor) 12 volts only, meaning that it does not use high-voltage electricity in it. For safety and security, it performs the required purpose, and it is easy to carry in a small car from one place to another.



Fig 1: Illustrative image of the device

### 2.3.3 Means of collecting information

- Arabic and foreign sources and references.
- Note.
- Tests and measurement.
- International information network.
- A questionnaire form to seek the opinions of experts and specialists about the validity and nomination of the most important tests.
- A form to unload the raw scores of the testers in the pre and post tests used in the research.
- Specialists and experts hired by the researcher.
- Auxiliary work team.

### 2.4 Field research procedures

#### 2.4.1 Determine the tests used in the research:

##### 2.4.1.1 Motor behavior tests for the accuracy of the crushing skill

##### 1. The name of the test: the motor behavior test for the accuracy of the crushing hitting skill from center No. (4).

The aim of the test: Measuring the motor behavior of the accuracy of the crushing hitting skill from center No. (4).

**Tools:** blocking wall device, legal volleyballs, volleyball court legal seating, measuring tape, colored adhesive tape, data recording form.

**Description of the test:** The tester sits in center 4 facing the net and in front of him is the blocking wall, with a prepared player and coach to give the balls to the tested player. (15) attempts are given to each player, with (5) in the diagonal direction, (5) in the opposite direction, and (5) the movement of the blocking wall, with no telling The tested player showed that the number of attempts is divided into three sections, and the designed device and arms are lifted and moved five times (five attempts) for each of the cases, blocking the near diagonal direction five times and the far one five times, and blocking the facing direction five times by moving the device right or left without telling the player about order (random).

One of the test conditions is the rise and movement of the blocking wall at the moment the player's hand meets the ball during the crushing hit

The preparation of the balls for the hitting player is done by the prepared player to ensure a good preparation for the tested player, and the balls that are not prepared well and correctly are re-attempted. As in Figure No. (2).

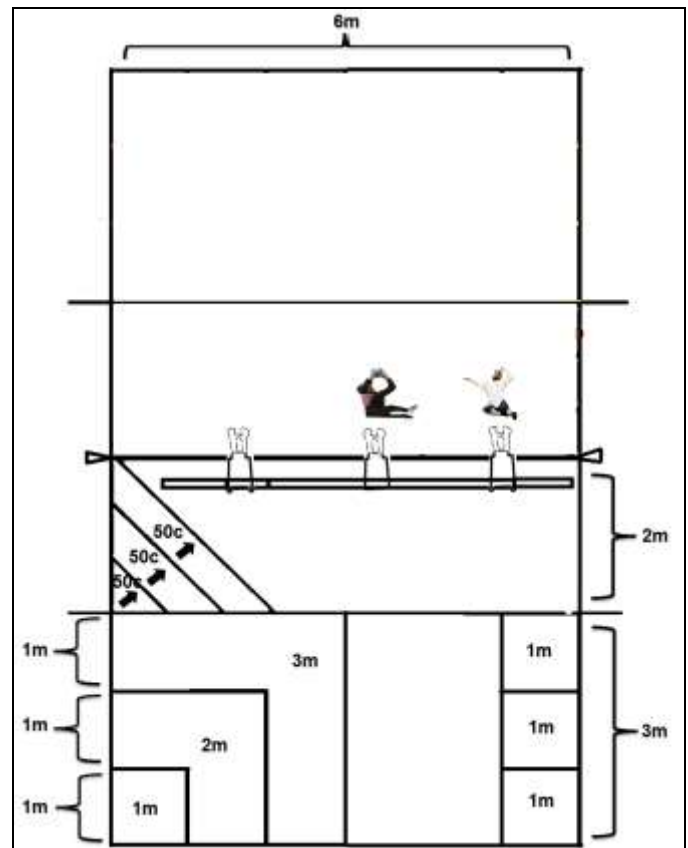


Fig 2

##### 2. The name of the test: the motor behavior test for the accuracy of the crushing hitting skill from Center No. (2).

The aim of the test: measuring the motor behavior of the accuracy of the crushing hitting skill from center number (2).

**Tools:** Blocking wall device, volleyballs, volleyball court legal seating, measuring tape, colored adhesive tape, data recording form.

**Description of the test:** The tester sits in center (2) facing the net and in front of him is the blocking wall, with a player prepared and trained to give the balls to the tested player. (15) attempts are given to each player, with (5) in the diagonal direction, (5) in the opposite direction, and (5) in the movement of the blocking wall with Not informing the tested player that the number of attempts is divided into three sections, and the device and arms are lifted and moved five times (five attempts) for each of the cases, blocking the near diagonal direction five times and the far one five times, and blocking the facing direction five times by moving the device right or left without telling the player about Arrangement (random).

One of the test conditions is the rise and movement of the blocking wall at the moment the player's hand meets the ball during the crushing hit.

The preparation of the balls for the hitting player is done by the prepared player to ensure a good preparation for the tested player, and the balls that are not prepared well and correctly are re-attempted.

In the diagonal crushing multiplication test. The corresponding area in the other Qatari court section, i.e. Area No. (1 and 5), shall be divided into three squares. The edge of the squares shall be adjacent from one of its sides to the edge of the court, with the first square measuring one square metre, surrounded by the other square measuring 2 square metres,



and surrounded by another square measuring 3 square metres, i.e. The edges of the squares will be about a meter away, and the squares are called (1, 2, and 3) to calculate the degrees.

In the face-to-face crushing test, the two areas facing the other court, Zone No. (1 and 2), are divided into a rectangle whose end is at the edge of the court, with a length of three meters and a width of one meter. It is divided into three sections, each section one square meter, and it is called squares (1, 2, and 3) for calculating grades.

In the near diagonal smashing test with a double blocking wall, the division of the test accuracy zones is in the front area of the playing field and in area No. (3) by diagonal lines from the lines of the sides of the court to the line of the front area and the distance between a line and a line of half a meter as in Figure No. (3)

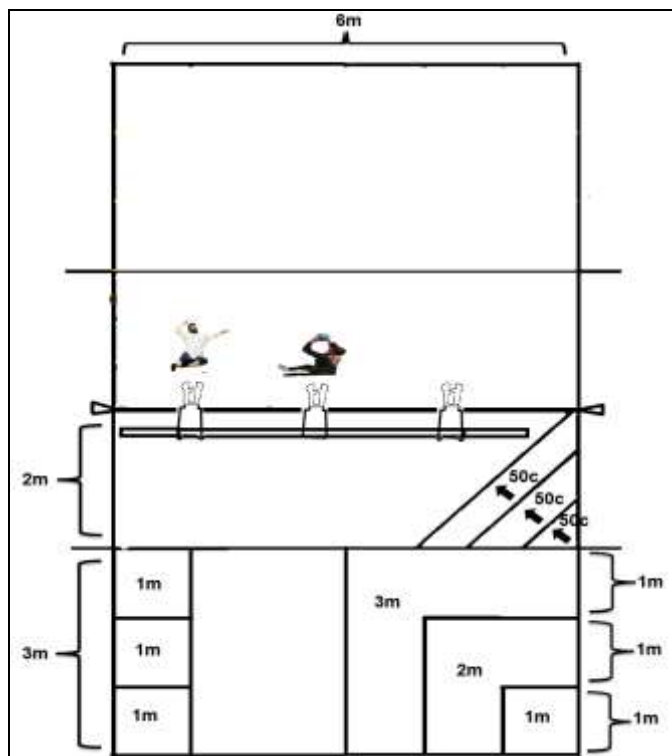


Fig 3

**Recording scores for the motor behavior test for the accuracy of the crushing skill (diagonal and confrontational)**

**Registration:** Each laboratory has (15) attempts, and they are calculated as follows:

- 1- Three points are given for the crushing blow that does not touch the wall and falls inside the opponent’s court at the specified point No. (1).
- 2- Two points are given for the crushing blow that does not hit the blocking wall, and falls at point number (2).
- 3- One point is given for the crushing blow that hits the wall and falls at point No. (3).
- 4- No point is given for a crushing blow that does not fall at a certain point or for a legal or technical error and The maximum score is (45) degrees.

**2.4.2 Scientific foundations of the test**

**2.4.2.1. The validity of the test.**

The researcher relied on extracting the validity of the test using the virtual validity method for the tests of the motor behavior of the accuracy of the skill of crushing the volleyball from the sitting position. This is done by presenting the tests

to a group of experts and specialists before implementing them to judge their validity and ability to measure what they were designed for, and their suitability for the level of the sample. The researcher found the validity coefficient by using the subjective validity coefficient, which is "the validity of the experimental scores of the test in relation to the real scores that have been cleared of measurement errors" <sup>[1]</sup>.

Intrinsic validity coefficient = stability √. After applying the law of self-honesty to the tests, it was found that the tests have high self-honesty degrees.

**2.4.2.2 Test stability**

The researcher conducted the tests on a sample of the reconnaissance experiment consisting of (4) players, as the first test took place on Thursday 8/12/2019 AD, and the test was repeated in the same conditions after (7) days had passed, on Thursday 15/12/2019 AD on the same sample. After obtaining the results of the two tests, the researcher found the correlation coefficient between them using the simple correlation law (Pearson), as shown in Table (1). It was found that the value of the correlation coefficient was high, which indicates that the tests have a high degree of stability.

**2.4.2.3 Objectivity of the test**

The researcher processed the results of the score of two arbitrators, for the items of the tests used by the researcher and candidates for the application, and calculated the value of the simple correlation coefficient as a statistical means between the results of the arbitrators in each test, as shown in Table (1), and it was concluded that it is highly objective.

**Table 1:** Represents the values of (constancy, honesty and objectivity)

Variable		Constancy	Honesty	Objectivity
Motor behavior of the skill of multiplication Overwhelming position No. (2)	Diagonal is close	0,901	0,949	0,951
	Confrontation	0,972	0,985	0,998
	Far Diagonal	0,901	0,949	0,951
Motor disposition of the skill of crushing hitting the center No. (4)	Diagonal is Close	0,953	0,976	0,911
	Confrontation	0,899	0,948	0,971
	Far Diagonal	0,921	0,959	0,892

**2.5 Exploratory experience**

The researcher conducted the exploratory experiment in order to identify the application of the skill tests nominated by the experts on Thursday 6/12/2019 AD in the closed hall for volleyball, sitting for the Wissam Al Majd Club on the survey sample consisting of (4) young players who were randomly selected from the sample community Non-participants in the research experiment, and the aim of this experiment was:

1. Knowing the difficulties that the researcher will face and working to avoid them.
2. Knowing the time taken to conduct the tests.
3. Knowing the ability of the sample to perform the selected tests and their suitability for them.
4. Knowing the ability of the assistant team to use the devices used in the tests.
5. Ensuring the validity of the devices and tools used in the research and their places of placement during the implementation of the tests.

<sup>1</sup> Muhammad Hassan Allawi and Muhammad Nasr al-Din Radwan; Measurement in Physical Education and Sports Psychology, 2nd edition: (Cairo, Dar Al-Fikr Al-Arabi, 2000), p. 275.

## 2.6 Pre-tests

Pre-tests were conducted on the experimental and control samples in the private closed hall of the Wissam Al-Majd Club in Baghdad, on Friday 1/3/2020, under the supervision of the researcher and with the help of the researcher.

## 2.7 The main experience

The training units were distributed by (3) training units every week on (Thursday, Friday and Saturday) for a period of (8) weeks, and the total number of training units becomes (24) training units. Out of (90 minutes) it is conducted on the experimental group and the control group is left with the trainer, and the total time becomes (720 minutes) to apply the curriculum that is in line with the trainer's plan and approach.

## 2.8. Post-tests

After completing the application of the exercises on Monday 9/3/2020 AD and under the same conditions in the pre-tests, the post-tests will be applied to the experimental and control samples for a period of (1) day.

The post-tests for the two groups were conducted on Sunday 3/15/2020 AD. The researcher, through his supervision of the research procedures and in cooperation with the assisting work team, was keen to implement the same procedures

followed in the pre-tests while creating the appropriate conditions in terms of time, place and tools.

## 2.9 Statistical methods

The researcher used statistical methods through the use of the statistical bag, which is known as (SPSS).

## 3. Presentation, analysis and discussion of the results

### 3.1 Presentation and analysis of the results

The researcher analyzed and discussed the results for the purpose of achieving the objectives of the research and its hypotheses, and to identify the effect of the exercises used in the device to develop the motor behavior of the accuracy of the skill of crushing the volleyball from a sitting position, as the results were analyzed in the light of the statistical laws used in the research and appropriate to this data in order to achieve the hypothesis The research is in light of the applied field procedures that the researcher used to reach this data, and then discusses it according to scientific references.

### 3.2 Presentation and analysis of the results of the pre and post tests of the control group of motor behavior for the accuracy of the crushing skill.

**Table 2:** It represents the arithmetic means, standard deviations, the calculated (t) value, the difference of the means and deviations, the calculated (t) value, and the significant significance of the control group

Variable	Regions	Tribal		Remote		FS	pf	Value Calculated	Sig	Indication
		s	p	s	p					
Motor behavior of the skill of multiplication Overwhelming position No. (2)	Diagonal is Close	6.33	1.03	8.00	1.09	1.66	1.50	2.71	0.04	Moral
	Confrontation	7.00	1.54	8.83	0.75	1.83	1.60	2.80	0.03	Moral
	Far Diagonal	8.50	0.54	9.83	0.98	1.33	1.21	2.69	0.04	Moral
Motor disposition of the skill of crushing hitting the center No. (4)	Diagonal is Close	7.50	1.04	8.50	0.83	1.00	0.89	2.73	0.04	Moral
	Confrontation	8.83	1.16	10.16	0.75	1.33	1.21	2.69	0.04	Moral
	Far Diagonal	9.00	0.63	9.66	0.51	0.66	0.51	3.16	0.02	Moral

$n-1 = 6-1 = 5$  at a degree of freedom (5) and a level of significance (0.05)

### 3.2.1 Discussing the results of the pre and post tests of the motor behavior control group for the accuracy of the serving and crushing skills:

Through Table (2), it is clear to us that the motor behavior of the accuracy of the skill of crushing hitting using the exercises prepared by the device is better than the motor behavior and accuracy without them, which indicates that the special exercises that were developed by the researcher fulfill the purpose required to develop the motor behavior of the accuracy of the skill, and the researcher attributes these results to that The curriculum set by the trainer did not significantly affect the crushing skill, as the performance rhythm was the same during the experiment and the pre and post tests, as well as because the performance used and given in the curriculum exercises were at the same pace, and because the players relied on the classic exercises used in learning and increasing The motor behavior of the accuracy of that skill did not achieve the desired purpose in the performance, as well as the coach's tendency to use more exercises for the physical abilities of the control group, which led to a lack of their development, and this is consistent with Mufti Ibrahim, "that training high levels of physical capabilities is difficult to achieve the goals of skillful performance, and it is necessary to achieve An optimal balance between the levels of physical attributes necessary for specialized sports allows for a better

and more accurate level of skillful performance [2].

### 3.3 Presentation and analysis of the results of the pre and post tests of the experimental group of motor behavior for the accuracy of the crushing skill skill

#### 3.3.1 Discussing the results of the pre and post tests of the experimental group of motor behavior for the accuracy of the crushing skill skill:

Table (3) shows the significance of the differences between the pre and post tests of the experimental group in the motor behavior of the accuracy of the crushing skill for two centers, namely Center No. (2) and Center No. (4), which were divided into three regions for each center:

(2) The near diagonal, the confrontational smash, and the far diagonal smash.

(4) The near diagonal, the face-to-face crushing, and the distant diagonal crushing.

And since the calculated value was greater than the tabular one, this indicated the significant differences between the pre and post tests of the variables discussed above and in favor of the post test. skill level of the players.

As well as the player taking several alternative decisions and thinking of other motor paths in the event of any blocking of

<sup>2</sup> Mufti Ibrahim Hammad; Modern sports training, planning, application and leadership, 2nd edition, Dar Al-Fikr Al-Arabi, Cairo, 2001 AD, p. 135.

the ball or its direction from the competing court by means of the device, which achieves the player's movement behavior and accuracy of the injury, if he takes a good and immediate alternative at the same time and is well prepared for it, and the researcher agreed with "Wissam Salah Abd Al-Hussein and Samer Youssef Mutaib 2014 AD "who confirmed that learning and training by means of assistive devices and means achieves the principle of speed in learning and keeps boredom away from the learner, as well as its role in prolonging the learner's memory of performing mathematical skills, strong inclination and desire to learn, and helping the learner in developing his mathematical skills" [3]

The researcher attributes the significant difference between the pre and post tests and in favor of the result of the post test of the experimental group to the effectiveness of the blocking wall device and its impact, as well as the special exercises prepared by the researcher as well, as the exercises used and the device helped to develop motor behavior and increase the accuracy of the crushing hitting skill, and this was confirmed by (Hanafi Mahmoud) that the use of devices and tools in skills training has a benefit in the accuracy of performance, through which the coach is able to make the ball in the position he wants continuously, which makes the player can repeat the exercise with the same ball positions and in the same way that is required to be learned, as he is fluent in performing the skill accurately [4].

In addition, learning and training according to different performance conditions achieves the principle of adapting to the performance of skills according to competition conditions, and this is what sports training needs. The moving arms and their speed and choices made by the coach according to the plan and the exercise, and this requires from the coaches aware of the variables and movements of the competitors, as well as exploiting the gaps of the opposing team from one point to another, avoiding mistakes and filling the gaps in the previous rounds. Thus, it is important that the performance in the crushing hitting skill be characterized by a dynamic behavior in the different or similar surrounding circumstances. This makes the exercises prepared using the blocking wall device valuable in developing the motor disposition of the accuracy of the crushing hitting skill.

### **3.4 Presentation and analysis of the results of posttests for the experimental and control groups of motor behavior for the accuracy of the crushing skill skill**

#### **3.4.1 Discussing the results of posttests for the experimental and control groups of motor behavior for the accuracy of the crushing skill:**

Table (4) shows that there are statistically significant differences after comparison with the tabular value in favor of the experimental group that used exercises by the device at the expense of the control group, in order to achieve the research hypothesis.

The researcher attributes this to the optimal use of devices in the exercises, as the devices used help direct the skill towards performance similar to the conditions of the game.

In addition to controlling the speed of performing the skill through the device, the movement of its arms and its speed, and changing its places, all this gives the player the opportunity to implement the skill well. The technical skills in

volleyball from a sitting position are interconnected with each other, and each of the skills depends on the skill that precedes it in performance during the game, so Proper motor behavior is very necessary in order to reach optimal performance during competition.

The researcher believes that the exercises that were prepared were according to different and changing conditions in performance, which achieves the principle of adaptation to the performance of skills according to competition conditions, which is what the volleyball game needs in general and the volleyball game from the sitting position in particular, as it is preferable that the exercises or exercises used be close to the conditions The match and the many variables that occur during it, and this is what makes the training method valuable when performing skills that are characterized by motor behavior and accuracy at the same time.

The researcher also believes that the improvement in the results is due to the quality of the exercises used in the training units of the experimental group and their effective impact in improving and developing the level of motor behavior for the accuracy of the two skills that depended on the diversity of the exercise movements and their overlap with the device as well, as well as the advanced and accurate capabilities intertwined with the skills The modern device used in the exercises used by the researcher for the training unit of the experimental group led to the improvement and development of this group over the control group.

The researcher also suggests this transition to the principle of thinking about the correct and programmed motor paths for the player before the crushing strike and achieving the appropriate and immediate alternative if the ball is obstructed, and according to the motor programs that were drawn in the brain, he gets used to it and performs the instantaneous and instantaneous switch when performing the skill, and that all sports and educational movements take place in The brain comes first, so correct and sound thinking must be done in performance and several alternatives must be made even before implementation.

The extent of the impact of the exercises using the device for the purpose of developing motor behavior through the performance and repetition of the prepared exercises taking into account the change in the exercise and its diversity, as well as the rush of the players towards the skillful performance of modern and easy-to-use devices that were not previously used as a wall device that raises the curiosity of the player in trying what is new and makes him That is, the player should perform the repetitions with confidence and desire and work for the better, and therefore this indicates that the direction of the indicator is towards the positive effect of the exercises, and that giving the player the opportunity to perform the exercises at a slow speed during the first repetitions allows for a clear vision, which allows him to correct the paths and then increase the ability to Correct motor behaviour.

Focusing on special exercises and increasing the exercise period to a series of repetitions worked to develop the correct and immediate motor behavior of the skills, which helps the player to achieve more understanding of the nature of their performance, which makes him generalize the performance of the crushing skill in different playing situations, in addition to that the continuous and continuous exercise leads To increase the player's ability to focus and the accuracy of skillful performance, as the main objective of the moving blocking wall is to develop the motor disposition to perform the crushing hitting skill, so the moral differences between the

<sup>3</sup> Wissam Salah Abdel-Hussein and Samer Yousef Meteb; Kinetic learning and its applications in physical education and sports, 1st edition: (Lebanon, Dar Al-Kutub Al-Alamiyyah, 2014 AD), pp. 194-195.

<sup>4</sup> Hanafi Mahmoud Al-Mukhtar; Scientific foundations in football training, Cairo - Dar Al-Fikr Al-Arabi - 1998 - p. 152.

post-tests of the two groups are attributed by the researcher to the use of special devices and exercises, "and that experience is directly proportional to accuracy and that The main goal of the skill was accuracy, then the performance must be slow to reduce errors" (1) and this is what happens at the beginning of learning, and the more the player's experience increases, the

more he can choose the correct response that is commensurate with the type of skill and thus direct the ball to the right place. Training the players on a set of prepared exercises helped in accurately estimating the distance and angles of the skill target from variable places and distances.

**Table 3:** It represents the arithmetic means, standard deviations, the calculated (t) value, the difference of the means and deviations, the calculated (t) value, and the significant significance of the experimental group.

Variable	Regions	Tribal		Remote		FS	pf	Value Calculated	Sig	Indication
		s	p	s	p					
Motor behavior of the skill of multiplication Overwhelming position No. (2)	Diagonal is Close	6.66	0.81	9.33	0.81	2.66	1.50	4.33	0.00	Moral
	Confrontation	6.83	1.32	10.00	0.63	3.16	1.47	5.27	0.00	Moral
	Far Diagonal	9.16	0.98	11.50	1.04	2.33	1.86	3.07	0.02	Moral
Motor disposition of the skill of crushing hitting the center No. (4)	Diagonal is Close	6.83	1.47	9.50	0.54	2.66	1.86	3.50	0.01	Moral
	Confrontation	9.50	0.54	11.16	0.75	1.66	1.03	3.95	0.01	Moral
	Far Diagonal	9.66	0.51	10.80	0.83	1.16	0.98	2.90	0.03	Moral

$n-1 = 6-1 = 5$  at the degree of freedom (5) and the level of significance (0.05)

**Table 4:** It shows the arithmetic means, standard deviations, the calculated (t) value, the error percentage, and the significant significance of the two groups with the results of the post-tests.

Variable	Variants	The control group		experimental group		(t) value	sig	Indication
		s	p	s	p			
Motor disposition of the skill of crushing hitting the center No. (2)	Diagonal is close	8.00	1.09	9.33	0.81	2.39	0.03	Moral
	Opposite diagonal	8.83	0.75	10.00	0.63	2.90	0.01	Moral
	Far diagonal	9.83	0.98	11.50	1.04	2.80	0.01	Moral
Motor disposition of the skill of crushing hitting the center No. (4)	Diagonal is close	8.50	0.83	9.50	0.54	2.44	0.03	Moral
	Opposite diagonal	10.16	0.40	11.16	0.75	2.86	0.01	Moral
	Far diagonal	9.66	0.51	10.80	0.83	2.76	0.02	Moral

$(n_1 + n_2 - 2) = 12 - 2 = 10$  at a degree of freedom (10) and a level of significance (0.05)

## 4. Conclusions and recommendations

### 4.1 Conclusions

Through the results, the following conclusions were reached:

1. The correct scientific method of the exercises used with the device in the gradation from easy to difficult helped the experimental group to reach the desired goal, which is to develop the motor behavior of the accuracy of the crushing skill of the volleyball players from a sitting position.
2. The use of multiple training and educational methods according to modern devices helps players develop their abilities, as well as controlling the use of means and devices to increase the degree of difficulty during training (which is therefore somewhat similar to the conditions and atmosphere of the game), which adapts the player to those stimuli and increases experience and then increases his potential for proper motor behavior in matches.
3. The proposed exercises prepared by the researcher using the device helped in developing the motor behavior of the crushing skill of the experimental group more than the exercises used for the control group.

### 4.2 Recommendations

1. It is possible to rely on the tests used in the research to identify the performance level of the motor behavior of the crushing skill.
2. The researcher recommends providing auxiliary devices and tools in sports halls for the purpose of developing basic and technical skills, and suitable for volleyball players from a sitting position.

3. Instructing the trainers to give importance in their training to developing the motor behavior of the various skills, especially the crushing skill.

## 5. References

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## Supplements

### Accessory (1)

Motor behavior exercises for the accuracy of the overwhelming hitting skill

1. The crushing strike exercise from position No. (4), with the player raising the ball to himself and directing it



- towards the areas specified by the presence of the blocking wall, by rising from position No. (2).
2. The crushing strike exercise from position No. (4) by raising the ball to himself and directing it towards the areas specified by the presence of the blocking wall by rising from position No. (3).
  3. The crushing strike exercise from Center No. (4), with the player raising the ball to himself and directing it towards the areas specified by the presence of the blocking wall, by rising from centers No. (2-3).
  4. The crushing strike exercise from position No. (2) by raising the ball to himself and directing it towards the areas specified by the presence of the blocking wall by ascending from position No. (4).
  5. The crushing strike exercise from position No. (2) by raising the ball to himself and directing it towards the areas specified by the presence of the blocking wall by ascending from position No. (3).
  6. The crushing strike exercise from Center No. (2) by raising the ball to himself and directing it towards the areas specified by the presence of the blocking wall by rising from centers No. (3-2).
  7. The crushing strike exercise from position No. (4) using a prepared player to prepare the balls for the player who is attacking and directing towards the areas specified by the presence of the blocking wall by ascending from position No. (2).
  8. The crushing strike exercise from position No. (4) using a prepared player to prepare balls for the player who is attacking and directing towards the areas specified by the presence of the blocking wall by ascending from position No. (3).
  9. The crushing strike exercise from position No. (4) using a player prepared to prepare balls for the player who is attacking and directing towards the specific areas with the presence of the blocking wall by rising from two positions No. (3-2).
  10. The crushing strike exercise from position No. (2) using a player prepared to prepare the balls for the player who is attacking and directing towards the specific areas with the presence of the blocking wall by ascending from position No. (4).
  11. The crushing strike exercise from position No. (2) using a player prepared to prepare balls for the player who is attacking and directing towards the specific areas with the presence of the blocking wall by ascending from position No. (3).
  12. The crushing strike exercise from position No. (2) using a player prepared to prepare balls for the player who is attacking and directing towards the specific areas with the presence of the blocking wall by rising from two positions No. (3-2).
  13. The crushing hitting exercise from the two centers (4-2) by preparing the balls by the preparer who stands in the center No. (3) and the striking players in the two centers (4-2), where the balls are prepared randomly in the presence of the blocking wall rising from two centers No. (4-2).
  14. The crushing hitting exercise from the two centers (4-2) by preparing the balls by the preparer who stands in the center No. (3) and the striking players in the two centers (4-2), where the balls are prepared randomly in the presence of the blocking wall rising from two centers No. (3) On both sides.
  15. The crushing hitting exercise from the two centers (4-2) by preparing the balls by the preparer who stands in the center No. (3) and the striking players in the two centers (2-4), where the balls are prepared randomly in the presence of the blocking wall rising from two centers No. (2-3) and (4-3) on both sides.
  16. The crushing strike exercise from the center No. (4) using a prepared player to prepare balls for the player who is attacking and directing towards the specific areas with the presence of the blocking wall with its random ascent.
  17. Smashing exercise from center No. (2) using a prepared player to prepare balls for the player who is attacking and directing towards the specific areas with the presence of the blocking wall by randomly rising.
  18. The crushing strike exercise from the two centers (4-2) by preparing the balls by the preparer who stands in the center number (3) and the hitting players in the two centers (4-2), where the balls are prepared randomly in the presence of the blocking wall with its random ascent.