

# Predict the Accuracy of the Performance of the Serve and Receive Skills in Terms of Methods of Attention to Volleyball for Students

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**Abstract---** *The researchers discussed the distinguished scientific and technological progress in all areas of life, and considering the field of physical education as one of the most prominent areas of human knowledge that is developing and is still developing on the foundations and principles of its scientific research, and the role and importance of each of the methods of attention and its importance accurately performing the skills of sending and receiving volleyball. The study objectives to identify:*

- 1. The level of methods of attention and accuracy of the performance of the serve and receive skills of volleyball students*
- 2. The strength and direction of the relationship of attention methods precisely to the performance of the transmit and receive skills in volleyball*
- 3. Detecting the proportions of the contribution methods of attention with accuracy of the serve and receive skills of volleyball students*
- 4. Predict the accuracy of the serve and receive skills in terms of methods of attention to volleyball for students*

*The researchers adopted the descriptive method in the survey method and correlative and predictive studies to achieve the goals of the research and test its hypothesis. The research community also included students of the second stage in the College of Physical Education and Sports Science University of Karbala for the academic year (2018-2019) and the research sample was chosen by (80) students. Through the results of the results of the statistical analysis of the data and the study of the relationship of variables with each other, conclusions were reached, the most important of which is to identify the relationship of each of the methods of attention accurately to the performance of the serve and receive skills in volleyball and the development of predictive equations for each of the serve and receive skills in terms of the researched variables.*

**Keywords---** *Predict, Accuracy, Serve and Receive Skills.*

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## I. INTRODUCTION

Motor skills in the sports field are a type of skill that requires the use of muscles to transform the body or some parts of it to achieve achievement or physical performance, especially the motor skills in sports are characterized by being mainly dependent on movement as well as being involved between cognitive processes and cognitive processes and emotional processes to achieve integration in performance.

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And because volleyball is a sport that requires high physical, mobility, and skill and mental capabilities and capabilities, its players must be distinguished by distinct mental capabilities that qualify them to perform these skills, especially difficult ones, and the belief of researchers in the effective and influential role of mental capabilities represented by methods of attention in performing volleyball skills,<sup>1</sup> especially the skill of sending and receiving the post because of their role in the results of the teams and achieving victory in the games, and considering that mental and psychological processes are the most subtle levels of human activity, and measuring and evaluating their level has become a major goal and an urgent necessity that must be used by the brother Appropriate scientific metrics and standards being one of the scientific foundations of the indicators of the orientation and selection process for those who have preparations and capabilities that enable them to practice a certain sport without others and predict their levels in the future because the self-assessments of coaches are no longer appropriate.<sup>2</sup>

As a result of this scientific attempt comes in the ability to identify the reality of some methods of attention as well as the accuracy of the performance of the serve and receive skills for students of the Faculty of Physical Education and Sports Science and the possibility of accurately predicting the performance of the serve and receive skills in terms of attention methods.

### ***Research Objectives***

1. Learn about the methods of attention and accuracy of the skills of sending and receiving skills in volleyball for students.
2. Knowing the strength and direction of the relationship of attention methods precisely with the performance of the serve and receive skills in volleyball.
3. Predicting the accuracy of the serve and receive skills in terms of methods of attention to volleyball for students.

### ***Research Fields***

- **The human field:** Students of the second stage, College of Physical Education and Sports Science, University of Karbala for the academic year (2018-2019)
- **Time field:** From 2/12/2018 to 5/3/2019
- **Spatial field:** The sports hall in the College of Physical Education and Sports Science, University of Karbala.

## **II. RESEARCH METHODOLOGY**

As the researchers used the descriptive method in the survey method and the correlative and predictive relationships, and this is what you see is consistent with and conforms to the specifications of their research and achieve the study goals.

### ***Community and Research Sample***

The research community included students of the second stage in the College of Physical Education and Sports Science, University of Karbala for the academic year (2018-2019) and the number (110) students. The selection of

the research sample came in a random sampling method, as it included (80) students, at a rate of (72.7%), after deporting some students of the pilot study who did not complete some tests and questionnaires.

### ***Search Methods and Devices Used***

In order for researchers to be able to complete their work to the fullest extent, it is necessary to use the tools and means that help them, which means "all means and tools that the researcher will use at every stage of his research" <sup>3</sup> which are as follows:

1. A survey of experts and specialists about determining the serve and receive skills.
2. Tests and measures.
3. Computer type (dell).
4. Electronic calculator.
5. Legal flying balls.
6. Stopwatch.

### ***Determine Serve Skills<sup>4</sup>***

For the purpose of determining the skills of sending and receiving volleyball, the researchers surveyed the scientific sources and references in order to identify the tests concerned with measuring each skill and present them to a group of experts and specialists in the field of testing, measurement, athletic training and kinetic volleyball learning to demonstrate their competence in measuring the skills involved in research and study, after collecting forms, emptying data and using The (Chi square) test to detect the tests that obtained a high percentage of the experts agreement and accept the nomination of the tests that have a calculated (Chi square) value greater than the tabular value of (3.84) as the (accuracy of the lars test) was accepted For the top plane of the ball) and test (accuracy transmitter receiver plane ball).

### ***Define Methods of Attention***

For the purpose of determining and measuring the level of methods of attention among students of the second stage of the College of Physical Education at the University of Karbala, the researchers surveyed the scientific sources and references, and approved the scale of attention methods built by (Ruedat - Tedfer) from Wexter University in New York and compassionate to Arabic by (Muhammad Hassan Allawi) after exposure On a group of experts and specialists to demonstrate the validity of its paragraphs in measuring methods of attention for students of the Faculty of Physical Education and Sports Science University of Karbala and the test includes (59) words measuring (7) dimensions.

### ***Pilot Study***

The researchers conducted an exploratory experiment on 12/16/2018 on a sample consisting of (20) students who were randomly chosen from the elements of the research community, and its purpose was to identify the difficulties and obstacles that may face them as well as to extract the scientific foundations of the tests and measures.

### ***Scientific Foundations of Tests and Metrics***

Since the tests used in the research have been chosen from the references and scientific research that meet the scientific transactions.<sup>5</sup>

### **1-Validity of the tests**

The sincerity of the tests is the most important feature among the characteristics of the good test <sup>6</sup>, where the researchers have verified the validity of the scale (Ruedat - Tedfer) to measure the methods of attention and test (the accuracy of the serve from the top in volleyball) and the test (accuracy of the receive of the serve in volleyball) through extracting the authenticity of the content Or the content when presenting the scale and tests to a group of gentlemen experts and specialists, and it turns out that there is agreement on the validity of the scale and the approved tests.

### **2-Stability**

In order to know the stability of the values of the results of the methods of attention methods and the candidate tests to measure the serve and receive skills, the researchers extracted the values of the correlation factor (Spearman) between the first application in the exploratory experiment on 12/16/2018 and re-apply the tests on 12/30/2018 and during a period of time that does not allow by learning or training, as the value of the stability coefficient of the scale of attention methods (0.885) and the stability of the transmitter accuracy test (0.844) and the accuracy of the receive accuracy (0.877).

### **Basic Experience**

Due to the completion of the procedures that qualify to carry out the basic experiment, which confirmed the validity of the tests and the candidate scale to measure the methods of attention and the skills of sending and receiving in volleyball, the researchers began conducting it on the members of the research sample who are (80) students, as the experiment was conducted in the sports hall in the College of Physical Education and Sports Science University Karbala lasted (4) days, which started on Sunday 7/1/2019 and ended on Thursday 10/1/2019. They also applied the tests concerned with measuring the transmitting and receiving skills, and then applying the scale of attention methods. After that, we went to data dumping and conducting statistical treatments.

### **Statistical Methods Used**

Researchers used the Social Sciences Statistical Package (SPSS) to process data.

## **III. RESULTS AND DISCUSSIONS**

Table 1: Shows the Sample Size, the Mean Value, the Standard Deviation, and the Standard Error of the Variables

<i>S</i>	<i>Variables</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Standard error</i>
1	External attention	80	13.615	2.482	0.419
2	External bearing	80	11.837	1.483	0.329
3	Internal attention	80	23.891	3.321	0.561
4	Internal bearing	80	19.871	2.989	0,505
5	Narrow attention	80	14.839	2.849	0.481
6	Reducing	80	24.876	3.894	0.658
7	Processing	80	15.119	1.824	0.308
8	The serve accuracy is from the top in volleyball	80	19.667	3.752	0.106
9	Accuracy of receiving volleyball transmitter	80	17.543	0.594	0.084

Through table (1) it turns out that the value of the standard error and of all variables was (zero) and this confirms that the research sample was distributed fairly and is close to the normal distribution in all the variables discussed.

**Correlation of serve accuracy from the top to the methods of attention**

By statistically processing students' data and studying the correlation using the correlation coefficient (Pearson), the results showed positive correlations between the methods of attention and the accuracy of serve from the highest among the second stage students in the College of Physical Education and Sports Science University of Karbala and table (2) between that.

Table 2: Show the Correlation Matrix Shows the Serve Accuracy from the Top of the Volleyball with the Searched Parameters

<i>Variables</i>	<i>Focus external attention</i>	<i>Carry external attention</i>	<i>Internal attention focus</i>	<i>Carrying internal attention</i>	<i>Focus narrow attention</i>	<i>Reducing the focus of attention</i>	<i>Information processing</i>
The serve accuracy is from the top	0.433	0.411	0.356	0.187	0.179	0.394	0.077

After the data were processed statistically and a study of the correlation of the serve accuracy from the top of the volleyball with the variables under study it was found that there was a positive moral correlation between the accuracy of the serve from the top of the volleyball and the researched variables and that the maximum random value of the correlation coefficient at the degree of freedom (78) and the level of significance (0.05) is equal (0.214)<sup>7</sup>

The researchers attribute this correlation to the methods of attention from the basic mental processes in learning mathematical skills in general and volleyball skills in particular, as the student must have a high ability to focus in the event of showing and explaining the movements and skills, which helps him in learning and performing The skill is fixed automatically, and the visual sense has a large role in motor control and a high ability to estimate distances.

This corresponds to what the studies indicated to the agreement of the opinions of some scientists in the sports field that the occurrence of current sporting achievements is linked to the presence of the athlete in the optimal mental and psychological energy area, and I have found that the most important characteristic of it is that attention has been entirely directed to the performance of the skill and attention skills are also considered One of the most important mental skills necessary for successful performance .<sup>8</sup>

As quoting indicates that there have been studies that have been done on the importance of the visual sense to control the estimation of distances between the player and his opponent or the distance of passing the ball, as well as the location of the feet and the movement of the arm's arm.<sup>9</sup> In order to identify the significance of the coefficients of correlation accuracy from the top with the estimates of the variables discussed, the researchers shed light on what came in Table (3).

Table 3: Shows the Relationship between the Accuracy of the Serve from the Top of the Volleyball and the Attention Methods

<i>Variables</i>	<i>Correlation coefficient value</i>	<i>Contribution rate</i>	<i>Value (F) calculated</i>	<i>Significance of correlation coefficient</i>
Focus external attention	0.433	0.187	10.133	Significant at the level of significance (0.001)
Attention Focus + carrying Attention + Internal Attention Focus + Attention Reduction	0.401	0.160	8.880	Significant at the level of significance (0.001)

Through table (3), it is clear that the value of the correlation coefficient and the contribution percentage are significant, evidenced by the calculated value of F, which indicates the correlation of serve accuracy with the variables of focus of external attention, bearing attention, focus of internal attention, and reduced focus of attention, as long as the contribution percentage is a significant and significant factor that can be chosen With Law (F) and thus it can be adopted as the accuracy of the serve from the top in volleyball is directly proportional to the focus of external attention and the bearing of external attention and the concentration of internal attention and the reduction of the focus of attention, and for the purpose of obtaining the proportions of the contribution methods of attention to the accuracy of the serve from the highest pal volleyball the researchers used a regression equation in which this relationship can be predicted, and Table (4) shows this.

Table 4: Shows the Contribution Ratios Accurately Transmitter Methods of Attention from the Top Plane of the Ball

Variables	Coefficient		Correlation coefficient	The nature of correlation	The standard error of the regression coefficient	(t) calculated	Type of indication
	The nature of coefficient	The value of coefficient					
Constant	-A-	17.104	0.383	Multi			
Focus external attention	-B -	0.066			0.017	2.155	Sig.
Carry external attention	-B2-	0.046			0.014	3.285	Sig.
Internal attention focus	-B3-	0.024			0.011	2.182	Sig.
Reducing focus	-B4-	0.022			0.011	2.001	Sig.

Through table (4), which shows the estimated values of serve accuracy from the top in terms of estimates of the focus of external attention and bear external attention and focus of internal attention and reduce the focus of attention). In light of this, the linear regression equation can be derived as follows:

Predictive value of the serve accuracy from the top =  $17.104 + (0.066 \times \text{the value of the focus of external attention}) + (0.046 \times \text{the value of bearing the external attention}) + (0.024 \times \text{the focus of internal attention}) + (0.022 \times \text{reducing the focus of attention})$  Expected for the player (Ahmed Abbas Kazem), who obtained estimates (13) in the concentration of external attention, (11) in the tolerance of external attention, (24) in the concentration of internal attention, (24) in the reduction in the focus of attention.

$$= 17.104 + 0.066 \times 13 + 0.046 \times 11 + 0.024 \times 24 + 0.022 \times 24 = (19.572)$$

While the mean has reached (19.667) and researchers believe that this student has the ability to focus external attention and bear the attention of the focus of internal attention and reduce the focus of attention below the average, which affects the expectation to estimate the degree of serve accuracy from the top of volleyball is lower than the average for fellow students.<sup>10</sup>

***Correlation of transmitter receive accuracy with the searched variables***

After the data has been statistically processed and a study of the correlation of the transmitter receive accuracy in

volleyball with the variables under study, it was found that there was a positive moral correlation between the accuracy of the transmitter receive and the variable of the external attention concentration. And its correlation with the variable of internal attention tolerance and the correlation value reached (0.394), and its correlation with the variable of narrow attention concentration and its value (0.435) and table (5) shows that.

Table 5: Show the bindery matrix to the volleyball transmitter receive with the searched variables

<i>Variables</i>	<i>Focus external attention</i>	<i>Carry external attention</i>	<i>Internal attention focus</i>	<i>Carrying internal attention</i>	<i>Focus narrow attention</i>	<i>Reducing the focus of attention</i>	<i>Information processing</i>
Transmitter receive accuracy	0.453	0.136	0.426	0.394	0.435	0.127	0.132

In order to identify the moral significance of the correlation coefficients between the accuracy of the transmitter receive in volleyball with the estimates of the researched variables, the researchers shed light on what came in Table (6).

Table 6: Shows the relationship of the transmitter's receive with volleyball with the estimates of the variables discussed

<i>Variables</i>	<i>Correlation coefficient value</i>	<i>Contribution rate</i>	<i>Value (F) calculated</i>	<i>Significance of correlation coefficient</i>
Focus external attention	0.453	0.205	8.324	Significant at the level of (0.003)
Attention Focus + carrying Attention + Internal Attention Focus + Attention Reduction	0.397	0.157	6.422	Significant at the level of (0.001)

Through table (6) shows that the value of the correlation coefficient and the percentage of contribution between estimates of the accuracy of the receive of the volleyball transmitter and the variables of the focus of external attention and the concentration of internal attention and the tolerance of internal attention and the variable of narrow attention concentration among students of the College of Physical Education and Sports Science Karbala University is significant as long as the ratio The contribution is a significant and moral function that can be tested by law (F) and thus can be adopted as the accuracy of the transmitter receive is directly proportional to the variables of the focus of external attention, the concentration of internal attention, and the bearing of internal attention and the focus of narrow attention.<sup>11</sup>

For the purpose of obtaining the estimated values of the ratios of the moral contribution, the researcher sought to use the regression equation, through which this relationship can be predicted and Table (7) shows that.

Table 7: Shows the estimated values of the ratios contribute to the accuracy transmitter receiver plane ball in terms of variables, methods of attention

Variables	Coefficient		Correlation coefficient	The nature of correlation	The standard error of the regression coefficient	(t) calculated	Type of indication
	The nature of coefficient	The value of coefficient					
Constant	-A-		0.319	Multi			
Focus external attention	-B -	8.772			0.104	2.028	Sig.
Carry external attention	-B2-	0.211			0.044	2.522	Sig.
Internal attention focus	-B3-	0.111			0.042	2.523	Sig.
Reducing focus	-B4-	0.106			0.024	3.208	Sig.

Through table (7), which shows the estimated values of the contribution percentages for the accuracy of the receive of the volleyball serve in terms of estimates of the focus of external attention, the focus of internal attention, and the bearing of internal attention and the focus of narrow attention among students of the College of Physical Education and Sports Science University of Karbala. In light of this, the linear regression equation can be derived as follows:

The estimated value of the volleyball transmitter receive accuracy =  $8.772 + (0.211 \times \text{the focus of external attention}) + (0.111 \times \text{the focus of internal attention}) + ((0.106 \times \text{the degree of internal attention tolerance}) + (0.077 \times \text{the degree of narrow attention focus}))$ .

An example of this is the estimation of the degree of accuracy of the transmitter receive in the expected volleyball of the student, who obtained (14) estimates in the focus of external attention, (24) in the concentration of internal attention, (20) in bearing internal attention and (16) in Narrow focus attention.

$$8.772 + (0.211 \times 14) + (0.111 \times 24) + (0.106 \times 20) + (0.077 \times 16) = (17.742)$$

While the arithmetic mean of the accuracy of receiving the volleyball transmitter has reached (17.543) and researchers see that this student has the capabilities of focusing external attention and focusing internal attention and carrying internal attention and focus attention narrow above average, which affects the expectation to estimate the degree of receiving the volleyball transmitter greater than the average in relation to fellow students.<sup>12</sup>

#### IV. CONCLUSIONS

Through the results of this study, the researchers reached the following conclusions:

1. Devising a predictive equation for the accuracy of the serve from the top in terms of variables (concentration of external attention and bearing external attention and focus of internal attention and information processing) among students of the second stage of the College of Physical Education and Sports Science University of Karbala.

2. Devising a predictive equation for the accuracy of receiving volleyball transmitters in terms of variables (focus of external attention, concentration of internal attention, tolerance of internal attention, and focus of narrow attention) among students of the second stage of the College of Physical Education and Sports Science University of Karbala.

## REFERENCES

- [1] Plant EA, Ericsson KA, Hill L, Asberg K. Why study time does not predict grade point average across college students: Implications of deliberate practice for academic performance. *Contemporary Educational Psychology*. 2005 Jan 1; 30(1):96-116.
- [2] Kitsantas A, Zimmerman BJ. Comparing self-regulatory processes among novice, non-expert, and expert volleyball players: A microanalytic study. *Journal of applied sport psychology*. 2002 Jan 1; 14(2):91-105.
- [3] Miller S, Weinberg R. Perceptions of psychological momentum and their relationship to performance. *The Sport Psychologist*. 1991 Sep 1; 5(3):211-22.
- [4] Urgesi C, Savonitto MM, Fabbro F, Aglioti SM. Long-and short-term plastic modeling of action prediction abilities in volleyball. *Psychological research*. 2012 Jul 1; 76(4):542-60.
- [5] Harrison JM, Blakemore CL, Richards RP, Oliver J. The effects of two instructional models-tactical and skill teaching-on skill development and game play, knowledge, self-efficacy, and student perceptions in volleyball. *Physical Educator*. 2004 Dec 1; 61(4):186.
- [6] Cleary TJ, Platten P, Nelson A. Effectiveness of the self-regulation empowerment program with urban high school students. *Journal of advanced academics*. 2008 Nov; 20(1):70-107.
- [7] Ericsson KA, Lehmann AC. Expert and exceptional performance: Evidence of maximal adaptation to task constraints. *Annual review of psychology*. 1996 Feb; 47(1):273-305.
- [8] Alsayigh HA, Athab NA, Firas M. Journal of Global Pharma Technology The Study of Electrical Activity of the Triceps Brachia Muscle according to the Chemical Changes of Water Loss during Spike in Volleyball. 2017; 57–62.
- [9] Athab NA, Hussein WR, Ali AA. A Comparative Study for Movement of Sword Fencing Stabbed According to the Technical Programming in the Game of Fencing Wheelchairs Class B. *Indian Journal of Public Health Research & Development*. 2019; 10(5):1344-7.
- [10] Athab NA. An Analytical Study of Cervical Spine Pain According to the Mechanical Indicators of the Administrative Work Staff. *Indian Journal of Public Health Research & Development*. 2019;10(5):1348-54.