# Design and standardization of a test of spatial awareness and distance for the skills of passing from above and below for volleyball players aged (12-14 years)

## Khalil Sattar Muhammad[1]

[1,2] University of Baghdad, College of Physical Education and Sport Sciences for women

## Abstract

The research aims: Designing a test of spatial awareness and distance for the skills of passing from above and below for volleyball players aged (12-14 years) and extracting standard scores and levels. The descriptive survey method was adopted. The research sample consisted of players from specialized schools for sports talent in volleyball, numbering (120) players in (6) specialized schools (Baghdad, Diwaniyah, Anbar, Samawah, Babylon, Kirkuk), as the researcher chose the players. Males aged (12-14 years). After that, the researcher divided the selected sample into a survey consisting of (10) players. To build the test, (50) players were selected, and the scientific foundations were found, and (60) players were chosen to codify the test and extract grades and standard levels. After that, the researcher designed a test. Spatial perception and distance for the skills of passing from above and below, out of his belief in evaluating the level of skill of the player at the level of the two skills. The scientific foundations of honesty, consistency, and objectivity were extracted, as well as the standards and levels that led to conclusions and recommendations, the most important of which are: A test was reached that takes into account distance and location for volleyball players. At the ages of 12-14 years, the largest percentage of results appeared within the Very Good level, which indicates that the sample's level of perception was positive towards the test. The necessity of researching and investigating variables, whether physical, motor, or mental, that work to improve skill performance. It is necessary to use the test on an ongoing basis for the purpose of evaluating the player and identifying his level, as well as evaluating training programs.
**Keywords**: design, spatial perception, scrolling from top to bottom.

---

[1] Assistant Professor, (PhD), College of Physical Education and Sports Sciences, University of Baghdad. (khaleel.mohammed@cope.uobaghdad.edu.iq)

**Introduction**

One of the requirements of age groups is the continuous evaluation process of curricula and training, and perhaps one of the foundations upon which these curricula are built are the new tests, especially those that target mental and skill abilities together, because these groups constantly need mental motor changes that enable them to master the skill and help them with motor connection. Therefore, the role of tests and measurement came in this regard, and those responsible for it are still continuing to research and investigate the various situations that reveal to us the true level of the age groups in volleyball and what they have reached. To bring the skills to the stage of high quality in their application, mastering basic skills is the basis for mastering tactical and technical aspects in the training stages (Farhood, Mohammed, and Khudair 2023) and the reality of the situation indicates our lack of such tests that work to reveal mental abilities through skill performance. Moreover, the Most tests focused on the physical or skill aspect only, so attention must be paid to re-evaluating these measures and tests, identifying some of their advantages and disadvantages, and working to present them and then re-correct them. Through this study, (Zahraa and Ali 2022) we will design a composite test between two skill characteristics, which are passing from above and below and perception of distance. And time, and this gives the player to simulate different places on the field, and because the two skills are important for this group of the sample, because they use the two skills in trading to a very large extent, and because they lack or are weak in other skills, (Kadhim 2024) therefore it was necessary  Thus, from the above,  the researcher, who specializes in training age groups, sees the importance of constructing a test for perception of place and distance, as it gives objective results to the coach so that he can address the weak points and enhance the strengths. (Khlaif and Shnawa 2022) Among the previous studies that dealt with the process of constructing and codifying tests of perception of place and distance, especially in volleyball, there are many of them, including: Study (Rahman, 2022) The aim of the research is to identify the relationship of kinesthetic perception and its relationship to the accuracy of scoring from free throws in basketball among the players of the College of Physical Education and Sports Sciences team - Al-Qadisiyah University. Accordingly, the researcher assumed the existence of a significant relationship between sensory-motor perception and its relationship to the accuracy of scoring from free throws in basketball among the players of the College of Physical Education and Sports Sciences team - Al-Qadisiyah University. (Sabhan and Abd AL-Hussein 2015) The researcher used the descriptive, correlational approach to suit the nature of the research. The research sample included Al-Qadisiyah University basketball team players, who numbered (13) for the academic year 2021-2022, out of the research community, who numbered (17). Thus, the percentage of the sample from the total population was 76.47%. The researcher used the kinesthetic sensation test and the basketball free throw test. The tests for the research variables were conducted on the research sample on Monday, February 24, 2022, in the closed hall of the College of Physical Education and Sports Sciences, Al-Qadisiyah University, at 11 a.m., with the assistance of the work team. (Nashwan and Alzoubi 2022)

As for the study (Abdi, 2018) The study aimed to identify the effect of integrated training in gaming situations on the development of sensory-motor perception (distance and time), and the researcher assumed the positive effect of playing position exercises on

the development of some sensory-motor perception. (Nashwan and Allawi 2021) He used the experimental method, and the research sample included 34 players in an intentional manner, 16 players as an experimental sample to which the program was applied with the integrated training strategy over a period of 8 weeks (microcycle) in a period The first competition, where we relied in this program on the method of training in the style of playing situations, which contains a group of exercises similar to the real competition situations that the player can face during matches, and 16 other players as a control sample to which the traditional program was applied based on the method of separate training, which does not achieve a relationship with The real scenario that the player faces during the competition, and he achieved an improvement in the results of most tests for the experimental group in the sensory-motor perception tests. The positive effect of sensory-motor perception on the development of some basic skills. (Easa, Shihab, and Kadhim 2022) It is recommended to use mental training programs and place them in educational programs, as they contribute to facilitating learning and acquisition. And mastering the basic skills in the sport of football, especially for young people and children. It is also recommended to adopt training programs in playing situations because of its benefit in improving the level of achievement. (Kazim, M. J., Zughair, A. L. A. A., & Shihab 2019) As for the study (Mohammed, K. S., Flayyih, M. S., & Rumeeh), the research aimed to build a measure of the level of tactical performance of volleyball players applying for the Iraqi Premier League for the 2018-2019 season. The nature of the research problem. Then the researchers selected the research sample in an intentional manner for players from Iraqi clubs in the Premier League (B, A). (Kadhim, M. J., Shihab, G. M., & Zaqair 2021) The researchers adopted the entire community as a sample for the research, and their number reached (156) players distributed among (13) clubs. The sample was divided into (12) players, an exploratory experiment player representing (the police club), and (100) players representing the building. After a maximum period of two months had passed since the scale was applied to the construction sample, the researchers applied it to the standardization sample, which consisted of (144) players, which is the same as the construction sample, in addition to the rest of the number, which was (44) players, and the researchers extracted the grades and standard levels. The researchers reached several conclusions, the most important of which is: constructing a measure of the level of linear performance with (36) items. The scale was also codified in its final form, and its grades and standard levels were extracted. The researchers recommended using the current scale for volleyball coaches to identify the level of the sample with the aim of developing their own plans to improve or improve the level of planning performance. Building a measure of the level of plan performance among volleyball players for other samples and from different age groups.(Salman, KADHIM, and SHIHAB 2022)

As for a study (Mohammed K., 2023) It aims to determine grades and standard levels for some mental skills by researchers, which is considered of great importance, especially if it matches the targeted research sample, as conclusions were obtained, the most important of which are: The standard levels of mental skills reached the results of the sample studied within the level limited to (very good, good, average, and acceptable). And weak). The number of players at the (average) level was greater than the number of players at the other levels according to the results of the research scale. Then the researchers

recommended: working on using training programs accompanied by psychological programs that would develop the psychological, physical, skillful and tactical aspects side by side. It is necessary to conduct other studies on similar samples using axes of mental skills different from the axes of this research. As for the study (Fadil, 2022), it aimed to design and apply a test to measure the accuracy of receiving a volleyball using a forearm pass for female students. Study participants for the 2018/2019 academic year. The number of female students who were recruited reached 73. Based on the results of this study, the researcher concluded that the accuracy of receiving in volleyball and the use of the forearm pass for the female students who were analyzed was below average, as most of them showed below average performance. The researcher recommends adopting the test prepared in this study. The aim of this study is to evaluate the students' level of accuracy, in order to determine the degree to which they enjoy development. The researcher also recommends paying attention to developing accuracy among students by giving them more time to train on accuracy during volleyball lessons. As for the study (Ahmed. 2019)) The research aims to: Identifying motor satisfaction and physical self for advanced volleyball players. And extracting the scores and standard levels for the two scales of motor satisfaction and physical self. To achieve these goals, the researchers used the descriptive method in a survey style to suit the nature of the research problem. The research community included elite volleyball club players distributed among (6) clubs (Police - South Gas - Bahri - Peshmerga - Habbaniyah - Kufa), numbering (80) players. The researchers chose (70) players who represent the research sample in an intentional manner, and this constitutes The number is (75%) from the original community. As for the remaining players from the community, the researchers excluded them in order to conduct the exploratory experiment on them. The researchers divided the sample as follows: (40) players to experiment with the scientific foundations of the motor satisfaction and physical self scales, and (30) players to sample the main experiment as well. On the researchers' use of the motor satisfaction and physical self scales by Muhammad Hassan Allawi. The researchers verified the validity of the scales in Chapter Four. The researchers extracted the scores and standard levels for the scales. The researcher concluded: The use of (5) standard levels for the two scales indicated that the scores were not dispersed. The volleyball players enjoyed a good level of motor satisfaction and an average level of physical self-satisfaction. After that, the researchers made several recommendations, including: paying attention to studying other psychological variables for volleyball players. Conducting other studies on other sporting events.(Yaroub, Alkhafaji, and Sabhan 2024)

From the above review of previous studies, the researcher finds the importance of the process of constructing and codifying a test that takes into account the skill and movement aspect (distance and location) to determine the levels of the age group (12-14 years) as they are at the beginning of mastering the skill, which must be built on basic determinants that will cast astray in the future. To develop competition (Mahmood and Kadhim 2023)

The research aims: to design a test of spatial awareness and distance for the skills of passing from above and below for volleyball players aged (12-14 years) and to extract scores and standard levels.

**Method and tools:**

The descriptive survey method was adopted, because it agrees in solving the research problem, while the research sample consisted of Players from specialized schools for sports talent in volleyball, numbering (120) in (6) specialized schools (Baghdad, Diwaniyah, Anbar, Samawah, Babylon, Kirkuk). The researcher selected male players aged (12-14 years) and then the researcher divided the selected sample. To conduct a survey consisting of (10) players, and to build the test, (50) players were selected, to find the scientific foundations, and (60) players were chosen to codify the test and extract grades and standard levels. Table (1) shows the division of the sample.

**Table (1) shows the division of the sample**

| Legalization sample | Construction sample | Sample exploratory experiment | number | School name | T |
|---|---|---|---|---|---|
| 4 | 4 | 10 | 18 | Baghdad | 1 |
| 10 | 12 | - | 22 | Diwaniyah | 2 |
| 10 | 9 | - | 19 | Anbar | 3 |
| 10 | 5 | - | 15 | Heaven | 4 |
| 13 | 10 | - | 23 | Babylon | 5 |
| 13 | 10 | - | 23 | Kirkuk | 6 |
| 60 | 50 | 10 | 120 | the total | |
| 50% | 41.66% | 8.33% | 100% | Percentage | |

. Define the search variable:

The tests for the skills of passing from above and below in scientific sources take into account the evaluation of performance and accuracy of the place and through the researcher's experience as a player, coach and volleyball specialist, as well as the opinions of experts and specialists in the field of testing, measurement and volleyball. attached (1) It was found that there is a need to estimate distance because these players have learned the skill, but it is likely that there is a weakness in estimating location and distance, especially in volleyball matches for children. Therefore, the researcher decided to design a test that takes into account location and distance to influence the opposing player and for this test to be a criterion for players to build Training programs that develop them in this direction because the exercises that the trainer sets must have sufficient information to be well codified. After that, the researcher designed the test

attached (2) The aforementioned changes were made to it, and the test was presented to experts and specialists attached (1) To demonstrate its validity for measurement, the validity of the test was determined according to two indicators: the coefficient of difficulty and ease of the test and the discriminatory ability of the test.

**Exploratory experience:**

To ensure the suitability of the test to the level of the sample, as well as to determine the time required for application, as well as to know the obstacles that may be encountered in the main experiment of the test, the exploratory experiment was conducted on a sample of (10) players representing the Specialized School of Volleyball in Baghdad in the closed hall of the Volleyball Center. Specialist for Sports Talent, through which the appropriate test for the sample was reached, as well as knowledge of the difficulties and requirements needed by the researcher.

**Main experience:**

The test was applied to a sample of (50) players for a period of (4) days at the sports festival held by the Ministry of Youth and Sports in Baghdad. The results were recorded for statistical treatments for the purpose of construction, and the scientific basis for the sample scores was extracted.

Scientific parameters for the test:

Validity of the test:

For the purpose of extracting the validity of the test in question, the researcher extracted the validity of the test in two ways.

Firstly: Content veracity:

After the questionnaire for the test in question was distributed to experts and specialists attached (1) In the field of testing, measurement, and the game of volleyball, the researcher used the validity of the content to explore their opinions on the ability of the test to measure what it was designed for. "The test becomes valid if the experts or specialists in the field of testing agree, and measurement is that it measures what it was designed for, as most of them agreed on It is valid with some modifications" (Jasem, (2024)), as he took into account these modifications out of the researcher's belief in their sobriety and scientific value, which improves the test. Moreover, "one of the most important elements of validity is one of the most important standards of quality of the test or measurement, as he points out The truth or accuracy with which we measure the thing or phenomenon that it was designed to measure (Al-Mashhadani, 2015, p. 69)

Ease and difficulty level:

The researcher presented the statistical description of the test Testing spatial awareness and distance for handling passes from above and below in volleyball The subject of the research was that the arithmetic mean, standard deviation, and skewness coefficient were extracted, as it was shown through Table (2) that the values of the skewness coefficient are less than (1□) This indicates that the sample. Moderately distributed, as the test is considered appropriate if its distribution is normal, provided that the tests do not constitute a severe skewness (Allam, 2000, p. 78).

**Table (2) Values of the means, standard deviations, and skewness coefficient for the candidate tests**

| Torsion coefficient | standard deviation | The mediator | In the middle of a calculation | Unit of measurement | Statistical treatments | T |
|---|---|---|---|---|---|---|
| -.477 | 2.09294 | 44.0000 | 43.5200 | centimeter | Testing spatial awareness and distance for handling passes from above and below in volleyball | 1 |

**Discriminating ability:**

After the data for the skill test subject of the research was collected and transcribed, the researcher arranged the raw scores for each test in ascending order from "the lowest score to the highest score," from which (33%) of the highest scores and the same number of lower scores were selected in order to identify the test's ability to discriminate. between the high-level group and the low-level group" (Allah, 2011).

**Table (3) shows the discriminatory ability of the spatial awareness test and distance for handling passes from above and below in volleyball.**

| Calculated t value | | Low level | | High level | | Unit of measurement | Testing | T |
|---|---|---|---|---|---|---|---|---|
| Significance values | T | ± A | Q | ± A | Q | | | |
| 0.000 | 12.373 | .7185 | 45.4412 | 1.2554 | 41.1000 | degree | A1 | 1 |

**Significant < 0.05 degrees of freedom (32)**

**Stability:**

"Test reliability means the extent of the test's accuracy in measurement and the consistency of its results when applied multiple times to the same individuals."( (Al-Yasiri, 2010, p. 75) To know the stability and balance of the test, the researcher tested a group of the sample numbering (20) and retested the same sample after (7) days had passed from the first trial of the test and by observing the significance values that are less than the significance level ( 0.05), which indicates a significant correlation, as shown in Table (4).

Objectivity:

It was calculated by (correlation between the scores of two arbitrators (2□)They set scores for one group of individuals at the same time, as the results showed high reliability coefficients by noting the significance values, which are less than the significance level (0.05), which indicates the significance of the correlation, as shown in Table (4).

---

Arbitrators:

1-A. M. Dr. Laith Abdul Razzaq Muhammad, University of Baghdad/ College of Physical Education and Sports Sciences.

2- M. Dr. Ammar Falih Rumaih, University of Baghdad/ College of Physical Education and Sports Sciences.

**Table (4) shows the reliability and objectivity coefficient for testing spatial awareness and distance for handling passes from above and below in volleyball.**

| Indicative value | Objectivity | Indicative value | Consistency | Unit of measurement | Test name | T |
|---|---|---|---|---|---|---|
| .000 | .893** | .020 | .515 | degree | A1 | 1 |

The main experience of legalization:

After the test was designed and the foundations for its construction were extracted, its suitability for standardization was completed. The test was applied to a standardization sample of (60) players for a period of (4) days at the sports festival held by the Ministry of Youth and Sports in Baghdad. The results were recorded for statistical treatments for the purpose of extracting grades and standard levels. The scientific basis for the sample scores was extracted.

Statistical methods:

The researcher used the statistical package (SPSS). .

- Arithmetic mean.
- Standard deviation.
- The mediator.
- Torsion coefficient.
- Correlation coefficient (Pearson)
- Standard score (Z).
- Modified standard score (T).

**Results and discussion:**

Standards:

Standards mean a set of scores derived through statistical methods from raw scores and are used to compare the level of an individual's performance with the level of performance of the group to which he belongs. They are created by collecting the scores of a group of individuals who are similar in age and gender, in addition to some characteristics related to the subject in which we use the standards, and then analyzing the data with statistical methods. To obtain the levels (Hani, 2018), the standards were extracted according to the following law (arithmetic mean - raw score / standard deviation), and then this equation was entered by extracting the standard score (T). As shown in Table (5).

**Table (5) Standard Score (Modified) The objectivity of testing spatial awareness and distance for handling passes from above and below in volleyball**

| Repetition | Adjusted standard t-scores | Z standard scores | Raw scores | T | Repetition | Adjusted standard t-scores | Z standard scores | Raw scores | T |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 48.74 | -0.13 | 43.3 | 22 | 1 | 75.09 | 2.51 | 38.9 | 1 |
| 2 | 48.14 | -0.19 | 43.4 | 23 | 1 | 72.69 | 2.27 | 39.3 | 2 |
| 1 | 47.54 | -0.25 | 43.5 | 24 | 1 | 70.3 | 2.03 | 39.7 | 3 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 46.95 | -0.31 | 43.6 | 25 | 1 | 64.91 | 1.49 | 40.6 | 4 |
| 1 | 45.75 | -0.43 | 43.8 | 26 | 1 | 61.92 | 1.19 | 41.1 | 5 |
| 1 | 45.15 | -0.49 | 43.9 | 27 | 1 | 60.72 | 1.07 | 41.3 | 6 |
| 1 | 44.55 | -0.54 | 44 | 28 | 1 | 60.12 | 1.01 | 41.4 | 7 |
| 2 | 43.95 | -0.6 | 44.1 | 29 | 1 | 59.52 | 0.95 | 41.5 | 8 |
| 1 | 42.75 | -0.72 | 44.3 | 30 | 2 | 58.92 | 0.89 | 41.6 | 9 |
| 2 | 40.96 | -0.9 | 44.6 | 31 | 2 | 58.32 | 0.83 | 41.7 | 10 |
| 1 | 40.36 | -0.96 | 44.7 | 32 | 1 | 57.72 | 0.77 | 41.8 | 11 |
| 1 | 39.76 | -1.02 | 44.8 | 33 | 3 | 57.13 | 0.71 | 41.9 | 12 |
| 1 | 39.16 | -1.08 | 44.9 | 34 | 2 | 56.53 | 0.65 | 42 | 13 |
| 1 | 37.96 | -1.2 | 45.1 | 35 | 2 | 55.33 | 0.53 | 42.2 | 14 |
| 1 | 37.37 | -1.26 | 45.2 | 36 | 1 | 54.73 | 0.47 | 42.3 | 15 |
| 1 | 36.77 | -1.32 | 45.3 | 37 | 2 | 54.13 | 0.41 | 42.4 | 16 |
| 1 | 35.57 | -1.44 | 45.5 | 38 | 1 | 52.34 | 0.23 | 42.7 | 17 |
| 2 | 34.37 | -1.56 | 45.7 | 39 | 2 | 51.74 | 0.17 | 42.8 | 18 |
| 1 | 33.77 | -1.62 | 45.8 | 40 | 3 | 51.14 | 0.11 | 42.9 | 19 |
| 1 | 33.17 | -1.68 | 45.9 | 41 | 3 | 50.54 | 0.05 | 43 | 20 |
| 1 | 25.99 | -2.4 | 47.1 | 42 | 2 | 49.94 | -0.01 | 43.1 | 21 |
| **The total number of repetitions is 60** | | | | | | | | | |

**Standard levels of testing:**

The researcher chose (5) levels to measure his test, and when the standard scores were distributed among the approved levels, the standard levels appeared, as shown in Table (6).

**Table (6): Levels and their specific percentage in the normal distribution and raw and standard scores**
**(Za and T), the number of practices, and the percentage of the test**
**Spatial perception and distance for handling passes from above and below in volleyball.**

| Ratio | Sample number | Limits of the standard score T | z-score limits | Raw grade | The proportion determined in a normal distribution |
|---|---|---|---|---|---|
| 5% | 3 | 70.3- 75.09 | 2.03- 2.51 | 39.7- 38.08 | 2.14% very good |
| 6.66% | 4 | 60.12- 64.91 | 1.01- 1.49 | 41.4- 39.8 | 13.59% good |
| 70% | 42 | 40.36- 59.52 | -0.96 – 0.95 | 44.7- 41.5 | Average 68,27% |
| 15% | 9 | 33.17- 39.76 | -1.68 - -1.02 | 46.43- 44.8 | 13,59% popular |
| 1.66% | 1 | 25.99 | -2.4 | 48.1- 46.44 | 2.14% weak |

Table 6 shows that the percentages of standard levels shown by the sample in the test under investigation are as follows:

The sample showed varying percentages compared to the percentages determined at the first standard level (very good). The sample achieved a percentage of (5%), which is a higher percentage than determined for it in a normal distribution. At the second standard level (good), the sample achieved a percentage of (6.66%(This is a percentage lower than that determined for it in a normal distribution. At the third standard level (average), the sample achieved a percentage of (70%(This is a higher percentage than determined in a normal distribution, and at the fourth standard level (acceptable), the sample achieved a percentage of (15%This is a percentage higher than what was determined for it in the normal distribution. At the fifth standard level (weak), the sample achieved a percentage of (1%), which is a percentage lower than what was determined for it in the normal distribution. We note from the above that the test results for the sample were limited to the levels (very good, average, and acceptable). (Salih et al. 2024)

The researcher attributes these levels to the importance of the two skills, especially for this age group, as those responsible for training the age groups in specialized schools work to pay great attention to these two skills for their multiple uses, including attacking the opponent, including receiving the serve, (Saharuddin et al. 2018) and including preparing for the teammate, in addition to the fact that the trainers take into account the most accurate and important positions of training. On a continuous basis by dividing, it into small and large areas. Perhaps the player's awareness of these places came through these exercises that take long times and many repetitions because repeated practice of the skill leads to achieving the correct performance of the skill with consistency, harmony and control and without stiffness or tension. "Repetition and training gives the skill More mastery, competition, and more precise motor brilliance" (Fadil and Mohammed 2022)

Although there is variation in these levels, this is due to the principle of individual differences. Therefore, the sample's achievement of good percentages is due to increased training in motor and cognitive abilities through the skill in order for it to be a criterion for the player in achieving good results while practicing the skill in mini volleyball matches, and this is what he indicated. (Abdul-Khaleq) "Improvement in skill performance depends on the extent of attention and development of the physical and motor aspects related to the skill" (Ahmed and Yousif 2019)

The process of mastering skill performance in terms of perception of location and distance cannot be achieved except through the fundamental connection between mental processes and skill performance on the one hand and physical performance on the other hand, (Jasem et al. 2024) as the researcher was keen to measure the two skills and give accurate information about the training situation, so this test was one of the Those tests that were previously applied gave information about skills, but on the other hand, the levels were fairly good, and they are a step in the right direction for evaluating the training process in general and the level of spatial awareness and distance in particular. (Setar Mohammed, Aed Shamkhi, and Jabar Mohammed 2023)

**Conclusions:**

1. A test was developed that takes into account distance and location for volleyball players aged 12-14 years

2. The largest percentage of results appeared within the very good level, which indicates that the sample's level of perception was positive towards the test.

3. The necessity of researching and investigating variables, whether physical, motor, or mental, that work to improve skill performance.

4. It is necessary to use the test on an ongoing basis for the purpose of evaluating the player and identifying his level, as well as evaluating training programs.

5. It is necessary to take into account the sample category when designing tests and to commit to achieving the test goal easily when applied.

6. Constructing other tests on samples similar to the current research sample, as well as applying the test to other samples and extracting its scientific foundations.

**Appendices**

**Appendix (1) Names of experts and specialists**

| Workplace | Specialization | Name of expert And the scientific title | T |
|---|---|---|---|
| University of Baghdad/ College of Physical Education and Sports Sciences | Tests and measurement | Prof. Dr. Thaer Daoud Salman | 1 |
| University of Baghdad/ College of Physical Education and Sports Sciences | Volleyball tests and measurements | Prof. Dr. Fares Youssef Shaba | 2 |
| University of Baghdad/ College of Physical Education and Sports Sciences | Learn to move | Prof. Dr. Tariq Nizar Al-Taleb | 3 |
| University of Diyala/ College of Physical Education | tests and measurement/ volleyball | A. Dr. Muhammad Walid | 4 |
| University of Baghdad/ College of Physical Education and Sports Sciences | tests and measurement/ volleyball | or. Dr. Asmaa Hikmat | 5 |

Appendix (2) Test

**Test: Handling from above and below from over the net to the opposite court**

**Purpose of the test:** Measuring spatial awareness and distance for handling passes from above and below in a volleyball.

**Tools used:** Miniature volleyball court, measuring (14" long x (6" wide), (2) poles, (2) high, (2) blinds, (10m) long and (2m) wide, (5) volleyballs, tape, measuring tape.

**Performance Specifications:** The playing field opposite the laboratory is divided using adhesive tape into (5) areas for accuracy, including (2) in the two back corners of the playing field, (2) in the two front corners of the playing field, and the fifth square in

half of the playing field in exactly the center of (6). The five squares measure (1.5 m x 1.5 m) and are given These squares are numbers, as the square in the corner of the playing field is given in (center 1) (3), the square in (center 5) (4), the square in (center 6) (5), the square in (center 2) (1), and the square in (center 4) (2). As in Figure (1), the columns are placed at a height of (2 metres) and a cloth is attached to them, a length of (10 meters) and a width of (1.5 metres) to block the view from the laboratory, and they are parallel and adjacent to the net.

The tester stands in area (A), which is drawn at a distance of (1 m) from the attack line (front) in the middle of the field, and as shown in Figure (1), the person conducting the test (the coach) stands in the opposite field, specifically in area (B), also at a distance of (1 m). From the offensive line in the middle of the field, in turn, he throws the ball with both hands, along with the number of the square to which the tester must direct the ball, passing it from above or below.

**Registration method:**

❖  (2) trial attempts are given for each pass from above and below Without blocking sight.

❖  Each laboratory is given (10) attempts (5) for each skill, the average of which is calculated for the laboratory.

❖  The distance is calculated from the place where the ball falls to the player's designated area.

❖  A ball that falls outside the boundaries of the designated area is recorded for its distance from the place of its fall to the designated area.

❖  The ball that falls outside the boundaries of the playing field is discarded and is counted among the ten attempts.

2- It is given (Zero) for the ball that falls within the specified area.

**Note: The lower the ball's falling distance, the higher the tester's perception rate.**

# References

Ahmed, Khalil Star Mohammed Asst Dr, and Dr Tareq Ali Yousif. 2019.
"Determination of Standard Levels of Motor and Physical Satisfaction of
Advanced Volleyball Player." *Modern Sport* 18(4).

Easa, Fahem Abdul Wahid, Ghadah Muayad Shihab, and Mohammed Jawad Kadhim.
2022. "The Effect of Training Network Training in Two Ways, High Interval
Training and Repetition To Develop Speed Endurance Adapt Heart Rate and
Achieve 5000 Meters Youth." *Revista Iberoamericana de Psicologia Del
Ejercicio y El Deporte* 17(4):239–41.

Fadil, Asmaa Hikmet, and Khalil Setar Mohammed. 2022. "Constructing and
Rationing A Test for the Skill of Receiving the Serve From Above in Volleyball
for Third-Year Students in the Faculty of Physical Education and Sports
Sciences." *Revista Iberoamericana de Psicología Del Ejercicio y El Deporte*
17(3):140–42.

Farhood, Nidaa, Khaleel Mohammed, and Muwafaq Khudair. 2023. "Building and
Codifying Optimism and Pessimism Measures for Players of Elite Clubs in the
Premier Volleyball League."

Jasem, Zeena Khaled, Khaleel Setar Mohammed, Mohannad Salman Dawood, and
Khuloud Liayth Abd Alkreem. 2024. "The Psychological Well-Being and Its
Relationship with the Functional Creativity of Female Gymnastics' Trainers."
*Annals of Applied Sport Science* 12(2):0.

Kadhim, M. J., Shihab, G. M., & Zaqair, A. L. A. A. 2021. "The Effect of Using Fast
And Direct Cooling after Physical Effort on Some Physiological Variables of
Advanced Football Players." *Annals of the Romanian Society for Cell Biology*
25(6):10014–20.

Kadhim, Mohammed Jawad. 2024. "Social Networks' Place in Contemporary

Political Movements." *International Journal of Social Trends* 2(2):51–59.

Kazim, M. J., Zughair, A. L. A. A., & Shihab, G. M. 2019. "The Effect of Zinc Intake on the Accumulation of Lactic Acid after Cooper Testing among Football Premier League Referees." *Sciences Journal Of Physical Education* 12(5):260–68.

Khlaif, Imad Kadhim, and Talib Faisal Shnawa. 2022. "The Effect of Using Therapeutic Physical Exercises Accompanying Physical Therapy in the Rehabilitation of Lumbar Disc Herniation for Football Players Aged (25-25)." *Revista Iberoamericana de Psicología Del Ejercicio y El Deporte* 17(1):33–35.

Mahmood, Hasnaa Ali, and Mohammed Jawad Kadhim. 2023. "Special Exercises for Some Physical, Kinetic and Electrical Abilities Accompanied by Symmetrical Electrical Stimulation in the Rehabilitation of the Muscles of the Legs for Patients with Simple Hemiplegic Cerebral Palsy." *Pakistan Heart Journal* 56(1):580–95.

Nashwan, Nashwan A., and Haidar M. Allawi. 2021. "Some Mental Abilities and Their Impact on the Level of Positive and Negative Defense Performance of Advanced Boxers in the Sport of Boxing." *Multicultural Education* 7(4):52–61.

Nashwan, Nashwan Abdullah, and Amal Sulaiman Alzoubi. 2022. "The Role of the Faculty of Physical Education in Developing Citizenship Values from the Perspective of Postgraduate Students at Yarmouk University."

Sabhan, Hussein, and Deena Abd AL-Hussein. 2015. "Visual Vision, and Their Relationship in the Performance of High-Spike Diagonal and Rectum Skill Accuracy Volleyball." *Journal of Physical Education* 27(4).

Saharuddin, A. I., NZMN Rashid, N. S. Mohd Noor, N. S. Abdul Rahman, A. Ismail, W. R. Wan Abdul Razak, F. Pardi, A. H. Jawad, K. Ismail, and K. A. Radzun.

2018. "High-Throughput Optimization of Effective Microbes Nutrient Formulation via Automated Media Optimization System (AMOS)." *International Journal of Engineering & Technology* 7(4.14):1–6.

Salih, Ismael Hameed, Ali Mseer Yaseen, Kamal Jalal Naseer, AmarAbbas Attieh, and Mohammed Jawad Kadhim. 2024. "THE IMPACT OF COMPETITIVE SPEED EXERCISES ON JUNIOR BOXERS'EFFECTIVENESS OF SKILL PERFORMANCE AND COUNTERATTACK SPEED." *International Development Planning Review* 23(1):149–62.

Salman, Salah Mahmood, MOHAMMED JAWAD KADHIM, and GHADAH MUAYAD SHIHAB. 2022. "The Effect of Special Exercises in the Rehabilitation of the Shoulder Muscle for the Youth Wrestling Category." *International Journal of Early Childhood Special Education* 14(5).

Setar Mohammed, K., D. Aed Shamkhi, and M. Jabar Mohammed. 2023. "Determining the Grades and Standard Levels of Some Mental Skills as an Indicator for the Selection of Young Volleyball Players. SPORT TK-Revista EuroAmericana de Ciencias Del Deporte, 12, 28."

Yaroub, Ansam, Mayada Zuhair Alkhafaji, and Hussein Sabhan. 2024. "THE EFFECT OF USING SPORTS MOVIES AS AUTHENTIC MATERIAL ON (ESP) LEARNING AMONG (PE) DOCTORAL STUDENTS IN IRAQ: TASK-BASED LEARNING APPROACH." *International Development Planning Review* 23(1):1267–88.

Zahraa, SAif Abdul, and Ahmed Farhan Ali. 2022. "The Effect of Musculus Rhomboideus Fibromyalgia Rehabilitation Program in Youth and Advance Freestyle and Greco–Roman Wrestlers." *Journal of Physical Education* 34(2).