DESIGNING AND STANDARDIZING A TEST FOR COURT DEFENSE AGAINST ATTACKS (SPIKE) FOR PREMIER LEAGUE VOLLEYBALL PLAYERS

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Abstract
Research Objectives:
1. Design a test for court defense against attacks (spike) for Premier League volleyball players.
2. Standardize the test for court defense against attacks (spike) for Premier League volleyball players.
3. Establish standardized performance levels that can be used to assess the efficiency of front-row players in court defense after executing a spike.
The researcher employed the descriptive survey method due to its suitability for the nature of the study. The research population consisted of 128 Premier League volleyball players, with a sample size of ninety-four players selected from six clubs. The researcher designed and standardized the test following scientifically recognized procedures for test design and standardization. Data was processed using SPSS to achieve the study's objectives.
Findings:
• The test for court defense against attacks (spike) for Premier League volleyball players was successfully designed and standardized.
• Norm-referenced scores and performance levels for the test were established.
• The test effectively evaluates the accuracy of court defense against spike attacks for all Premier League volleyball players.

Keywords: Standardization, Court Defense Test, Spike, Premier League Players, Volleyball.

Introduction

1. Research Introduction

1.1 Introduction and Research Importance

Volleyball is a team sport that relies on the integration of offensive and defensive skills to ensure superiority in competitions (Bompa & Haff, 2009, p. 55). Among the essential skills that directly influence team performance is court defense after a spike, which serves as the first line of defense in preventing the opposing team from scoring points (McGown, Fronske, & Moser, 2001, p. 22). The spike is one of the most powerful offensive weapons in volleyball, as it depends on speed and precision, requiring defensive players to possess quick motor responses, high technical skills, and the ability to read opponents' movements and anticipate the ball's trajectory correctly (Schmidt & Lee, 2019, p. 115).

With the significant advancements in playing strategies and the increasing power of offensive plays, especially in elite leagues, court defense has become more complex. This necessitates the development of scientific methods to measure players' performance efficiency in this skill. Relying solely on subjective evaluations or traditional observations is no longer sufficient; instead, there is a need to design objective assessment tools that contribute to accurate performance analysis and provide quantitative data to guide training programs effectively.

Given the importance of aligning defensive skills with offensive ones, it has become crucial to enhance defensive abilities, particularly in defending against spikes, which pose a challenge to teams and individual players. This skill requires quick reactions, strength, and an element of surprise, as executed by opponents. Effective court defense constitutes half of a team's performance and is just as important as offensive skills, if not more so, in determining match outcomes. The higher the players' proficiency in court defense after a spike, the greater the team's chances of gaining points and winning sets and matches.

Significance of Study

The significance of this research lies in enhancing deep court defense skills (recovering the ball from the net). Therefore, it is essential to design skill-based tests to assess this specific skill level, allowing for the identification of strengths and weaknesses. This will enable the development of appropriate solutions to improve defensive performance through precise measurement and targeted training, enhancing court defense efficiency in volleyball.

1.2 Research Problem

Observers and experts in volleyball at various levels have noticed a significant dominance of offensive skills over defensive ones. To establish a balance between offense and defense, it has become necessary for volleyball specialists to enhance defensive performance, particularly in deep court defense (recovering the ball from the net).

This need motivated the researcher to design specific tests to measure this skill, which will assist in monitoring progress and development. These tests will serve as objective evaluation tools, providing scores and performance levels that can be used to assess players' defensive capabilities. The goal is to align defensive skills with the advancements in offensive play, thereby improving overall game performance and achievement levels.

1.3 Research Objectives

1. To design a test for court defense after a spike for elite volleyball league players.
2. To standardize the test for court defense after a spike for elite volleyball league players.
3. To establish performance benchmarks that can be used to evaluate the efficiency of front-row players in court defense after a spike.

1.4 Research Scope

- Human Scope: Players of the elite volleyball league clubs for the 2024/2025 season.
- Time Scope: From August 13, 2024, to November 18, 2024.

- Location Scope: Indoor sports halls of the selected club samples.

2. Research Methodology
2.1 Research Method
The researcher adopted the **descriptive method using a survey approach**, as it is suitable for the nature and objectives of the study.

2.2 Research Population and Sample
The research population consisted of 128 players from the elite volleyball league. The sample was drawn from six clubs, comprising ninety-four players in total.
- Construction Sample: sixty-four players from four clubs.
- Scientific Foundations Group: forty-eight players from three clubs.
- Pilot Study Group: sixteen players from one club.
- Application Sample: thirty-two players from two clubs.

Table (1) illustrates the distribution of the research sample.

No.	Clubs	Population	Scientific Foundations Sample	Pilot Sample	Application Sample	Outside Sample
1	Al-Shurta	16	16	—	—	—
2	North Refineries	16	16	—	—	—
3	Peshmerga	16	16	—	—	—
4	Al-Muqdadiya	16	—	16	—	—
5	Erbil	16	—	—	16	—
6	South Gas	16	—	—	16	—
7	Nineveh	16	—	—	—	16
8	Al-Daghara	16	—	—	—	16
Total		**128**	**48**	**16**	**32**	**32**
Percentage		**100%**	**37.5%**	**12.5%**	**25%**	**25%**

2-3 Data Collection Methods:
The researcher utilized the following data collection methods:
- **Content analysis** of scientific sources and references.
- **Designed tests** specifically for the study.
- **A recording and data extraction form** for test results (Ap 3).

2-4 Designing Tests for Court Defense Against Attack (Spike) for Premier League Volleyball Players:
The researcher reviewed and analyzed numerous scientific sources and references, including:
- Eileen Wadee Faraj (2011, p. 135)
- Riyadh Khalil Khammass Al-Humairi (2008, p. 77)
- Ali Saloom Jawad Al-Hakim (2004, p. 38)
- Mohammed Ibrahim Shehata & Mohammed Jabir Breqea (1997, p. 44)

- **Suhad Qasim Mohammed (2013, p. 105)**
- **Fruich:** *A Guide to Volleyball* **(1978, p. 18)**

These references were studied to design and standardize court defense tests against attacks (spikes) for Premier League volleyball players, following scientific procedures.

The researcher developed an initial version of the tests along with their instructions in a questionnaire form (Ap.1), which was then presented to experts (Ap. 2) for validation. The experts assessed the tests' suitability and determined evaluation criteria. After collecting and analyzing the responses, the agreement rate was 100%, confirming the tests' validity. Consequently, the tests were finalized in their preliminary form.

2-4-1 Specifications of the Court Defense Test Against Attack (Spike) for Position (2) in Premier League Volleyball Players:

Test Name: Court Defense Test Against Attack (Spike) for Position (2).

Objective: Measure the accuracy of court defense against attack (spike) for Position (2).

Equipment:

- Volleyball court
- (5) Official volleyballs
- Whistle
- Standing platform (1 meter high)

Procedure:

- The tested player's court area is divided into six zones, comprising three front zones and three back zones.
- The two central zones are of equal size, while the right and left side zones correspond to the player's designated position.
- The standing platform is placed on the opposite side of the court, facing the tested player.

Performance Description:

- The player stands at Position (2) while the coach stands on the opposite side on the standing platform, holding two volleyballs.
- Upon hearing the whistle, the coach tosses the first ball to the tested player, who performs a spike.
- As the player lands, the ball retriever throws the second ball to the tested player, who must direct the ball toward a designated court zone based on priority.

Scoring:

Each player gets **five attempts**, and the total score is based on these attempts. Points are awarded as follows:

- 4 points for directing the ball to Position (2).
- 3 points for directing the ball to Positions (3) or (4).
- 2 points for directing the ball to Position (6).

- 1 point for directing the ball to Positions (1) or (5).
- 0 points for an unsuccessful attempt or if the ball goes out of bounds.
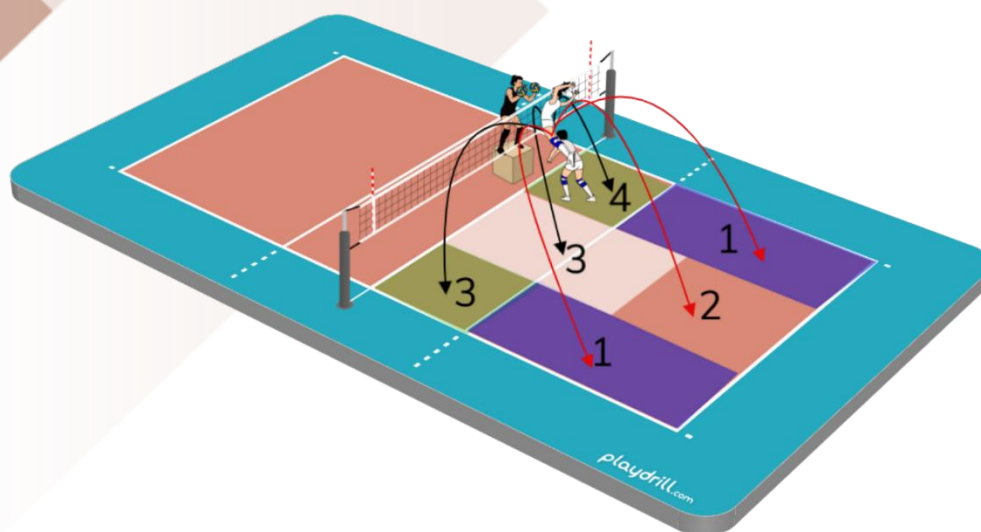
Figure (1): *Illustrates the court defense test from the attack position (spike) at position (2) for players in the premier volleyball league.*

2-4-2 Specifications of the Court Defense Test from the Attack Position (Spike) at Position (3) for Premier League Volleyball Players:

Test Name: Court Defense Test from the Attack Position (Spike) at Position (3).

Objective of the Test: To measure the accuracy of court defense from the attack position (spike) at position (3).

Equipment: Volleyball court, five legal volleyballs, whistle, standing platform with a height of one meter.

Procedure: The player's court area is divided into six regions, with three front zones and three back zones. The two central zones are of equal size, while the right and left zones are sized according to the player's position. The standing platform is placed in front of the player, facing the court.

Description of Performance: The player stands in position (3) and faces the court from the standing platform. A person holding two balls stands opposite the player. Upon hearing the whistle, the ball holder throws the ball to the player, who performs the spike. As the player moves down, the ball holder throws the second ball to the player, who must direct the ball to one of the designated court regions.

Scoring: The player is given five attempts, and the total score for the five attempts is calculated. The points are scored as follows:

- 4 points for directing the ball to the center of position (3).
- 3 points for directing the ball to positions (2) and (4).
- 2 points for directing the ball to position (6).
- 1 point for directing the ball to positions (1) and (5).
- 0 points if the player fails to perform the task or sends the ball out of bounds.
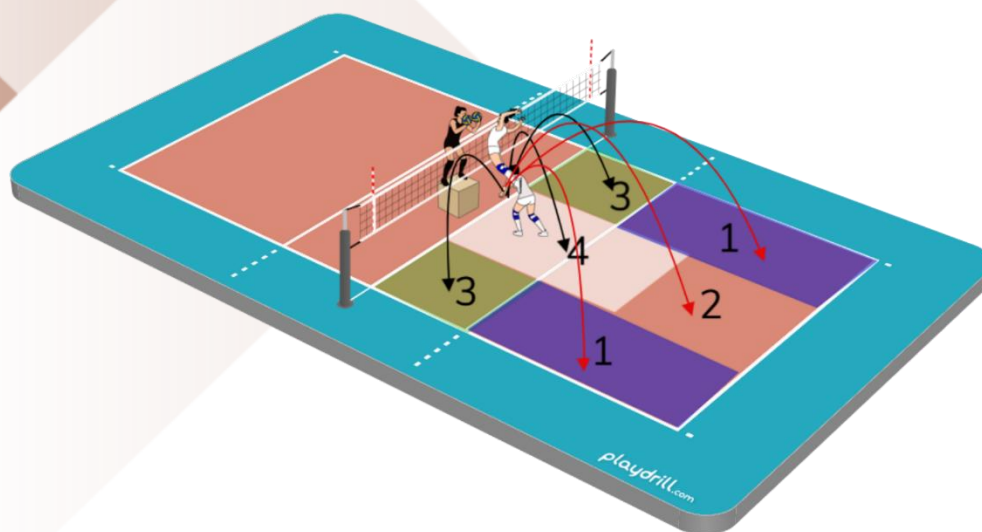
Figure (2) illustrates the court defense test from the attack position (spike) at position (3) for Premier League volleyball players.

2-4-3 Specifications of the Court Defense Test from the Attack Position (Spike) at Position (4) for Premier League Volleyball Players:

Test Name: Court Defense Test from the Attack Position (Spike) at Position (4).

Test Objective: To measure the accuracy of court defense from the attack position (spike) at position (4).

Equipment: Volleyball court, five official volleyballs, whistle, standing platform (1 meter high).

Procedures: The player's court area is divided into six regions: three front areas and three back areas. The central two areas are equal in size, while the left and right-side areas are equal in size to the center area the player is positioned in. The standing platform is placed opposite the court in front of the player.

Performance Description: The player stands in position (4) and faces the court on the standing platform while a person holds two balls. Upon hearing the whistle, the ball holder throws the first ball to the player, who performs a spike. As the player descends, the ball holder throws the second ball at the player, who then directs the ball to one of the designated regions on their court.

Scoring: Each player is given five attempts, and the total score for the five attempts is calculated. Points are awarded as follows:

- 4 points for directing the ball to center position (4).
- 3 points for directing the ball to positions (2) and (3).
- 2 points for directing the ball to position (6).
- 1 point for directing the ball to positions (1) and (5).
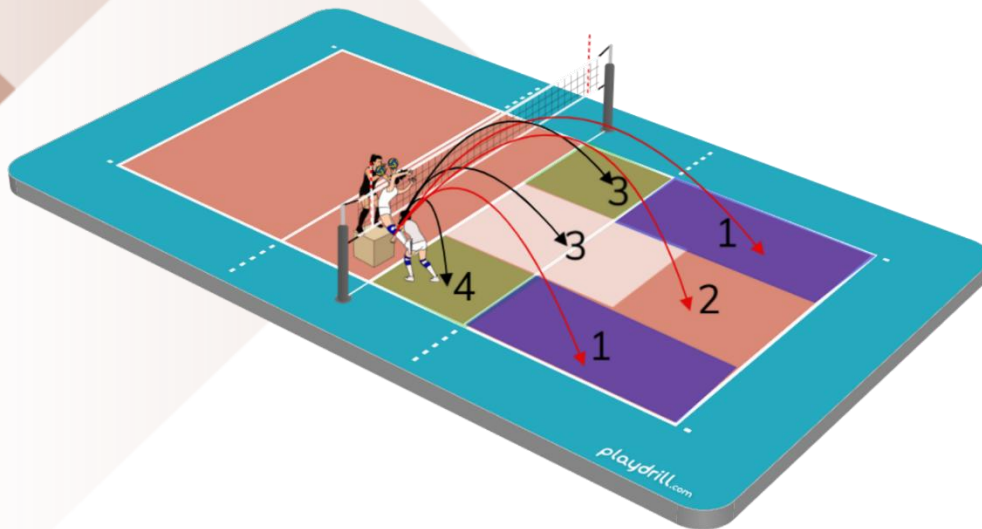- 0 points if the player fails the attempt or directs the ball out of the court.

Figure (3) (Illustrates the court defense test from the attack position (spike) for position (4) for Premier League volleyball players)

2-5 The Pilot Experiment:

The researcher applied the designed tests on a sample of sixteen players from Al-Muqaddadiya Club on Monday, September 9, 2024, at the Al-Muqaddadiya Volleyball Club field. The purpose of the pilot experiment was to:

• Train the supporting team on how to perform the tests(Ap.4).
• Verify the dimensions and distances for the tests.
• Ensure the suitability of the tests for the research sample.
• Confirm the effectiveness of the tools used in the research.
• Determine the time required to complete each test.

2-6 Scientific Foundations for the Defense Test from the Attack Position (Spiking) for Elite Volleyball Players:

2-6-1 Test Validity:

The validity of the test was established through the following:

• **Content or Logical Validity:** The researcher ensured this type of validity by clarifying the concept of the subject being measured, which is the accuracy of court defense from the attack position (spiking) for elite volleyball players. This was achieved by analyzing the content of scientific references.

• **Face Validity:** The researcher obtained face validity, which serves as an indicator of the experimental validity of the tests, by extracting the square root of the reliability coefficient. Face validity means "the test is designed to measure and evaluate the trait it was intended for" (Ali Saloum, 2004, p. 58).

2-6-2 Reliability:

To ensure the reliability of the tests and their ability to provide consistent or comparable results when reapplied, the researcher employed the method of test-retest. This was done on a sample of 48 players from the clubs (Al-Police, North Oil, Peshmerga) on September 17,

18, and 19, 2024, with one day allocated per club. The test was re-administered on September 24, 25, and 26, 2024, with the second application following the same specifications and procedures as the first. Table (2) shows the test days.

Table (2) Shows the Days of the Initial and Retest Application of the Test on the Sample

No.	Club	Date of First Application	Date of Second Application
1	Al-Shurta	17/9/2024	24/9/2024
2	North Oil Refinery	18/9/2024	25/9/2024
3	Peshmerga	19/9/2024	26/9/2024

2-6-3 **Objectivity:**

The objectivity of the test was determined by finding the correlation coefficient between the ratings of two referees[1] who recorded the test results.

Table (3) Reliability, Self-Validity, and Objectivity Coefficients for the Defense Test from Attack Position (Spike) for Elite Volleyball Players

#	Test	First Application	Second Application	Reliability	Self-Validity	Objectivity
1	Defense from Attack Position (Spike) for Position 2	Mean: 14.416, SD: 2.499	Mean: 15.625, SD: 2.027	0.972	0.985	0.93
2	Defense from Attack Position (Spike) for Position 3	Mean: 16.520, SD: 2.483	Mean: 17.125, SD: 2.017	0.985	0.992	0.96
3	Defense from Attack Position (Spike) for Position 4	Mean: 13.625, SD: 2.710	Mean: 15.020, SD: 2.108	0.951	0.975	0.95

2-7 Final Application:

The main experiment for the research was conducted from October 14, 2025, to October 17, 2024, on a sample of thirty-two players from the research population, representing players from the clubs Arbil and Gas Al-Janoub. During the application, the following aspects were considered:

• Preparation of the registration forms.

• Allowing time for warm-ups.

• Ensuring players were reminded to perform the test seriously.

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[1] • The referees:
• Prof. Dr. Tariq Ali Youssef – Faculty member and volleyball player.
• Dr. Mohammed Khalil Ibrahim – Second-degree volleyball referee.

2-8 Statistical Methods:

• **Mean**: Used to calculate the average or arithmetic mean of the data.

• **Standard Deviation**: Measures the extent of variation or dispersion of data from the mean.

• **Mode**: The value that occurs most frequently in the dataset.

• **Square Root**: Primarily used in calculating the standard deviation and other data analysis functions.

• **Skewness**: Reflects the asymmetric or tilt in the data distribution.

• **Percentage**: Represents data as a fraction of one hundred.

• **Pearson's Simple Correlation Coefficient**: A measure of the linear relationship between two variables.

• **Standard Score (6 Sigma)**: A measure of how far a data point is from the mean, expressed in terms of standard deviations.

3- Presentation of Results:

3-1 **Statistical Description, Scores, and Standard Levels for the Court Defense Test from the Attack Position (Spike) for Premier League Volleyball Players**:

3-1-1 **Statistical Description, Scores, and Standard Levels for the Court Defense Test from the Attack Position (Spike) for Position (2) for Premier League Volleyball Players**:

3-1-1-1 **Statistical Description of the Court Defense Test from the Attack Position (Spike) for Position (2) for Premier League Volleyball Players**:

Table (4) Statistical Description of the Court Defense Test from the Attack Position (Spike) for Position (2) for Premier League Volleyball Players

Mean (M)	Standard Deviation (±SD)	Mode	Minimum Value	Maximum Value	Skewness
15.156	1.919	16	11	20	-0.439

Explanation:

Table (4) shows that the mean value for the test was 15.156 with a standard deviation of 1.919. The mode was sixteen, with the highest value of the test reaching twenty and the lowest value being eleven. The skewness value was -0.439, which is between ±1, indicating that the test is suitable for the sample level and close to a normal distribution.

3-1-1-2 **Standard Levels for the Court Defense Test from the Attack Position (Spike) for Position (2) for Premier League Volleyball Players**:

Table (5) Standard Levels for the Court Defense Test from the Attack Position (Spike) for Position (2)

Level	Values	Frequency	Percentage (%)
High	19 and above	6	18.75%
Medium	15 – 18	18	56.25%
Low	14 and below	8	25%

3-1-1-3 **Standard Scores for the Court Defense Test from the Attack Position (Spike) for Position (2) for Premier League Volleyball Players**:

Table (6) Standard Scores for the Court Defense Test from the Attack Position (Spike) for Position (2)

Raw Score	6 Sigma	Raw Score	6 Sigma
11	14	16	57
12	23	17	66
13	31	18	75
14	40	19	83
15	49	20	92

3-1-2 **Statistical Description, Scores, and Standard Levels for the Court Defense Test from the Attack Position (Spike) for Position (3) for Premier League Volleyball Players**:
3-1-2-1 **Statistical Description for the Court Defense Test from the Attack Position (Spike) for Position (3) for Premier League Volleyball Players**:

Table (7) Statistical Description for the Court Defense Test from the Attack Position (Spike) for Position (3)

Mean (S̄)	Standard Deviation (±σ)	Mode	Lowest Value	Highest Value	Skewness
16.437	2.368	17	12	20	-0.237

The table (7) shows that the mean value is 16.437 with a standard deviation of 2.368. The mode is seventeen, the highest value for the test is twenty, and the lowest value is twelve. The skewness value is -0.237, which falls between ±1. This indicates that the test is suitable for the sample's level and is close to a normal distribution.

3-1-2-2 **Standard Levels for the Court Defense Test from the Attack Position (Spike) for Position (3) for Premier League Volleyball Players**:

Table (8) Standard Levels for the Court Defense Test from the Attack Position (Spike) for Position (3)

Level	Values	Frequencies	Percentage (%)
High	19 and above	7	21.875%
Medium	15 – 18	19	59.375%
Low	14 and below	6	18.75%

3-1-2-3 **Standard Scores for the Court Defense Test from the Attack Position (Spike) for Position (3) for Premier League Volleyball Players**:

Table (9) Standard Scores for the Court Defense Test from the Attack Position (Spike) for Position (3)

Raw Score	6 Sigma	Raw Score	6 Sigma
12	19	17	54
13	26	18	61

14	33	19	68
15	40	20	75
16	47		

3-1-3 **Statistical Description, Scores, and Standard Levels for the Court Defense Test from the Attack Position (Spike) for Position (4) for Premier League Volleyball Players**:
3-1-3-1 **Statistical Description for the Court Defense Test from the Attack Position (Spike) for Position (4) for Premier League Volleyball Players**:

Table (10) Statistical Description for the Court Defense Test from the Attack Position (Spike) for Position (4)

Statistic	Value
Mean (S)	14.312
Standard Deviation (±σ)	2.131
Mode	14
Lowest Value	10
Highest Value	17
Skewness	0.146

The table (10) shows that the mean value is 14.312 with a standard deviation of 2.131. The mode is fourteen, the highest value in the test is seventeen, and the lowest value is ten. The skewness coefficient is 0.146, which is within the range of ±1, indicating that the test is suitable for the sample level and approximates a normal distribution.

3-1-3-2 **Standard Levels for the Court Defense Test from the Attack Position (Spike) for Position (4) for Premier League Volleyball Players**:

Table (11) Standard Levels for the Court Defense Test from the Attack Position (Spike) for Position (4)

Level	Values	Frequency	Percentage
High	16 and above	9	28.125%
Medium	13–15	16	50%
Low	12 and below	7	21.875%

3-1-3-3 **Standard Scores for the Court Defense Test from the Attack Position (Spike) for Position (4) for Premier League Volleyball Players**:
Table (12) Standard Scores for the Court Defense Test from the Attack Position (Spike) for Position (4)

Raw Score	6 Sigma	Raw Score	6 Sigma
10	16	14	48
11	24	15	55

12	32	16	63
13	40	17	71

4- Conclusions and Recommendations:

4-1 Conclusions:

• The court defense tests from the attack position (spike) for premier league volleyball players have been designed and standardized.

• Standard scores and levels for the court defense tests from the attack position (spike) for premier league volleyball players have been established.

• The accuracy of testing court defense from the attack position (spike) for premier league volleyball players is feasible for all players in the premier league.

4-2 Recommendations:

• Periodically use the court defense tests from the attack position (spike) to assess the performance level of premier league volleyball players.

• Standardize the test for youth and junior categories of volleyball players.

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Appendix (1) Survey Opinions of Experts and Specialists on the Tests Designed by the Researcher

Dear Esteemed Professor ....,

The researcher extends his best greetings to you...

The researcher intends to conduct his study entitled *"Design and Standardization of Court Defense Tests from an Offensive Position (Spike) for Premier League Volleyball Players."*

In this regard, the researcher kindly requests your assistance in determining the validity of the attached tests, the construction method used in the tests, and also the method of performance and recording by placing a check mark (Π) next to the designed tests that you deem appropriate and beneficial to the research.

Kindly accept this and respond in support of the scientific research... With respect.

- (Researcher / Amjad Hamid Badr, Tel: 07705874798) For your information, with appreciation.

Designed Tests Presented to Experts and Specialists

Does Not Apply	Applies	Test Name	Test Number
		Court Defense Test from Offensive Position (Spike) for Position (2)	1

Test Name: Court Defense Test from Offensive Position (Spike) for Position (2)

Test Objective: To measure the accuracy of court defense from an offensive position (spike) for position (2).

Tools: Volleyball court, (5) legal volleyballs, whistle, standing platform (1 meter height).

Procedure:

- The player's court area is divided into (6) zones: three front zones and three back zones. The middle zones are equal in size, while the left and right-side zones correspond to the main area where the player is positioned.

- The standing platform is placed opposite the court, facing the player being tested.

- The coach holds two balls and, upon hearing the whistle, throws one ball at the player, who performs the spike. Afterward, the ball holder throws the second ball, which the player directs into one of the designated zones of the court based on importance.

Performance Description:

- The player stands at position (2) while the coach is stationed at the opposite side of the court on the standing platform.

- After hearing the whistle, the coach throws a ball at the player, who executes the spike. After the player's action, the ball holder throws the second ball, and the player sends the ball to one of the designated zones of the court.

Recording:

- The player is given (5) attempts, and the total points from these attempts are calculated. Based on your opinion, the points for each zone are as follows:

- o ( ) points for directing the ball to Zone Center (1).
- o ( ) points for directing the ball to Zone Center (2).
- o ( ) points for directing the ball to Zone Center (3).
- o ( ) points for directing the ball to Zone Center (4).
- o ( ) points for directing the ball to Zone Center (5).
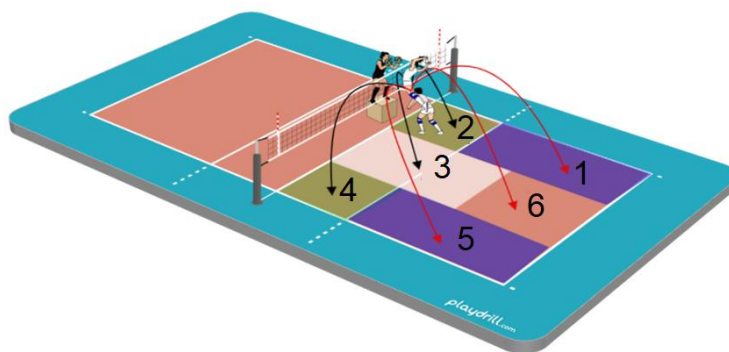- o ( ) points for directing the ball to Zone Center (6).

Figure (1) illustrates the court defense test from an offensive position (spike) for position (2) for elite volleyball players.

Not Suitable	Suitable	Test Name	Test Number
		Court defense test from offensive position (spike) for position (3)	2

Test Name: Court defense test from offensive position (spike) for position (3).

Objective of the test: Measuring the accuracy of court defense from offensive position (spike) for position (3).

Tools: Volleyball court, (5) legal volleyballs, whistle, standing platform at a height of (1) meter.

Procedure:
The player's court area is divided into (6) zones, consisting of three front zones and three back zones. The central two zones are of equal size, while the left and right-side zones correspond to the player's position. The standing platform is positioned opposite the player on the court.

Performance Description:
The player stands in position (3) and faces the opposite side of the court on the standing platform. A person holds two balls, and when the whistle is heard, the ball holder throws the first ball to the player. The player performs the spike, and as the ball lands, the ball holder throws the second ball to the player, who directs it to one of the zones of the court.

Scoring:

Each player is given (5) attempts, and the total score of the five attempts is calculated. The scoring per zone is as follows (your input is needed for the points per zone):

- ( ) points for directing the ball to Zone (1).
- ( ) points for directing the ball to Zone (2).
- ( ) points for directing the ball to Zone (3).
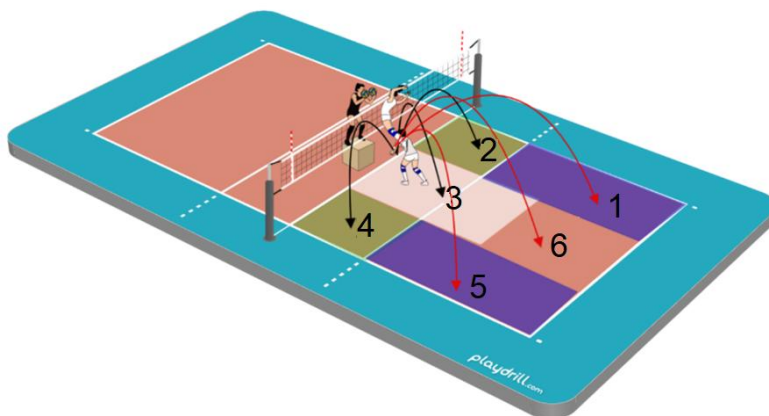- ( ) points for directing the ball to Zone (4).
- ( ) points for directing the ball to Zone (5).
- ( ) points for directing the ball to Zone (6).

Figure (2) illustrates the court defense test from the offensive position (spike) for position (3) for the elite volleyball league players.

Test Name: Court Defense Test from Offensive Position (Spike) for Position (4).

Test Goal: To measure the accuracy of court defense from the offensive position (spike) for position (4).

**Equipment**: Volleyball court, five legal volleyballs, whistle, standing platform at a height of one meter.

Procedures: The player's court area is divided into six regions, with three front regions and three back regions. The middle two regions are equal in size, while the side regions (right and left) are proportional to the area of the center the player is in. The standing platform is placed on the opposite side of the court facing the player being tested.

Performance Description: The player stands in position (4) and faces the court on the standing platform. A person holds two balls. Upon hearing the whistle, the ball holder throws a ball to the player, who performs the spike. After the spike, the ball holder throws the second ball, and the player redirects the ball to one of the designated court areas.

Scoring: Each player is given five attempts, and the total points for the five attempts are calculated. According to your opinion, the points for each region are as follows:

- ( ) points for directing the ball to Center Area (1).
- ( ) points for directing the ball to Center Area (2).

- **( )** points for directing the ball to Center Area (3).
- **( )** points for directing the ball to Center Area (4).
- **( )** points for directing the ball to Center Area (5).
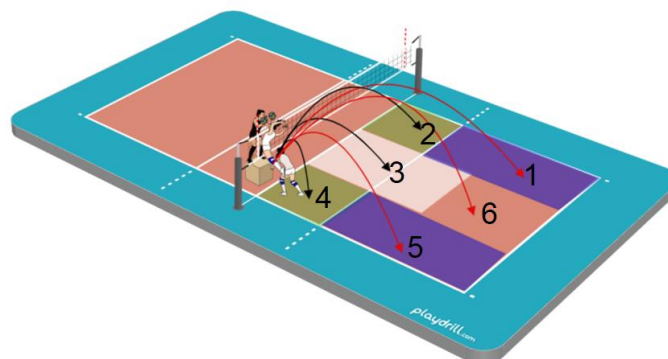
Figure (3) illustrates the court defense test from the offensive position (spike) for position (4) for premier league volleyball players.

Appendix (2) Names of the Experts and Specialists to Whom the Designed Tests Were Presented

No.	Expert's Name	Academic Title	Specialization	Workplace
1	Dr. Mohamed Sobhi Hassanin	Professor	Measurement & Evaluation/Volleyball	Egypt / Helwan University / Faculty of Physical Education for Boys
3	Dr. Mohamed Walid Shihab	Professor	Measurement & Evaluation/Volleyball	Diyala University – Faculty of Physical Education and Sports Sciences
4	Dr. Iythar Abdul Kareem Ghazal	Professor	Measurement & Evaluation	Mosul University – Faculty of Physical Education and Sports Sciences
5	Dr. Ahmed Sabaa Atiyah	Professor	Biomechanics/Volleyball	Baghdad University – Faculty of Physical Education and Sports Sciences
6	Dr. Naima Zidan Khalaf	Assistant Professor	Measurement & Evaluation/Volleyball	Baghdad University – Faculty of Physical Education and Sports Sciences
7	Dr. Tariq Ali Youssef	Assistant Professor	Measurement & Evaluation/Volleyball	Baghdad University – Faculty of Physical Education and Sports Sciences

Appendix (3) Data Discrimination Form for the Test Results

No.	Test Name	Test (1)	Test (2)	Test (3)	Test (4)	Test (5)	Total Trials
1	Court Defense Test from Offensive Position (Spike) for Position (2)						
2	Court Defense Test from Offensive Position (Spike) for Position (3)						

3	Court Defense Test from Offensive Position (Spike) for Position (4)							

Appendix (4) Names of the Assistant Work Team

No.	Full Name	Specialization	Workplace
1	Prof. Dr. Mohamed Walid Shihab	Measurement & Evaluation/Volleyball	Diyala University / Faculty of Physical Education and Sports Sciences
2	Prof. Dr. Hamid Ahmed Mohamed	Biomechanics	Tikrit University / Faculty of Physical Education and Sports Sciences
3	Prof. Dr. Ahmed Sabaa Atiyah	Biomechanics/Volleyball	Baghdad University / Faculty of Physical Education and Sports Sciences
4	Asst. Prof. Dr. Tariq Ali Youssef	Measurement & Evaluation/Volleyball	Baghdad University / Faculty of Physical Education and Sports Sciences
5	Dr. Mohamed Khalil Ibrahim	Measurement & Evaluation	Salah al-Din Education Directorate