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Designing and standardizing a test to measure the accuracy of long-range shooting from knee level for handball players aged (15-17) years

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Abstract

The researcher noticed a clear weakness in the emerging players in the skill of shooting from the knee level, so he required a way to measure it scientifically through work to evaluate them and the lack of libraries to test this skill for the purpose of discovering the best level of the three levels of the target (upper, middle or lower) that is easier to reach. The study represents a twofold objective, the first of which is to design and build a test to measure the accuracy of the accuracy of shooting with the fulcrum leg from the level of the knees for handball backline players, and the second is the technicalities of this test, and the human field was represented by players of the specialized schools of the Handball Federation with ages (15 - 17 years). old, and the time was: From 4-3-2023 to 5-5-2023, and the spatial domain is the sports halls of these centers in Baghdad and the governorates, and the descriptive method used the survey method and research formed from 12 schools affiliated with these centers in Baghdad and the governorates, and the descriptive method used the survey method and research damage from 12 schools affiliated with these centers in Baghdad and the governorates, and the descriptive method used the survey method and research formed from 12 schools affiliated with these centers in Baghdad and the governorates, and the descriptive method used the survey method and research formed from 12 schools affiliated with these centers in Baghdad and the governorates The research sample consisted of 140 players and the researcher concluded that the test that was designed and standardized can measure this skill properly, the test tool designed by the

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Author performed its effect perfectly, and **recommended** the necessity of using this test and the possibility of applying it to handball players in the future, and the test that was standardized can be developed, modified and applied to other ages both genders.

Keywords: Standard Levels, Test Innovation, Accuracy Measurement Tool, Sudden Shooting

Introduction

Tests and measurements in the field of sports games are among the most important means of evaluation to enhance the fields of education and training and to assess players' levels. Through these tests, coaches can determine the players' level in a particular skill or physical attribute before and during the start of the season. This allows them to develop a work plan for educational or training curricula and to correct their work, if necessary, to ensure continuous improvement of the level. Moreover, these tests enable players to know their own level or even compare it to their peers. The improvement of players' levels to continue their journey in the sports field greatly depends on conducting tests regularly, benefiting from the results, analyzing them, and correcting any deviation from the set goal. Objective tests should be based on solid scientific foundations to give us accurate results that can be relied upon to determine the player's level. Therefore, tests in sports games, including handball, have become very important. Every sports event has a goal that athletes constantly strive to achieve. "Handball is one of the team games widely practiced, and like other sports, players must master all defensive and offensive skills according to their playing style")Fathi, Moushriq Khaleel; Hadi, Zahraa Adnan; Abd Alhussein, Huda Hameed; Hussein, Yasir Najah(545 صفحة ،2024 ،

Therefore, it is essential to know the player's true level to enable us to compete according to those abilities. "Handball is one of the team sports that involves high-level technical and skillful performance, requiring the correct construction in applying the required skillful performance") ،"Safaa Abas Atowan(321 صفحة ،2022 ، Scoring a goal against the opposing team is the ultimate goal for handball players when the player directs the ball to the right spot in the goal. Backline players resort to long-range shots from various levels depending on the level from which the ball leaves the shooter's hand, such as over the head, head level, hip level, or knee level. This can be performed from a stationary position, while walking, running, or jumping. "It can be performed from a stationary position, walking, or running without jumping, taking advantage of a gap in the defense in front of the player carrying the ball to shoot unexpectedly at the goal to score" **)Moushriq Khaleel Fathi(294 صفحة ،2022** ،. The low shot from knee level is one of its types, and it is considered the most suitable spot where the player can shoot the ball at the goal due to the gaps between the defenders' legs through which the ball can pass during the

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shot. Additionally, the position of the defender between the goalkeeper and the attacking player shooting the ball significantly contributes to obstructing the goalkeeper's view, giving the attacker an easy chance to score a goal. This type of shot is named as such because the ball leaves the player's hand at knee level during the shot, requiring the player to exert significant physical effort through preparatory movements accompanied by high shooting power and speed. While the pivot leg is planted, the shooting arm swings back to achieve maximum range of motion, allowing the player to gain substantial momentum as the ball leaves his hand. It is crucial that the player's hand directs the ball upwards during the swinging motion of the shooting arm, with torso rotation helping to push and guide the ball, particularly towards the upper corners of the goal, and other corners in general, allowing the ball to pass beside the defenders' legs of the opposing team. "Therefore, we can say that the trajectory of the ball when shooting at the handball goal has levels like high shooting, low shooting, and waist-level shooting،)Moushriq Khaleel Fathi ،(2017 ،

The Players resort to this type of shooting because handball defenders are characterized by their tall stature and large bodies, which help them block attackers and intercept or deflect the ball's path towards their goal, especially shots from above, in addition to the presence of a goalkeeper at the goal. "Long-distance shooting by backline players requires high skill due to the distance of the shot and the presence of the opposing defender in front of them, as well as the goalkeeper, making accuracy the decisive factor in the success of the shot.") ."Muhmood Abbass ;Moushriq Khaleel fathi; صفحة ،2019 ، (216 Therefore, Shooting from above with a jump is often very difficult, so the backline attacker resorts to low shooting from knee level. The ability of the player to surprise the defenders and the goalkeeper and direct the ball to the right spot in the goal means they have a high level of shooting accuracy, allowing them to score and increase the team's goal tally. "The trajectory of the ball when shooting at the handball goal has levels such as high shooting, low shooting, and -level shooting) ."Moushriq Khaleel Fathi،(2017 ،

*Through the observation and follow-up of the researcher for the training of the Iraqi Handball Federation Schools' players and watching some of their matches, it was noticed that there is a clear weakness among these players in this important skill. Therefore, there was a need for a method to measure it scientifically through practical tests to evaluate them and adjust their trajectory. After researching and reviewing scientific sources, it was found that such tests are very rare and old and do not meet expectations. Here lies the research problem: there is an urgent need to design and standardize a modern test to measure this skill, which most researchers and coaches desire, especially after the recent amendments to the game rules. Therefore, the researcher decided to work on designing and standardizing an innovative test to measure the long-range shooting accuracy from below at the defenders' knee level for handball players, to provide a numerical value that

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distinguishes players from each other, allowing for their evaluation and contributing to serving the handball community.

Importance of the Study

The importance of this study lies in uncovering the best shooting area from below for backline players towards the goal and determining which of the three target levels (upper, middle, lower) is the easiest to shoot towards compared to other levels. This type of shooting is crucial for young handball players as it is an important skill that they need to master at this age to become a powerful asset for their teams in the future. Through the researcher's observation and follow-up of the training of the Iraqi Handball Federation Schools' players, and watching some of their matches, it was noticed that there is a clear weakness among these players in this important skill. Imagine if the best level among the three target levels (upper, middle, or lower) that is easier to shoot towards is discovered. Due to its importance, there was a need for a method to measure it scientifically through practical tests to evaluate them and correct their trajectory. After researching and reviewing scientific sources, it was found that such tests are very rare, old, and do not meet expectations. ***Here lies the research problem***: there is an urgent need to design and standardize a modern test to measure this skill, which most researchers and coaches desire, especially after the recent amendments to the game rules. Therefore, the researcher decided to work on designing and standardizing an innovative test to measure the long-range shooting accuracy from the defenders' knee level for handball players, to provide a numerical value that distinguishes players from each other, allowing for their evaluation and contributing to serving the handball community.

The research aims to: Firstly, design and construct a test to measure the long-range shooting accuracy from knee level for backline handball players, and secondly, to standardize this test. The human domain was represented by players from the specialized schools of the Handball Federation aged (15-17) years. The time domain: started from 4-3-2023 to 5-5-2023, and the place domain: the sports halls of these centers in Baghdad and the governorates.

Previous Studies

Study by Ali Abdul-Hussein Hammoud Al-Zargany:)Ali Abd Al Housain Al Zargany(12 صفحة،2016 ، (Ali Abdul-Hussein Al-Zargany, 2016, p. 12), "Construction and Standardization of a Set of Skill Tests for the Accuracy of Two Types of Shooting: From the Front and Falling for Front Line Handball Players." The research aims were: to construct a set of skill tests for two types of shooting (jumping forward to the angle position and falling to the pivot position) for front line handball players, and to standardize tests for these types of shooting (jumping forward to the angle position and falling to the pivot position) for handball players. The descriptive method was used, with the community and

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sample being elite league players in the Iraqi league season (2015-2016). An innovative electronic device was used to measure shooting accuracy. The study resulted in standardizing a set of tests to measure the accuracy of jumping forward shooting for wing players and falling shooting for pivot players. These findings align with the current study and recommended the need to innovate new tests for goal areas, including the area above and below the goalkeeper.

Study by Moushriq Khalil Fathi and Amir Sattar: :)Fathi, Moushriq Khaleel; Sattar, Amir Jabbar (576 صفحة ،2017 ،"Design and Standardization of a Test to Measure the Accuracy of Jump Shooting for Wing Players from the Angle Position on the Near Goal Side in Handball." The importance of the research lies in assessing the athlete's level, addressing weaknesses, and working on development. The researchers found that handball lacked accuracy tests for shooting from the angle position, so they standardized a test to measure the accuracy of shooting from the angle position on the near goal side using a measuring tool designed by the researchers. The study aimed to design a test to measure the accuracy of jumping forward shooting from the angle on the near goal side and determine its standard levels. The descriptive survey method was used, and they concluded that the test measures what it was intended for. These conclusions align with the current study and recommended that this test can be modified and applied to handball players of other age categories using this tool.

Study by Moushriq Khalil Fathi and Iyad Abdul Mahdi:) :Fathi و Mahdy ،2018 ، (49 صفحة "Design and Standardization of a Test to Measure the Accuracy of Long-Range Shooting with High Jump for Handball Players at Specialized Schools for Sports Talents Aged (15-17 Years)." The importance of this study lies in innovating a modern test to measure handball shooting accuracy using an innovative and modern auxiliary tool, as most tests are outdated. This was the research problem, so the researchers aimed to design and standardize a modern test to measure this skill. The study aimed to design a tool to measure long-range shooting accuracy and to standardize a test to measure long-range shooting accuracy with a high jump for handball players. The descriptive survey method was used, with the research sample consisting of five specialized schools for talented players. The researchers concluded that the tool used in the test is essential for measuring handball shooting accuracy, and the test used in the research can be relied upon to measure long-range shooting accuracy with a high jump in handball. These conclusions align with the current study, recommending the use of modern devices and tools in tests and the necessity of standardizing new tests in the future, suggesting the use of the test for other samples.

Study by Mahmood Abbas Hussein:)Mahmoud Abas Housayn(2019 ،

"The Relationship of Some Biomechanical Variables with the Accuracy of Shooting Skill from High Jump with One Leg and Both Legs Together and the Difference

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Between Them for Advanced Handball Players." The study aimed to design and standardize a test for the shooting accuracy from high jump for backcourt handball players, to identify the values of some biomechanical variables for the shooting accuracy skill from high jump with one leg and both legs together, and to identify the type of relationship between some biomechanical variables and shooting accuracy from high jump with one leg and both legs together for handball players. The importance of the research lies in biomechanical analysis and its relationship with shooting accuracy from high jump with one leg or both legs together, identifying the difference between them, and understanding the correct technical performance of this skill. The main findings included designing and standardizing a test to measure long-range shooting accuracy with a high jump in handball, and it was found that shooting accuracy is the same whether jumping with one leg or both legs together. These findings align with the current study, and the researcher recommended relying on this test, emphasizing the body's launch angle for its importance in shooting accuracy, and mastering the skill of long-range shooting from high jump with one leg and both legs together for handball players.

Methodology

The researcher used the descriptive survey method, and the research community consisted of handball players aged 15-17 from 12 schools affiliated with the Handball Federation in Iraq: (Baghdad Rusafa 1, Rusafa 2, Karkh, Nineveh, Diwaniyah, Basrah, thi Qar, Karbala, Wasit, Diyala, Babil, Muthanna). The research sample was selected from 6 schools representing the research community: 3 schools from Baghdad, Wasit, Karbala, and Muthanna, totaling 140 players. A special questionnaire was distributed to the players to determine the easiest or most difficult shooting areas in the goal from their perspective. The goal was divided into six areas, and a tool was fixed in the goal to measure shooting accuracy, as the importance of the goal areas differs. Two areas are at the high level (rectangles, right and left), two at the middle level, and two at the low level. Each area was given a numerical weight after estimating the ease and difficulty level. The tools used included: a regulation handball court, a shooting accuracy measurement tool designed by the researcher, 10 handballs, adhesive tape, a stopwatch, in addition to designing and constructing a tool placed in the goal to measure shooting accuracy, and a mannequin designed to act as a defending player (Figure 1).

Construction Steps:

The researcher conducted two exploratory experiments to estimate the time required to perform the test and identify the appropriate place to position the mannequin in front of the player. The first experiment was conducted on (11-3-2023) on a sample of players from Baghdad Rusafa 1 Handball School, consisting of 6 players who were later excluded. The experiment aimed to identify obstacles and difficulties during which the

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shooting accuracy measurement tool was fixed in the goal, and the method of performance was explained to the players. The test was applied, and the researcher observed that the tool did not meet the required purpose of measuring shooting accuracy. Therefore, it was decided to modify the tool to fit the intended purpose, and a suitable solution was reached by adding a vertical stand in the middle of the three levels extending from top to bottom, making the number of shooting areas in the goal 6, aligning with the requirement to measure shooting accuracy. The second exploratory experiment was conducted on the same sample on (29-3-2023), achieving its goal, after which the researcher conducted the main experiment.

Final Test Format:

Test Name: Test to Measure the Accuracy of Long-Range Shooting from Knee Level for Handball Players.

Objective of the Test: To measure the accuracy of long-range shooting from knee level for handball players.

Tools: Handball court, 10 handballs, adhesive tape, stopwatch, iron mannequin designed in the shape of a defending player with a height of 1.5 meters, standing on an iron base and covered with sponge, placed in front of the test player on the free-throw line to create a game-like environment (Figure 1).

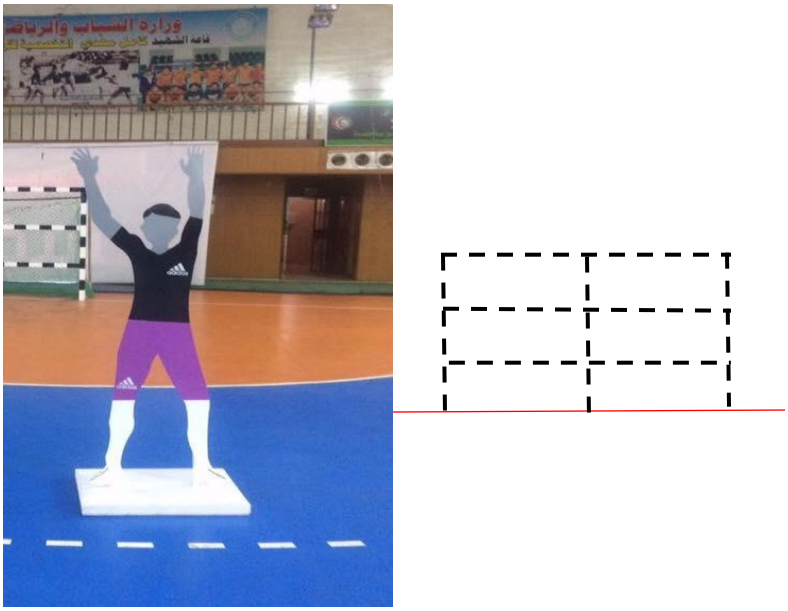

Figure 1: Shows the designed mannequin and the shooting accuracy measurement tool fixed in the goal.

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The Long-Range Shooting Accuracy Measurement Tool:

The tool is Hanging on the Goal Frame*and consists of iron bars with a thickness of 8 cm to match the dimensions of the goal frame bars. It is secured in the goal with iron clamps, dividing it into three levels (upper, middle, lower). A vertical bar runs through the center of the goal from the middle of the top crossbar to the ground, dividing the goal into six equal rectangles, (Kazim et al., 2019) each with an area of 61.33 x 142 cm, as a target area, as shown in Figure 1. Each shooting area in the goal is assigned a numerical weight. Shooting is performed from the side of the mannequin placed on the seven-meter line, as shown in Figure 2. There are six shots, with a 5-second rest between each shot. The score is calculated based on the ease and difficulty of the shooting area in the three levels (upper, middle, lower). Shooting at area number 1 (left of the goalkeeper) and area number 2 (right of the goalkeeper) gives the near area 8 points and the far area 6 points. Area number 3 (middle left of the goalkeeper) gives the near area 13 points and the far area 11 points. Area number 4 (middle right of the goalkeeper) gives the near area 12 points and the far area 10 points. Area number 5 (lower left of the goalkeeper) gives the near area 5 points and the far area 3 points. Area number 6 (lower right of the goalkeeper) gives the near area 4 points and the far area 2 points. If the ball rebounds off the inner bars of the tool placed in the goal, it counts as one point. If it rebounds off the goal frame or goes out of the goal, no points are awarded.(Kadhim, 2024a)

Performance Method: After the coach explains the test and performance method, the player is asked to shoot at the goal, which is divided into shooting areas shaped as six rectangles. The sequence starts with area number (1) - the upper-level shooting area to the left of the goalkeeper, rectangle number 1. Then rectangle number 2 - the upper level to the right of the goalkeeper, rectangle number 3 - the middle level to the left of the goalkeeper, rectangle number 4 - the middle level to the right of the goalkeeper, rectangle number 5 - the lower level to the left of the goalkeeper, (Kazim, M. J., Zughair, A. L. A. A., & Shihab, 2019) and rectangle number 6 - the lower level to the right of the goalkeeper. The test player stands behind the free-throw line and in front of the mannequin at a distance that allows them to take preparatory steps. Upon hearing the start signal, they advance, receive the ball from a teammate, and begin the test.(Kadhim, 2023)

Performance Conditions: The shooting must be done sequentially on the shooting areas from (1) to (6) with no more than three preparatory steps. The player is given one attempt, and the highest possible score for the test is (27).

Scoring:

1. Shooting at the first area number (1) - left of the goalkeeper, scores (7) points.

2. The second area number (2) - right of the goalkeeper, scores (5) points.

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3. Number (3) - the middle area to the left of the goalkeeper, scores (6) points.

4. Number (4) - the middle area to the right of the goalkeeper, scores (4) points.

5. Number (5) - the lower area to the left of the goalkeeper, scores (2) points.

6. Number (6) - the lower area to the right of the goalkeeper, scores (3) points.

If the ball rebounds off the inner bars of the tool in the goal or enters an unintended shooting area according to the shot sequence, it scores one point. If the ball rebounds off the goal frame or goes out of the goal, no points are awarded**.**

Table 1*: Shows the levels and the number of successful shots for each level.

Levels	LOW	Acceptable	Average	Good	Very Good
Successful shots	8	8-12	| 13-16	17-19	| 21-27

To achieve reliable and highly accurate results, the researcher subjected the raw scores obtained to statistical treatments to find the scientific foundations (validity, reliability, and objectivity). The discriminatory validity of the test was extracted in Table (2), and the correlation coefficient was adopted to calculate the reliability of the test results and their repetition, and the raters' scores were processed to obtain objectivity.

***Table 2*: Shows the reliability and objectivity coefficients of the test.**

Scientific Foundations	Correlation Coefficient	True Significance	Type of Correlation
Reliability Reliability	0.992**	0.000	معنوي
Objectivity	0.999**	0.000	معنوي

Discriminatory Power: To determine the discriminatory power, the researcher used the method of extreme groups by adopting 27% of the highest scores and 27% of the lowest scores. The test scores were able to distinguish between the two groups, as shown in Table (2).

Table 3*: Shows the mean, standard deviation, and T-value for the test.

Variables	**Lower Group**		**Upper Group**		T test	**True Significance**	**Type of Difference**
	ȳ	S	ȳ	S			
Shooting Accuracy Test	13.02632	2.56259	23.6316	1.53202	21.897-	001	**Significant**

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The researcher used the percentage, mean, standard deviation, independent samples t-test, simple correlation coefficient (Pearson), adjusted standard score, and modified standard scores**.**

Results:

Table 4: Shows the mean, standard deviation, and skewness coefficient for the test sample.

Long-Range Shooting Accuracy Test from Knee Level for Handball Players	**Mean**	**Standard Deviation**	**Skewness Coefficient**
	18.5357	4.34718	-355

The normal distribution curve was divided into five levels for the long-range shooting accuracy test from the backcourt with a pivot leg from knee level on the handball goal, as shown in Table 4.

Table 5: Shows the standard level boundaries for the long-range shooting accuracy test from knee level for handball players.

No.	**Standard Levels**	**Standard Level Boundaries**	**Shooting Score Levels**
1	Low	25-34.99	8 – Goals
2	Acceptable	35-44.99	8-12
3	Average	45-54.99	13-16
4	Good	55-64.99	17-19
5	Very Good	65 and above	21-27

Table 6: Shows the number of sample members, raw scores, and adjusted standard scores for the test.

No.	Raw Scores	Standard Scores	Adjusted Standard Scores	NO.	Raw Scores	Standard Scores	Adjusted Standard Scores	No.	Raw Scores	Standard Scores	Adjusted Standard Scores
1	8	-2.42357	25.76	48	17	-0.35327	46.47	95	21	0.56687	55.67
2	8	-2.42357	25.76	49	17	-0.35327	46.47	96	21	0.56687	55.67

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3	8	-2.42357	25.76	50	17	-0.35327	46.47	97	21	0.56687	55.67
4	9	-2.19354	28.06	51	17	-0.35327	46.47	98	21	0.56687	55.67
5	9	-2.19354	28.06	52	17	-0.35327	46.47	99	22	0.7969	57.97
6	11	-1.73347	32.67	53	17	-0.35327	46.47	100	22	0.7969	57.97
7	11	-1.73347	32.67	54	18	-0.12323	48.77	101	22	0.7969	57.97
8	11	-1.73347	32.67	55	18	-0.12323	48.77	102	22	0.7969	57.97
9	11	-1.73347	32.67	56	18	-0.12323	48.77	103	22	0.7969	57.97
10	11	-1.73347	32.67	57	18	-0.12323	48.77	104	22	0.7969	57.97
11	11	-1.73347	32.67	58	18	-0.12323	48.77	105	22	0.7969	57.97
12	11	-1.73347	32.67	59	18	-0.12323	48.77	106	22	0.7969	57.97
13	11	-1.73347	32.67	60	18	-0.12323	48.77	107	22	0.7969	57.97
14	12	-1.50344	34.97	61	18	-0.12323	48.77	108	22	0.7969	57.97
15	12	-1.50344	34.97	62	18	-0.12323	48.77	109	22	0.7969	57.97

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16	13	-1.2734	37.27	63	18	-0.12323	48.77	110	22	0.7969	57.97
17	13	-1.2734	37.27	64	18	-0.12323	48.77	111	22	0.7969	57.97
18	13	-1.2734	37.27	65	18	-0.12323	48.77	112	22	0.7969	57.97
19	14	-1.04337	39.57	66	18	-0.12323	48.77	113	22	0.7969	57.97
20	14	-1.04337	39.57	67	18	-0.12323	48.77	114	23	1.02694	60.27
21	14	-1.04337	39.57	68	18	-0.12323	48.77	115	23	1.02694	60.27
22	14	-1.04337	39.57	69	19	0.1068	51.07	116	23	1.02694	60.27
23	14	-1.04337	39.57	70	19	0.1068	51.07	117	23	1.02694	60.27
24	14	-1.04337	39.57	71	19	0.1068	51.07	118	23	1.02694	60.27
25	15	-0.81333	41.87	72	19	0.1068	51.07	119	23	1.02694	60.27
26	15	-0.81333	41.87	73	19	0.1068	51.07	120	23	1.02694	60.27
27	15	-0.81333	41.87	74	19	0.1068	51.07	121	23	1.02694	60.27
28	15	-0.81333	41.87	75	19	0.1068	51.07	122	23	1.02694	60.27

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29	15	-0.81333	41.87	76	19	0.1068	51.07	123	23	1.02694	60.27
30	15	-0.81333	41.87	77	19	0.1068	51.07	124	23	1.02694	60.27
31	16	-0.5833	44.17	78	19	0.1068	51.07	125	24	1.25697	62.57
32	16	-0.5833	44.17	79	19	0.1068	51.07	126	24	1.25697	62.57
33	16	-0.5833	44.17	80	19	0.1068	51.07	127	24	1.25697	62.57
34	16	-0.5833	44.17	81	19	0.1068	51.07	128	24	1.25697	62.57
35	16	-0.5833	44.17	82	19	0.1068	51.07	29	25	1.48701	64.87
36	16	-0.5833	44.17	83	19	0.1068	51.07	130	25	1.48701	64.87
37	16	-0.5833	44.17	84	19	0.1068	51.07	131	25	1.48701	64.87
38	16	-0.5833	44.17	85	19	0.1068	51.07	132	25	1.48701	64.87
39	16	-0.5833	44.17	86	19	0.1068	51.07	133	25	1.48701	64.87
40	17	-0.35327	46.47	87	19	0.1068	51.07	134	25	1.48701	64.87
41	17	-0.35327	46.47	88	19	0.1068	51.07	135	25	1.48701	64.87
42	17	-0.35327	46.47	89	21	0.56687	55.67	136	26	1.71704	67.17
43	17	-0.35327	46.47	90	21	0.56687	55.67	137	26	1.71704	67.17
44	17	-0.35327	46.47	91	21	0.56687	55.67	138	26	1.71704	67.17

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45	17	-0.35327	46.47	92	21	0.56687	55.67	139	27	1.94707	69.47
46	17	-0.35327	46.47	93	21	0.56687	55.67	140	27	1.94707	69.47
47	17	-0.35327	46.47	94	21	0.56687	55.67				

Table 7*: Shows the percentage distributions of standard levels achieved by the sample in the test.

Long-Range Shooting Accuracy Test from Knee Level for Handball Players						
Natural Curve Levels	%2.14	%13.59	%34.13	%34.13	%13.59	Total
Levels	25-34.99 Low	35-44.99 Acceptable	45-54.99 Average	55-64.99 Good	65 and above Very Good	--
Frequency	15	24	49	47	5	140
Percentage	10.71%	17.14%	35%	33.57%	3.57%	100%
Successful Attempts	8	12-8	16 -13	19 -17	27-21	

Based on Table 6, the percentage distributions of the standard levels achieved by the sample in the test are as follows: the sample achieved a significantly higher percentage in the first level (Low) compared to the percentage designated for it in the natural curve. The sample also achieved a higher percentage in the second level (Acceptable) compared to its designated percentages in the natural curve. In the third level (Average), the sample achieved a slightly higher percentage than the designated one. In the fourth level (Good), the sample achieved a slightly lower percentage than the designated one in the natural curve. However, in the fifth level (Very Good), the sample achieved a much lower percentage than the designated one in the natural curve.

The researcher concluded that these percentages, which appeared after conducting the test on the sample, mostly centered around the Average and Good levels. The rest of the levels showed varying distributions among the individuals. This suggests that the results were balanced and centered approximately around the middle, indicating that the test is easy and straightforward to use. Thus, it can be said that the test was largely centered within the Acceptable and Average levels, which is the desired outcome. This demonstrates the test's success in measuring what it was designed for (accuracy of long-range shooting from knee level), achieving the study's objective. The researcher attributes this to the young

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players' lack of technical experience in accurately directing the ball at the goal, given their age categories.(Kadhim, 2024b)

The researcher concluded that these percentages, which appeared after conducting the test on the sample, mostly centered around the Average and Good levels. The rest of the levels showed varying distributions among the individuals. This suggests that the results were balanced and centered approximately around the middle, indicating that the test is easy and straightforward to use. Thus, it can be said that the test was largely centered within the Acceptable and Average levels, which is the desired outcome. This demonstrates the test's success in measuring what it was designed for (accuracy of long-range shooting from knee level), achieving the study's objective. The researcher attributes this to the young players' lack of technical experience in accurately directing the ball at the goal, given their age categories

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