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Building and codifying a test battery for some specific functional abilities of young basketball players

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Abstract
Tests are one of the important means and one of the very necessary requirements in monitoring the development of the level reached by the player or team. The functional variables of basketball players differ from the variables found in other games, as each game has its own specificity that distinguishes it from the rest of the games, and the lack of ready-made functional tests Basketball coaches have it ready and at hand. It creates a problem for them and makes the task difficult for them. Therefore, special tests must be developed and codified in this game. Here lies the problem of the research, as there is no battery of functional tests for youth basketball players, which negatively affects the functional aspect, which is conducted independently by the coach, because there are no clear and specific tests for this game to identify the most important variables of the functional aspect and develop comprehensive tests to measure functional abilities and save us time and effort. It puts our coaches on the right path to building an integrated and comprehensive program in a modern, scientific and thoughtful approach to this game. The research aims to: Develop a battery of tests for some of the special functional abilities of young basketball players and legalizing special functional test battery units for young basketball players. The most important conclusions were: The composite matrix was adopted using the Pear max orthogonal rotation method, and the functional battery for the factors extracted for this study was extracted, which represents.

Keywords: Building and codifying a test battery, special functional abilities, basketball

1. Introduction
The game of basketball has enjoyed a great place among the sports games in the world. In fact, in some countries of the world, it ranked first among its games, and these countries began to make a great effort in order to obtain advanced positions in international tournaments and Olympic tournaments. This did not come spontaneously, but was based on research. Study, criticism and analysis for many years in an effort to solve the problems facing the progress of the game.
Basketball is one of the games characterized by speed and strength, and its beauty is characterized by its fast, offensive nature, which requires a high level of physical fitness and mastery of skill and tactical performance.
One of the standards of high basketball achievement is to score the largest possible number of points over the opposing team. Therefore, advanced countries in the field of the game have sought to develop their various types of offensive methods. At the forefront of these methods is the fast attack method, which has proven its role in deciding the results of matches as it is an effective weapon for superiority over the opponents. The opposing team and determine the outcome of the match.
Sports training alone cannot achieve these achievements and developments unless it relies on other sciences that help facilitate its task of success in a faster and better way. Among these sciences are physiology (the science of organ physiology) and tests and measurement. Accordingly, the role of specialists, experts and researchers is active in developing appropriate tests and batteries. Tests for all necessary aspects, including the functional aspect, given that functional equipment is the primary basis on which the development of the player's level of physical performance depends.
Likewise, the test battery is of great importance in selecting the best and most suitable players for any game, as this battery is placed in order to reduce effort and not waste time, and this battery is specific in its measurement of specific and important elements.

Muhammad Sobhi Hassanein expresses this, quoting Barrow and Megee, as saying: (Some commonly used tests and standards may not be the best that can be used. They may be time- and effort-consuming in their parts or not specific in their measurement of certain elements. They may have been developed to measure average performance only. Therefore, attention must be paid to re-evaluating the sets of tests used and forming new sets in the field. Motor performance (Muhammad Sobhi Hassanein, 1995, p. 102) [4]. The importance of the research lies in developing a standardized test battery in a scientifically studied manner for some of the special functional abilities needed by youth basketball players in Babil Governorate, due to the lack of such studies at the disposal of the coach and the fact that functional tests are among the difficult tests that require sufficient knowledge and expertise on the part of the person performing the tests and who deliver them. For the true measure of the functional aspect, which is the basic foundation of physical work.

1.1 The Research Problem

Tests are one of the important means and one of the very necessary requirements in monitoring the development of the level reached by the player or team. The functional variables of basketball players differ from the variables found in other games, as each game has its own specificity that distinguishes it from the rest of the games, and the lack of ready-made functional tests Basketball coaches have it ready and at hand. Create a problem for them and make the task difficult for them, therefore, it is necessary to develop special tests and codify them in this game, and here lies the problem of the research, as there is no battery of functional tests for youth basketball players, which negatively affects the functional aspect, which is conducted independently by the coach, because there are no clear and specific tests for this game to identify the most important variables of the functional aspect and develop tests. It comprehensively measures functional capabilities, saves us time and effort, and puts our coaches on the right path to building an integrated and comprehensive program in a modern, scientific and thoughtful approach to this game.

1.2 Objectives of the Research

1. Develop a battery of tests for some of the special functional abilities of young basketball players.
2. Legalizing special functional test battery units for young basketball players.

1.3 Fields of Research

1.3.1 The Human Field: Youth players in Babil Governorate clubs for the season (2021-2022).

1.3.2 The time field: Includes the period from 15/10/2021 to 15/3/2022.

1.3.3 The space field: Closed halls of Babylon Governorate clubs.

2. Research methodology and field procedures

2.1 Research methodology

The researcher used the descriptive method coupled with the survey method and mutual correlations between the variables of the study, to suit the nature of the research used.

2.2 The research community and its sample:

The research population was limited to young players in the Babil Governorate clubs (Al-Hilla, Babil, Al-Kifl, Al-Mahaweel) for the season (2021-2022), who numbered (64) players. The research sample was chosen randomly with (51) players.

2.2.1 Research methods, devices and tools:

- Arabic and foreign references.
- Global Information Network (Internet).
- Observation and experimentation.
- Personal interviews for those with experience and expertise in the field of academic specialization.
- Tests and measurements.
- A questionnaire form to determine the tests for each variable in the study.
- Forms for translating data for each variable.

2.2.2 Devices and tools

- Legal basketball court.
- Pulse measuring devices (3).
- Devices for measuring systolic and diastolic pressure (3).
- Special terraces for conducting tests.
- A wooden board painted black, 1/2 meter wide and 1.5 meters long, with white lines drawn on it, the distance between each line being 2 cm.
- Smooth wall, 3.60 meters high.
- Measuring tape.
- One (1) device for measuring height and weight.
- Digital electronic stopwatches (1/100) of a second, manual (5).
- Personal electronic calculator, Dell laptop.
- Stethoscope (3).
- Metronam (2). The metronam is a device that divides the minute according to known sound rhythms and with a clear sound. It is used by musicians. It has been used in research to divide and control the number of steps on the box.
- Wooden box, 40 cm high, number (2).
- Wooden box, 50 cm high, number (2).
- Wooden box, 32 cm high, number (2).
- Sony camera.
- A special digital camera with high accuracy and speed to film a 60-second Sony jump test.
- Electric car.

2.3 Determine search variables

2.3.1 Determining the functional capabilities of young basketball players

A group of special functional abilities has been identified according to the physical requirements of basketball players. The best ones are chosen to represent the true indicator for selecting youth basketball players in order to determine their most important advantages, which are as follows.

1. Short anaerobic capacity.
2. Long anaerobic capacity.
3. Aerobic capacity.
4. Maximum oxygen consumption.
5. Lactic ability.
6. The ability of the heart and circulatory system.

2.3.2 Determine functional ability tests for young basketball players

In order to determine the set of tests for the functional variables under study, the researcher took the opinion of experts with experience and expertise for each of the research variables through a questionnaire that was distributed to these experts. After collecting the forms and transcribing the data, the percentage of the tests was extracted and the tests that obtained a percentage were accepted. More than 80% agreement, and Table (1) shows the nominated tests.

Table 1: Shows the percentage of expert agreement on tests of functional abilities.

N	Test	Agreed	Percentage %	Sig
1 Short anaerobic capacity	Sprint test (40), (50), (60) yards	12	100 %	Acceptable
	The Staircase Test by Margia-Callan	4	33.33	Unacceptable
	Qtel's 10-second test	5	41.66	Unacceptable
	Urkaria aptitude test	3	25.0	Unacceptable
	Vertical jump test (Sargent)	10	83.33	Acceptable
2 Long anaerobic capacity	Vertical jump test 60 seconds	11	91.67	Acceptable
	90 second test for Quebec	3	25.0	Unacceptable
	Animated bios by Cunningham and Faulkins	2	16.66	Unacceptable
	Ergometric bike 60 seconds maximum	5	41.66	Unacceptable
	Step test for anaerobic capacity	10	83.33	Acceptable
3 Aerobic capacity	Harvard test	10	83.33	Acceptable
	1.5 mile running test	6	50.0	Unacceptable
	600 yard running test	7	58.33	Unacceptable
	Koberl test 12 minutes	11	91.67	Acceptable
	Sharkey test	10	83.33	Acceptable
Maximum oxygen consumption	Carlson fatigue curve test	11	91.67	Acceptable
	Test your mind	7	58.33	Unacceptable
5 Lactic ability	Forestry test	10	83.33	Acceptable
	Callan test	5	41.66	Unacceptable
	Physical work ability test at pulse 170	8	66.66	Unacceptable
	Strand physical fitness test	6	12	Unacceptable
6 The ability of the heart and circulatory system	Barash test	11	91.67	Acceptable
	Cramton test	5	41.66	Unacceptable
	Schneider's test	7	58.33	Unacceptable
	Foster test	12	100	Acceptable
	Tuttle's test	12	100	Acceptable

Adopting a percentage of (80%) of the expert opinion agreement value, and excluding tests that did not obtain this percentage

2.4 Exploratory experience

The researcher conducted the experiment on (20) players on (16/11/2021) at exactly (4) in the afternoon, for a period of three days, with four tests per day, by implementing functional capacity tests, and after (8) days had passed, the experiment was repeated on individuals. Themselves on (24/11/2021) and the purpose of the exploratory experiment was as follows:

1. Know the clarity of the test instructions for the sample.
2. Determine the time the test takes to establish its appropriate time.
3. Identifying the problems that may encounter the researcher when implementing the main experiment.
4. The extent of the assistant work team's understanding of conducting functional tests.

2.5 Scientific foundations of tests

2.5.1 Validity of tests

A valid test means: "The test measures what it was designed to measure, meaning: a valid test is a test with the same function that it claims to measure, and does not measure anything else instead of it or in addition to it." (Marwan Abdel Majeed,2000,p.287) [2] Accordingly, the researcher used content validity, as Sachs emphasized that "content validity is always used in evaluating achievement tests", since this type of validity depends on the evaluation of experts, the researcher presented these proposed tests to a group of them, and it was proven that the tests have a good degree of validity with the agreement of these experts that they achieve the purpose for which they were developed.

2.5.2 Reliability of tests

Test reliability "means: that the test gives the same results if it is repeated on the same individuals, in the same situations" (Allawi, Muhammad Sobhi,1995, p.380) [4], and the method of applying and re-applying the test is one of the most common uses of test reliability, "and this method is based on applying the same test or scale to a group One of the individuals twice in a row on two different days, and the correlation between the scores of the first application and the scores of the second application indicates the reliability coefficient of the reliability of the test". (Allawi, Muhammad Hassan & Radwan,Muhammad Nasr, 2000, p.283) [5].

Accordingly, the results of the tests in the exploratory experiment were taken on the exploratory sample, and the tests were repeated 8 days after the start of the tests, and on the same sample, and the correlation coefficient was calculated using the simple correlation law (Pearson) between the two applications as an indication of the reliability and stability coefficient, and Table (2) shows this.

2.5.3 Objectivity of tests

Objectivity means: "The rapporteurs do not differ in

judging something or a specific topic" (Bahi, Mustafa Safi,1999, p. 50) [6]. Accordingly, the researcher allocated two arbitrators to record the results of the tests, and took into account that the position of each judge was almost different from the other when recording the data related to the tests used in the research, even though "The correlation coefficient between the ratings of the first arbitrator and the second arbitrator regarding the test objectivity factor." (Khater, Ahmed Mohamed & Al-Beik, Ali Fahmy,1984,p. 25) [7] The objectivity of the tests between the results of the grades of the first and second arbitrators (*) was calculated by means of the simple correlation coefficient (Pearson), as it is noted that: The values of the correlation coefficient were all greater than The tabular correlation coefficient values indicate a high degree of objectivity, and Table (2) shows this.

Table 2: Shows the reliability and objectivity of the candidate functional tests.

N	Functional tests	Reliability	Objectivity	Sig type
1	Sprint 50 yards	0.911	0.928	Sig
2	Vertical jump Sargent	0.906	0.935	Sig
3	Jump 60 seconds	0.862	0.902	Sig
4	Step for anaerobic capacity	0.821	0.873	Sig
5	Harvard	0.873	0.888	Sig
6	Cooper	0.801	0.800	Sig
7	Share	0.823	0.822	Sig
8	Carlson	0.818	0.823	Sig
9	Tuttle	0.913	0.921	Sig
10	Barash	0.811	0.900	Sig
11	Forestry	0.891	0.810	Sig
12	Foster	0.917	0.925	Sig

2.6 The main and basic experiment for the research

The researcher determined the dates for implementing the tests related to the variables of the study that he adopted in his research, and they are many and varied, and accordingly it was agreed to set a suitable date, and in a suitable place, to conduct the tests, and take measurements for the tests under study for basketball players on (2-18/12/2021) and in order to These procedures are implemented easily and conveniently. The researcher and the assistant work team did the following:

1. Organizing the devices used in research and preparing them to take measurements and functional tests for research.
2. Determine a specific and appropriate date to take the results of the functional tests under investigation.
3. Arranging the names of the players using forms specific to the variables under research, and for each of the variables separately, for ease of implementing tests and recording data in them.
4. Clarifying the work methods and requirements of each test and explaining its importance and the importance of implementing it accurately and actively, because the work concerns all players, coaches and administrators.
5. Tests were conducted in the main experiment over a period of (3) days for each team, with four tests per day.

2.7 Finding the discriminatory power of the candidate tests: The discriminatory power of the nominated tests was found from the results of the exploratory sample, by arranging the results in ascending order for each of the items, and then determining a percentage of (27%) from the upper group, and (27%) from the results of the lower group, who in each group reached the highest and lowest (5), in order to approximate the percentage (27%) of (20) which is (5.4); Comparing the results of the individuals of the two groups: the highest and the lowest, according to the law (T) for uncorrelated samples, as shown in Table (3).

Table 3: Shows the means, standard deviations, calculated T-values, and significance level for the tests.

N	Functional tests	Higher group		Lower group		t value	sig level	sig type
		Mean	Std. Deviation	Mean	Std. Deviation			
1	Sprint 50 yards	12.248	0.9727	10.269	0.7433	7.270	0.000	Sig
2	Vertical jump Sargent	18.663	1.9609	14.310	0.9305	4.485	0.002	Sig
3	Jump 60 seconds	3.5103	0.2389	2.4163	0.0726	9.795	0.000	Sig
4	Step for anaerobic capacity	43017.82	3862.5978	3118.68	495.475	6.832	0.000	Sig
5	Harvard	50.069	2.11743	43.1372	1.34245	6.182	0.000	Sig
6	Cooper	2819	224.065	2412	41.473	3.994	0.004	Sig
7	Share	45.40	3.286	37.60	2.191	9.511	0.000	Sig
8	Carlson	20.6	0.548	17.2	0.447	10.752	0.000	Sig
9	Tuttle	156.74	3.45611	64.5778	9.0862	21.2	0.000	Sig
10	Barash	19.526	0.84266	15.24	1.00399	7.312	0.000	Sig
11	Forestry	41.8	2.168	31.6	0.894	9.725	0.000	Sig
12	Foster	7.2	0.837	3.4	0.548	8.497	0.000	Sig

It is noted from Table (3): The calculated (T) values are all significant. The Sig score values were smaller than (0.500) for all the items mentioned in the table, and thus they are statistically significant, which means: The questionnaire items have acceptable discriminating power.

2.8 Statistical methods used in the research

The researcher used the ready-made program (SPSS v20) in the social statistical portfolio.

3. Presentation, analysis and discussion of the results:

3.1 Presentation of the results of the arithmetic means, standard deviations, and skewness coefficients for the factors

The researcher presents the results describing the arithmetic means and standard deviations of the tests applied to the research sample, as shown in Table (4) below:

Table 4: Shown results describing the arithmetic means and standard deviations of the tests applied to the research sample

N	Functional tests	Measuring unit	Mean	Std. Deviation	Skew ness
1	Sprint 50 yards	Kg/s	12.37435	1.254548	0.014
2	Vertical jump Sargent	Cm/kg	16.6613	1.99190	0.054
3	Jump 60 seconds	Watts/kg	2.85736	0.42343	0.816
4	Step for anaerobic capacity	Kg×cm/s	44070.9	48940.5	0.023
5	Harvard	W/Mg heartbeat	47.18379	2.514364	0.753
6	Cooper	Meter	2577.55	144.248	0.566
7	Share	ml/kg/s	45.49	4.411	0.032-
8	Carlson	Touch/pulse/s	18.53	1.376	0.104
9	Tuttle	Steps number to produce a pulse is 2.5	109.523	39.916	0.021 -
10	Barash	Beat/s	17.2582	1.65830	0.080 -
11	Forestry	Beat/s	35.45	3.349	0.667
12	Foster	Beat/s	5.12	1.1775	0.912

It is clear from Table (4) that the values of the skewness coefficient (Person) were limited to (+ 1) and within the moderate distribution in all tests, which proves the suitability of the tests to the age and gender level of the sample, and they can be entered into the factor matrix.

3.2 Preparing, displaying, analyzing and examining the correlation matrix

Through the intercorrelations matrix that was extracted using the simple Pearson correlation coefficient by adopting the raw scores of the sequence of tests, because the first step with which the factor analysis begins is (calculating the correlation coefficients between the tests and recording them in a matrix suitable for this type of analysis). By examining the inter-correlation matrix, we show the following:

- The number of matrix coefficients (66) correlation coefficients (diagonal cells were not counted), including:
- (36) Positive correlation coefficient, with a percentage of (54.54%).
- (30) Negative correlation coefficient, with a percentage of (45.45%).
- The sample size is 51-2=49.
- The significance level is 0.50.
- The tabular value is 0.273.

3.3 Presentation of the results of the factor analysis after rotating the factors

The researcher presents the results of the factor matrix after rotating the factors that participated in the factor analysis process before the rotation, and that the variance maximization method (Varimax) is a rotation method characterized by the fact that it maintains the property of independence between the factors, and this means geometrically: the axes remain orthogonal during the rotation process. All factors were saturated in the five factors in different proportions. Four tests were saturated on the first factor with a greater degree of saturation than the rest of the factors, four tests were saturated on the third factor, three tests were saturated on the second factor, and two tests were saturated on the fourth and fifth factors.

3.3.1 Interpretation of the first factor

The researcher displays the saturations of the tests with the first factor. They were arranged in descending order, with two of them being positive and two being negative. This factor is one of the polar factors, as the tests saturated it with significant saturations from both sides: positive and negative. It is noted that the tests (Tuttle, Barash, and Carlson) achieved degrees of saturation (0.688, 0.684 and -0.675) respectively.

3.3.2 Interpretation of the second factor

The researcher displays the saturations of the tests with the second factor. They were arranged in descending order, since they were all positive, indicating that the tests were saturated with significant and positive saturations. It is noted that the tests: (Foster, Forestry, and Step for Anaerobic Capacity) had saturation degrees of (0.813, 0.750, 0.571), respectively.

3.3.3 Interpretation of the third factor

The researcher presents the saturations of the tests with the first factor and they were arranged in descending order, as three of them were positive and one was negative. This factor is one of the polar factors, as the tests were saturated with significant saturations from both sides: positive and negative. It is noted that the tests ((Enemy (50)) Yards, Vertical Jump (Sargent), Step for Anaerobic Capacity, and Forestry) achieved saturation scores of (0.755, 0.698, 0.454, and -0.430), respectively.

3.3.4 The final appearance of the battery

After analyzing the correlation matrix for functional aptitude tests, and rotating the matrix, five factors were extracted, of which only three were accepted, as the fourth and fifth factors were neglected because they did not meet the conditions for accepting the factors. From that, it was possible to extract a test battery that included three tests with high saturations on the three accepted factors, as shown in the table. (5).

Table 5: Shows the basketball functional tests battery in its final form.

Test number	Test name
1	Tuttle
2	Foster
3	Sprint 50 yards

3.4 Displaying the results of the modified standard scores for the basket of functional abilities tests in basketball

The researcher presents the results of the research sample and the modified standard score for the basketball functional aptitude tests battery, my agencies:

3.4.1 Displaying the results of the standard scores of the Tuttle test on basketball players

The researcher presents the results of the standard scores of the Tuttle test on basketball players, and Table (6) shows the raw scores, the z-score, and the modified standard score for the research sample scores:

Table 6: Shows the raw scores, the standard score, and the modified standard score ranked in descending order for the Tuttle test.

N	Raw Degree	Standard Degree	Modified standard Degree	N	Raw Degree	Standard Degree	Modified standard Degree
1	41.07143	1.71489-	32.85	27	108.8529	0.01678-	49.83
2	47.89474	1.54394-	34.56	28	114.6951	0.12958	51.30
3	50.96542	1.46702-	35.33	29	115.7143	0.15511	51.55
4	52.12500	1.43797-	35.62	30	116.0000	0.16227	51.62
5	52.50000	1.42857-	35.71	31	119.1029	0.24001	52.40
6	53.41177	1.40573-	35.94	32	121.0802	0.28954	52.90
7	58.44565	1.27962-	37.20	33	126.5000	0.42532	54.25
8	58.50000	1.27826-	37.22	34	131.3382	0.54653	55.47
9	60.58333	1.22606--	37.74	35	131.7794	0.55758	55.58
10	65.66176	1.09883-	39.01	36	132.4412	0.57416	55.74
11	68.05063	1.03899-	39.61	37	146.5000	0.92637	59.26
12	71.13235	0.96178-	40.38	38	147.5385	0.95239	59.52
13	72.60256	0.92495-	40.75	39	152.5000	1.07669	60.77
14	73.62500	0.89933-	41.01	40	154.2500	1.12053	61.21
15	84.28241	0.63234-	43.68	41	154.2794	1.12127	61.21
16	86.50000	0.57678-	44.23	42	156.9412	1.18795	61.88
17	86.50000	0.57678-	44.23	43	159.0000	1.23953	62.40
18	88.35294	0.53036-	44.70	44	159.6667	1.25623	62.56
19	96.25000	0.33252-	46.67	45	160.1029	1.26716	62.67
20	96.25000	0.33252-	46.67	46	161.0357	1.29053	62.91
21	98.02941	0.28794-	47.12	47	162.2500	1.32095	63.21
22	101.2083	0.20830-	47.92	48	163.7778	1.35923	63.59
23	102.2297	0.18271-	48.17	49	166.2500	1.42116	64.21
24	102.2297	0.18271-	48.17	50	169.9166	1.51302	65.13
25	106.2500	0.08199-	49.18	51	173.2500	1.59653	65.97
26	106.2500	0.08199-	49.18				

It is clear from Table (6): that the mean of the standard degree was (0), the standard deviation (1), and that their values are limited to (+3), which means: the standard test degree fall within the moderate (normal) level.

3.4.2 Displaying the results of the standard degree of Foster's test to basketball players:

The researcher presents the results of determining the standard levels of the Foster test on basketball players, and Table (7) shows the raw degree, the z-score, and the modified standard degree for the research sample scores.

Table 7: Shows the raw Degree, the standard degree, and the modified standard degree ranked in descending order for the Foster test

N	Raw Degree	Standard Degree	Modified standard Degree	N	Raw Degree	Standard Degree	Modified standard Degree
1	4	0.94938-	40.51	27	5	0.09994-	49.00
2	4	0.94938-	40.51	28	5	0.09994-	49.00
3	4	0.94938-	40.51	29	5	0.09994-	49.00
4	4	0.94938-	40.51	30	5	0.09994-	49.00
5	4	0.94938-	40.51	31	5	0.09994-	49.00
6	4	0.94938-	40.51	32	5	0.09994-	49.00
7	4	0.94938-	40.51	33	5	0.09994-	49.00
8	4	0.94938-	40.51	34	5	0.09994-	49.00
9	4	0.94938-	40.51	35	5	0.09994-	49.00
10	4	0.94938-	40.51	36	5	0.09994-	49.00
11	4	0.94938-	40.51	37	5	0.09994-	57.50
12	4	0.94938-	40.51	38	6	0.74951	57.50
13	4	0.94938-	40.51	39	6	0.74951	57.50
14	4	0.94938-	40.51	40	6	0.74951	57.50
15	4	0.94938-	40.51	41	6	0.74951	57.50
16	4	0.94938-	40.51	42	6	0.74951	57.50
17	4	0.94938-	40.51	43	7	1.59896	65.99
18	4	0.94938-	40.51	44	7	1.59896	65.99
19	4	0.94938-	40.51	45	7	1.59896	65.99
20	5	0.09994-	49.00	46	7	1.59896	65.99
21	5	0.09994-	49.00	47	7	1.59896	65.99
22	5	0.09994-	49.00	48	7	1.59896	65.99
23	5	0.09994-	49.00	49	7	1.59896	65.99
24	5	0.09994-	49.00	50	8	2.44841	74.48

25	5	0.09994-	49.00	51	8	2.44841	74.48
26	5	0.09994-	49.00				

It is clear from Table (7): that the arithmetic mean of the standard scores was (0), the standard deviation (1), and that their values are limited to (+3), which means: the standard test scores fall within the moderate (normal) level.

3.4.3 Displaying the results of the standard scores of the 50-yard sprint test to basketball players:

The researcher presents the results of determining the standard levels for the 50-yard sprint test on basketball players, and Table (8) shows the raw scores, the zigzag standard score, and the modified standard score for the research sample's scores:

Table 8: Shows the raw scores, standard score, and adjusted standard score ranked in descending order for the 50-yard sprint test.

N	Raw Degree	Standard Degree	Modified standard Degree	N	Raw Degree	Standard Degree	Modified standard Degree
1	9.50292	2.28881-	27.11	27	12.58065	0.16444	51.64
2	9.55414	2.24799-	27.52	28	12.59690	0.17740	51.77
3	10.36585	1.60097-	33.99	29	12.76596	0.31215	53.12
4	10.72607	1.31384-	36.86	30	12.78459	0.32700	53.27
5	10.78905	1.26364-	37.36	31	12.79863	0.33820	53.38
6	10.88000	1.19114-	38.09	32	12.79863	0.33820	53.38
7	10.98546	1.10708-	38.93	33	12.82051	0.35564	53.56
8	10.99830	1.09685-	39.03	34	12.83677	0.36860	53.69
9	11.05442	1.05211-	39.48	35	12.91339	0.42967	54.30
10	11.18760	0.94596-	40.54	36	13.02983	0.52249	55.22
11	11.18760	0.94596-	40.54	37	13.13485	0.60620	56.06
12	11.39647	0.77947-	42.21	38	13.27731	0.71975	57.20
13	11.42857	0.75388-	42.46	39	13.28000	0.72190	57.22
14	11.42857	0.75388-	42.46	40	13.34380	0.77275	57.73
15	11.50592	0.69222-	43.08	41	13.39130	0.81061	58.11
16	11.64384	0.58229-	44.18	42	13.39156	0.81082	58.11
17	11.84433	0.42248-	45.78	43	13.39713	0.81526	58.15
18	11.99324	0.30378-	46.96	44	13.41682	0.83096	58.31
19	12.04819	0.25998-	47.40	45	13.51351	0.90803	59.08
20	12.08054	0.23419-	47.66	46	13.53383	0.92422	59.24
21	12.18182	0.15346-	48.47	47	13.71429	1.06807	60.68
22	12.34756	0.02135-	49.79	48	13.94268	1.25012	62.50
23	12.37942	0.00404-	50.04	49	14.06780	1.34985	63.50
24	12.39243	0.01441	50.14	50	14.92754	2.03515	70.35
25	12.48025	0.08442	50.84	51	15.88629	2.79937	77.99
26	12.56454	0.15160	51.52				

It is clear from Table (8): that the arithmetic mean of the standard scores was (0), the standard deviation was (1), and that their values are limited to (+3), which means: the standard test scores fall within the moderate (normal) level.

3.4.4 Scientific specifications for the battery for testing the functional abilities of basketball players

Table 9: Shows the scientific specifications of the battery for testing the functional abilities of basketball players.

Test number	Test name	N	Validity	Reliability	Objectivity	Coefficient of discriminatory ability	Difficulty factor
1	Tuttle	20	%100	0.913	0.921	7.270	50
2	Foster	20	%100	0.917	0.925	21.2	52
3	Sprint 50 yards	20	%100	0.911	0.928	8.497	54

4. Conclusions and Recommendations

4.1 Conclusions

1. The composite matrix was adopted using the Pear max orthogonal rotation method.
2. The functional battery for the factors extracted for this study was extracted, and its units represent the highest saturations on the factors below:
   - The first factor is represented by the Tuttle test
   - The second factor: Foster's test.
   - The third factor: testing the enemy at 50 yards.
3. The standards (sequentially modified standard score and percentile ranks) were determined for the battery
4. The battery units extracted for this study were standardized.

4.2 Recommendations

1. Adopting the (Deducted Functional Battery) as an objective, scientific method for selecting players in the game (basketball) in Babil Governorate from a functional standpoint.
2. Adopting the criteria that were reached by using the standard tables developed by the researcher for the final battery items during the evaluation and selection process for basketball players in Babylon.
3. Conducting a similar study on variables and other aspects related to a player's choice of basketball, including physical and psychological measurements that were not addressed in the study.
4. Re-conduct the study with the same variables on other age groups, and create standards for them.

5. Using field tests that the coach or researcher can easily apply to the players.
6. Adopting these tests helps reduce effort and time.

5. References

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