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Determine the levels and standards for testing flight time and shooting accuracy for youth handball players

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Abstract---*The scientific development at the present time has led to reliance on testing, measurement and evaluation, where they play an important role in developing programs, curricula, planning, organizing and evaluation processes in various fields of education in general and physical education in particular, as they help to identify the physical condition and level of the individual's motor skill, characteristics and mental and social characteristics.The variables (flight time and shooting accuracy) are the main pillar through which the player can perform the skill of shooting with handball in different circumstances or under the pressure of competitors or its performance in extremely difficult circumstances. The physical abilities of the handball player are embodied in the player's approaching speed and the ability to run The speedy enables him to participate quickly in defense, attack and speed of movement as "the sport of handball requires a high level of strength, speed and endurance, especially bearing speed, in addition to flexibility and agility in the case of correction."*

Type of Paper--- *Review*

Keywords---*Standards, levels, and from flight, shooting accuracy.*

Research aims:

- Finding the standard grades of the variables (flight time and accuracy of correction) to select the youth players with reel hand.
- Determining the levels of the variables (flight time and accuracy of correction) to select the youth players with hand reel.

As for the third chapter, it included the research methodology, and its sample identified the young players of (16-18) years of age who participated in the Iraq Handball League for the season (2016-2017), which numbered (65) players, and specifying tests for the variables (flying time and shooting accuracy), and the tools used, And the exploratory experience to identify the validity of organizational and administrative procedures, the scientific foundations of the tests and their distinctive strength, the test vocabulary, and the statistical package (SPSS) for the purpose of data processing, and the fourth chapter: This chapter included the presentation of the arithmetic mean and standard deviations, and the standard levels of test results for the variables (flight time and accuracy Correction) of the subject of the study, placing it in tables, and then analyzing and discussing it in an accurate scientific manner supported by sober scientific sources, through which the achievement of the objectives of the research was reached. Conclusions and recommendations: - This chapter includes a set of conclusions reached by the researcher through the statistical results produced by it. The study, as it was emphasized on the recommendations to adopt the variables (flight time and shooting accuracy) in the selection process for young handball players and the approval of tests and Measures in achieving the goals of selection and evaluation based on the grades and standard levels reached by the researcher.

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Definition of the research Research introduction and its importance `Those who follow the steps that the developed world follow in bringing their athletes to the higher levels will notice that the first of these steps is the correct and accurate choice of these heroes, i.e. selection, and this is what we saw in the last World Handball Cup finals that was held in Sweden in (2016), when a number of players emerged And they had the biggest role in their teams getting advanced results, especially the French national team players, who had the biggest role in the French national team's World Cup victory. The scientific development at the present time has led to reliance on testing, measurement and evaluation, as they play an important role in developing programs, curricula, planning, organizing and evaluation processes in various fields of education in general and physical education in particular, as they help to identify the physical condition and level of the individual's motor skill, characteristics, and mental and social characteristics. The variables (flight time and shooting accuracy) are the main pillar through which the player can perform the skill of shooting with handball in different circumstances or under the pressure of competitors or its performance in extremely difficult circumstances. The physical abilities of the handball player are embodied in the player's approaching speed and the ability to run The speedy enables him to participate quickly in defense, attack and speed of movement, as "the sport of handball requires a high level of strength, speed and endurance, especially bearing speed, in addition to flexibility and agility in case of correction." (9: 160) This importance is evident in recognizing the importance of these determinants in finding grades and standard levels, which gives these grades a first picture for specialists and those interested in this topic, because they need to know the determinants of selection that plays an effective role in getting players to the higher levels. And through the researcher's humble experience as a coach and player for many Iraqi clubs and national teams, and his acquaintance with studies, research and literature on the topic of grades and standard levels, the research problem became evident. Therefore, since these grades and standard levels of the variables (flight time and shooting accuracy) are not available for selecting players, in addition to the scientific sources indicating the necessity of developing standard bikes for every four years, therefore the research problem arose to try to fill the deficiency in this aspect, which is an attempt to identify the physical level These players own it, so the researcher resorted to setting standards and levels to be a correct and important indicator in the selection process for youth handball players. **Research Objectives** Finding standard scores for basic skills for selecting youth handball players. Determining the basic skills levels for selecting youth handball players. **Research fields:**

The human field: Al-Shabab players, Baghdad governorate clubs (Al-Jaysh - Al-Karkh - Al-Shorta - Al-Khalidoun)

The time frame: the period from 1/1/2020 to 2/15/2020

Spatial domain: the fields of research clubs.

Research methodology and field procedures

Research Methodology

The researcher adopted the descriptive approach in the survey method for its suitability to the nature of the problem as the most appropriate and easiest curriculum to achieve the objectives of the study.

Research community and sample

The research community was identified from the 200 youth handball players, and the researcher chose their research from the Baghdad clubs teams for the first and excellent class of (65) players, as their percentage from the original community reached (32.5%) as shown in Table (1).

Research Tools Research tools are the means by which the researcher can collect data and solve the problem to achieve the research objectives, whatever those tools are data, samples and devices (11: 218,219). The researchers used the following methods and devices:

Methods of data collection

- Arab and foreign sources and references:
- The international network (the Internet).
- Note:
- Personal interviews:
- The questionnaire:

Table (1):show the distribution of youth handball players to the clubs covered by the study.

T	Club	Number of Players
1	Al-Jaysh	7 1
2	Al-Karkh	16
3	Al-Shorta	16
4	Al-Khalidoun	16

Devices and tools used in the research (assistive devices)

The researchers used the following devices and tools:

- Nikon video camera of Japanese origin (1) .
- The device designed to measure flight time and accuracy of aiming with hand ball.
- Legal hand balls, number (4) size (450) perimeter 58 cm) size of the International Federation (3).
- Sticky tape .
- squares measuring (40 by 40 cm).
- A legal handball court.
- A legal handball goal (1).

Determining the tests for the components of the investigated indicators:

The researcher determined the tests according to their experience and informed them of the scientific literature on tests and measurement through their design of the device (flight time and accuracy of aiming).

Test method

Device name: Measurement of flight time and accuracy of aiming with a hand.

Purpose of the test (device)

Measuring the flight time with the hand wheel.

Measuring accuracy of aiming.

Performance method

The laboratory stands in front of the line (9 meters) at a distance of (3 meters) in the standby position and looks at the designed device and when it hears the instruction, it makes approximate steps and jump from the first platform start and fly and then land on the second platform and the player passes during the test three stages as in the following figure and is given Each player (4) attempts and the device runs randomly.

First stage start (jumping)

It is the stage in which the laboratory (the player) takes the approximate steps and presses the first platform to start (jump), which operates the time and light as shown in Figure (1).

Figure No. (1) shows the first stage of starting (jumping) for the test

The second stage, the flying stage:

It is the stage in which the tester (player) jumps as high as possible to obtain the longest flight time, as shown in Figure (2).

The third stage, the landing stage:

It is the stage in which the tester (the player) lands on the second platform (the landing), and the time and the light installed on the shooting accuracy square are stopped, as shown in Figure (3)

Figure No. (2) The second stage of the flight stage for the test

Figure No. (3) the third stage, the landing stage of the test

Scoring: The best flight time recorded by the player is calculated by the device, which is the electronic system. As for the accuracy of the correction, it is calculated through the scorer and that if the player enters the ball into the square, he is given (3) points and if the ball is in the edge of the square it is given (2) and if the ball does not touch any A square is given (zero) and thus the highest score for the test is (12) and the lowest score (zero) by giving four attempts to each player.

Research exploratory experience

For the purpose of identifying and identifying errors and negatives that may appear when conducting the tests and measurements used in the study, to avoid them and not to fall into them and to ensure objective results, the researcher conducted the exploratory experiment on a randomly selected sample of youth players, youth club with handball from members of the community of origin based on a sample of 14 On Tuesday, 1/14/2020, the purpose of conducting the pilot experiment was as follows:

- Ensure the clarity of the test instructions.
- Diagnosing the obstacles and negatives that the researcher may encounter.
- Checking the accuracy and safety of the devices and tools used.
- Informing the assisting work team on how to apply tests and record scores.
- Extracting the scientific foundations for the tests.

Characteristics of the tests and their scientific conditions.

The researcher extracted the scientific foundations for the tests and measurements that were determined by surveying the opinions of experts and specialists for the variables of the study under investigation.

Test validation: -

"Honesty is the most important condition for a good test. An honest test is one that succeeds in measuring what was set for it (11:38). Therefore, the two researchers used the validity of the content to extract the validity of the tests by presenting the candidate tests to a group of experts and specialists (Appendix 1), and they agreed on The tests were validated for the purpose for which they were designed, and with this the researcher proved the validity of their tests.

Stability of tests

The researcher used the method of testing and re-testing to find the test reliability factor, as the test was applied on 1/14/2020 on a sample of (14) youth players from Al Shabab Club with hand reel, then the test was repeated on the same sample and under the same conditions after (7) days and on my day. 1/21/2020, and by using the simple Pearson correlation coefficient between the scores of the first and second measures, the tests under investigation were found to have high stability because the entire calculated value was greater than the tabular value, as shown in Table (3).

Objectivity of the tests

For the purpose of extracting the objectivity of the tests, the researcher processed the results of the arbitrators score ((*)) for the terms of the tests nominated for the application and calculated the value of the simple correlation coefficient as a statistical method, as it was concluded that it is of high objectivity because all the calculated values were greater than the tabular value, as shown in Table (2).

Table (2) shows the scientific basis for basic skills tests

T	Test vocabulary	Persistence	Objectivity
1	Flight time	98	19
2	Aim accuracy	19	49

The main and basic research experience: -

The researcher conducted the main experiment from Saturday 1/2/2020 until Saturday 2/8/2020, as all the tests were carried out on the research sample and this was classified in special forms for the testers.

The statistical methods used in the research: -

The researcher used the ready-made program (SPSS) in the statistical bag to process the data and obtain the results.

Presentation and discussion of results: -

This chapter deals with the presentation of the statistical data that have been reached by the researcher in order to analyze and discuss them and to find out what matches the objectives specified in the research, represented by the measurements and special tests of the individuals, the research sample after applying the tests, extracting results, setting standards in special tables, and building standard levels for it.

Standard scores for test items:

After carrying out the steps for applying basic skills tests to the sample members, the results were obtained with raw scores, and in order to achieve the research objectives of finding standards for young handball players, the raw scores for the tests were obtained, so obtaining the raw scores is an easy matter for the measurement. The face of difficulty lies in interpreting these grades and giving them a meaningful meaning. The grading process is an important process, because it represents the guide for the student or player in his school or mathematical work and in understanding his abilities. It also determines to a large degree his educational, professional and sports future (11:86), "it includes The process of legalizing the tests and setting standards and levels, because the raw scores extracted from applying the tests to individuals are of limited use without converting them into standards or levels (11:87). (Gaussian curve) t-degree " This degree is called t-test and it is one of the most used standard degrees in the field of education Physical and sport sciences, and this degree is based on the properties of the normal distribution curve, and the T-degree is a standard degree with its mean (50) and its standard deviation (10). : 114)

$$t = 10 * \frac{x - \bar{x}}{n} + 50 \qquad (1)$$

The researcher also used the standard Z-score as one of the standard methods for evaluating the numbers scored by players (10:36), and thus the objectives of the research were achieved.

Statistical Description of Test Distribution:

The researcher extracted the arithmetic means, standard deviations, the median and the torsion coefficient to identify how the tests were distributed when applied to the research sample, and the following tables show the descriptive statistics of the tests.

Table (3) shows the descriptive statistics of the skill tests of soccer goalkeepers.

T	the test	the middle	Mediator	standard deviation	Coefficient of torsion
1	Flight time	6 0 0,8	0,800	0,31	0.08
2	Aim accuracy	6,33	6	0,57	0.27

Table (4) shows the raw and standard scores T and Z in the (Flight Time) test for youth handball players.

Class T	Z-degree	Raw grade	Class T	Z-degree	Raw grade
49,00	**-0,10**	**0.775**	**48,19**	**-0,18**	**0.750**
49.03	**-0.10**	**0.776**	**48,23**	**-0,18**	**0.751**
49.06	**-0.09**	**0.777**	**48,26**	**-0,17**	**0.752**
49,10	**-0.09**	**0.778**	**48,29**	**-0,17**	**0,753**
49,13	**-0.09**	**0.779**	**48,32**	**-0,17**	**0.754**
49,16	**-0.08**	**0.780**	**48,35**	**-0,16**	**0.755**
49,19	**-0.08**	**0.781**	**48,38**	**-0,16**	**0.756**
49,23	**-0.08**	**0.782**	**48,42**	**-0,16**	**0.775**
49,26	**-0.07**	**0.783**	**48,45**	**-0,15**	**0,758**
49,29	**-0.07**	**0.784**	**48,48**	**-0,15**	**0.759**

49,32	-0.07	0.785	48,51	-0,15	0.760
49,35	-0.06	0.786	48,55	-0,15	0.761
49,39	-0.06	0,787	48,58	-0,14	0.762
49,42	-0.06	0,788	48,61	-0,14	0.763
49,45	-0.05	0,789	48,64	-0,14	0.764
49,48	-0.05	0.790	48,68	-0,13	0.765
49,51	-0.05	0,791	48,71	-0,13	0.766
49,55	-0.05	0.792	48,74	-0,13	0.767
49,58	-0.04	0.793	48,77	-0,12	0.768
49,61	-0.04	0,794	48,80	-0,12	0.769
49,65	0.04-	0.795	48,84	0,12-	0.770
49,68	0.03-	0.796	48,87	0,11-	0.771
49,71	0.03-	0.797	48,90	0,11-	0.772
49,74	0.03-	0.798	48,94	0,11-	0.773
49,77	0.02-	0.799	48,97	0.10-	0.774

Class T	Z-degree	Raw grade	Class T	Z-degree	Raw grade
50,65	6 0,0	0,826	49,81	0.02-	0,800
50,68	6 0,0	0,827	49,84	0.02-	0,801
50,71	7 0,0	0,828	49,87	0.01-	0,802
50,74	7 0,0	0,829	49,90	0.01-	0,803
50,77	7 0,0	0,830	49,94	0.01-	0,804
50,80	8 0,0	0,831	49,97	0.003-	0,805
50,84	8 0,0	0,832	50,00	0,00	0,806
50,87	8 0,0	0,833	50.03	0,00	0,807
50,90	9 0,0	0,834	50.06	0,00	0,808
50,93	9 0,0	0,835	50.09	0,00	0,809
50,96	10 ,0	0,836	50,13	0,01	0,810
51,00	10 ,0	0,837	50,16	0,01	0,811
51.03	10 ,0	0,838	50,19	0,02	0,812
51.06	11 ,0	0,839	50,23	0,02	0,813
51,09	11 ,0	0,840	50,26	0,03	0,814
51,12	11 ,0	0,841	50,29	0,03	0,815
51,16	12 ,0	0,842	50,32	0,03	0,816
51,19	12 ,0	0,843	50,35	0,04	0,817
51,23	12 ,0	0,844	50,39	0,04	0,818
51,26	13 ,0	0,845	50,42	0,04	0,819
51,29	13 ,0	0.846	50,45	0,05	0,820
51,32	13 ,0	0,847	50,48	0,05	0,821
51,35	14 ,0	0,848	50,52	0,05	0,822
51,39	14 ,0	0,849	50,55	0,05	0,823
51,42	14 ,0	0,850	50,58	0,06	0,824
			50,61	0,06	0,825

Table (5) shows the raw scores, standard scores, T and Z in the (shooting accuracy) test for youth handball players**.**

		Aim accuracy
Class T	Z-degree	Raw grade
-43,51	-9,35	1

-25,96	**-7,60**	2
-8,42	**-5,84**	3
9,12	**-4.09**	4
26,67	**-2,33**	5
44,21	**0.58**	6
61,75	**1,18**	7
79,30	**2,93**	8
96,84	**4,68**	9
114,39	**6,44**	10
131,93	**8,19**	11
149,47	**9,95**	12

Determining standard levels

After the standard grades of the sample results were found in the examined tests, the standard levels were determined according to the Gaussian curve of normal distribution (Fig. 7), since “most of the characteristics and characteristics measured in physical education approaches the normal distribution (301: 2) as well (from Objective methods of grading assessment, especially if the group on which the measurements are made is large (13: 450) and that the construction of these levels was based on dividing them into six levels chosen by the researcher within six ranges, for each range (16) of the standard degrees of flight time and (1) 1) of the standard degrees of correction accuracy within three standard deviations located to the right and left of the arithmetic mean, and the range divides it into "six standard degrees" (114: 8). Table (6) shows the limits of the standard levels of the results of the research sample in the flight time and correction accuracy tests.

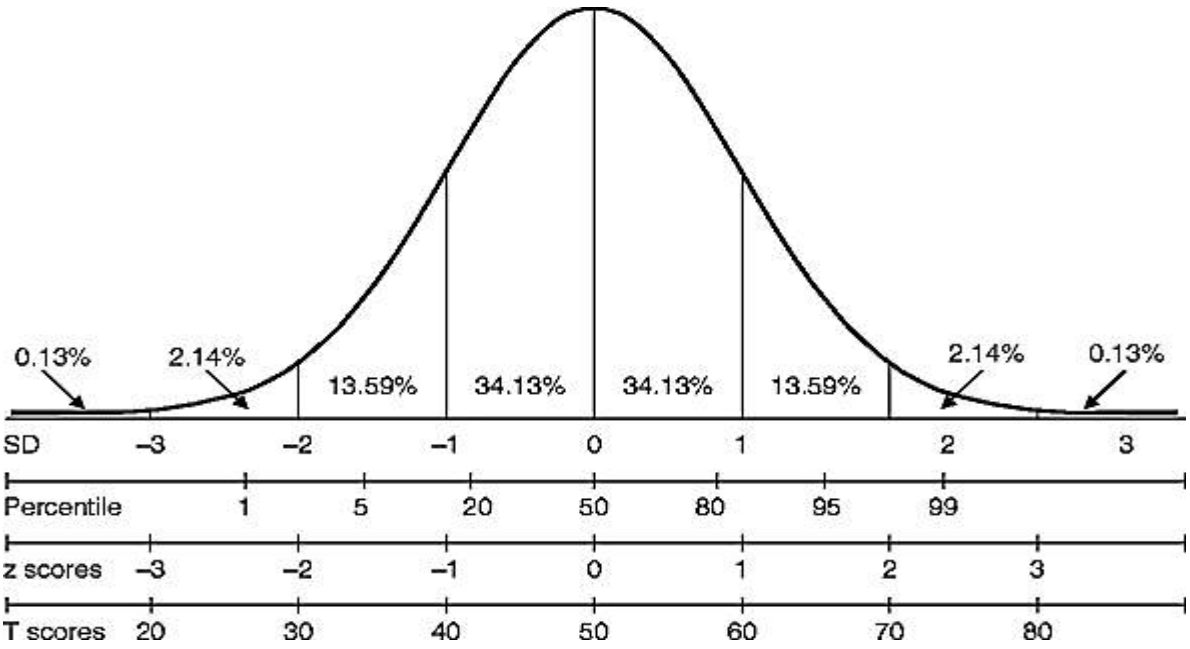

Figure (4) Gaussian curve for Standard, Standard and T degrees.

Table (6) shows the limits of the standard levels for the results of the research sample in the flight time and aiming accuracy tests

Standard levels	Standard classes of raw grades aiming accuracy of	Standard classes of crude classes flight time of
very good	**12-11**	**0.836 to 0.850**
good	**10-9**	**0.819 to 0.835**

Average	**8-7**	**0.802 to 0.818**
Acceptable	**6-5**	**0.785 to 0.801**
Weak	**4-3**	**0.767 to 0.783**
Very weak	**2-1**	**0.750 to 0.766**

It is evident from table (7) that most of the sample was at a (average) level at the time of flight and the researcher attributes the reason for this to the research sample's possession of the explosive force, which led to the presence of a high skill for the time of flight during correction. The explosive force is one of the important capabilities to solve many kinetic duties Which includes many basic offensive skills, and the player focuses on gathering the maximum explosive force during the correction process with the hand ball, because it depends on this ability and what is related to the sudden explosive action of the muscles, as well as getting rid of the blocking wall process applied by the defenders, the "physical side is a factor." A basis and important in mastering the performance of motor skills and reaching the technical level (5:29), and this is what he pointed out to (Adel Fadel, 1998): “Force is of great importance in performance because movement always leads against resistance, especially with athletes who perform their movements against high and many resistance. From the usual (8:13) The researcher believes that flying time is very important in selecting young players with handball, and it is difficult to develop because it is related to strength and speed and it takes time for the young player to increase his development.

As for the accuracy of correction, most of the sample was at a level (acceptable and average) in the accuracy of correction and the researcher attributed the reason for that to the research sample possessing a high level of training as they are in the special preparation stage and most of the teams focus on training them on special skills, including correction, which is the main factor in achieving Victory over the opposing team, as confirmed by it, "that accuracy is one of the important and necessary components in handball, and we may not be exaggerating if we say that this component is" closely "and" strong "linked to winning, represented in scoring goals, so correction is a skill that depends on this component in a high way. (6: 52)

Conclusions and recommendations.

Conclusions.

- Fit the tests to the research sample.
- A standardized grading has been reached for flight time and shooting accuracy for youth handball players.
- Standard levels of flight time and shooting accuracy have been set for youth handball players.
- The sample achieved in the tests the flight time and shooting accuracy of the youth handball players at the standard level between (acceptable and average) for the research sample.

Recommendations.

- The researcher recommends circulating the tests set as one of the selection criteria for young handball players in order to get the players to the higher levels to achieve the goal.
- Taking into account the standard levels reached by the researcher in the field of selecting young handball players that were achieved on the sample concerned with the research in order to use it in the evaluation process and follow its development from time to time.
- Through indicators for the evaluation process according to the standards achieved for the study to develop training programs commensurate with the level of players.
- Disseminating the proposed tests as a guide for selecting young handball players to the Central Iraqi Federation and sports clubs to benefit from it.
- The necessity of conducting research and studies on other samples such as youth and applicants to assess their levels for the purpose of selecting the national teams.
- Redefining new standards for the research community every 3 or 5 years to keep pace with the progress made in the field of this game.

References

1. Jaber Abdel-Hamid and Ahmed Khairy; Research Methods in Education and Psychology, Cairo, Arab Renaissance House, 1973.
2. Zuhair Qassim Al-Khashab (and others); Football: (Mosul, Dar Al Kutub for Printing and Publishing, 1988).
3. Adel Fadel Helmy; Physiological Sports Medicine: (Amman, Al-Kindi House for Publishing and Distribution, 1998).
4. Ali Sumum Al-Fartousi, Sadiq Jaafar, and Ali Mutair; Measurement, testing and evaluation in the mathematical field, Baghdad, Al-Nahrain Press, 2015.
5. Mohamed Subhi Hassanein; Measurement and Evaluation in Physical Education and Sports, C1, 4th Edition, Cairo, Arab Thought House.
6. Mahmoud Taha Nabih; A suggested guide for middle school teachers in the Improved Handball Curriculum, 1st Edition (Alexandria, Sports World Foundation, 2014).
7. Nedfal SM (1968AD), cited by Al-Tikriti, Wadih Yassin Muhammad (and others), the physical fitness qualifications for students applying for admission to the College of Physical Education at the University of Mosul, in the proceedings of the Fifth Scientific Conference of the Faculties of Physical Education in the Iraqi Country, Basra University, 1989.
8. Nizar Al-Taleb and Mahmoud Al-Samarrai. Mosul: Statistics, physical and mathematical tests. Mosul: Dar Al Kutub for Printing and Publishing, 1981.
9. Nawar Abdullah Hussein; Determining standard levels of some (special physical characteristics, basic skills, and anthropometrics) for different playing lines, Master Thesis, Al-Qadisiyah University, College of Physical Education, 2007.

Appendix (1) experts and specialists

Experts	**Degree**	Workplace
Prof. Dr .Ali Salman	Chosen Bar and Measure / Wrestling	Al-Mustansiriya University / College of Physical Education and Sports Sciences
Prof. Dr .Bashar Ghalib	Test and measure / handball	University of Diyala / College of Physical Education and Sports Sciences
Prof. Dr .Ghada Mahmoud	Test and measure / racket games	Al-Mustansiriya University / College of Physical Education and Sports Sciences
M .Haider Ghazi Aziz	Flag coaching / handball	Al-Mustansiriya University / College of Physical Education and Sports Sciences
M.D .Ryead Mezher	Test and measurement / soccer ball	Al-Mustansiriya University / College of Physical Education and Sports Sciences