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Designing and standardizing the proficiency test for knot tying, as well as the open knot tying test, for scout troops in high schools.

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Abstract

The practice of the scout movement in our country is concentrated within the scope of schools, as it is an important part of education sports. So, Scout teams are formed within the school, which contribute to the various activities of the movement, including camping and practicing artistic and cultural activities and sports. In order to reach scout teams with good capabilities, as well as for the purpose of standing on the level of performance of the selection of students participating in scout teams, special tests for scouting skills must be conducted through designing and codifying tests that give real values and the real level for scouts, it is within their competence in the field of scout movement, tests and measurement, and after reviewing theoretical studies, the researchers have come to the fact that there are no tests and measurements that give an evaluation of these skills. The researchers wanted to study this problem by designing special tests to evaluate the performance of some scouting skills for scout teams in high school.

Introduction and the importance of research:

that test Measurement is a scientific means that helps to reach the correct evaluation and thus raise the level of performance in various sports activities. Therefore, those in charge of the evaluation process are in dire need to develop and raise the efficiency of measurement tools, because the basis of every process, whether it is a selection or a successful comparison between a group of testers, is based on the availability of Accurate scientific conditions and foundations in the measurement methods. Indeed, the availability of such conditions means reducing and correcting errors and negatives.(Anwar, 2021; Zainab & Sahar, 2021) Testing in these means makes them accurate tools that help those in charge of the process to reach their goals, as the evaluation using objective and scientific measurement tools differs completely from the use of scientific methods. Usually subject to personal and subjective bias.(Ali, 2021; Hutham & Osama, 2021)

Physical education is an important part of modern education, which includes many activities, events and practices that must be built among school students through which the integrated and balanced for individuals so that they can adapt (Naima, 2022) development and growth can be achieved. to themselves and with the society. The practice of the scout movement in our country is concentrated within the scope of schools, as it is an important part of education sports. so Scout teams are formed within the school, which contribute to the various activities of the movement, including camping and practicing artistic, (ALtaai, 2019) cultural and sports activities.

In order to reach scout teams with good capabilities, as well as for the purpose of standing on the level of performance of the selection of students participating in scout teams, special tests for scouting skills must be conducted through designing and codifying tests that give Value Truth and real level for scouts. The selection process is an important and sensitive process, and it must be based on scientific methods and numbers Objective and through testing and measurement Scientific. And from here The importance of the research was manifested in designing and codifying tests to evaluate some of the scouting skills of scout teams in high school to stand level and performance scout These schools and then those in charge of the scouting movement can know the abilities they With these skills and through reliable picks Scouts to form (Anwar Altaee, 2022) scout teams.

Research Issue:

that scout In the scout movement, they are the backbone of the movement, and they must have capabilities that enable them to carry out the duties, activities, and practices of the scout movement. Scouts Participants in the movement have a degree of high responsibility. This thing is achieved through a scientific and

accurate selection process, and this depends on the existence of special tests in the hands of those in charge of the scout movement. There must be such tests to give the correct assessment of the students' level with these skills. According to the researchers' knowledge, it is within their competence in the field The scouting movement, tests and measurement After examining the theoretical studies, the researchers concluded that there are no tests and measurements that give an evaluation of these skills. The researchers wanted to study this problem by designing special tests to evaluate the performance of some scouting skills for scout teams in high school

research aims:

- 1- Test design and rationing The foreshortening knot and the open wedge tie for scout teams in high school
- 2- Determining standard scores and levels for the designed tests.

Research areas:

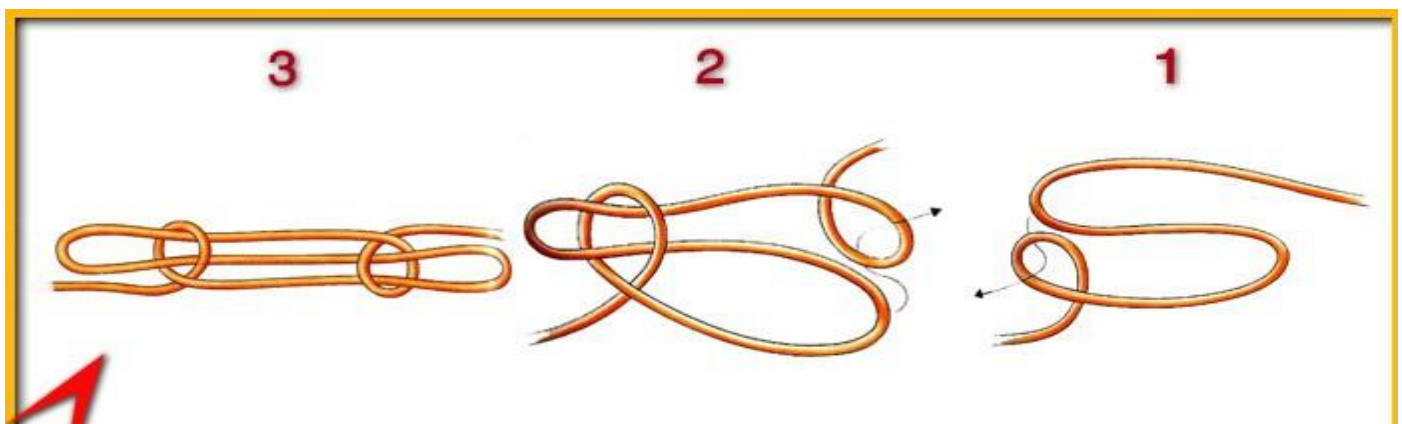
- 1- **the field Human:** scouts in high school in Basra Governorate for the year Academic year 2022-2023 AD.
- 2 **domain temporal:** for the period 2/10/2022 to 15/3/ 2023
- 3- **Domain Spatial:** School grounds in high school.

Theoretical studies:

knot shortener (dog's leg):

It is used to shorten the rope to avoid any weakness in it, or just to shorten it.

Method: We form a loop in the rope to shorten it to the required extent, then we make this loop next to the origin of the rope, thus forming three parts of it, forming a loop in each direction. Then we form half a tie at the origin of the rope near each loop, and insert a small part of the end of each loop into the half of the tie close to it. Finally, we tighten both ends of the rope, thus forming a knot required (See fig

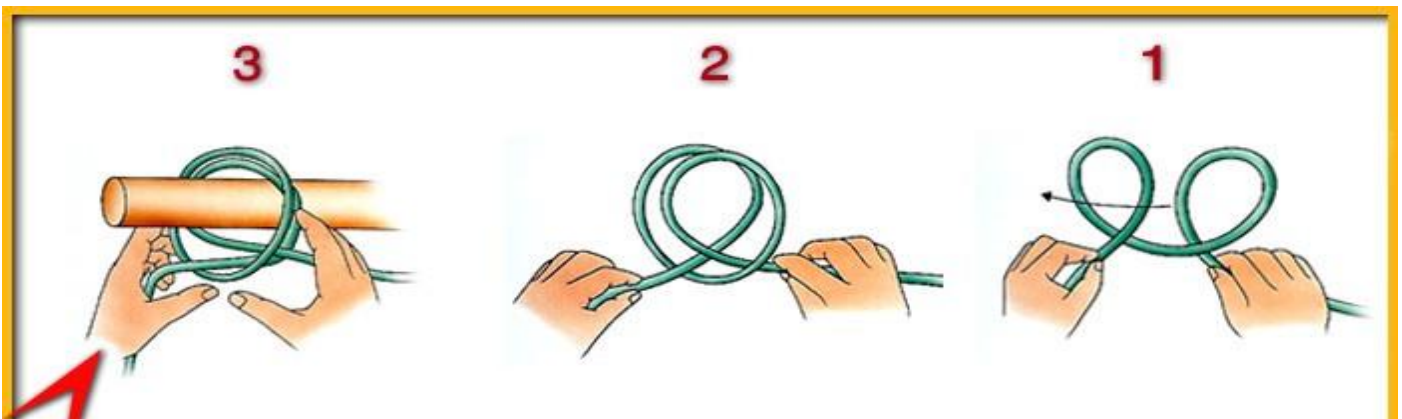


wedge tielt is one of the most important ties in scouting life, as it is used in many activities and the way it works is as follows

a- If the column – the peg – is open-headed

· Make two consecutive loops with the rope and note that the end of the first loop is below it and the end of the second loop is above it · Put the two loops on top of each other and then tighten the ends of the rope

B – If the column is closed at both ends, and this type is used at the end of most courses, and the way it works is as follows: Make a loop around the pole or branch that you want to tie the rope to Take the end of the second end and pass it under the loop and tighten the two ends of the rope to get the previous tie



Research Methodology and procedures field:

Research Methodology:

The method is the method used by the researchers to answer the questions raised by the problem in question, in other words

It consists in answering the question, How will the researchers solve the problem? (89:8)

Therefore, the researchers used the descriptive methodscan, Because it is the right way to reach goals Research and study of research variables.

Research community and sample

A sample is a part of a population that is chosen in order to represent the population correctly and honestly and for the sample to be similar.

To the specifications of the community or at least very close to it, it must be of an appropriate size according to the law preview. (14:2)

The researchers selected the research community from Scouts the Intermediate schools in Basra Governorate (Center), whose ages ranged between (13–15) years and year (2022–2023) M.

In order to determine the research sample, this sample must represent the original community, which is being studied, and which will be rationed

designed tests, The researchers did the sample was chosen randomly, and it included (80) students from the second grade middle within four Madras, the governorate center (20) request for each school. As shown in Table (1).

Table (1) shows the numbers the sample in every school

Number of Scouts	Schools	
	Intermediate Wissam Al-Wara	
	Medium city cities	
	High school Ahmed Al-Waeli	
	Medium	
	Total	

Schedule (2)

THE NUMBER AND PROPORTION OF THE RESEARCH SAMPLE		RATIONING SAMPLE		SAMPLE CHECK SCIENTIFIC FOUNDATIONS FOR TESTS (*)		COMMUNITY SEARCH	SAMPLE DETAILS EFFECTIVENESS
The ratio	the number	The ratio	the number	constancy	honesty	THE ORIGINAL	
82,5%	66	82,5%	66	14	28	96	Scoutshigh school

It shows the numbers and details of the research sample on which the tests were conducted

Means of collecting information, devices and tools used:

Means of collecting information

The researchers used several methods to collect information, which are:

- 1- Arabic and foreign sources.
- 2- Tests designed by researchers.
- 3- Righteousness software the computers as statistic.
- 4- Personal interviews♦

Equipment and tools used in the research:

- 1- Ropes, one meter long, number (2).
- 2- Pegs with a length of half a meter number (2).
- 3- One (1) chair.
- 4- One (1) table
- 5- whistle.
- 6- hour timing.
- 7- Results registration form the exams.
- 8- Calculator (Pentium 4)

Steps to implement the research and its field procedures:

Designed tests:

Two special tests were designed by the researchers to evaluate the performance of some scouting skills for scouts in middle schools

And after being presented to the specialized experts*It appeared as follows:

(the test the first)

- **name the test:** Knot default test scout.
- **The purpose of the test:** Evaluation of the scout's default knot skill Scouts high school
- **age level and sex:** Scouts secondary and who Their ages ranged between (12-14) Years
- **Tools used:** ropes one meter long, whistle, Stopwatch, chair, table

Test conditions

- 1– The student performs the default knot completely, without missing, while sitting on a chair And a table.
- 2– The time of performing the test until the completion of the performance of the knot of default before scout.
- 3– The number of attempts is only two in each performance, and we choose the performance The best (less time).

– **road the performance:**

- he sits scout In front of the timer To perform The tote starts when the whistle blow timer.
- Leads scout formation A loop in the rope to shorten it to the required extent, then he makes this loop next to the origin of the rope, thus forming three parts of it, forming a loop in each direction, then he makes half a tie at the origin of the rope near each loop, and inserts a small part from the end of each loop in the half of the bundle close to it. Finally, the two ends of the rope are tightened, thus forming the required knot
- The timer stops the stopwatch to see how long it takes.

– **Register:**

- The time it takes to perform the node is recorded complete negligence And the right one we choose Less time through the team the assistant.

(the test the second)

- **name the test:** a test wedge tie (open head) scout.
- **The purpose of the test:** Skill assessment Wedge tie (open head) scout at Secondary Scouts
- **age level and sex:** Scouts secondary and who Their ages ranged between (12–14) Years
- **Tools used:** Single length ropes meter, Half length pegs meter, whistle, Stopwatch, chair, table

Test conditions

- 1– leads the student wedge tie complete without deficiency sitting on a chair And a table.
- 2– The time of performing the test until the end of the performance wedge tie before requester.

3- The number of attempts is only two in each performance, and we choose the performance The best (less time).

- road the performance:

The student sits in front of the timer To perform wedge tie It starts when the whistle sound timer.

-The student makes two consecutive loops with the rope and notes that the end of the first loop is below it and the end of the second loop is above it

, Then he puts the two rings on top of each other and then tightens the ends of the rope

- The timer does off Stopwatch to see how long it takes.

- Register:

- The time it takes to perform the tie is recorded Corynebacterium complete And the right one we choose Less time through the team the assistant.

experiment survey:

In order to know the appropriateness of the tests for the research sample, the response of the sample to those tests, the time taken to perform the test, and to avoid errors that may occur to the work, as well as to detect obstacles and obstacles that may face the implementation the exams,

So the researchers took action more From an exploratory experiment, each of which had a specific goal, as follows:

First reconnaissance experience:

After completing the research's test design, the researchers conducted the second exploratory experiment on June 6.12/ 2022

At ten in the morning in a school mentioned previously in Basra Governorate, and their number was (14). Scout

In the presence of the assistant work team (*), the designed tests were applied Hused in the research and was intended to verify

Among the following:

1- Ensure the validity of the tools used in the research.

2- Learn how to apply the tests by the assistant team.

3- Learn how to record grades and how many times each student gets them searchlight.

4- Identify the obstacles that may occur by experience.

2- Knowing the appropriate times for tests.

3- How to explain and apply the performance of the tests used in the research

4- Identifying the extent to which the sample accepts and understands the tests and the method of performance.

The second reconnaissance experiment:

The researchers experimented on the 13th/12/2022 at ten o'clock in the morning in one of the mentioned schools in the governorate Basra, done experiment on (28) Scout them (14) Scout One of the scout teams who are experienced in scouting work, and the aim was to conduct the scientific foundations for tests.

3-8 Scientific foundations For tests:

Although the researchers conducted a survey for opinions Experts and specialists in the field of testing and measurement, but must

Taking into account stability, honesty and objectivity as scientific foundations for the test. So Sami Muhammad mentioned

Tests are a means that help evaluate performance and compare its levels with its goals objectivity, It should have a high rate of

Honesty, constancy and objectivity. (252:3). In order to obtain accurate results and to ensure the validity of the tests, the researchers resorted to subject it to the foundations Scientific.

3-8-1 is true the test: Salah is stubborn The validity of the test in measuring what it was designed for is in two respects:

measure the trait to be studied the function it measures, And The nature of the sample or the population to be studied as a distinctive sample of its members

The researchers used types of validity to ration the tests to give these tests the status of legitimacy in their application to

The research sample The researchers obtained following:

3-8-1-1 Honesty Virtual:

By presenting the tests to specialists in the field of physical education by judging the validity of these tests in

Measuring the characteristic to be measured, as (90%) of the specialists are validated by these tests, as they measure what they were prepared for.

This checks for the researchers sun Types of honesty which is honesty virtual. As Mustafa Mahmoud said, "We can count the test as honest

If it was presented to a number of specialists in the field that the test measures, and they judged that it measures what was set to be measured efficiently (166:7)

3-8-1-2 Honesty Differentiation:

And for To prove this sincerity, the researchers applied the tests on two samples of equal number, consisting of (28) laboratories for each sample, The two samples were chosen by this method intentional illusion. The first sample is students one The aforementioned high school in Basra Governorate (14) Scout and the second sample (14) Scouts From the experienced teams to work scout, and after getting results from these

Schedule(3)

It shows the arithmetic mean, standard deviations, and the calculated (t) value for the two samples in the tests

Tests and in order to calculate the validity differential. In These tests were treated statistically using the (T) test, as shown Schedule(3)

By observing the results in Table (3), it was found that the tests enjoyed a high degree of validity, as differences of high significance appeared between the two samples.

3-8-2 Test stability: Consistency is “consistency in results and the test is considered to be stable.” if We obtained the same results from it on the same individuals and under the same conditions.¹⁾ For the purpose

level indication	Sig	value (v) calculated	Scouts the experienced		Scouts in high school		Statistical processors the exams
			p	s-	p	s-	
moral	0,017	2,546	0,06	0,42	0,071	0,48	Knot default test
moral	0,191	1,342	0,072	0,54	0,073	0,57	a test wedge tie (open head)

of verifying the stability of the tests used in search, The researchers used the (retest) method, as the test was applied to a sample of (14) students one The aforementioned high school in Basra Governorate after (5) days on 20/1/2023 It was on 25/1/ 2023 Then the results were processed Statistically, where The correlation coefficient (pearson), As shown in Table (4)

Schedule (4)

It shows the arithmetic means, standard deviations, and the value of (t) calculated for the tests used in the research

level indicati on	Sig	Valuable (R) calculat ed	The second test		The first test		Statistical processors the exams
			p	s-	p	s-	
moral	0,001	0,799	0,067	0,487	0,715	0,488	Knot default test
moral	0,000	0,887	0,056	0,55	0,044	0,57	a testwedge tie(open head)

And by observing the results in Table (4), it was found that the tests had acquired the characteristic of stability and stability because (the correlation coefficient between the results of two times indicates the test stability coefficient, and thatiflink wasmorally)(71:4)

3-8-3 is objectivethe exams:

Objectivity is defined as(sheThe extent to which the arbitrator or examiner is free from subjective factorsas bias.This is done by determining the degree of agreement of the referees or examiners so that the arbitrator isindependent,In the mathematical field, the instructions for applying the test must be clarified in terms of its conductand manage it and register Results)

Therefore, the researchers can say that the results of the tests were subjected to accurate objective evaluation, and thus the researchers avoided In that the tests were affected by a changearbitrators.

The final application of tests on a sampleLegalization:

After the proposed tests were subjected to the scientific foundations of the tests of stability, honesty and objectivity, the researchers reached the final form of these tests, as it became clear to the researcher that the tests are suitable for measuring the performance of some scouting skills to be measured, and then the researchers prepared the necessary supplies to conduct these tests.Scouts high schoolFor the academic year (2022-2023)On 25/2/2023have been usedsquaresIn the secondary school within the research sample in the province of Basra, and the aforementioned auxiliary work team applied the tests on the rationing sample, which is (66).ScoutAnd it lasted four days, as the dates of the tests were close at ten o'clock in the morning on each test day, as the researchers took Considering all extraneous variables that affect the application of the test.

meansStatistics:

For the purpose of processing statistical data, the following statistical laws were used: (252:5)

- 1- Arithmetic mean (THE ARITHMETIC MEAN)
- 2- deviation normative. ((STANDARD DEVAIATION
- 3- coefficient the difference. (MEASURE OF DIFFRENCE)
- 4- The ratio Centennial.
- 5- T-test between two unrelated media and two sample equal.
- 6- Correlation coefficient Simple. (PEARSON)
- 7- Fixed amount.
- 8- The standard score modified by the sequential method = the arithmetic mean +_ the fixed value

4- Presentation, analysis and discussion of results

In order to achieve the objectives of the research and its statistical hypotheses in evaluating performance in terms of some physical abilities and skill functional, The researchers presented, analyzed and discussed the results after they were processed statistically and extracted from the results of the proposed tests and by the program prepared by the computer as well as the proposed equations in order to obtain the final indicator for each a test.

View the results of the two sample tests search:

table (5)

Shows the arithmetic mean, standard deviations, coefficient of variation and the highest value And low value for the two designed tests

minimu m value	high er valu	Factor the differe	deviati on normat	the middle Arithm	meas ruing unit	Statistical processors the exams
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	e	nce	ive	etic		
0,485	0,34	5,95	0,025	0,42	second	Knot default test
0,69	0,35	10,37	0,055	0,53	second	a testwedge tie(open head)

It can be seen from Table (5) that the results of the default knot test, where the arithmetic mean was (0.42) and with a deviation normative(0.025) and the coefficient of variation (5.95).%)And higher Z value (0,34)And lower Value (0.485), either test results **wedge tie(openHead)** alive. The arithmetic mean was (0.53), with a standard deviation (0.055), and the coefficient of variation (10.37).%)and the highest value (0,35)And low value (0,69)

View standardized scores and modified raw scores for tests Designer:

The relationship was extracted to find the constant value ($5 \times \text{standard deviation} / 50$) (274:4) The modified standard score was extracted by the sequential method (the arithmetic mean \pm the fixed amount (sequentially), and the arithmetic mean represents the score (50) in the scores table normative, Either the fixed amount represents the value that must be added or subtracted from the mean Arithmetic, since The modified standard score is a score with an average of (50) and a deviation of zero.

Benchmark bikes and raw scores for the two designed tests:

Table (6) shows the standard scores and the raw scores in a sequential manner for the two research tests designed and in a table of shaded numbers, which are the degrees of the highest value and the lowest value obtained by the sample in the first test, and it is fixed on all subsequent tables for the rest the exams. And I give it symbol ((x1 for node testing negligence, ((x2 for testing wedge tie (open head)

schedule (6)

Shows the standard scores and the raw scores in a sequential manner for the tests designed

x2	x1		x2	x1		x2	x1		x2	x1	T
0,387	0,355	5	0,5245	0,4175	5	0,662	0,47	5	0,7995	0,5325	1
0,3815	0,3525	7	0,519	0,415	7	0,6565	0,4675	7	0,794	0,53	2
0,376	0,35	8	0,5135	0,4125	8	0,651	0,465	8	0,7885	0,5275	3
0,3705	0,3475	9	0,508	0,41	9	0,6455	0,4625	9	0,783	0,525	4
0,365	0,345	10	0,5025	0,4075	10	0,64	0,47	10	0,7772	0,5225	5
0,3595	0,3425	11	0,497	0,405	11	0,6345	0,4675	11	0,772	0,52	6

0,354	0,34	2	4915	4025	7	0,629	465	2	0,7665	5175	7
0,3485	0,3375	3	486	40	3	0,6235	4625	3	0,761	515	8
0,343	0,335	4	4805	3975	0	0,618	46	4	0,7555	5125	9
0,3375	0,3325	5	475	395	0	0,6125	4575	5	0,75	51	10
0,332	0,33	5	4695	3925	2	0,607	455	5	0,7445	5075	11
0,3265	0,3275	7	464	39	2	0,6015	4525	7	0,739	505	12
0,321	0,325	3	4585	3875	3	0,596	45	3	0,7335	5025	13
0,3155	0,3225	0	453	385	4	0,5905	4475	0	0,728	50	14
0,31	0,32	0	4475	3825	5	0,585	445	0	0,7225	4975	15
0,3045	0,3175	1	442	38	5	0,5795	4425	1	0,717	495	16
0,299	0,315	2	4365	3775	7	0,574	44	2	0,7115	4925	17
0,2935	0,3125	3	431	375	3	0,5685	4375	3	0,706	49	18
0,288	0,31	4	4255	3725	0	0,563	435	4	0,7005	4875	19
0,2825	0,3075	5	42	37	0	0,5575	4325	5	0,695	485	20
0,277	0,305	5	4145	3675	2	0,552	43	5	0,6895	4825	21
0,2715	0,3025	7	409	365	2	0,5465	427	7	0,684	48	22
0,266	0,30	3	4035	3625	3	0,541	425	3	0,6785	4775	23
0,2605	0,2975	0	398	36	3	0,5355	422	0	0,673	475	24
0,255	0,295	0	3925	3575	5	0,53	42	0	0,6675	4725	25

Presentation and discussion of the standard levels and the percentages determined for them in the normal distribution curve, the modified standard scores, the number of students, and the percentages for each level in the two knots of default tests and the wedge ligament (open head)

Schedule (8)

Show The standard levels and the proportions established for them in the normal distribution curve, the modified standard scores, and a number Scouts

And the percentages for each level in the two research tests

percentage	number of students	grades modified standard in a sequential manner	raw grades in Designed tests	levels
0%	—	1-20	0.5325 - 0.485	weak
0%	—		0,7995 - 0,695	
27,27%	18	21-40	0.4825 - 0.445	ceptable
22.72%	15		0,6895 - 0,585	
51,5%	34	41-60	0,4425 - 0,395	verage
48,48%	32		0.5795- 0.475	
19,6%	13	61-80	0,3925 - 0,345	good
22.72%	15		0,4695 - 0,365	
1.51%	1	81-100	0,3425 - 0,295	ry good
6,06%	4		0.3595- 0.255	

It is clear from Table (8) in two tests that the level of weakness is determined by the raw scores for both tests (0.7995- 0.485), which corresponds to the standard scores (1-20), as the number of two scouts (Zero) for both tests achieved a percentage of (zero%), while the acceptable level is determined by the raw scores (0.6895-0.445), which corresponds to the standard score (21-40), as the number of students for both tests, respectively (15, 18) Scout They achieved a percentage of (27.27%, 22.72%,

respectively), while the average level is determined by the raw scores (0.5795–0.395), which corresponds to the standard score (41–60), as the number of Scouts For both tests, respectively (34, 32) students achieved a percentage of (51.5%, 48.48%), respectively. The good level is determined by the raw scores (0.4695–0.345), which corresponds to the standard score (61–80). Where is the number Scouts For both tests, respectively (13, 15) Scout They achieved a percentage of (19.6% and 22.72%), respectively. As for the very good level, it is determined by the raw scores (–0.3595). **0,295**) Which corresponds to the standard score (81–100), as the number Scouts For both tests and on respectively (1,4) Scout They achieved a percentage of 1.51%, 6.06, respectively%)

The researchers attribute The reason for this difference and discrepancy between the members of the research sample and their access to different levels

The idea of this test is based on the fact that there is a close link between the performance of the requirements of this test because it contains several skills that must be possessed. scout Within scout teams and their mastery to enable workers and specialists to scout work to choose scout, and as The researchers also see that the nature of the test used in evaluating performance was consistent with the nature and age scout in high school (a sample search) For all levels mentioned previously, In addition, the researchers were keen to choose simple motor skills commensurate with the physical and cognitive abilities of this group

conclusions

Based on the results of the research and the statistical analysis of the data and their discussion, the researchers reached the following conclusions:

- 1– The designer tests Hlt showed individual differences between the members of the research sample through the raw scores and the levels obtained by the sample members when rationing these the exams.
- 2– The levels ranged between (good and the middle and accepted) in All the results of the tests designed for the research sample, and this indicates the convergence of results despite the differences between individual the sample.
- 3– The research sample obtained a level of (middle) more than other levels in the two tests designers.

4- The results of the two tests were characterized by objectivity due to the use of scores. Because she underwent calibration and examination in the accuracy of the results that give it.

Recommendations

In the light of theoretical studies and statistical analysis and discussion of the results, the researchers made the following recommendations:

1- The possibility of using designed tests in evaluation of Scouts' performance in high school. This is because of its importance and its ability to give objective values of performance by specialists in the follow-up stages of work of Scout.

2- The possibility of using these designed tests to find individual differences between Scouts in high school. At the beginning of scouting work, standing on the strengths and weaknesses of the team of scout.

3- The possibility of adopting these indicators, standards and levels by specialists in evaluation of scout in high school before and during to implement a training program.

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