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Building, codifying, and applying the analytical thinking scale for handball Premier League players.

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Abstract: The research included four chapters, as the first chapter contained an introduction to the research and its importance,the researcher touched on the importance of analytical thinking and the need to study it in the sports aspect and in the game of handball,as for the problem of the research, it lies in the absence of a scale that measures analytical thinking in the sports side and among handball players. The objectives of the research were building and codifying analytical thinking among handball players for the season (2022-2023) and identifying the level of analytical thinking among handball players in Iraq for the season (2022-2023). As for the areas of research, it included the human field, which was represented by the players of handball clubs in Iraq for the sports season (2022-2023), and the temporal field was determined for the period from (6/9/2018) until (7/30/2018), while the spatial field was halls And sports club stadiums in Iraq, and the researcher used the descriptive approach in the survey method, and the research sample consisted of (145) players from Iraqi clubs, and the researcher built and standardized the analytical thinking scale and used to extract the statistical results, the statistical bag (SPSS), and the researcher was able to build and standardize the analytical thinking scale with (56) a paragraph divided into four axes, so the researcher recommends that coaches use the current scale to periodically detect the level of their players to know the extent of their readiness and preparation in training and competition.

Keywords: Analytical thinking ,handball ,Premier League ,player

Chapter one

1- Introducing the research:

1-1 Introduction to the research and its importance:

Analytical thinking is considered as a mental process, and what is meant by the process in the framework of psychology is a series of activities directed towards a specific goal or a series of changes that take a specific form. If we look at analytical thinking from this angle, we find that it represents one of the basic stages or steps related to a number of more complex thinking processes. Such as coordination and critical thinking, problem-solving, decision-making, scientific thinking, systemic thinking, and creative problem-solving)1(.

1-2 Research problem:

The problem of the research lies in the absence of a measure of analytical thinking related to the Iraqi environment, specifically the players of Iraqi clubs in handball, and the large number of measures of analytical thinking in the aspect of general psychology, but the precise specialized aspect in the sports field must be taken into account to reveal the distinction between players that have not been previously addressed with this The type of samples to the knowledge of the researcher.

1-3 Research Objectives:

1- Building and codifying the analytical thinking scale for Premier League handball players in Iraq for the season (2022-2023).

2- Identifying the level of areas of analytical thinking among the handball Premier League players in Iraq for the season (2022-2023).

1-4 research areas:

1-4-1 The human field: Premier League handball players in Iraq for the season (2022-2023).

1-4-2 Time range: 10/11/2022 to 24/1/2023.

1-4-3 The spatial field: halls and stadiums of Iraqi clubs.

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1-5 Define terms:

1- Analytical thinking, as defined by Krikori 1988: is the ability of the individual to face problems by disassembling its parts carefully and in a systematic manner, paying attention to details, focusing attention on them, planning carefully before making a decision, as well as collecting the best possible amount of information and the ability to contribute to clarifying things so that rational conclusions can be obtained. Depending on the reasons and facts)2(.

Chapter two

2- Research methodology and field procedures

2-1 Research Methodology: The researcher used the descriptive survey method to suit the nature of the research problem and its objectives.

2-2 Community and research sample: The original community of the research was the players of Premier League clubs for the sports season 2022-2023 AD, as the research community reached (240), meaning the research community was taken completely, while the research sample amounted to (223) players, and the sample of the reconnaissance experiment consisted of (13) Players from Naft Maysan Sports Club. The sample of the application was (100) players from the clubs of the municipalities of Basra and Karbala. As for the sample of construction and rationing, it consisted of (110) players from clubs, as shown.

The research sample was divided into:

1- A sample of the reconnaissance experiment from (13) players, and its percentage is (5.417), representing Naft Maysan Club.

2- As for the construction and rationing sample, it consisted of (110) players and its percentage was (45,833) representing the clubs (Al-Hashd Al-Shaabi, Al-Kufa, Al-Jaish, Karbala, Diyala, Al-Karkh, Al-Kut)

3- The sample of the application is (100) players, and its percentage is (41,667) representing clubs (the municipalities of Basra, Al-Fatwa, Al-Nasiriyah, the Arabian Gulf, Al-Shorta, Al-Musayyib, Al-Taawon).

4- The excluded (17) players and their percentage is (7.083), because they do not know how to read and write.

2-3 Means of gathering information:

The researcher used several methods to collect the required data in her research, namely:

- Arabic and foreign sources and references to determine the most important areas for managing emotions in the game of handball and the most important paragraphs for it.

- Forms distributed to experts and specialists to determine the validity of the areas and proposed items for measuring the management of emotions. - A form for emptying the data - Analytical thinking scale - Personal interviews.

2-4 Tools and methods used in the research:

1- Arabic and foreign sources and references. 2-observation. 3-Resolution. 4- Personal interviews. 5-tablets.

2-5 Field Research Procedures:

2-5-1 Procedures for constructing the analytical thinking scale: The researcher adopted the steps identified by Allen & yen in building the analytical thinking scale, as follows:

2-5-1-1 Define the concept of analytical thinking:

This step is one of the most important steps in building the tool, because measuring analytical thinking requires defining its concept clearly, so some educational and psychological literature has been used to clarify these concepts.

2-5-1-2 Determine the scopes of the analytical thinking scale:

For the purpose of defining the areas of analytical thinking, the researcher reviewed a group of studies and research, and conducted some personal interviews with a group of experts and specialists, in the fields of (general psychology and sports psychology), and in the light of the definition of analytical thinking, the researcher identified five areas of the scale with a definition for each of them The components are (focusing attention, perception, decision-making, responsible, interpretation) and for the purpose of ensuring the

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validity of these areas and their definitions, the questionnaire was presented to a group of experts (Appendix 7), and they numbered (14) experts in sports psychology.

Table (1) shows the chi-square of the agreement of experts and specialists on the areas of analytical thinking

N	areas of analytical thinking	The number of agreed experts	The number of disagreeing experts	Calculated Ca2 degree	significance level	Significance and acceptance
1	Focus attention	15	0	15.000	*0.000	acceptable
2	Perception	15	0	15.000	*0.000	acceptable
3	Make decision	14	1	11.267	*0.001	acceptable
5	Interpretation	13	2	8.067	*0.005	acceptable

2-5-1-3 Preparing the initial formula for the analytical thinking scale: In order to prepare the initial formula for the analytical thinking scale, the researcher carried out several procedures, namely:

First: Preparing the items for the analytical thinking scale: The sources on which I relied to obtain the items for the scale are:

A- Relevant scales: Some paragraphs whose wording has been modified in a way that is compatible with the current scale were selected and added to the paragraphs obtained from the initial survey responses.

2-5-1-4 Determining the method of formulating the scale's paragraphs and their foundations: After collecting the paragraphs for each of the analytical thinking scale, the researcher formulated (60) paragraphs distributed over the areas of analytical thinking. The researcher took a number of steps in formulating the paragraphs, including:

1- That the scale consists of positive and negative items, and the reason for this diversification is to reduce the respondent's tendency to answer.

2- The paragraph should not be ambiguous and its meaning should be clear and specific.

3- The paragraph should be appropriate to the nature of the sample.

4- The paragraph should measure one of the components of the study.

5- The paragraph should be written in the first person pronoun.

2-5-1-5 Presentation of the initial version of the analytical thinking scale: After examining the methods of constructing the analytical thinking scale and the rules followed in that, the researcher formulated the scale paragraphs in an appropriate and easy-to-understand language for the research sample, since preparing the scale paragraphs in its initial form is an essential step in building the scales. The researcher, when preparing the initial formula for the scale, divided the paragraphs into positive and negative paragraphs, in order to cover all aspects of the subject of analytical thinking and according to the areas that have been identified, as follows:

A- Analytical thinking scale: 1- Focusing attention 15 items. 2- Realizing 15 paragraphs. 3- Decision making 15 paragraphs.

4- Interpretation 15 paragraphs.

2-5-1-6 Determine the validity of the items of the analytical thinking scale, its instructions, its alternatives, and the key to correcting it:

the analytical thinking scale contained (60) items distributed over four areas, which the researcher presented as follows:

First: After completing the formulation of the paragraphs, the researcher presented the scale paragraphs to a specialist in the Arabic language for the purpose of linguistically correcting the paragraphs. The notes and modifications he made were taken into account, and thus the scale is free from linguistic errors and ready to be presented to the experts.

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Second: The scale was presented in its initial form to a group of arbitrators with experience and specialization in the field of mathematical and psychological sciences, testing and measurement, and their number is (15) experts.

The researcher analyzed the results of the scale using the percentage as a criterion for accepting or excluding the items of the scale, as the paragraphs agreed upon by (75%) or more of the arbitrators were accepted as being valid and suitable for the scale, and (Bloom) indicates that "the researcher must obtain approval of (75%) or more From the opinions of arbitrators in this kind of honesty")3(.

2-6 Exploratory Experience:

The researcher applied the scale to a sample of (13) players representing the Tigris Sports Club, and the aim was to: ensure the clarity of the scale instructions and the clarity of its paragraphs for the research sample, and to identify the time it took for their answers, which is (19.37) minutes, and to identify all the negatives before conducting The main experiment.

2-7 The main experiment: The researcher conducted the main experiment on the research sample of (110) players for the purpose of statistical analysis of the items and extracting the discriminatory power of the items of the scale in order to keep the distinctive items and exclude the undistinguished items, as well as to find the psychometric properties of the scales as follows:

First: The method of correcting the scale: based on the fact that the wording of the paragraphs was in two directions (negative and positive) and that the process of correcting the analytical thinking scale took place by setting an appropriate score for each paragraph, and according to the respondent's answer through the correction key, and in the current analytical thinking scale, the alternatives to answering it are (5) alternatives and by (58) paragraphs that shows this, and the weights of the paragraphs were given as follows

1- If the direction of the paragraph is positive

2- If the direction of the paragraph is negative

5	4	3	2	1
1	2	3	4	5

2-8-1 Finding the discriminating ability of the items of the analytical thinking scale for elite handball players:

It was verified that it was found for each item in the four dimensions of the scale by applying its form to the particularated statistical analysis sample (structure sample) of (110) players.

Table (2)

Shows the results of the discriminatory ability of the items of the analytical thinking scale

The first area: meditative focus								
Paragraphs	N	The group	X	+ Z	Calculated (t)	degree (Sig)	indication	Discrimination
1	30	Upper	4.170	0.803	6.343	*0.000	Indicator	Discriminator
	30	Lower	1.950	0.762				
2	30	Upper	4.090	0.749	6.355	*0.000	Indicator	Discriminator
	30	Lower	2.050	0.685				
3	30	Upper	4.060	0.750	5.922	*0.000	Indicator	Discriminator
	30	Lower	2.120	0.715				
4	30	Upper	3.867	0.915	5.159	*0.000	Indicator	Discriminator
	30	Lower	2.467	0.516				
5	30	Upper	3.733	1.033	4.025	*0.000	Indicator	Discriminator
	30	Lower	2.533	0.516				

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6	30	Upper	3.867	0.915	5.672	*0.000	Indicator	Discriminator
	30	Lower	2.200	0.676				
7	30	Upper	4.000	0.756	6.874	*0.000	Indicator	Discriminator
	30	Lower	2.200	0.676				
8	30	Upper	4.000	0.756	6.500	*0.000	Indicator	Discriminator
	30	Lower	2.267	0.704				
9	30	Upper	3.867	0.743	6.013	*0.000	Indicator	Discriminator
	30	Lower	2.200	0.775				
10	30	Upper	3.933	0.884	4.752	*0.000	Indicator	Discriminator
	30	Lower	2.600	0.632				
11	30	Upper	4.070	0.748	5.924	*0.000	Indicator	Discriminator
	30	Lower	2.020	0.798				
12	30	Upper	3.990	0.677	6.006	*0.000	Indicator	Discriminator
	30	Lower	2.120	0.715				
13	30	Upper	4.160	0.806	7.443	*0.000	Indicator	Discriminator
	30	Lower	1.810	0.590				
14	30	Upper	4.250	0.760	8.536	*0.000	Indicator	Discriminator
	30	Lower	1.650	0.591				
The second area: perception								
Paragraphs	N	The group	X	+ Z	Calculated (t)	The level of indication	indication	Discrimination
1	30	Upper	3.940	0.679	5.145	*0.000	Indicator	discriminator
	30	Lower	2.190	0.835				
2	30	Upper	3.860	0.580	5.197	*0.000	Indicator	discriminator
	30	Lower	2.190	0.835				
3	30	Upper	3.830	0.568	5.138	*0.000	indicator	discriminator
	30	Lower	2.190	0.835				
4	30	Upper	3.890	0.950	5.278	*0.000	indicator	discriminator
	30	Lower	2.430	0.495				
5	30	Upper	3.957	0.993	5.087	*0.000	indicator	discriminator
	30	Lower	2.497	0.500				
6	30	Upper	3.890	0.950	5.516	*0.000	indicator	discriminator
	30	Lower	2.297	0.591				
7	30	Upper	4.023	0.793	6.761	*0.000	indicator	discriminator
	30	Lower	2.297	0.591				

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8	30	Upper	4.157	0.777	7.027	*0.000	indicator	discriminator
	30	Lower	2.363	0.611				
9	30	Upper	4.023	0.793	6.316	*0.000	indicator	discriminator
	30	Lower	2.297	0.701				
10	30	Upper	4.030	0.702	5.836	*0.000	indicator	discriminator
	30	Lower	2.170	0.723				
11	30	Upper	4.010	0.687	6.746	*0.000	Indicator	discriminator
	30	Lower	1.970	0.665				
12	30	Upper	4.170	0.796	8.197	*0.000	Indicator	discriminator
	30	Lower	1.560	0.617				
13	30	Upper	4.300	0.794	7.095	*0.000	Indicator	discriminator
	30	Lower	1.750	0.813				
14	30	Upper	4.230	0.870	8.580	*0.000	Indicator	discriminator
	30	Lower	2.080	0.710				
The third area: decision making								
Paragraphs	N	The group	X	+ Z	Calculated (t)	degree (Sig)	indication	Discrimination
1	30	Upper	3.990	0.635	7.397	*0.000	Indicator	discriminator
	30	Lower	1.750	0.717				
2	30	Upper	3.960	0.631	7.143	*0.000	Indicator	discriminator
	30	Lower	1.870	0.677				
3	30	Upper	4.030	0.662	6.728	*0.000	indicator	discriminator
	30	Lower	1.940	0.726				
4	30	Upper	2.820	1.064	1.357	*0.180	indicator	discriminator
	30	Lower	2.398	0.531				
5	30	Upper	4.087	0.986	5.588	*0.000	indicator	discriminator
	30	Lower	2.465	0.540				
6	30	Upper	3.953	0.989	5.620	*0.000	indicator	discriminator
	30	Lower	2.265	0.613				
7	30	Upper	4.087	0.829	6.845	*0.000	indicator	discriminator
	30	Lower	2.265	0.613				
8	30	Upper	4.220	0.802	7.146	*0.000	indicator	discriminator
	30	Lower	2.331	0.636				
9	30	Upper	4.087	0.829	6.427	*0.000	indicator	discriminator
	30	Lower	2.265	0.720				

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10	30	Upper	3.997	0.922	4.856	*0.000	indicat or	discrimi nator
	30	Lower	2.568	0.670				
11	30	Upper	4.010	0.645	6.929	*0.000	indicat or	discrimi nator
	30	Lower	1.880	0.727				
12	30	Upper	3.900	0.665	6.500	*0.000	indicat or	discrimi nator
	30	Lower	1.900	0.710				
13	30	Upper	3.940	0.636	7.441	*0.000	indicat or	discrimi nator
	30	Lower	1.840	0.626				
14	30	Upper	4.210	0.844	6.294	*0.000	indicat or	discrimi nator
	30	Lower	1.910	0.789				
The fourth area : interpretation								
Paragr aphs	N	The group	X	+ Z	Calculated (t)	degree (Sig)	indicati on	Discrimi nation
1	30	Upper	3.900	0.665	6.500	*0.000	indicat or	discrimi nator
	30	Lower	1.900	0.710				
2	30	Upper	3.940	0.636	7.441	*0.000	indicat or	discrimi nator
	30	Lower	1.840	0.626				
3	30	Upper	4.389	0.830	7.174	*0.000	indicat or	discrimi nator
	30	Lower	2.561	0.534				
4	30	Upper	4.456	0.746	7.920	*0.000	indicat or	discrimi nator
	30	Lower	2.428	0.653				
5	30	Upper	4.456	0.746	8.258	*0.000	indicat or	discrimi nator
	30	Lower	2.495	0.538				
6	30	Upper	4.323	0.976	6.501	*0.000	indicat or	discrimi nator
	30	Lower	2.361	0.642				
7	30	Upper	4.010	0.645	6.929	*0.000	indicat or	discrimi nator
	30	Lower	1.880	0.727				
8	30	Upper	4.050	0.698	7.696	*0.000	indicat or	discrimi nator
	30	Lower	1.760	0.631				
9	30	Upper	3.940	0.723	7.823	*0.000	indicat or	discrimi nator
	30	Lower	1.480	0.683				
10	30	Upper	4.375	0.820	6.441	*0.000	indicat or	discrimi nator
	30	Lower	2.531	0.746				
11	30	Upper	4.442	0.737	8.202	*0.000	indicat	discrimi

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	30	Lower	2.531	0.520			or	nator
12	30	Upper	4.245	0.875	6.518	*0.000	indicat or	discrimi nator
	30	Lower	2.531	0.520				
13	30	Upper	4.442	0.737	8.136	*0.000	indicat or	discrimi nator
	30	Lower	2.398	0.635				
14	30	Upper	4.379	0.731	8.262	*0.000	indicat or	discrimi nator

Degree of freedom (N1 + N2 - 2) = (58), * Discriminatory indicator if (Sig) score ≥ (0.05)

From the observation of table (7), it is clear that all items of the analytical thinking scale have been retained,which achieved the conditions specified by the statistical significance of the calculated (T) value, as the (Sig) score was < (0.05) at a degree of freedom (58) and a level of significance (0.05), and with this procedure the scale became composed of (56) items and with a total score ranging from (56 - 280) degrees.

2-8-3 The scientific bases of the two scales

First: apparent honesty:

The researcher obtained good indications of the apparent honesty of the (analytical thinking) scale through what experts and specialists in the field of general and mathematical psychology decided. The honesty of the construction was verified through the use of the two end groups and internal consistency.

2-8-5 Stability of the scale: For the purpose of calculating the stability coefficient of the scale, the researcher relied on the following:

First: Cronbach's alpha method:

This method was used because (it is used in any type of objective and essay questions))4(, as the stability was extracted in this way by applying the alpha Kornbach equation on the individuals of the scale building sample using the statistical bag (spss), it was found that the value of the stability coefficient for all The resolution axes are (0.821), which is a high stability coefficient, and it can be relied upon to estimate the stability of the test.

Second: the half-partition method:

For the purpose of finding the stability coefficient of the resolution, the half-partition method was adopted because it is a method that does not require a long time and is in line with the requirements of the scale. The data obtained by the researcher related to the scores of the scale paragraphs included (56) paragraphs were relied upon, as the scale was divided into two parts. The first includes the degrees of the paragraphs that It carries odd numbers with (28) paragraphs, and the second includes degrees for paragraphs bearing even numbers with (28) paragraphs,the simple Pearson correlation coefficient was calculated,which reached the scale (0.855), but this value represents the stability coefficient of the test, so the value of the stability coefficient must be corrected)5(.

2-8-6 Finding the standard scores and levels of the analytical thinking scale for handball players:

The scores and standard levels of the analytical thinking scale of the handball players were extracted on the scores of the same construction sample of (110) players, through which the measure of the level of analytical thinking of the handball players can be judged.

Table (3) shows the statistical parameters of the results of the analytical thinking scale for the rationing sample

the scale	Measu ring unite	N	hypot hetical mean	Arithmeti c mean	Media tor	standard deviatio n	standa rd error	torsion modulus	high est degr ee	Low est degr ee	Ter m

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Analytical thinking	Degree	110	168	.211109	213	19.547	1.864	-0.864	254	140	114

It appears from Table (3) that the arithmetic mean of the rationing sample for the results of the analytical thinking scale was (211.109), with a hypothetical mean (168), the median (213), and a standard deviation (19.547), and the standard error was (1.864).

While the coefficient of torsion was (-0.864), the highest score was (254), the lowest score was (140), and the range was (114). To determine the standard scores and levels for this scale, Table (4) shows the raw scores, the standard score, and the modified standard scorefor the grades of the rationing sample after being arranged in ascending order.

table (4)

Shows the standard levels of the analytical thinking scale of the rationing sample

N	Standard degree	Modified standard degree	Standard level	Number of Players (repetitions)	Percentage
1	and under (2 -)	and under29	Very weak	5	4.55%
2	(1-) — (1.99-)	30 – 39	Weak	12	10.91%
3	(0) — (0.99-)	40 – 49	acceptable	32	29.09%
4	(1) — (0.01)	50 – 59	Middle	40	36.36%
5	(2) — (1.01)	60 – 69	Standard level	20	18.18%
6	and above (2.01)	and above70	Very good	1	0.91%
The total				110	100%

(n = 110)

It appears from Table (4) that the sample's number was within a very weak grade (5) with a p.c. of (4.55%), the sample's number was within a weak grade (12) with a p.c. (10.91%), and the sample's number was within an acceptable grade(32) with a p.c. (29.09%), and the sample's number was within an average grade(40) with a p.c. (36.36%), and the sample's number was within a good grade (20) with a p.c. (18.18%), and the sample's number was within a very good grade (1) with a p.c. (0.91%) . Thus, the results of the analytical thinking scale obtained (6) standard grades over which the sample was distributed normally.

2-9 Statistical Methods:

The researcher used the spss statistical program to extract the statistical results.

Chapter three

3- Presenting and analyzing the results of the analytical thinking scale areas of the application sample and discussing them:

Table (5) demonstrates that calculated (T) between the arithmetic mean and the hypothetical mean in the areas of the scale (analytical thinking).

N	Areas of analytical thinking scale	The number of paragraphs	Hypothetical mean	Arithmetic mean	standard deviation	Calculated (T) value	significance level	Statistical significance
1	Focus attention	14	42	53.950	7.359	7.262	*0.000	indicator
2	Perception	14	42	52.400	6.731	6.910	*0.000	indicator

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3	Make decision	14	42	48.900	6.069	5.085	*0.000	indicator
4	Interpretation	14	42	49.700	6.097	5.648	*0.000	indicator
	scale as a whole	56	168	204.950	22.315	7.405	*0.000	indicator

* D If the significance level score (Sig) ≥ (0.05)

Table(5) demonstrates the paragraphs of attention focus area are (14), the hypothetical mean is (42) ,the arithmetic mean is (53.950) , while the standard deviation is (7.359) and the value of calculated (T) is (7.262) at the significance level (0.000) , and we found that hypothetical mean is less than arithmetic mean. The paragraphs of perception area are (14), the hypothetical mean is (42) , the arithmetic mean is (52.400) , while the standard deviation is (6.731) and the value of calculated (T) is (6.910) at the significance level (0.000) , and we found that hypothetical mean is less than arithmetic mean , as for the paragraphs of decision making area are (14) , the hypothetical mean is (42) , the arithmetic mean is (48.900) , while the standard deviation is (6.069) and the value of calculated (T) is (5.085) at the significance level (0.000) , and we found that hypothetical mean is less than arithmetic mean , and for the paragraphs of interpretation area are (14), the hypothetical mean is (42) , the arithmetic mean is (49.700) , while the standard deviation is ((6.097) , and the value of calculated (T) is (5.648) at the significance level (0.000) , and we found that the hypothetical mean is less than arithmetic mean. In conclusion for the number of items of the (analytical thinking) scale as a whole (56) items, the hypothetical mean is (168) , the arithmetic mean is (204.950) ,while the standard deviation is (22.315) , and the value of calculated (T) is (7.405) at the significance level (0.000) , and we found that the hypothetical mean is less than arithmetic mean.

It shows the degree of importance, the arithmetic averages, the standard deviations, the relative weight, the arrangement, and the level of the areas of the analytical thinking scale.

N	Areas of analytical thinking scale	The number of paragraphs	Total responses	Arithmetic mean	standard deviation	relative weight	the level	arrang ement
1	Focus attention	14	5395	53.950	7.359	%77.07	high	1
2	perception	14	5240	52.400	6.731	%74.86	high	2
3	Make decision	14	4890	48.900	6.069	%69.86	high	4
4	interpretation	14	4970	49.700	6.097	%71	high	3
	scale as a whole	56	20495	204.950	22.315	%73.20	high	

It is clear from Table (6) that:

The field of (focusing attention) ranked first with a relative weight of (77.07%), which is at a high level, and the researcher attributes this to the great role played by the field of attention focus, as the player who maintains his focus on a specific stimulus for a period of time will have a clear vision,for the purpose of sound decision making,the researcher believes that the player directs all his attention effectively and positively to specific sensory stimuli and isolates all other stimuli, that is, in the sense of making some stimuli in the focus of feeling and focusing on them by directing his mental energy to the event and feeling it. Where (Youssef Al-Azem 2018) indicates that the individual turns actively or positively and pays attention to certain sensory stimuli and neglects the stimuli of others, i.e. makes some stimuli in the focus of feeling and focuses on them In addition to that margin of feeling, the individual may focus on a single stimulus or spread so that he can maintain a scattered view of everything that happens around him)6(.

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The field of (perception) ranked second with a relative weight of (74.86%), which is a high level,the researcher attributes this to the fact that the perception process is one of the important processes that contribute to steadfastness in emotional situations after self-realization, and that the process of analytical thinking means realizing what is behind the individual's feelings and how to deal with anxiety and fears. A person who has the ability to perceive and be aware of his thoughts will have the ability to focus and make the right decision. By observing and observing his thoughts, perception is important in success and athletic excellence, and (Ashraf and Ibrahim) indicate that the greater the player's experience and the distribution of his knowledge, the more accurate his ability to control his emotions and the greater his use in the future, and his performance becomes fast and his thinking develops)7(, and (Osama Kamel Ratib) indicates that (the game Handball is one of the dynamic group games (moving) because it is distinguished by the factor of surprise and surprise, and that some players fail to achieve the best level of their performance due to the increase in emotions, nervous tension and anxiety that accompany participation in important competitions))8(, Where it turned out that the Premier League handball players have a clear ability to perceive.

And that the field of (interpretation) ranked third with a relative weight (71%), and it is at a high level, and the researcher attributes this to the player's ability to interpret situations, as the player who understands the situations and facts related to him and his teammates will have the high organization to interpret the situations that occur during the match and deal with Problems by reviewing all alternatives in order to solve them, and the player sometimes resorts to leaving situations that do not concern him, as he is characterized by calmness and the promise of haste when issuing a specific judgment on a situation, in addition to his ability to discover the relationships between situations and ideas.

And that the field of (decision-making) ranked fourth with a relative weight of (69.86%), which is at a high level, and the researcher attributes this to the fact that the decision-making process is an important process and is not easy at the same time, as it requires effort in systematic thinking and a sufficient amount of information that helps to choose The most appropriate and reaching sound and correct decisions for the players is not an easy matter, but it requires the player to be a high degree of attention and focus, and this confirms (Muhammad Hassan Allawi et al. 2003) that the decision-making stage is considered one of the crucial stages through which the appropriate response to the stimulus is chosen,the accuracy and speed of response selection depends on it, and this stage depends entirely on perception because it is the stage that interprets the stimuli,accordingly, the success of (players) in making decisions during the game depends on basic factors such as: speed, accuracy, alertness, and information stored in the brain)9(.

As for the scale (analytical thinking as a whole), it got a relative weight of (73.20%), which is a high level,the researcher attributes this to the fact that this variable receives attention from the players, as the research sample enjoys positive analytical thinking, which is characterized by the desire to solve problems and put forward new ideas that would develop the thinking of the players, as analytical thinking represents one of the important thinking patterns that many researchers seek to develop among the players. In different stages, analytical thinking helps the individual to face problems in a systematic manner, paying attention to details, collecting as much information as possible, organizing it, planning carefully before making a decision, clarifying things so that he can reach rational conclusions through the facts he knows, and then build a clear and specific standard for evaluation,this is what confirms (Muhammad Abdel-Hadi Hussein 2005) that analytical thinking has the ability to analyze information, identify keys to issues and relationships, diagnose hypotheses, build conclusions from the available information, and come up with logical conclusions,and this type of thinking is taken for its nature with a straight form, as it is an organized, sequential, sequential thinking of steps, as it uses the method of cause and effect to analyze problems step by step, so analytical thinking is concerned with solving problems in an organized and arranged manner according to the steps set for it)10(, and this means that the research sample had a high level degree of analytical thinking makes them able to think before and during the game, and that the individual with analytical thinking has the ability to plan and rely on research to find the best way and the ability to analyze things and segment them accurately before making any decision, as when they face any problem, they collect as much information as possible about it And attention to details to reach appropriate solutions.

Chapter four

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4-1 Conclusions:

1- The scale of analytical thinking for the handball Premier League players in Iraq was built, and it is worth measuring analytical thinking in its four areas (focusing attention - perception - decision making - interpretation).

2- A scale was built and standardized with (56) paragraphs distributed over four areas, and special grades were set for the Premier League handball players in Iraq.

3 - The possibility of predicting the level of performance of the players in terms of analytical thinking and analytical thinking.

2-4- Recommendations:-

1- The necessity of adopting a scale of analytical thinking for the Premier League handball players in Iraq to determine their level among the players for the purpose of selecting players for all grades, and thus one of the pillars of the cognitive processes of the players is identified.

2- Emphasizing the development of the players' analytical personality through conducting exercises and lectures.

3- Adopting the predictive equation for the purpose of selecting qualified players for the matches.

4- The need for a counseling unit or a specialist in the psychological and educational aspects of counseling in each club to identify the problems of the players.

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FootNotes

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