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A standard model according to the most important physical, motor and mental abilities as an indicator for the selection of futsal referees in the middle euphrates

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Abstract--The aim of the research is to design a standard model according to the most important physical, motor and mental abilities as an indicator for the selection of futsal referees in the Middle Euphrates, as these abilities are one of the important pillars for the success of futsal referees in performing their tasks in refereeing matches in the best way. The researchers assumed the possibility of relying on these indicators in the selection of futsal referees in the Middle Euphrates. The most important physical and mental abilities were determined, as well as their tests, and the researchers conducted a reconnaissance experiment to identify the most important obstacles and avoid the negatives, so that the main experiment was then conducted, and using the appropriate statistical methods, the standard model for these abilities was designed.

Keywords--Transitional Speed, Response Speed, Agility, Consistency, Focus Attention, Diverting Attention.

Introduction

Futsal is one of the games that has spread very quickly in sports circles at the level of practice as well as watching, as it is one of the activities that is characterized by speed in performance and diversity of movements, skills and tactical positions during play. The team, and this requires the presence of referees at a high level of physical abilities due to the necessity of continuous movement

during the performance with the players, as well as their enjoyment of a high level of mental abilities for each of them to be able to take the correct response and the right decision during the performance, as well as the need to have good motor abilities of the referees. Physical abilities, speed of response, transitional speed, agility and compatibility, as well as mental abilities, focus attention and divert attention, are very important for futsal referees to lead a match well and ensure fair competition between players through the application of the law using these combined abilities to produce a high performance characterized as ideal as possible. This gives the results of the research great importance as it is an important indicator for the selection of futsal referees in the Middle Euphrates

Purpose of the research

1. To identify the most important physical, motor and mental abilities of futsal referees in the Middle Euphrates.
2. Designing a standard model according to the most important physical, motor and mental abilities as an indicator for the selection of futsal referees in the Middle Euphrates.

Research procedures

Research Population and Sample

The research community, which is represented by the futsal referees in the middle Euphrates, who numbered (53), identified all of them for the purpose of research..

Study design

The researchers adopted the descriptive approach using the survey method and standard studies for its suitability to the nature of the research problem.

Studied Variables

The study (physical abilities, transitional speed, response speed, agility motor abilities, compatibility and mental abilities: focus attention and diverting attention) as main variables for this study.

Tests Used

Determination of physical, motor and mental abilities

Physical, motor and mental abilities were determined by looking at various references and sources as well as previous research, and through a questionnaire that was presented to a group of specialists and experts. Its validity was determined using the (K2) test. As shown in Table (1)

Table (1) It shows the validity of the studied variables

Indication type	Calculated K_{a2} value	agreement ratio	number of experts		Capacity	No
			Does not fit	Repair		
moral	8	%100	zero	8	Transition speed	1
moral	4,5	%87.5	1	7	Responsiveness	2
moral	8	%100	zero	8	agility	3
moral	8	%100	zero	8	Compatibility	4
moral	8	%100	zero	8	focus attention	5
moral	8	%100	zero	8	diverting attention	6

Determination of the studied abilities tests

The studied abilities tests were determined using various sources, references and periodicals, which were presented to experts and specialists to determine their validity, as shown in Table (2)

Table (2) Indicates the validity of the aptitude tests studied

Indication type	Calculated K_{a2} value	agreement ratio	number of experts		the exams	No
			Does not fit	Repair		
moral	8	%100	zero	8	Sprint (30) m from the high start	1
moral	8	%100	zero	8	Nelson motor response test	2
moral	8	%100	zero	8	Barrow zigzag jog	3
moral	8	%100	zero	8	numbered circuit test	4
moral	8	%100	zero	8	Bourdon test Infimov to measure attention concentration	5
moral	8	%100	zero	8	Bourdon test Infimov to measure attention diversion	6

The exploratory experience

The exploratory experiment was conducted on a group of (7) futsal referees on 1/2/2020. The purpose was to avoid the negatives of conducting the main experiment for research and to identify the time of each test as well as the total time for conducting the tests.

The main experience

The main experiment of the research was conducted on 2/2/32/2022 on the research sample of (53) judgements, and after sorting the results of the tests, they were processed statistically to reach the final results of the research.

Extracting the discriminatory ability of the tests

The discriminatory ability of the tests is one of the important things that must be available in any test based on the scores of two independent groups, namely the

upper and lower group, and with a deduction of 50%, which represented (27) judgments from the results of the research sample for the two groups. T as required by the available data in terms of whether it is independent or not, and is based on calculating the mean deviation of two samples from each other divided by the standard error of the difference of the two means." The discriminatory ability of the tests was extracted, as shown in Table (3)

Table(3)Shows The Discriminatory Ability Of The Tests Used

indicative level	t calculated	lower group		senior group		the exam	No
		±p	s	±p	s		
0.030	347, 5	426, 0	936, 4	712, 0	935, 2	Sprint (30) m from the high start	1
0.020	23,645	0.014	2,36	0.026	1,79	nelson response test kinetic	2
0,004	19,023	0,219	8,83	0,108	7,13	Barrow zigzag jog	3
0.040	529, 2	078, 1	688, 5	631, 0	45, 6	numbered circuit test	4
0,030	10,321	0,738	2	0.965	6,25	Bourdon test Infimov to measure attention concentration	5
0,010	12,873	0,514	1,58	0,514	4,41	Bourdon test Infimov to measure attention diversion	6

T-table value at the degree of freedom (52) and significance level (0.05) = 1.67

Ease and Difficulty Coefficient

One of the conditions for the quality of the tests is their suitability for the research sample, so that these tests are not of high difficulty or too easy, as well as "there must be a moderate distribution of the scores of the sample members whose standards tables are codified for the selected tests." The suitability of the tests to the research sample was confirmed through Table (4)

Table (4)It shows the statistical description of the research sample

skew modulus	standard deviation	Arithmetic mean	measuring unit	the exams	No
674, 0	502, 0	011, 5	Tha intention	Sprint (30) m from the high start	1
37 5, 0-	165, 0	822, 1	Tha intention	nelson response test kinetic	2
1 3 3, 0	71 5, 0	6,930	second	Barrow zigzag jog	3
873, 0	0,995	5,775	Degree	numbered circuit test	4
452, 0	1,716	4,065	Degree	Bourdon test Infimov to measure attention concentration	5
- 67 0.0	1,184	3,041	Degree	Bourdon test Infimov to measure attention diversion	6

The scientific basis of the tests

Validity of the content

"A test is considered valid if it measures only what it was intended to measure" (1)

The validity of the tests was confirmed by presenting them to a group of experts and specialists through a questionnaire form to indicate the validity of these tests and the extent of their measurement of the characteristic to be measured.

Stability

Static Test “The test that gives similar results or the same results if it is re-applied more than once and under the same conditions” (1)The stability of the tests was confirmed by repeating them a week after the pilot experiment sample, and using Pearson's simple correlation coefficient, the reliability coefficient was extracted, as shown in Table (5)

Objectivity

The objectivity coefficient of the approved tests was extracted through the results of two judgments assessed by the individuals of the research sample by recording them at the same time and by extracting the Pearson simple correlation coefficient, the objectivity of the tests was confirmed as shown in Table (5)

Table(5)It Shows The Stability And Objectivity Of The Tests

Indication level	Objectivity coefficient	Indication level	stability coefficient	the exams	No
0.003	0.89	0.035	0.83	Sprint (30) m from the high start	1
0.021	0.87	0.043	0.81	nelson response test kinetic	2
0.031	0.82	0.004	0.84	Barrow zigzag jog	3
0.000	0.90	0.001	0.87	numbered circuit test	4
0.000	0.92	0.000	0.86	Bourdon test Infimov to measure attention concentration	5
0.002	0.91	0.001	0.85	Bourdon test Infimov to measure attention diversion	6

Presentation and analysis of the search results

For the purpose of clarifying the results reached by the researcher, analyzing and discussing them, he decided to present them in special tables after processing them statistically and in line with achieving the objectives of the research, and as shown below.

Table (6)It shows the arithmetic means, standard deviations, and skewness coefficient of the variables investigated

skew modulus	standard deviation	Arithmetic mean	measruing unit	the exams	No
674 , 0	502 , 0	011 , 5	second	Sprint (30) m from the high start	1
37 5 , 0-	165 , 0	822 , 1	second	nelson response test kinetic	2
1 3 3 , 0	71 5 , 0	6,930	second	Barrow zigzag jog	3
873 , 0	0,995	5,775	Degree	numbered circuit test	4

452,0	1,716	4,065	Degree	Bourdon test Infimov to measure attention concentration	5
- 67 0.0	1,184	3,041	Degree	Bourdon test Infimov to measure attention diversion	6

Table (6) shows that the arithmetic mean value of the research sample members in the sprint test reached (5,011) with a standard deviation of (0.502), while the arithmetic mean value of the research sample members in the Enelson test reached (1,822) with a standard deviation of (0.165). Also, the arithmetic mean value of the research sample members in the zigzag running test by Barwa's method reached (6,930) with a standard deviation of (0.571), while the arithmetic mean value of the research sample members in the numbered circles test reached (5,775) with a standard deviation of (0.995) The arithmetic mean value of the research sample in the attention concentration test reached (4,065) with a standard deviation of (1,716), while the mean value of the research sample in the attention diversion test reached (3,041) with a standard deviation of (1,184)

Table (7)It shows the raw scores and standard scores of the research sample members

raw grade	raw grade	raw grade	raw grade	raw grade	raw grade	Standard degree
3.54	4.56	6.27	6.43	1.33	4.32	100
3.53	4.55	6.26	6.44	1.34	4.33	99
3.52	4.54	6.25	6.45	1.35	4.34	98
3.51	4.53	6.24	6.46	1.36	4.35	97
3.50	4.52	6.23	6.47	1.37	4.36	96
3.49	4.51	6.22	6.48	1.38	4.37	95
3.48	4.50	6.21	6.49	1.39	4.38	94
3.47	4.49	6.20	6.50	1.40	4.39	93
3.46	4.48	6.19	6.51	1.41	4.40	92
3.45	4.47	6.18	6.52	1.42	4.41	91
3.44	4.46	6.17	6.53	1.43	4.42	90
3.43	4.45	6.16	6.54	1.44	4.43	89
3.42	4.44	6.15	6.55	1.45	4.44	88
3.41	4.43	6.14	6.56	1.46	4.45	87
3.40	4.42	6.13	6.57	1.47	4.46	86
3.39	4.41	6.12	6.58	1.48	4.47	85
3.38	4.40	6.11	6.59	1.49	4.48	84
3.37	4.39	6.10	6.60	1.49	4.49	83
3.36	4.38	6.09	6.61	1.50	4.50	82
3.35	4.37	6.08	6.62	1.51	4.51	81
3.34	4.36	6.07	6.63	1.52	4.52	80
3.33	4.35	6.06	6.64	1.53	4.53	79
3.32	4.34	6.05	6.65	1.54	4.54	78
3.31	4.33	6.04	6.66	1.55	4.55	77
3.30	4.32	6.03	6.67	1.56	4.56	76
3.29	4.31	6.02	6.68	1.57	4.57	75
3.28	4.30	6.01	6.69	1.58	4.58	74

3.27	4.29	6.00	6.70	1.59	4.59	73
3.26	4.28	5.99	6.71	1.60	4.60	72
3.25	4.27	5.98	6.72	1.61	4.61	71
3.24	4.26	5.97	6.73	1.62	4.62	70
3.23	4.25	5.96	6.74	1.63	4.63	69
3.22	4.24	5.95	6.75	1.64	4.65	68
3.21	4.23	5.94	6.76	1.65	4.66	67
3.20	4.22	5.93	6.77	1.66	4.67	66
3.19	4.21	5.92	6.78	1.67	4.68	65
3.18	4.20	5.91	6.79	1.68	4.69	64
3.17	4.19	5.90	6.80	1.69	4.70	63
3.16	4.18	5.89	6.81	1.70	4.71	62
3.15	4.17	5.88	6.82	1.71	4.72	61
3.14	4.16	5.87	6.83	1.72	4.73	60
3.13	4.15	5.86	6.84	1.73	4.74	59
3.12	4.14	5.85	6.85	1.74	4.75	58
3.11	4.13	5.84	6.86	1.75	4.76	57
3.10	4.12	5.83	6.87	1.76	4.77	56
3.09	4.11	5.82	6.88	1.77	4.78	55
3.08	4.10	5.81	6.89	1.78	4.79	54
3.07	4.09	5.80	6.90	1.79	4.80	53
3.06	4.08	5.79	6.91	1.80	4.81	52
3.05	4.07	5.78	6.92	1.81	4.82	51
3.04	4.06	5.77	6.93	1.82	4.83	50
3.03	4.05	5.76	6.94	1.83	4.84	49
3.02	4.04	5.75	6.95	1.84	4.85	48
3.01	4.03	5.74	6.96	1.85	4.86	47
3.00	4.02	5.73	6.97	1.86	4.87	46
2.99	4.01	5.72	6.98	1.87	4.88	45
2.98	4.00	5.71	6.99	1.88	4.89	44
2.97	3.99	5.70	7.00	1.89	4.90	43
2.96	3.98	5.69	7.01	1.90	4.91	42
2.95	3.97	5.68	7.02	1.91	4.92	41
2.94	3.96	5.67	7.03	1.92	4.93	40
2.93	3.95	5.66	7.04	1.93	4.94	39
2.92	3.94	5.65	7.05	1.94	4.95	38
2.91	3.93	5.64	7.06	1.95	4.96	37
2.90	3.92	5.63	7.07	1.96	4.97	36
2.89	3.91	5.62	7.08	1.97	4.98	35
2.88	3.90	5.61	7.09	1.98	4.99	34
2.87	3.89	5.60	7.10	1.99	5.00	33
2.86	3.88	5.59	7.11	2.00	5.01	32

2.85	3.87	5.58	7.12	2.01	5.02	31
2.84	3.86	5.57	7.13	2.01	5.03	30
2.83	3.85	5.56	7.14	2.02	5.04	29
2.82	3.84	5.55	7.15	2.03	5.05	28
2.81	3.83	5.54	7.16	2.04	5.06	27
2.80	3.82	5.53	7.17	2.05	5.07	26
2.79	3.81	5.52	7.18	2.06	5.08	25
2.78	3.80	5.51	7.19	2.07	5.09	24
2.77	3.79	5.50	7.20	2.08	5.10	23
2.76	3.78	5.49	7.21	2.09	5.11	22
2.75	3.77	5.48	7.22	2.10	5.12	21
2.74	3.76	5.47	7.23	2.11	5.13	20
2.73	3.75	5.46	7.24	2.12	5.14	19
2.72	3.74	5.45	7.25	2.13	5.15	18
2.71	3.73	5.44	7.26	2.14	5.16	17
2.70	3.72	5.43	7.27	2.15	5.17	16
2.69	3.71	5.42	7.28	2.16	5.18	15
2.68	3.70	5.41	7.29	2.17	5.19	14
2.67	3.69	5.40	7.30	2.18	5.20	13
2.66	3.68	5.39	7.31	2.19	5.21	12
2.65	3.67	5.38	7.32	2.20	5.22	11
2.64	3.66	5.37	7.33	2.21	5.23	10
2.63	3.65	5.36	7.34	2.22	5.24	9
2.62	3.64	5.35	7.35	2.23	5.25	8
2.61	3.63	5.34	7.36	2.24	5.26	7
2.59	3.62	5.33	7.37	2.25	5.27	6
2.58	3.61	5.32	7.38	2.26	5.28	5
2.57	3.60	5.31	7.39	2.27	5.29	4
2.56	3.59	5.30	7.40	2.28	5.30	3
2.55	3.58	5.29	7.41	2.29	5.31	2
2.54	3.57	5.28	7.42	2.30	5.32	1

Table (8) Shows the standard levels, categories, and frequency of the research sample in physical tests

No	levels	Categories	Repetition
1	excellent	61.94 – 70.08	3
2	Very well	53.790- 61.93	9
3	Good	45,649 – 53,789	14

4	Average	37.508 – 45.648	21
5	weak	29.367 – 37.507	4
6	Very weak	21.266 – 29,366	2

Table (9) It shows the standard levels, categories and frequency of the research sample in the kinetic tests

No	levels	Categories	Repetition
1	excellent	74.197 -65,067	4
2	Very well	65,066 -55,936	8
3	Good	55,935 -46,805	13
4	Average	46.804 -37.674	22
5	weak	37,673 -28,543	3
6	Very weak	28,542 -19.412	3

Table (10) Show levels normative and categories and repetition to sample search in the exams mental

No	levels	Categories	Repetition
1	excellent	65.9 -58.05	2
2	Very well	58.04 -50.190	11
3	Good	50.189-42.339	14
4	Average	42.338 - 34.488	20
5	weak	34.487 -26.637	2
6	Very weak	26.636 -18,786	4

Table (8) shows that the members of the research sample have achieved different levels. At the excellent level, the number of the research sample members was (3), with a percentage of (5.66), and the level is very good, and their number was (9) and with a percentage of (16.98), and their number was within The level is good (14), with a percentage of (26.41), and in the medium level the number was (12) and with a percentage of (22.64), and the level is weak, the number (4) with a percentage of (7.54), and their number is within the level of good (2) and with a percentage of (3.77) Table (9) shows that the levels of the research sample members were also different. At the excellent level, the number of the research sample members was (2), and with a percentage of (3.77), and the level was very good, their number was (11) and by a percentage (20.75), and their number was within The level is good (14) with a percentage of (26.41), and in the average level the number was (20) and with a percentage of (37.73), and the level is weak, the number (2) was with a percentage of (3.77), and their number was within the level of good (4) and with a percentage of (7.54) As for Table (10), the research sample members had achieved different levels. At the excellent level, the number of the research sample members was (4), and with a percentage of (7.54) when the level was very good, their number was (8) and with a percentage of (15.09), and their number was within the level Good (12), with a percentage of (22.64), and at the average level the number was (22) and with a percentage of (41.50), while the level was weak, the number (3) with a percentage of (5.66), and their number was within the level of good (3) and with a percentage of (5.66.)Through the results

presented, it becomes clear to us that the largest percentage of the research sample was concentrated within the average level and for all physical, motor and mental tests, while the lowest percentage within the two levels was excellent and very weak. The basis is that the different traits, traits, and abilities are distributed among the totality of people in a moderate manner, and that the extreme values of this characteristic appear among people in a limited way, while people are concentrated in the middle” (1)We find that the individuals of the research sample have a normal distribution on the curve and the researcher attributes this to the suitability of the tests to the levels of the research sample. The two ends of the curve and the researcher consider this to be a logical thing due to the different physical, motor and mental capabilities of the rulers. Each rule has its own level that distinguishes it from the rest of the rulers.

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