World Journal of Sport Sciences 4 (4): 386-393, 2011
ISSN 2078-4724

Coordination Abilities as a Defining Element in Raising the Physical and Skill Performance Level of Basketball Female Juniors (A Factorial Study)

Ehab Mostafa Kamel and Mahmoud Houssain Mahmoud

[1]Department of Sport Training, Faculty of Physical Education, Beni-Suef University, Egypt
[2]Department of Sport Training, Faculty of Physical Education, El-Minia University, Egypt

Abstract: The process of defining the level of dynamic performance of basketball juniors is a very important process because it is difficult to define such a level through observing the performance of the player during the sports competitions. This because of the interference of many effective factors affecting this performance such as the nature of the competition, the level of the competitors and the reactions of the partners, competitors and referees, so it is necessary to follow the correct scientific ways to identify the coordination abilities of beginners. This research aims at identifying the working force structure of the coordination abilities of female basketball beginners, so it designs a sort of testing battery as an index of measuring and evaluating these abilities, The two researchers used a descriptive methodology (surveying study) on a sample of 70 basketball beginners under the age of 14 in some Cairo and Giza clubs in the sports season 2009/2010, Within the limits of the research and through the statistical analysis and discussion of the tables, we can reach the following conclusion Designing a testing battery as an index to measure and evaluate the direct abilities which are found in female basketball beginners, including 8 tests to measure 2 strong factors (the ability's for balance, orientation and dynamic organization and the ability's for distinction and rhythmic response.

Key words: Coordination abilities % Physical and skill performance % Factor analyses % Female juniors % Basketball

INTRODUCTION

The process of defining the level of dynamic performance of basketball juniors is a very important process because it is difficult to define such a level through observing the performance of the player during the sports competitions. This is because of the interference of many effective factors affecting this performance such as the nature of the competition, the level of the competitors and the reactions of the partners, competitors and referees. All these factors affect the level of performance. So, the tests of the dynamic performance are considered one of the important means which determine the level of their performance because they elevate the form of the individual performance of the player to an ideal standard and the product of these tests is the real index of this performance level because it separates all the external factors previously mentioned so that the performance in such case is a measure indicative of his level [1- 4].

Due to the rapid development in Basketball, the arrival to the highest levels demands that the player should have a high dynamic in quick performance inside the playground both in case of attack or defense, because he rapidly changes his attacking position to a defending one and vice-versa. This means that he should be a well-rounded player who is good at defending and attacking. This shows the great role that the harmonious abilities play and that their development and improvement lead to the development and improvement of the performance of the player because they make him a multi-sided player. The amount of preparation and training of these abilities can define the level of the player [5-7].

Schreiner [8] points that these harmonious abilities are considered the key to success in learning dynamic skills and improving and developing the planning, skill and physical level of performance. When the player has enough of such abilities, they help him to raise the level of performance, which means that they are of directly proportional with technical performance.

Corresponding Author: Ehab Mostafa Kamel, Department of Training,
Faculty of Physical Education, Beni-Suef University, Egypt.

Steinhoefer [9] asserts that the level of the player's performance of basketball skills depends on his dynamic repertoire of coordination abilities which are stored in the dynamic memory of the player in the golden stage of learning these abilities, which is the period from the age of 5 to 14.

Through the practical academic experience of the starting two researchers in the field of physical training of this game and their acquaintance with scientific references as far as they know, they noticed that there was a scarcity of tests which measure the coordination abilities of Basketball female juniors at all ages which enable trainers to know the level of the player's Coordination abilities. Prätorius [10] points out that it is necessary to follow the correct scientific ways to identify the deficiency in the dynamic abilities of beginners, while trying to establish a link between these abilities and to find the best means and tests to measure their levels and to know the aspects of strength and weakness for their importance at the ages under 14 years old.

All the aforementioned drew the attention of the two researchers to try to reach the special coordination abilities of female basketball beginners, which are related to skill and dynamic performance through setting up a testing battery which can give an index of coordination abilities of basketball female beginners.

Research Objectives: This research aims at identifying the working force structure of the coordination abilities of female basketball beginners, so it designs a sort of testing battery as an index of measuring and evaluating these abilities.

Research Hypotheses: In the light of the research objectives, the two researchers suggest what follows:

- The working force of the coordination abilities of Basketball female juniors stated is represented in the following factors:
- The ability of dynamic distinction
- The ability of dynamic connection
- The ability to make balance
- The ability to control position
- The harmonic ability
- The ability to achieve quick dynamic response.
- The ability of dynamic organization and direction.
- The extracted battery represents the previous factors.

MATERIALS AND METHODS

The two researchers used a descriptive methodology (surveying study) on a sample of 70 basketball beginners under the age of 14 in some Cairo and Giza clubs in the sports season 2009/2010.

Steps of Setting up a Testing Battery of Coordination Abilities:

- Defining the factors that control the coordination abilities of Basketball female juniors as follows:
- The ability of dynamic distinction.
- The ability of dynamic connection.
- The ability to make balance.
- The ability to control position.
- The harmonic ability.
- The ability of quick dynamic response.
- The ability of dynamic organization and direction.

A group of tests were set for every previous factor and the number of tests are 30, each of which were distributed among the previous seven factors.

The factors and tests presented were shown to a number of experts in order to recognize how far they suited the abilities of Basketball female juniors and also how the tests suit the factors.

All the experts agreed that the factors and the thirty tests were suitable.

Applying the Tests: The tests of coordination abilities were applied to the principle research sample in the period from Saturday 15/8/2009 to Friday 20/11/2009.

Statistical Analysis: Median - mean - standard deviation - skewnees - correlation coefficient - T-test for distinctions among averages - Factor analyses by the principal component Analysis.

RESULTS AND DISCUSSION

The median, mean, standard deviation and skewnees of the marks of the research sample in the tests of coordination abilities under study:

Table 1 shows that the value of skewnees ranges between 1. 94 and -1.16 and they are within the limits of " 3 and it shows that the marks of the sample's members in all the tests under study are distributed moderately.

Table 1: Median, mean, standard deviation and skewnees of the total research sample in tests under consideration (N = 10)

N.	Tests	Median	Mean	Std. deviation	Skewness
1	Exchanging hands on the ball between the two legs	105.00	82.96	42.22	0.14-
2	Dribbling within the opponent zone for one minute	31.00	30.51	2.52	0.92-
3	Dribbling and passing on internal goals	33.00	34.67	7.29	0.65
4	Passing on the wall for 20 seconds	22.20	48.02	48.01	0.93
5	Moving the two legs "3 times * 20 meter "	29.97	29.68	4.36	0.45-
6	A dribbling in 14 meter around 10 cones	14.44	14.47	1.68	0.35
7	Feet jump inside the hexagon	12.80	11.31	5.07	0.11-
8	Cross dribbling for unused hand	14.30	14.48	2.79	0.39
9	Passing on internal goals	41.00	40.79	5.85	0.14-
10	Four medical balls (domino)	15.00	16.58	8.22	0.15
11	Dribbling with two balls on the volleyball court	27.70	25.99	3.98	0.01-
12	Running in 25 meter	32.00	31.49	4.08	0.08-
13	Tolerance test of speed 6 times × 25 meter (speed in tolerance)	125.50	123.17	14.06	0.01-
14	Shooting from outside the circle of half diameter 14:00	5.12	5.12	0.15	1.29
15	Cross dribbling with two hands	5.11	5.10	0.14	1.88
16	Shooting under the basket for 30 seconds	30.00	29.30	2.56	0.22-
17	Shooting from the jump around the free throw (10 places)	33.28	32.80	2.59	1.16-
18	Walking on the Sweden seat upside down in 20 seconds	31.00	31.10	4.00	0.16
19	Deep jump	31.00	30.74	3.24	0.21-
20	Jump 20 seconds accompanied by music	128.00	125.43	13.61	0.32-
21	Rolling basketball	27.70	26.31	4.04	0.10-
22	Defensive action, front and back	13.00	12.42	4.57	0.38-
23	10 step lay up shot	5.01	5.09	0.14	1.94
24	Side movement in 20 meter	13.00	12.33	4.00	0.10-
25	Dribbling around 20 cones of the basketball court	5.10	5.11	0.15	1.79
26	Directing force	13.00	12.33	4.00	0.10-
27	Rebounding running in 30 seconds	41.00	40.79	5.85	0.14-
28	Passing test in 30 seconds	5.11	5.09	0.11	1.77
29	Continuous follow-up in 30 seconds	42.00	40.56	6.33	0.25-
30	Exchanging passing with the ball between the legs with a jump 30 second	122.00	121.09	4.66	0.60-

Table 2: Correlation matrix between the degrees of the expressions used (n =70)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1														
2	-0.108	1													
3	-0.17	-0.221	1												
4	-0.146	-.513**	0.177	1											
5	0.125	.252*	-.256**	-.393**	1										
6	-0.152	-.458**	-0.143	.568**	-0.178	1									
7	-0.027	0.213	-.764**	-0.117	.433**	0.066	1								
8	.426**	-0.164	0.198	0.075	-.280*	-0.169	-0.112	1							
9	-.270*	.398**	0.002	-.486**	0.034	-0.084	-0.107	-.246*	1						
10	.289*	-0.103	.557**	0.041	-.437**	-0.15	-.809**	.237**	0.062	1					
11	-0.011	0.097	-0.162	0.053	0.087	.305*	-0.03	-.249*	0.088	0.105	1				
12	-0.07	-.387**	0.018	.624**	-.395**	.512**	0.061	0.173	-0.22	0.023	0.027	1			
13	-.244*	.331**	-0.097	0.083	.335**	-0.063	.252*	-.461**	-0.184	-.253*	0.004	0.029	1		
14	-0.105	-.387**	.557**	.386**	-0.187	.415**	.422**	0.007	-.291*	-.408**	-0.136	.241*	-0.091	1	
15	-0.005	-.394**	.654**	.265*	-.291*	0.224	-.459**	0.163	-.245*	.653**	-0.061	0.22	-0.18	.581**	1
16	-0.053	.634**	-0.243	-0.218	.484**	-0.226	0.197	-0387**	0.157	-.311**	0.192	-.444**	.458**	-.400**	-.352**
17	-.266*	.350**	-345**	-.481*	.372**	-0.122	.384**	-.423**	.507**	-.312**	-.o13	-.331**	.277*	-0.221	-.350**
18	0.056	-0.181	0.107	.283*	-.371**	0.223	-0.192	.383**	-0.006	.252*	0.03	.666**	-.251*	0.069	0.182
19	-.607**	.244*	0.212	-0.039	0.02	0.025	-.287*	-.364**	.494**	0.083	0.069	-0.082	0.279	-0.233	-0.219
20	-0.119	.601**	-0.157	-.265*	0.179	-.374**	0.229	0.02	0.03	-0.046	-88	-0.125	.459**	-.251*	-0.124
21	-0.101	0.118	-0.147	0.096	0.054	.326**	-0.036	-0.213	0.124	0.049	.829**	0.004	-0.05	-0.112	-0.161
22	0.07	-.500**	-0.215	0.196	-226	0.235	.468**	0.093	-.348**	-.528**	-0.108	0.22	-0.127	0.156	0.013
23	0.151	-.340**	.486**	0.165	-0.111	0.174	-.597**	.266*	-0.223	.437**	-0.165	0.082	-.339**	.837**	.701**
24	-0.029	-.380**	0.063	.258*	-.294*	0.201	-0.057	0.166	-109	0.055	-0.083	0.199	-.352**	.322**	.278*
25	0.036	-.258*	.393**	0.104	-0.154	0.176	-.270**	0.136	-0.181	.388**	-0.112	0.115	-0.16	.772**	.669**
26	-0.029	-.380**	0.063	.258*	-0.294	0.201	-0.057	0.166	-0.109	0.055	-0.083	0.199	-.325**	.322**	.278*
27	-.270*	.398**	0.002	-.486**	0.034	-0.084	-0.107	-.246*	1.00**	0.062	0.088	-0.22	-0.184	-.291*	-.245*
28	0.045	-.354**	.248*	0.209	-.345**	0.167	-.288*	.291*	-0.142	.557**	-0.103	0.071	-.382**	.678**	.803**
29	-.297*	-0.176	-.245*	0.213	.297*	.488**	0.042	-.493**	.245*	-.290*	0.132	0.041	0.057	0.124	-0.047
30	-0.119	0.219	0.229	-0.054	0.016	-0.218	-0.031	-0.227	0.129	-0.032	0.017	-.269*	0.183	-0.063	-0.155

Table 2: Continued

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
16	1														
17	0.211	1													
18	-.375**	-.380**	1												
19	.244*	.358**	0.031	1											
20	.360**	.320**	0.006	0.204	1										
21	0.204	0.056	-0.056	0.144	-27	1									
22	-0.126	-0.151	-0.034	-.419**	-.368**	-0.134	1								
23	-.343**	-.336*	0.143	-.330**	-0.181	-0.195	0.086	1							
24	-.393**	-.243*	0.064	-0.169	-.397**	0	0.232	.248*	1						
25	-420**	-.331**	0.136	-0.208	-0.161	-176	-0.086	.835**	0.146	1					
26	-.393**	-.243*	0.064	-0.169	-.397**	0	0.232	.248*	1.00**	0.146	1				
27	0.157	.507**	-0.006	.494**	0.03	0.124	-.348**	-0.223	-0.109	-0.181	-0.109	1			
28	-.330**	-.325**	.242*	-0.169	-0.157	-0.095	-0.08	.815**	.250*	.690**	.250*	-0.142	1		
29	.244*	0.148	-0.227	.305*	-.321**	0.204	0.147	0.032	0.145	-0.002	0.145	.245*	-0.095	1	
30	.298*	0.057	-.297*	0.169	0.095	0.051	-0.117	-0.125	-0.061	-0.153	-0.061	0.129	-0.066	-0.05	1

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

Table 3: Factor loadings and Variamx raw with P.C and marked loading are $ 0.7

	Factors loadings (Unrotated)							
	Factor (1)	Factor (2)	Factor (3)	Factor (4)	Factor (5)	Factor (6)	Factor (7)	Factor (8)
1	0.18	0.03	0.57	0.17	0.26	0.46	0.11	0.15
2	0.71	0.23	0.16	-0.19	0.12	0.13	0.13	0.37
3	0.29	0.65	-0.11	0.12	0.16	0.33	-0.33	-0.14
4	0.54	0.25	-0.29	0.37	0.44	0.15	0.09	0.02
5	0.51	0.46	0.19	0.26	0.06	0.20	0.09	0.22
6	0.37	0.41	-0.59	0.14	0.16	0.18	0.16	0.13
7	0.29	0.75	0.24	0.11	0.09	0.02	0.32	0.25
8	0.45	0.27	0.49	0.23	0.21	0.08	0.22	0.11
9	0.46	0.39	0.47	0.25	0.40	0.02	0.30	0.05
10	0.28	0.78	0.01	0.20	0.04	0.19	0.15	0.06
11	0.15	0.07	0.4	0.25	0.14	0.72	0.14	0.18
12	0.47	0.19	0.22	0.44	0.26	0.12	0.49	0.05
13	0.44	0.25	0.05	0.02	0.64	0.27	0.09	0.09
14	0.66	0.24	0.14	0.52	0.21	0.02	0.01	0.06
15	0.67	0.04	0.03	0.42	0.20	0.09	0.05	0.1
16	0.69	0.14	0.03	0.10	0.23	0.14	0.27	0.07
17	0.64	0.11	0.16	0.31	0.17	0.12	0.24	0.02
18	0.40	0.23	0.07	0.34	0.13	0.07	0.62	0.03
19	0.41	0.32	0.57	0.06	0.23	0.28	0.09	0.05
20	0.46	0.15	0.34	0.13	0.43	0.04	0.31	0.38
21	0.18	0.07	0.47	0.24	0.09	0.64	0.16	0.28
22	0.24	0.69	0.13	0.17	0.28	0.16	0.05	0.19
23	0.69	0.04	0.08	0.61	0.06	0.18	0.04	0.02
24	0.52	0.13	0.26	0.04	0.46	0.22	0.19	0.5
25	0.62	0.08	0.01	0.58	0.20	0.15	0.05	0.08
26	0.52	0.13	0.26	0.04	0.46	0.22	0.19	0.5
27	0.46	0.39	0.47	0.25	0.40	0.02	0.30	0.05
28	0.69	0.19	0.03	0.50	0.11	0.16	0.03	0.08
29	0.10	0.40	0.65	0.17	0.07	0.01	0.13	0.29
30	0.26	0.14	0.05	0.12	0.12	0.20	0.48	0.23
Eigen values	6.89	3.58	3.09	2.56	2.19	1.86	1.78	1.3
% total Variance	22.97%	11.93%	10.30%	8.54%	7.30%	6.21%	5.92%	4.33%

Table 3: Continued

	Factors loadings (Varimax raw)								
	Factor (1)	Factor (2)	Factor (3)	Factor (4)	Factor (5)	Factor (6)	Factor (7)	Factor (8)	Communalities
1	0.25	0.01	.78*	0.00	0.13	0.06	0.13	0.05	0.7
2	0.32	0.15	0.08	-0.23	0.22	0.14	0.26	0.69	0.79
3	0.08	.85*	0.14	0.03	0.08	0.23	0.00	0.03	0.81
4	0.56	0.15	0.34	0.12	0.17	0.14	0.46	0.27	0.8
5	0.04	0.55	0.02	0.12	0.36	0.06	0.46	0.09	0.67
6	0.08	0.16	0.28	0.22	0.08	0.39	0.45	0.50	0.77
7	0.09	.92*	0.01	0.11	0.04	0.06	0.01	0.14	0.89
8	0.16	0.19	0.64	0.09	0.16	0.23	0.30	0.18	0.68
9	.91*	0.06	0.11	0.13	0.01	0.06	0.05	0.01	0.9
10	0.06	.82*	0.28	0.07	0.02	0.12	0.10	0.10	0.79
11	0.02	0.01	0.02	0.08	0.06	0.91	0.02	0.03	0.84
12	0.24	0.05	0.12	0.04	0.11	0.03	0.85	0.12	0.83
13	0.32	0.20	0.60	0.19	0.33	0.03	0.11	0.31	0.76
14	0.19	0.10	0.18	.83*	0.19	0.06	0.09	0.16	0.83
15	0.15	0.11	0.01	.78*	0.14	0.03	0.14	0.00	0.69
16	0.00	0.20	0.26	0.29	0.32	0.26	0.48	0.24	0.64
17	0.55	0.40	0.25	0.21	0.14	0.08	0.21	0.14	0.65
18	0.05	0.16	0.18	0.09	0.02	0.01	0.82	0.09	0.74
19	0.45	0.26	0.64	0.19	0.14	0.04	0.06	0.08	0.75
20	0.02	0.17	0.15	0.08	0.29	0.06	0.02	0.8	0.78
21	0.07	0.00	0.06	0.12	0.06	0.90	0.00	0.01	0.84
22	0.35	0.48	0.13	0.09	0.20	0.20	0.05	0.51	0.72
23	0.09	0.01	0.16	.91*	0.09	0.08	0.00	0.09	0.89
24	0.05	0.0	0.03	0.15	.92*	0.00	0.06	0.15	0.9
25	0.05	0.12	0.05	.89*	0.04	0.07	0.04	0.05	0.81
26	0.05	0.00	0.03	0.15	.83*	0.00	0.06	0.15	0.9
27	.93*	0.06	0.11	0.13	0.01	0.06	0.05	0.02	0.89
28	0.02	0.22	0.11	.85*	0.15	0.01	0.08	0.02	0.81
29	0.22	0.22	0.45	0.05	0.01	0.23	0.10	0.6	0.73
30	0.07	0.20	0.32	0.12	0.14	0.02	0.47	0.21	0.45
Eigen values	3.15	3.42	2.71	4.11	2.47	2.16	2.77	2.46	23.25
% total Variance	10.51%	11.39%	9.01%	13.71%	8.23%	7.19%	9.24%	8.19%	77.50%

Account the Correlation Matrix Between the Degrees of the Expressions Used Pearson Equation Using the Values of Crude

Factor Analysis of the Correlation Matrix: The researchers analyzed the matrix of links factorially using the method of the principal analysis. Table 3 illustrates the following:

- Principal factor matrix, Eigen Values, communalities and % total variance
- Orthogonal rotation of principal factor matrix by using Kaiser's Varimax
- Defining the saturations which are # 0.7

DISCUSSION

The two researchers have extracted the strong factors according to three conditions which are (hidden root of the factor < or = 1 integral, the saturation value of the test set to the factor < or = 0.7 according to the criteria of Gilford and that three or more tests are saturated with the factor). Below is an illustration of the strong factors extracted and the explanation of each factor in the light of the tests saturated with it.

Three tests are saturated with this factor [10% of the number of the tests used]. Their saturations ranged from (0.92) to (0.82) and so special features of that factor are the capacity for balance, orientation and dynamic organization.

Pim [11] mentions that basketball is a game of direction-change, rotation, speed, expectations and deception. As long as there is one player in the attack, he can have the ball in the playground. Theoretically, the rest of the players will not grasp the ball for 80% of the time of the match. This statistic illustrates how important it is to develop the skills of moving without the ball.

Table 4: Marked on strong factor 2

N.	Tests	Marked
7	Feet jump inside the hexagon	-0.92
3	Dribbling and passing on internal goals	0.85
10	Four medical balls (domino)	0.82

Table 5: Marked strong factors 4

N.	Tests	Marked
23	10 step lay-up shot	0.91
25	Dribbling around 20 cones of the basketball court	0.89
28	Passing test in 30 seconds	0.85
14	Shooting from outside a circle of a two-meter radius.	0.83
15	Cross dribbling with two hands	0.78

As moving without the ball requires the player to be brilliant in starting, deceiving and changing his direction and to have excellent perception of the playground and good vision so that he can perceive the areas inside the playground with his fellows and competitors so that the aim of these movements can be achieved which is to open gaps in the competitors defense by frequently moving without the ball.

This agrees with previous studies [11-15] which state that a skilful basketball player should use different kinds of movements without the ball to cut to the basket. He cannot stay standing in his place all the time, so he has to change his speed and his direction permanently by moving to the empty areas to get and pass the ball to his fellows. This skill is not less important than the rest of the game's skills, like shooting for example, because many beginners are attracted to the ball, so it is necessary to allocate time for teaching the skills of moving without the ball as much as that allocated for improving the shooting skills because these movements will give the same chances of shooting or may be more because the number of players without the ball will be 80% of the attackers and the players' realization of the principle will stimulate them to perform aiming movements when they are not having the ball. The skills of moving without the ball require the player to have a high capacity to control his body so that he would not fall or make mistakes. The more the capacity for balance increases the more the capacity fo controlling the body increases and consequently the ability to control the ball increases and so does the speed of organization and orientation inside the areas of the playground, which will lead to minimizing the effort of the attackers and increasing the burden on the defenders and this will be in favor of the attackers throughout the match.

Five tests are saturated with that factor (16.66% of the used tests). Their saturations ranged from 0.91 to 0.78 and so the special features of the tests of this factor are the capacity for dynamic distinction, capability of quick response and rhythmic capacity.The two researchers see that the best term for that factor is the capability of distinction and rhythmic response.

Basketball is the game of distinction and true dynamic sense of every stage of technical performance and every part of the body in terms of changing the state and position of the body in the suitable place and time to execute the planned duties with high accuracy and economization of effort and under numerous pressures (e.g. time - competitors - physical impact - accuracy situation - and balance).This is because the time of the attack is 24 seconds, which means that the dynamicity of professional performance in basketball requires a quick dynamic to dynamic stimulants (auditory B visual - tangible - sensory). There should be harmony in dynamic performance among parts of the skill according to the circumstances (pressures) that the player undergoes.

The capacity for dynamic distinction is obvious in basketball in the players' capability to determine the amount of force and suitable speed to carry out the dynamic duties needed inside the playground, like the capability to perform oriented movements or parts of certain movements in a wide variety of forces and forms (the accuracy of the movements). Examples include shooting from a near or medial area, passing and

Table 6: Strong factors which are extracted and the tests representing them and their saturation

Factor	M	N. Tests	Tests	Marked
The capacity for balance, orientation	1	3	Dribbling and passing on internal goals	0.85
and dynamic organization	2	7	Feet jump inside the hexagon	0.92
	3	10	Four medical balls (domino)	0.82
The capability for distinction and rhythmic response	4	14	Shooting from outside a circle of a two-meter radius.	0.83
	5	15	Cross dribbling with two hands	0.78
	6	23	10 step lay-up shot	0.91
	7	25	Dribbling around 20 cones of the basketball court	0.89
	8	28	Passing test in 30 seconds	0.85

Table 7: Correlation matrix between the extracted tests

M	Tests	3	7	10	14	15	23	25	28
3	Dribbling and passing on internal goals								
7	Feet jump inside the hexagon	0.764*							
10	Four medical balls (domino)	0.557*	0.809*						
14	Shooting from outside a circle of a two-meter radius.	0.502*	0.422*	0.408*					
15	Cross dribbling with two hands	0.654*	0.459*	0.653*	0.408*				
23	10 step lay-up shot	0.486*	0.597*	0.437*	0.653*	0.851*			
25	Dribbling around 20 cones of the basketball court	0.393*	0.270*	0.388*	0.437*	0.837*	0.835*		
28	Passing test in 30 seconds	0.248*	0.288*	0.557*	0.388*	0.772*	0.815	0.690*	

The value of (R) in the table is set to the level of 0.05 and free point of 68=0.232

receiving the ball from different distances and in different forms and also how to deal with the ball or with the fellow players and competitors. The sense of place and time is needed as well as carrying out the planning duties, whether individual or team duties, quickly and accurately [16].

This was asserted by prior studies [5-7, 16, 17] that every coordination ability has its own special skills with which it is directly proportional. The more the level of this ability increases, the more the level of performing these dynamic skills does. The reason behind this is that modern games require dealing with different situations using fast and sound judgment due to the development of the styles of the game (attacking - defensive). This requires the player to own a good sensory/dynamic perception of (place, time, fellow partners, competitors and the ball) This requires a high capacity for dynamic response after perception of signals (auditory, visual, tangible) aiming at achieving a dynamic action through a quick reaction, such as seizing the ball from fellow player after giving him a sign to run forward in order to achieve a numerical advantage over competitors, basket or performing the steps of lay-up while keeping pace with the competitors steps but after the competitor performs the first step to have a correct shooting in order to seize the ball or to disperse it before shooting.

Determining the Final Tests of the Coordination Abilities of Female Basketball Beginners: The two researchers were able to determine the final tests of the coordination abilities of female basketball beginners. These were eight tests representing two factors. The two researchers see that the accepted factors agree partly with the suggested ones. Table 6 illustrates the two strong factors which are extracted and the saturated tests in every one of them.

It is obvious from Table 8 that there is a statistical significant connection among the extracted tests, which shows that there is a functional interference among them and this means that these tests are affected by each other.

CONCLUSION

Within the limits of the research and through the statistical analysis and discussion of the tables, the researchers reach the following conclusion:

- Designing a testing battery as an index to measure and evaluate the direct abilities which are found in female basketball beginners, including 8 tests to measure 2 strong factors as follows:

Factor's name	Tests
1-the ability's for balance, orientation and dynamic organization	- Dribbling and passing on internal goals - Feet jump inside the hexagon- - Four medical balls (domino)
2-the ability's for distinction and rhythmic response	- Shooting from outside a circle of a two-meter radius. - Cross dribbling with two hands - 10 step lay-up shot - Dribbling around 20 cones of the basketball court - Test of passing test in 30 seconds

- The battery units are considered pure units because their saturations on the other factors are not essential.
- B The extracted battery provides a quick and objective criterion for measuring the direct abilities of female basketball beginners.

Recommendations

- The importance of using the extracted battery when selecting beginners and teams competing at international level.
- Using the extracted battery in the selection, planning, evaluation and classification processes.
- Conducting such studies on different samples in order to assure the results of the present research.

REFERENCES

1. Raczek, J., 2002. Entwicklungsveränderungen der motorischen Leistungsfähigkeit der Schuljugend in drei Jahrzehnten. Sportwissenschaft, 32: 201-216.
2. Bös, K., 2001. Handbuch sportmotorischer Tests. Hogrefe, Göttingen, pp: 100 B 1115.
3. Joch, W., 2001. Das Sportlich Talent. Mayer and Mayer Verlag, Achen.
4. Steinhöfer, D., 1995. Zur Leistungserfassung im Basketball. Ingrid Czwalina, 2 Aufl., Hamburg, pp: 7- 13, 19 B 23, 33 B 60.
5. Glassuer, G., 2003. Koordinationstraining im Basketball, Von Ressourcen ueber Anforderungen zu kompetenzen, Dissertation, Dr. Kovac Verlag, Hamburg, 6: 20-40.
6. Houssain, M., 2006. Jugendbasketball; Untersuchung zur Trainierbarkeit der Beinarbeit und zur Bedeutung der Koordinative Faehigkeit, Dr. Kovaè Verlag, Hamburg, pp: 10.
7. Farouk, A. and M. Houssain, 2009. The Effect of a Suggested Coordination Training Program on the Performance Level of Some Basic Skills for Young Basketball Players. Journal of Sports Science, Faculty of Physical Education, El-Minia University, 22: 21 -57.
8. Schreiner, P., 2000. Koordinationstraining Fussball, das Peter Schreiner System.Rowohlt Verlag, Reinbek, pp: 10-27.
9. Steinhöfer, D., 2003. Grundlagen des Athletiktrainings. Theorie und Praxis zu Kondition, Koordination und Trainingssteuerung im Sportspiel. Philippika Sportverlag, Münster, pp: 11- 21, 292 B 318.
10. Pratorius, B. and T. Milani, 2007. Kinder B koordinationstest Alfried krupp von Bohlen und Halbach Stiftung. Taechische Universitaet Chemnitz, pp: 1-195.
11. Pim, R.L., 1994. Winning Basketball Techniques And Drills For Playing Better Basketball. Contemporary books Inc, Chicago, Illinois.
12. Ismail, M., 2009. Basketball Practices (Defense). Munsha't Al. Ma'aref, Second Volume, Alex, pp: 6-21, 46.
13. Prusak, K.A., 2005. Basketball fun and games. Human Kinetics, USA.
14. Anrich, C.H., 2001. KoordinationB Grundlagen fuer schule und Verein. Klett Schulbuchverlag, Leipzig, pp:17, 18, 33, 40-42, 62-75.
15. Deutsche Basketball Bund, 2003. Basketball Rahmentrainingskonzeption fuer kinder und jugendliche im leistungssport, landes Sport Bund Nordrhein, Westfalen eV.
16. Neumaier, A., 2003. Koordinatieves Anforderungsprofil und Koordinationstraining, Sport and Buch Strauß, Köln, pp: 29, 30, 48 B 50, 120, 165.
17. Hirtz, P., 2002. Entwicklungen zur Entwicklung koordinativer Fähigkeiten im Kindes- und Jugendalter. In: G. Ludwig and B. Hrsg. Koordinative Fähigkeiten B Koordinative Kompetenz. Uni. Kassel, pp: 104-112.