Effect of Specific Exercises to Develop of Motor Coordination for Junior Basketball Players 13-15 Year

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ABSTRACT

Focusing on motor coordination by using specific exercises during training would help the players to have high developed skills when scientifically chosen according to their abilities, ages and capacities. Coordination is one of the most important motor capacities that a basketball player should have. The accuracy of skills performance and the way of dealing with it during the game may get affected by the flow of performance, velocity and decision control. The problem of the study depend on the reduction of interest of some coaches in coaching motor coordination despite its importance for the players specially those of young ages. Therefore, the study aims at recognizing the effect of specific exercises on the development of motor coordination for junior basketball players. The experimental method is used as convenient to this study. The subject has consisted of (16)basketball players between (13-15) year-old representing the junior players of Al-Hillah sport club, the researchers come out with the important conclusions that is inserting specific exercises with the training program has better impact on developing motor coordination for the players.

Key Words: **motor coordination, specific exercises, junior basketball players**

1. Introduction

The attention to preparing the basketball players and they are little will result in raise their level in the aspects of physical and technical, skills, plans, psychological, and educational, these aspects will lead to develop of gameplay manners, plans and give abeautiful in performance, all of this will bethrough mastering skills and reach to the level that develops the game. The focus on the motor coordination (MC) by using specific exercises (SE) will make the player has a high capacity in the development of basic skills, if the skills have been selected in a scientific way according to the potential of the players, ages, and abilities.

The sciences focus on the development of MC during modern training programs, the fact that MC is one of the most important motor skills that must be had by a basketball player, through performance streamlined, speed and control in decision making, which in turn affects the accuracy of skills performance and how to deal with it during the match. The importance of research is to selection of specific exercises working to develop MC for basketball players (junior) with ages (13-15) years because of its interest in raising the level of groomed and trained and their reach to desired levels**.**

The modern trends in sports training have begun interested infusing specific training programs for each age group according to the physical characteristics an motor skills that distinguishes from others, especially in the game of basketball, which is one of the games that require rapid dynamic coordination and accuracy in skills performance, but we notice able lack of interest by some of the coaches on that side in spite of its importance for the players, especially junior and youth, for this reason, specific exercises for MC were selected in order to help in the development to the performance of the basic basketball skills in a research sample.

2. Methodology

The researchers have used experimental approach with design of (Equality group) because it is suitable for the problem nature, the researchers have done the equality between study groups (experimental and control) by depend on MC tests, length, and weight, the results are shown in table (1).

Table (1) Show equality between control and experimental group in pre tests

Statistical	Control group			Experimental group			Value of calculate Mann Whitney	Valve of tabulate Mann Whitney	Significances
	Intermediate Arithmetic	Inter quartile deviation	coefficient of variation	Intermediate Arithmetic	Inter Interquartile deviation	coefficient of variation			
Numbered circuit test	7.95	1.7	21.38	6.82	0.65	0.29	33	15	No S
Throw the balls to walls and receptors	7.5	2.25	30	10.5	1.12	10.66	31		
Length	150	9	99	151	8.5	100.33	27		
Weight	39	4.25	103.2	38.5	4.5	96	30.5		

2-1 Subjects

Research sample is consist of junior players from sport Alhillah club, and the number of sample is approximately 20 players with ages (13-15) year. The researchers are selected 16 players and divided them into two groups, the number of player for every group is 8, experimental group is (8) and control group is (8).

2-2 Testing Procedures:

Motor Coordination Tests (Mohamed, 1995) Test one is throw the tennis ball to the wall and receptor Test (Coordination of arm with eye), and second test is numbered circuit test (Coordination of leg with eye). To make sure from the validity of the tests, the researchers are shown the tests to the number of experts and specialists, the agreement about the tests between the experts were (80%),the researchers have done the pre tests on 4 O'clock pm at Thursday (27/3/2008) in Hamza Noory Hall, the number of research sample was 16 player, they divided into two group (control and experimental).

2-2-1Test one: Tennis Ball Throw and Receptor

The purpose: Measure of coordination between (arms and eyes).

Tools: Tennis Ball, Wall paints on it square (2X2) m, the distance is (5)m.

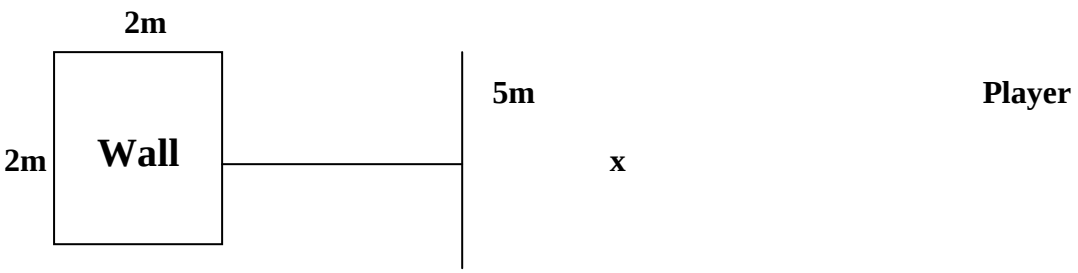
Performance: The player is stand up in front of the wall and in the back of the line which is painted on the floor, the player will do:

A- Throw tennis ball five consecutive times with the right hand into wall, the player has to reception the ball with same hand after reflected.

B-Throw tennis ball five consecutive times with the left hand into wall, the player has to reception the ball with same hand after reflect.

C-Throw a tennis ball five times with the right hand and received by the left hand after reflect from the wall.

Grade Account: calculated one for each correct attempt and be the final score (15)



2-2-2Test Two: Numbered Circle Test

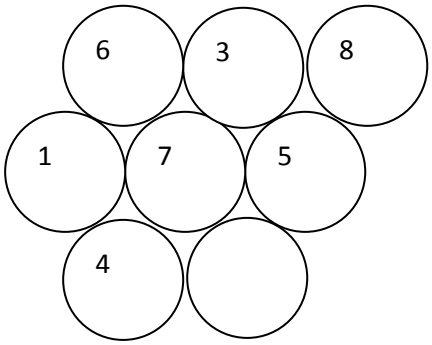
The purpose: Measure of coordination between (legs and eyes).

Tools: Painted on the floor (8) circles numbered from (1 to 8), each diameter(60 cm)and, as we observe in Figure(1), timer watch.

Performance: The player is stand up inside the circle number (1), when he heard the beginning sign, the player starts to jump from circle to circle until number (8).

Grade Account: Recorded the time which the player is spending to jump up the (8) circles correctly.

Figure (1)



2-3 The Scientific Basis for Coordination Tests:

So as to test is achieve the object and purpose that is putted for them, the test has to continent the terms and conditions of the most important transactions of scientific test (validity, reliability, and objectivity), the results of which are shown in table (2).

Table (2) Show reliability and objectivity coefficient of the tests which is used

Tests	Measurement Unit	Reliability Coefficient	Objectivity	Value of Calculate T		Sign
				reliability	Objectivity	
Numbered Circles	Second	0.99	0.90	12.6	5.05	S
Throw the balls into wall and receptors	Degree	0.83	0.90	3.64	5.5	
Value of tabulate (T) is (2.45) at the significance level (0.05) and freedom degree (7)						

The validity of the content of the tests have been obtained through presentation to the experts and that is through the logical judgment on the existence of the property or attribute or ability to investigate as if it was proposed method of measurement actually measured or not (Mohammad and Mohamed, 2000). The stability and objective tests as set out in schedule (2) the value of calculated (T) for the two tests is greater than tabulated value (2.45) at the level of significance (0.05) and the degree of freedom (7) which indicates that it enjoys a high degree of stability and objectivity

2-4 Specific Exercises

Specific exercises applied during the training units to the experimental group just, the exercises were putted in the main department on Saturday 29\3\2008, the time was 4 O'clock pm in Hamza Noory Hall, the duration is 8 weeks, 3 times at week, the number of whole units is 24. The intensity of the exercises is (fast performance) and the time of the training unite is (90) minute, the time of specific exercises is shown in table (3).Note, the training program of coach is the same for both groups but the experimental group has specific exercises with their training program. We can see a training program model in appendix (1).

Table (3) Show the number of weeks and the specific exercises and times

Exercises Weeks	Time of single exercises	Time of paired exercises	Time of group exercises	Full exercises time	intensity	The number of unites at week
First	20 m	30m	40m	90m	Fast performance	Three times at week
Second	20m	30m	40m	90m		
Third	25m	35m	45m	105m		
Fourth	25m	35m	45m	105m		
Fifth	30m	40m	50m	120m		
Sixth	30m	40m	50m	120m		
Seventh	35m	45m	55m	135m		
Eighth	35m	45m	55m	135m		

2-5 Statistical: (Mohammed and, 2001), (Radwan, 2003)

- Percentage %
- Chi-squared Test
- Spearman Coefficient
- Median.
- Interquartile deviation.
- Coefficient of Variation.
- Wilcoxon Test.
- Mann Whitney Test

3. Results & Discussion

The results of MC tests point to there is a development in MC for both group (control and experimental) as shown in table (4, 5, and 6). The improvement that occurs for control group because of effect of original program which prepared by the coach, in addition, the players were very regular in training, this reason lead to MC development. The results also have shown there is improvement for experimental group which are better than control group because of the effect of specific exercises which placed with training program by the coach, these exercises contributed to develop of MC for players.

Specific exercises were regular between intensity and enough rest, they characterized by variety, delight and excitement, and for this reason the players felt with rush to training. The specific exercises are also helping to develop of motor capacities, Abu Al Aula (1997) has indicated that coordination is connected with a lot of physical features such as, speed, agility, balance and accuracy, the relation among coordination and speed seems with motor performance requirements of the temporal, also the agility, balance, and accuracy are displayed with requirements of the movement of the formalities and spatial.

Table (4) Show the Results of Pre and Post MC Tests for Control Group

Statistical	Measure Unite	Pre Test		Post Test		Sample Size	Value of Wilcoxon	Valve of tabulate Wilcoxon	Significance
		Median	Interquartile deviation	Median	Interquartile deviation				
Numbered circuit test	Second	7.95	1.7	6.66	1.07	8	1	3	S
Throw the balls to walls and receptors	Degree	7.5	2.25	10	1.25	8	2		

Table (5) Show the Results of Pre and Post MC Tests for Experimental Group

Statistical	Measure Unite	Pre Test		Post Test		Sample Size	Value of Wilcoxon	Valve of tabulate Wilcoxon	Significance
		Median	Interquartile deviation	Median	Interquartile deviation				
Numbered circuit test	Second	6.82	0.65	5.84	0.37	8	1	3	S
Throw the balls to walls and receptors	Degree	10.5	1.12	13.5	0.75	8	2		

Table (6) Show the Results of Post MC Tests for Control Group

Statistical	Measure Unite	Post Test Control		Post Test Experimental		Sample Size	Value of Mann Whitney	Valve of tabulate Mann Whitney	Significance
		Median	Interquartile deviation	Median	Interquartile deviation				
Numbered circuit test	Second	6.66	1.07	5.84	0.37	16	11	15	S
Throw the balls to walls and receptors	Degree	10	1.35	13.5	0.75	16	9		

4. Conclusions

The researchers found that specific exercises had good effect to develop of MC of experimental group for basketball players with ages (13-15) year, and training program which follow up by coach had positive impact to develop of MC of control group, also, the advantage was more for experimental group in develop of MC for junior basketball players.

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