

## Effect of on the Court Specific Footwork Training Protocol on Passing Ability and Defensive Movement of Male Basketball Players



### Physical Education

**KEYWORDS :** On the Court Footwork Training, Passing Ability and Defensive Movement

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### ABSTRACT

*The purpose of the study was to find out the effect of on the court specific footwork training protocol on passing ability and defensive movement of male basketball players. For this purpose, thirty male basketball players were randomly selected as subjects. The age of the subjects were ranged between 15 to 17 years. They were divided into two equal groups and each group consisted of 15 subjects. Group I underwent on the court specific footwork training protocol for three days per week for twelve weeks and group II acted as control. The passing ability and defensive movement were selected as criterion variables. The passing abilities and defensive movement were assessed by passing test and defensive movement test respectively. The analysis of covariance (ANCOVA) was used to analyze the significant difference, if any among the groups. The results of the study showed that the on the court specific footwork training protocol had significantly improved the passing ability, defensive movement of male basketball players.*

### INTRODUCTION

Basketball is a fast moving game and most popular sports in the world and one of the most widely viewed (Scott Lucett, 2013). Basketball is played by both men and women of all ages and fitness level. Successful game of basketball needs ability of the players to generate good footwork, agility and tremendous power during the play of game. Skills like dribbling, shooting and passing are of utmost importance for a player at any level of play (YograjThani, 1997).

Proper footwork is the foundation of the game of basketball. All fundamental skills in basketball namely dribbling, passing & receiving, shooting, rebounding and defensive movements need a sound foot work to achieve high level performance. Studies have

proved that the ability to use the proper foot work has the greater impact in performing defense, rebounding, handling the ball or moving in to different offensive and defensive positions (Young, McDowell and Scarlett, 2001). Good footwork is a prerequisite for soundly executing each of these fundamental skills (Hal Wissel, 2012). Sound foot work is the basis for developing good timing, maintaining good body balance & position and using the least amount of energy. The footwork training can be incorporated into any basketball program for players across all levels to help maximize performance and decrease the risk of injury (Dave Anthony, 2013).

Skill-based conditioning games offer a specific training stimulus to stimulate the physiological demands of competition and combination training and skill-based conditioning games is likely to confer the greatest improvements in fitness and skill in junior elite players (Santos, Ejam and Janeira, 2012). Research has also shown that the use of specific exercise programs incorporating various forms can significantly reduce the incidence of injury, especially to the lower extremities, while improving performance (Myer, Ford, and Hewett, 2004).

### METHODOLOGY

#### Subjects

Thirty male basketball players were selected as subjects at random. The age of the subjects were ranged between 15 to 17 years. They were divided into two equal groups and each group consisted of 15 subjects. Group-I underwent on the court specific footwork training protocol for three days per week for twelve weeks and Group-II acted as control who did not participate any special training apart from the regular curricular activities.

#### Variables

The passing ability and defensive movement were selected as criterion variables. The on the court specific footwork training protocol was selected as independent variable. The passing ability and defensive movement were assessed by pass-

ing test and defensive movement test respectively.

#### Training Programme

During the training period, the experimental group (Group-I) underwent (n = 15) on the court specific footwork training protocol for three days per week (alternative days) for twelve weeks and subjects in Group II as control were instructed not to participate in any strenuous physical exercise and specific training throughout the training programme apart from the regular curricular activities. Everyday the workout lasted for 30 to 45 minutes approximately including warming up and warming down periods. The subjects underwent the respective programmes as per the schedules under the supervision of the investigator. Each training session was conducted only in the morning time. The on the court specific footwork training was performed three days per week for twelve weeks. They perform 3 sets and each set constitutes of 10 repetition totally they perform 30 repetitions. They were given 20 seconds of passive recovery between the repetitions and 120 seconds rest between the set. The players were instructed to perform at high intensity. The workouts are designed to help improve deceleration capabilities, change in direction and footwork skills required for basketball. Care should be taken when performing footwork workout on a basketball court. The following on the court specific footwork drills are given in the training protocol in Table 1.

**TABLE - 1  
ON THE COURT SPECIFIC FOOTWORK DRILLS**

Sl.No	Drills
1.	4 Cones Defensive Drill
2.	Single Leg Hops Line Footwork Drill
3.	Crossover Steps Line Footwork Drill
4.	Foot Ups Side to Side Footwork Drill
5.	Figure 8 Footwork Drill
6.	Foot Ups Forward & Backwards Footwork Drill
7.	T-drill
8.	Agility Ladder Drills
9.	Lateral Cone Steps Drill
10.	Pro-lane Agility Drill

### STATISTICAL PROCEDURES

All the subjects of two groups were tested on selected dependent variables at prior to and immediately after the training programme. The analysis of covariance (ANCOVA) was used to analyze the significant difference if any, between the groups on each selected criterion variables separately. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as an appropriate.

### RESULTS

It is clear from Table 2 that there is no significant difference between on the court specific footwork training group and control group on passing ability and defensive movement be-

fore commencement of training, as obtained F ratio of 0.005 and 0.12 are less than the required table value of 4.20 at 0.05 for the df of 1 and 28. It denotes that the random assignment of subjects for the two groups is successful; however initial difference is not elicited in passing ability and defensive movement.

**TABLE - 2**  
**ANCOVA ON PASSING ABILITY AND DEFENSIVE MOVEMENT**

Variables	Testing Conditions	On the Court Specific Footwork Training Group	Control Group	SOV	SS	df	MS	F-Ratio
Passing Ability(Point)	Pre (M ± SD)	10.67 ± 2.80	10.73 ± 2.46	B	0.04	1	0.04	0.005
	Post (M ± SD)	14.47 ± 3.30	11.2 ± 2.23	B	80.03	1	80.03	
	Adjusted (M)	14.74	16.05	B	17.97	1	17.97	
Defensive Movement(Sec)	Pre (M ± SD)	20.36 ± 0.89	20.47 ± 0.87	B	0.10	1	0.10	0.12
	Post (M ± SD)	18.97 ± 18.97	20.26 ± 0.78	B	12.33	1	12.33	
	Adjusted (M)	19.02	20.22	B	10.74	1	10.74	
				W	208.26	28	7.44	9.40*
				W	83.91	27	3.11	5.78*
				W	23.16	28	0.83	19.89*
				W	5.65	27	0.21	51.14*

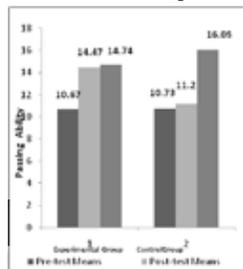
\*Significant at 0.05 level of confidence.

Table 2 also reveals that there is a significant difference on passing ability and defensive movement during post test. The obtained F ratio of 9.40 and 19.89 are greater than the required table value of 4.20 at 0.05 for the df of 1 and 28. Thereby it infers that the passing ability and defensive movement found to change significantly before and after twelve weeks of training.

Further, Table 2 clearly shows that passing ability and defensive movement differ between the groups after adjusting the pre test scores, as obtained F ratio of 5.78 and 51.14 are greater than the required table value of 4.21 at 0.05 for the df of 1 and 27, indicating that after adjusting pre-test scores, there was a significant difference between the two groups on adjusted post test scores on passing ability and defensive movement. Thus, it is concluded that twelve weeks of on the court specific footwork training significantly enhanced both passing ability and defensive movement.

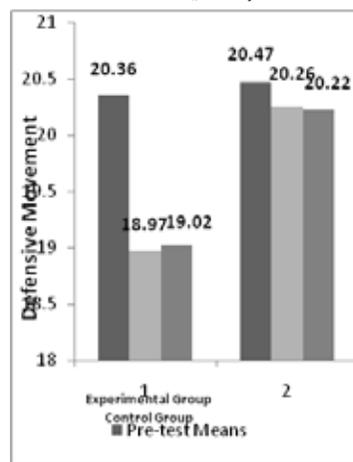
**DISCUSSION**

In the present study, twelve weeks of on the court specific footwork training significantly increased passing ability and defensive movement are presented in Figure I & II.



**Figure 1: Mean Values of On the Court Specific Footwork Training Group and Control Group on Passing Ability**

The results of the study showed that on the court specific footwork training elicited improvements in passing ability and defensive movement. Footwork drills will make the player quicker and more efficient movements. Footwork training is to improve skills as well as improve stamina. Footwork training is for the sport of basketball and provides drills to enhance performance and decrease the risk of injury (Scott Lucett, 2013).The basketball specific training produced improvements in passing ability of inter-collegiate women basketball players Parimalam and Pushparajan (2013).The result of the present study is in line with previous study, Sharma et.al (2012), found that to improve the specific skills, specific training procedures should be incorporated during the basketball training sessions. The footwork training is useful to apply exercises with various complexities and footwork training should include more specific basketball movements and activities (Jakovljevic et al., 2012).



**Figure 2: Mean Values of On the Court Specific Footwork Training Group and Control Group on Defensive Movement**

**CONCLUSIONS**

Observing the results derived from the effect of on-court specific footwork training, it is concluded that the specific skill related drills practices are the sources to develop passing ability and defensive movement of male basketball players. All fundamental skills in basketball namely dribbling, passing & receiving, shooting, rebounding and defensive movements need a sound footwork to achieve high level performance. The game of basketball needs sudden burst of speed, unexpected stops, jumps, turns, changes in direction and pace with and without the ball, in response to the direct action of the opponent. Good footwork is the keys to success on the court. To be effective on both offense and defense and the ability to change direction while maintaining balance. These basketball footwork drills develop foot speed, control, landing coordination, balance, and forward and backward movement, all of which make a better athlete on the court. Studies have proved that the ability to use the proper footwork has the greater impact in performing or moving in to different offensive positions. Hence, it was concluded from the results of the study, that twelve weeks on-court

[1] Dave Anthony, Basketball Footwork Drills/Training, www.ingame training.com/ wp-content/ uploads, 2013. | [2] Hal Wissel, Basketball Steps to Success - 3rd Edition,(USA: Human Kinetics, Champaign, 2012), p.1. | [3] Jakovljevic et al., (2012). Speed and Agility of 12-and 14-year-old Elite Male Adolescent Players, Journal of Strength & Conditioning Research, 26 (9), 2453-2459. | [4] Myer GD, Ford KR, and Hewett TE. (2004). Rationale and Clinical Techniques for Anterior Cruciate Ligament Injury Prevention Among Female Athletes, Journal of Athletic Training, 39 (4), 352-364. | [5] Parimalam, S and A. Pushparajan A., (2013). Effect of Specific Basketball Training Program on Physical Fitness and Skill Performance Variables of Inter Collegiate Women Basketball Players, International Journal of Advanced Life Sciences (IJALS), 6 (1), 33 -34. | [6] Santos, Ejam and Janeira, Maas., (2012). The Effects of Resistance Training on Explosive Strength Indicators in Adolescent Basketball Players, Journal of Strength & Conditioning Research, 26 (10), 2641-2647. | [7] Scott Lucett, (2013). Speed and Agility Training for Basketball, Journal of Strength & Conditioning Research, 12 (2), 212-6. | [8] Sharma et al., (2012). Effectiveness of Plyometric Training in the Improvement of Sports Specific Skills of Basketball Players, Journal of Strength & Conditioning Research, 18(3), 131-137. |