
EFFECT OF SPEED BASED SKILL PRACTICE ON SELECTED SKILL PERFORMANCE VARIABLES OF MALE BASKETBALL PLAYERS

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ABSTRACT

The present study aimed to determine the effect of speed based skill practice on selected skill performance variables of male basketball players. For this purpose (N=40) forty subjects aged between 18 to 25 years, who participating in inter-collegiate tournaments were selected from the Department of Physical Education, Bharathiar University and PSG College of Arts and Science, Coimbatore. The experimental design employed pre-test and post-test randomized group design with the subjects randomly divided into two equal groups of 20 subjects each. Group 1 underwent speed based skill practice (SBSP) while Group 2 served as the control group (CG) continuing with their regular training routines without any specific speed based skill interventions. The SBSP regimen for Group 1 was implemented over a period of eight weeks with sessions conducted five days a week. Collected data on selected skill performance variables specifically dribbling and passing were collected before and after the training period. Statistical analyses including paired t-test, analysis of variance and analysis of covariance. A significance level of 0.05 was chosen to test the significance of the results derived. The results confirmed the positive effect of speed based skill practice on selected skill performance variables including dribbling and passing performance confirming its effectiveness in enhancing skill execution among male college basketball players.

KEYWORDS: Basketball, Speed based skill practice, Dribbling and Passing.**INTRODUCTION**

Basketball is a dynamic sport that demands a high degree of physical fitness, technical proficiency and tactical intelligence. Among the numerous factors influencing game performance speed and skill execution play pivotal roles particularly in high-pressure, time

constrained situations commonly encountered in competitive play (Hoffman *et al.*, 1996). Speed based skill practice refers to training methodologies that emphasize the rapid execution of sport-specific movements, enabling athletes to respond swiftly and efficiently during match conditions (Ziv & Lidor, 2009).

Skill performance variables such as dribbling, shooting and passing are critical components of basketball success. These skills must not only be performed accurately but also at high speeds to gain a competitive edge (Drinkwater *et al.*, 2008). While traditional skill training is essential for developing technical foundations, it may not fully prepare athletes for the fast-paced demands of actual game scenarios. Consequently, integrating speed based components into skill drills has been proposed to enhance both neuromuscular coordination and cognitive responsiveness under time constraints (Ben Abdelkrim *et al.*, 2007). Previous research has demonstrated that sport-specific speed training can significantly improve performance outcomes in basketball players, particularly in executing complex motor skills under fatigue or defensive pressure (Mathews *et al.*, 2017).

These drills help players develop explosive acceleration, lateral movement and the ability to change direction rapidly. Basketball has been described as an intermittent sport requiring a comprehensive combination of physical, technical, mental and tactical skills. Dribble agility and the development of speed, agility and quickness especially with and without the ball are crucial for effective dribbling performance. However, the duration of ball possession has not been shown to be a significant predictor of effectiveness in dribbling and shooting skills.

METHODOLOGY

To achieve the objectives formulated in the present study, the following means and methods were employed. In the present study, the investigator aimed to study the effect of speed-based skill practice compared to a control group on selected skill performance variables. A pre-post random group experiment research design was employed. For the selection of subjects, (N=40) forty subjects aged between 18 and 25 years were chosen from the Department of Physical Education, Bharathiar University and PSG College of Arts and Science, Coimbatore. To study homogeneity Levene's test was applied and the selected subjects were equally divided into two groups of 20 each. Group 1 was named as the Speed Based Skill Practice group (SBSP) and Group 2 was named as the Control Group (CG). The selected skill performance variables such as dribbling and passing. These variables were measured using standardized tests administered by qualified research scholars in physical education.

Dribbling performance was assessed (in seconds) using the Johnson Basketball Test while passing performance was measured (in points) using the same test procedure. These initial scores were recorded as pre-test values.

Following this, the experimental group (Group 1) underwent a speed based skill practice program while the control group (Group 2) continued with their regular traditional training without any specific interventions related to speed training. The speed based skill practice regimen lasted for eight weeks with sessions of five days per week with a duration of 40 to 45 minutes and comprising drills focused on coordinative abilities and fundamental basketball skills training. After the intervention period, post-test scores for both groups were recorded using the same testing procedures. The collected data were analysed using paired t-test, analysis of variance and analysis of covariance to evaluate the individual and comparative effects of speed based skill practice and the traditional training on dribbling and passing performance. To test the significance of the results derived, the 0.05 level was chosen as the level of significance. The results of the study are as follows.

RESULTS

Table 1: Significance of mean gains & losses between pre and post - test scores of speed based skill practice group (SBSP) group and control group on selected skill performance variables among male basketball players.

Variables	Group	Test	Mean	MD	SEM	't'-ratio	Sig.
Dribbling	Experimental Group	Pre - Test	6.60	1.40	0.32	4.38*	0.00
		Post - Test	8.00				
	Control Group	Pre - Test	6.85	0.30	0.19	1.55	0.14
		Post - Test	7.15				
Passing	Experimental Group	Pre - Test	10.00	1.40	0.27	5.27*	0.00
		Post - Test	11.40				
	Control Group	Pre - Test	9.85	0.15	0.34	0.44	0.67
		Post - Test	9.70				

*Significance at 0.05 level (2.09)

Table - 1 shows that the obtained mean values of the pre-test and post-test scores for the experimental group in dribbling were 6.60 and 8.00 and 10.00 and 11.40 for passing. The calculated t-ratios were 4.38* for dribbling and 5.27* for passing. The tabulated t-value at the 0.05 level of significance for degrees of freedom 1, 19 is 2.09. Since the calculated t-ratios exceeded the critical value the results indicate a statistically significant improvement in dribbling and passing performance among male basketball players. The obtained mean values

of the pre-test and post-test scores for the control group were 6.85 and 7.15 for dribbling and 9.85 and 9.70 for passing. The calculated t-ratios in this group were less than the critical value of 2.09 at the 0.05 level with 1, 19 degrees of freedom. Therefore, the results indicate no statistically significant change in dribbling and passing performance among male basketball players.

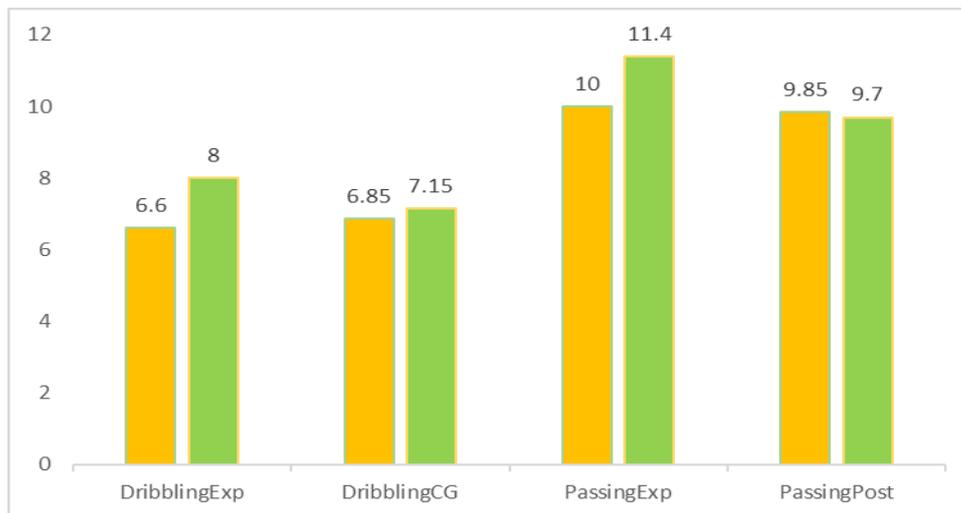


Fig. 1: The bar diagram shows the mean values of pre-test and post-test on dribbling and passing of experimental group and control group.

Table - 2: Analysis of variance on initial and final means of selected skill performance variables of male basketball players.

Variables	Levene's Statistics		Sources	SS	DF	MS	F-ratio
Dribbling	0.17 (1, 38, 0.69)	Pre-Test	Between Sets	0.63	1	0.63	0.68
			Within Sets	35.35	38	0.93	
	0.29 (1, 38, 0.59)	Post-Test	Between Sets	7.23	1	7.23	7.51*
			Within Sets	36.55	38	0.96	
Passing	0.13 (1, 38, 0.72)	Pre-Test	Between Sets	0.23	1	0.23	0.14
			Within Sets	62.55	38	1.65	
	0.26 (1, 38, 0.61)	Post-Test	Between Sets	28.90	1	28.90	13.90*
			Within Sets	79.00	38	2.08	

*Significance at 0.05 level (4.09)

Table - 2 explains that the observed F-values are: 0.68 (dribbling) and 0.14 (passing) for pre - test. In testing the significance of mean difference between the speed based skill practice (SBSP) and control group (CG) was found to be statistically not significant, it is failed to reach the required value of 4.09 for df is 1, 38. The observed F-value for the post - test means on selected skill performance variables of is 7.51 (dribbling) and 13.90 (passing). Since the

observed F-value on these variables is greater than the critical value of 4.09 for df is 1, 38, It is concluded that the observed final mean differences between the speed based skill practice (SBSP) and the control group (CG) group on the variables used in this study after eight weeks of training treatment were statistically significant. Thus, the results obtained confirm that the speed based skill practice (SBSP) have more impact on the development of dribbling and passing when compared to control group (CG).

Table 3: Analysis of covariance on selected skill performance variables of male basketball players.

Variables	Sources	SS	DF	MS	F-ratio
Dribbling	Between Sets	8.26	1	8.26	8.98*
	Within Sets	34.02	37	0.92	
Passing	Between Sets	26.02	1	26.02	16.23*
	Within Sets	59.30	37	1.60	

*Significance at 0.05 level (4.09)

Table - 3 reveals that the obtained “f” value was 8.98 (dribbling) and 16.23 (passing). Since the observed F-values on these variables were higher than the required critical value (4.09) at the 0.05 level of significance for df is 1, 37, it was found that the adjusted means differences among the two groups on selected skill performance variables of (dribbling and passing) were found to be statistically significant. It was concluded that the speed based skill practice (SBSP) has more impact on the development of dribbling and passing when compared to control group (CG).

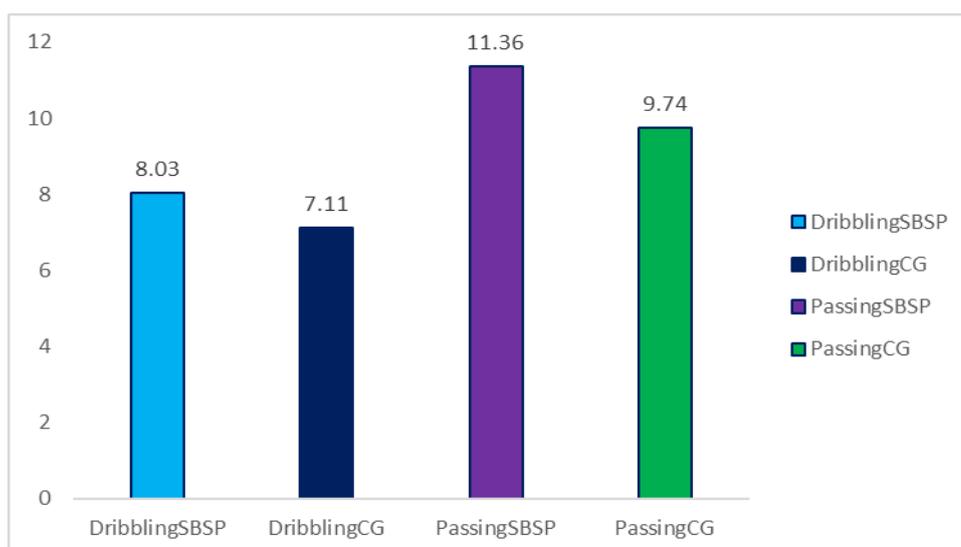


Fig. 2. The bar diagram shows the adjusted mean values of dribbling and passing on speed based skill practice and control group.

Findings of the Results

The study findings reveal a significant improvement in the selected skill performance variables of dribbling and passing within the experimental group which underwent speed based skill practice compared to the control group. Statistical analysis demonstrated that participants in the speed based skill practice group showed marked enhancements in skill performance following the eight weeks training program. These improvements were not observed to the same extent in the control group which followed traditional training routines. The findings are consistent with previous research. A study conducted by Hammami *et al.*, (2017) in Tunisia demonstrated that lower limb strength and agility training significantly enhanced dribbling and change of direction performance in youth handball players. Similarly, Granacher *et al.*, (2016) reported improved technical skill performance through neuromuscular training in adolescent athletes in Germany. Baskar and Murugesan (2018) found that basketball specific resistance training improved passing accuracy and ball control in college players from Tamil Nadu. According to Rajkumar and Shanmugam (2021) observed that speed and agility focused drills significantly enhanced ball handling skills in male basketball players in Kerala. In conclusion, the results of the present study underscore the effectiveness of speed based skill practice in improving dribbling and passing, thereby supporting its inclusion in training programs aimed at enhancing athletic performance among male basketball players.

CONCLUSION

Upon analysing the study's findings and acknowledging its inherent limitations, it becomes clear that integrating speed based skill practice has a distinct positive effect on enhancing the selected skill performance variables of dribbling and passing of male basketball players. Substantial improvements were noted in the selected variables among participants who underwent speed based skill practice over the eight weeks. This suggests that the tailored speed based skill practice regimen effectively enhances both dribbling and passing.

It can be inferred that the personalized application of speed based skill practice yielded statistically significant and positive effects throughout the intervention period, contributing to the enhancement of selected skill performance variables among of male handball players.

In contrast, the control group's individualized interventions did not yield significant improvements in selected skill performance variables of dribbling and passing within the same timeframe. When comparing the outcomes between the speed based skill practice group

and the control group, it is evident that the former exhibited substantially greater advancements in skill performance variables. This discrepancy highlights the superior impact of speed based skill practice on enhancing dribbling and passing of male basketball players.

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