International Journal of Physical Education, Sports and Health 2025; 12(5): 355-358

P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (RJIF): 5.93
IJPESH 2025; 12(5): 355-358

https://www.kheljournal.com
Received: 03-07-2025
Accepted: 07-08-2025

G Pushpa
Ph.D. Research Scholar, Department of Physical Education, Bharathiar University, Coimbatore, Tamil Nadu, India

Dr. P Manju Pushpa
Professor, Department of Physical Education, Bharathiar University, Coimbatore, Tamil Nadu, India

Corresponding Author:
G Pushpa
Ph.D. Research Scholar, Department of Physical Education, Bharathiar University, Coimbatore, Tamil Nadu, India

Effectiveness of Structured Specific Skill Training Programs on Game-Specific Performance Variables in School Basketball Players

G Pushpa and P Manju Pushpa

Abstract
The present study aimed to examine the effectiveness of structured specific skill training programs on game-specific performance variables in school basketball players. Methodology: To achieve this purpose, forty (N = 40) school basketball players were selected from Chavara Vidhya Bhavan Matriculation Higher Secondary School and Sri Ragavendra Matriculation Higher Secondary School, Coimbatore, Tamil Nadu. The subjects' ages ranged from 14 to 17 years. The forty subjects were divided into three groups, each consisting of fifteen (n = 15) participants: Experimental Group I, which underwent the Specific Skill Training Program (SSTP), and Control Group III, whose members did not participate in any training other than their routine activities. The experimental group participated in the Specific Skill Training Program four alternate days per week for a period of twelve weeks. Results: Data collected from the three groups before and after the training period were statistically analyzed using a dependent t-test. The mean gains recorded by the various groups in the pre-test and post-test were tested for significance using a paired t-test to determine whether the training program produced significant improvements in the selected variables after twelve weeks. The level of significance was set at 0.05. The results indicated that the experimental group showed significant improvement in all measured variables at the end of the twelve-week training period. Conclusion: The experimental group demonstrated a highly significant difference compared with the control group. It was concluded that the Specific Skill Training Program (SSTP) effectively enhances skill performance variables in school basketball players.

Keywords: Specific Skill Training, Skill performance Variables, Dribbling, Passing, Shooting, overall playing Ability

Introduction
Basketball is a fast-paced, dynamic team sport played between two sides of five players each on a rectangular court. The objective is to score points by successfully shooting the ball through the opponent's basket, which is positioned 10 feet above the ground. Scoring depends on shot location, with field goals inside the three-point arc worth two points and those beyond it worth three. Throughout the game, teams alternate between offense, advancing the ball and attempting to score, and defense, which involves strategies to prevent scoring through steals, blocks, and forced turnovers. Possession and movement are further governed by time restrictions, requiring teams to transition quickly across the half-court line. Success in basketball relies on a combination of tactical awareness, teamwork, and mastery of individual skills. Core technical abilities include dribbling, to control the ball while moving; passing, to distribute the ball with accuracy and timing; shooting, to score consistently from various ranges; rebounding, to recover missed shots; and defense, to contain and disrupt opponents. Equally important are footwork and conditioning, which underpin agility, endurance, and efficiency of movement during play structured, sport-specific skill training focuses on developing these essential abilities through targeted drills and game-like scenarios. For instance, dribbling drills such as figure-eight and ball-handling exercises enhance control and confidence under pressure. Shooting practice involving layups, jump shots, and free throws refines accuracy and consistency in scoring. Passing drills reinforce precision and decision-making, while rebounding exercises emphasize positioning and timing. Defensive training, including slides and close-outs, sharpens an athlete's ability to guard opponents effectively.

Footwork drills and conditioning routines further contribute to agility, stamina, and overall game readiness. Systematically integrating these elements, structured skill training programs aim to enhance game-specific performance variables. For school and college basketball players who are still in critical stages of technical and physical development, such programs not only elevate performance during competition but also build a strong foundation for long term athletic growth. Evidence from Indian research supports this perspective. (Vallimurugan *et al.*, 2022) [3] examined college women players and found that a combined strength and skill training program significantly improved dribbling, passing, and shooting performance compared to a control group. Similarly, (Senthil Kumaran *et al*., 2023) [1] reported that structured drills focusing on core basketball skills led to substantial gains in ball control, accuracy, and scoring consistency among school players.

Methodology

To achieve the purpose of the study, thirty (N=30) school basketball players were selected as subjects from Chavara Vidhya Bhavan Matriculation Higher Secondary School and Sri Ragavendra Matriculation Higher Secondary School, Coimbatore, Tamil Nadu. The subjects ages ranged from 14 to 17 years. The forty subjects were divided into two equal groups, each consisting of twenty (N = 15) players an Experimental Group, which underwent Specific Skill training, and a Control Group, whose members did not participate in any specific training beyond their routine activities. The Experimental Group participated in specific skill training four days per week (Monday, Tuesday, Thursday, and Friday) for a period of twelve weeks. Data collected from both groups before and after the training period were statistically analyzed for significance using a dependent t-test at the 0.05 level of significance.

Criterion Measures

It is evaluated skill performance variables that were chosen as the criterion measures for this study for testing.

Table 1: Criterion measures

S. No	Criterion measures	Test items	Unit of measurements
Skill Performance Variables			
1.	Dribbling	John Basketball Test	In Seconds
2.	Passing		In Points
3.	Shooting		In Counts
4.	Overall Playing ability	Judges Rating Scales	In Points

Table 2: Computation of the 't' ratio on skill performance variables of school basketball players in the experimental group

Experimental group						
		N	Mean	Std. Deviation	Std Error Mean	'T' Ratio
Dribbling (in seconds)	Pre test	15	20.13	1.46	0.47	4.37*
	Post test	15	22.20	2.14		
Passing (in points)	Pre test	15	27.86	1.64	0.15	11.31*
	Post test	15	29.60	1.99		
Shooting (in counts)	Pre test	15	27.07	1.71	0.14	12.44*
	Post test	15	28.87	1.81		
Overall Playing Ability (in points)	Pre test	15	5.60	0.63	0.15	11.31*
	Post test	15	7.33	0.90		

*Significant level 0.05 level (degree of freedom 2.14,1 and 14)

Table II reveals the computation of mean, standard deviation, and 't' t-ratio on selected skill performance variables, namely dribbling, passing, shooting and overall playing ability of the experimental group. The obtained 't' ratios on dribbling, passing, shooting and overall playing ability were 4.37,11.31,12.44 and 11.31 respectively. The required table value was 2.14 for the degrees of freedom 14 at the 0.05 level of significance. Since the obtained t values were greater than the table value, it was found statistically significant.

Table 3: Computation of the 't' ratio on selected skill performance variables of school basketball players in the control group

Control group						
		N	Mean	Std. Deviation	Std. Error Mean	'T' Ratio
Dribbling (in seconds)	Pre test	15	20.13	1.46	0.07	1.00
	Post test	15	20.20	1.47		
Passing (in points)	Pre test	15	27.73	1.83	0.74	0.09
	Post test	15	27.80	1.74		
Shooting (in counts)	Pre test	15	26.80	1.70	0.15	0.44
	Post test	15	26.87	1.81		
Overall Playing Ability (in points)	Pre test	15	5.47	0.52	0.09	1.47
	Post test	15	5.60	0.51		

*Significant level 0.05 level (degree of freedom 2.14,1 and 14)

Table II reveals the computation of mean, standard deviation, and 't' t-ratio on selected skill performance variables, namely dribbling, passing, shooting and overall playing ability of the experimental group.

The obtained 't' ratios on dribbling, passing, shooting and overall playing ability were 1.00, 0.09, 0.44, and 1.47 respectively. The required table value was 2.14 for the degrees of freedom 14 at the 0.05 level of significance. Since the obtained t values were greater than the table value, it was found statistically significant.

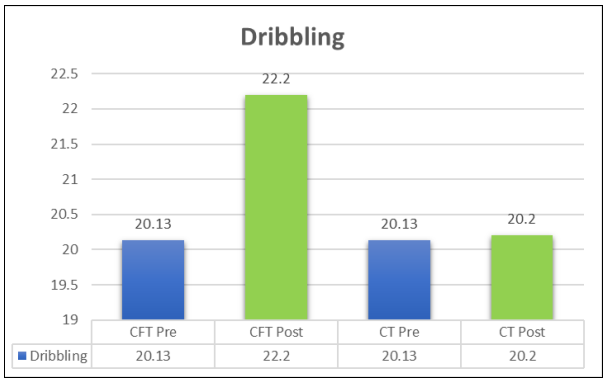

Fig 1: Bar diagram showing the mean value on skill performance variables of Dribbling among school basketball players in the experimental and control group

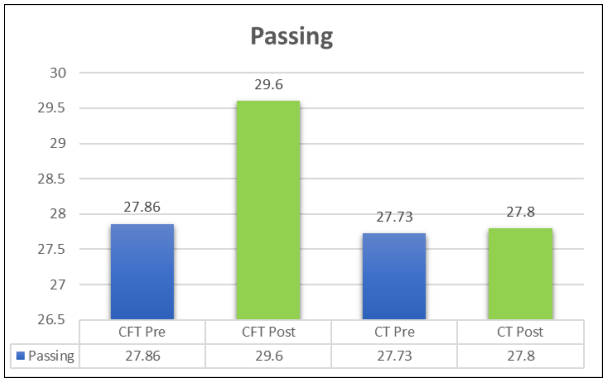

Fig 2: Bar diagram showing the mean value on skill performance variables of Passing among school basketball players in the experimental and control group

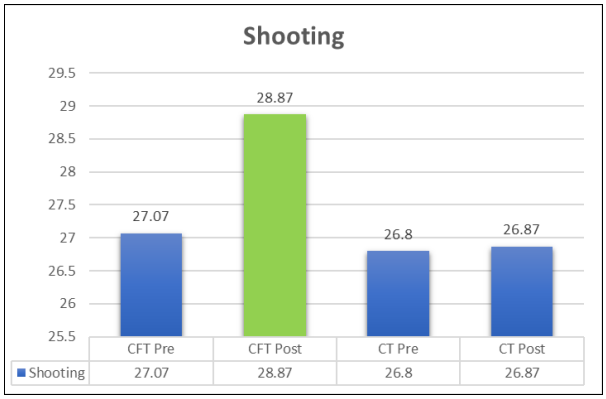

Fig 3: Bar diagram showing the mean value on skill performance variables of Shooting among school basketball players in the experimental and control group

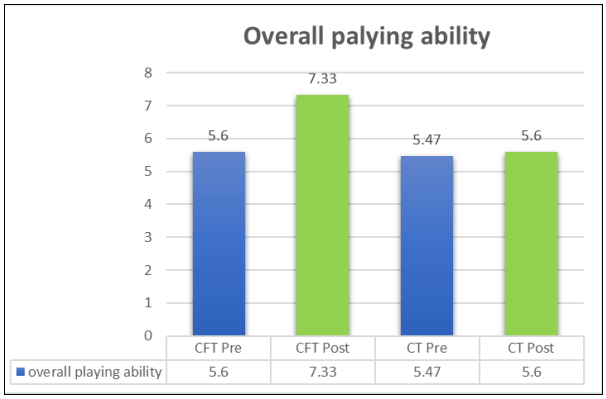

Fig 4: Bar diagram showing the mean value on skill performance variables of overall playing ability among school basketball players in the experimental and control group

Results

The findings observed on the effects of Specific Skill training on selected skill performance variables among school basketball players are as follows:

1. In the specific skill training group, the mean differences observed between pre-test and post-test for Passing, Shooting, Dribbling, and Overall playing ability were statistically significant.
2. In the control group, the mean differences observed between pre-test and post-test for Passing, Shooting, Dribbling, and Overall playing ability were not statistically significant.

Discussion on Findings

According to the present study, a 12-week Specific Skill Training (SST) program markedly improved school basketball players' dribbling, passing, shooting, and overall playing skills. In contrast, participants in the control group showed no significant changes in these variables. These results support and extend recent research on basketball and related skill development. Following the SST intervention, the experimental group's dribbling performance improved significantly, whereas the control group showed no change. The findings indicate that structured skill practice can substantially enhance performance metrics, including dribbling and field goal speed. This improvement aligns with previous studies for example, (S. Joicsy *et al.*, 2023) [5] noted that dribbling training positively impacts repeated sprint performance. Similarly, (Gunar *et al.*, 2025) [8] reported that integrating virtual reality workouts into structured basketball routines significantly improved dribbling ability in teenage players, while (Cao *et al.*, 2024) [7] demonstrated that functional training enhanced dribbling efficiency by refining motor control and coordination. Notably, in the current study, dribbling exhibited a smaller effect size than passing and shooting. This suggests that more complex and varied drills, such as agility-based or decision-making scenarios, may be necessary to maximize improvement. Ball-based training may also serve as an enjoyable alternative to traditional fitness exercises, provided it does not hinder jogging performance (Meckel, 2009) [6].

The experimental group's passing performance showed a highly significant improvement, indicating that systematic repetition of passing drills effectively enhances accuracy and execution. Similar findings have shown increased passing efficiency when players are frequently placed in game-like situations requiring rapid ball movement and agility. The current study supports these results, demonstrating that structured skill training strengthens passing mechanics and fosters consistency. Focused passing drills appear particularly effective for younger players who are still developing technical skills. Shooting performance in the experimental group also improved significantly. This is consistent with studies on balance-focused training, which show that stability and postural control positively influence shooting accuracy (Kamalakannan, 2023) [4].

The findings suggest that consistent, form-focused, and progressively challenging shooting practice can enhance performance, confidence, and biomechanical efficiency. Finally, the experimental group demonstrated notable improvement in overall game performance, as assessed by expert judges. This indicates that targeted skill training not only enhances individual technical abilities but also translates into meaningful improvements in game-related performance.

Conclusion

It was concluded that twelve weeks of Specific Skill Training significantly improved the dribbling, passing, shooting, and overall playing ability of school basketball players. Based on these findings, it is suggested that Specific Skill Training is an effective approach for achieving desirable improvements in the skill performance variables of school basketball players.

References

1. Senthil Kumaran S, Vallimurugan V. Enhancing skill performance variables among school level basketball players through specific drills - a pilot study. *EPRA Int J Multidiscip Res*. 2023;9(5).
2. Kumar KM, Suthakar S. An effective approach through strength, endurance and skill training program combinations on muscular strength and endurance and explosive power of male basketball players. *Int J Innov Res Dev*. 2016;5(2):105-7.
3. Vallimurugan V, Kumaran S. Effects of combined strength and skill training on selected performance variables among college women basketball players. *Indian J Appl Res*. 2022;12(5):30-3.
4. Kamalakannan PK, Desingurajan R. Effect of game specific skill training on selected physical variables among basketball players. *Int J Physiol Nutr Phys Educ*. 2023;8(1):5-7.
5. Joicsy S, Jayachitra M. Effects of specific skill practices on selected skill performance variables of adolescent female basketball players. *Int J Phys Educ Sports Health*. 2023;10(2):311-3.
6. Meckel Y. The influence of basketball dribbling on repeated sprints. 2009. [Unpublished or report; citation incomplete]
7. Cao J, Liu B, Wang L, Geok S. The effect of functional training on basketball players' physical fitness and sport performance: a systematic review and meta-analysis. *Front Physiol*. 2024;15:XX. doi:10.3389/fphys.2024.XXXXX
8. Gunar Y, Bavlı Ö. The effect of basketball exercises supported by virtual reality applications on the basketball skills of adolescent players. *BMC Sports Sci Med Rehabil*. 2025;17:37.
9. Riped-Online. The effect of balance training on improving shooting skills and the basketball debate among students of the Faculty of Physical Education. *Int J Phys Educ*. 2024;9(2):45-53.
10. Rajesh S, Veeramani S. Effects of specific volleyball training on selected skill performance variables among women volleyball players. *EPRA Int J Multidiscip Res*. 2022;8(1):1-4.
11. Vencurik T, Nykodym J, Bokuvka D, Rupčić T, Knjaz D, Dukarić V, *et al*. Determinants of dribbling and passing skills in competitive games of women's basketball. *Int J Environ Res Public Health*. 2021;18(3):1165.
12. Aschendorf PF, Zinner C, Delextrat A, Engelmeyer E, Mester J. Effects of basketball-specific high-intensity interval training on aerobic performance and physical capacities in youth female basketball players. *Phys Sportsmed*. 2019;47(1):65-70.