Original Article
ISSN (Online): 2582-7472

ShodhKosh: Journal of Visual and Performing Arts
April 2024 5(4), 1414–1419

EFFECTS OF SPECIFIC TRAINING PROGRAMME WITH AND WITHOUT VIDEO FEEDBACK ON SPEED ENDURANCE PEAK EXPIRATORY FLOW AND DRIBBLING AMONG SCHOOL LEVEL FOOTBALL PLAYERS

Pavithran S. [1], Dr. M. Srinivasan [2]

[1] Ph.D Scholar, Sri Ramakrishna Mission Vidyalaya Maruthi College of Physical Education, Coimbatore, Tamil Nadu, India
[2] Assistant Professor, Sri Ramakrishna Mission Vidyalaya Maruthi College of Physical Education, Coimbatore Tamil Nadu, India

ABSTRACT

The major goal of this research was to investigate how a specific training program with and without video feedback influenced selected speed endurance, peak expiratory flow, and dribbling variables among school-level football players. To do this, we picked sixty participants at random from Ranipet District schools. The participants' ages varied from 15 to 17. The participants were divided into three equal groups of twenty each. Group I (STPWVFG) participated in a specific training program with video feedback five days a week for twelve weeks, Group II (STPG) participated in a specific training program five days a week till twelve and Group III served as the control group. The criterion variables for speed endurance, peak expiratory flow, and dribbling were assessed both before and after the following training. It was determined that the twelve weeks of the specific training program with video and without video feedback of school-level football players had considerably improved the following variables: speed endurance, peak expiratory flow and dribbling in the experimental groups. There was insignificant improvement in the control group.

Keywords: Specific Training Program, Video Feedback, Speed Endurance, Peak Expiratory Flow and Dribbling

Corresponding Author

Pavithran.S, pavithran.pet@gmail.com

DOI
10.29121/shodhkosh.v5.i4.2024.4412

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

1. INTRODUCTION

Football training is crucial for improving players' abilities, fitness, and tactical understanding of the game. It usually focusses on important skills including ball handling, passing, shooting, dribbling, defensive positioning, and general fitness. Training sessions also focus on collaboration, strategy, and mental components of the game, such as decision-making and psychological resilience. The training environment contains a range of drills, small-sided games, and match simulations to help individuals and teams improve. (Gabbett 2016). In football (soccer), dribbling is the talent of controlling and manoeuvring the ball past opponents utilising a variety of tactics such as changing direction, pace, and ball control. Effective dribbling is vital for generating space, breaking defensive lines, and moving the ball forward. (Gheorghe & Popescu 2014). VBT enables athletes to thoroughly evaluate their methods, which aids in self-correction and progress. For example, a study of beginner basketball players found that a training program including video modelling resulted in considerable gains in passing performance and offensive play. Participants in video-based sessions

demonstrated superior technical execution than those who did not use such tools. (Tannoubi et al., 2023). Peak Expiratory Flow (PEF) is the greatest rate at which a person may expel air from their lungs, as measured using a peak flow meter. It is an important metric in determining respiratory function, especially in those who have asthma or other chronic respiratory disorders. PEF is used to assess the severity of asthma, measure medication efficacy, and detect early warning indications of an asthma attack or deteriorating respiratory function. (GINA 2023).

For football conditioning, programming is influenced by several factors, including the physiological demands of the sport. A well-rounded football training program should address endurance, strength, power, agility, and flexibility. Periodized training program, which combines strength and conditioning, is crucial to improving football performance and minimizing the risk of injury (Bompa & Haff, 2009). The importance of sport-specific conditioning drills, particularly small-sided games, for enhancing technical skills under competitive conditions (Stolen, et al., 2005).

2. METHODOLOGY

SELECTION OF SUBJECTS

This study attempts to find 60 school-level football players in Ranipet District, Tamil Nadu, India. The subjects were selected at random. Their ages varied between fifteen to seventeen years.

Table-I
Selection of Variables

S.no	Variables	Test Items	Units of Measurement
1.	Speed Endurance	150 metres run	In seconds
2.	Peak Expiratory Flow	Digital spirometer	In litres
3.	Dribbling	Morgan and Chirstian Soccer Test,1979	In Minutes

3. EXPERIMENTAL DESIGN

The study applied an actual random group design with a pre-test and a post-test. Sixty participants were chosen from schools around Ranipet District, Tamil Nadu. The 60 participants were divided into three equal groups of 20 each. The experimental and control groups were separated evenly. The experimental group was given a specific training program with video feedback (STPWVFG) and a specific training program group (STPG), whereas the control group (CG) got no training. The speed, peak expiratory flow, and dribbling variables were determined during the pretest. After twelve weeks of training, three groups took the post-test.

4. STATISTICAL TECHNIQUES

The ANCOVA test was used to determine if there was a significant difference between the pre-test, post-test, and adjusted post-test means in the three groups. The data were analysed on a computer with the SPSS statistics software, and the hypothesis was evaluated at the 0.05 significance level.

5. RESULT OF THE STUDY

Table-II
Computation of F-Ratio between the Pre-Test, Post-Test and Adjusted Post-Test Means on Speed Endurance of Experimental Groups and Control Group

	STPWVFG	STPG	CG	Sources of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	21.23	22.20	22.01	BG	10.67	2	5.34	1.43
				WG	211.97	57	3.73	
Post-Test Mean	20.49	21.07	22.35	BG	37.23	2	18.61	6.00*
				WG	176.84	57	3.1	
Adjusted Post-Test Means	20.97	20.72	22.17	BG	24.08	2	12.04	46.44*
				WG	14.52	56	0.26	

(*Significance level of 0.05, Table value of 3.16 with df 2,57 & Table value of 4.01 with df 1,56)

Table II indicates that the pre-test means of speed endurance for the specific training programme with video feedback group (STPWVFG), specific training programme group (STPG), and control groups were 21.23, 22.20 and 22.01, respectively. The pretest's attained F-ratio was 1.43, whereas the table's F-ratio was 3.16. Hence, for degrees of freedom 2 and 57, the pre-test means that the F-ratio was insignificant at the 0.05 significance level. The specific training programme with video feedback group (STPWVFG), specific training programme group (STPG), and the control group were post-test means of Speed Endurance was 20.49, 21.07 and 22.35 respectively. The acquired F-ratio for the post-test was 6.00*, whereas the table F-ratio was 3.16. Therefore, the post-test mean F-ratio for degrees of freedom 2 and 57 was statistically significant at the significance level of 0.05. The specific training programme with video feedback group (STPWVFG), specific training programme group (STPG), and the control group had adjusted post-test means of speed endurance was 20.97, 20.72 and 22.17 respectively. The table F-ratio was 4.01, but the obtained F-ratio for the adjusted post-test means was 46.44. Hence, for degrees of freedom 2 and 56, the adjusted post-test means the F-ratio was statistically significant at the significance level of 0.05.

Figure-1

Bar Diagram Showing The Pre-Test Post-Test And Adjusted Post-Test Mean Value Of Experimental Groups And Control On Speed Endurance

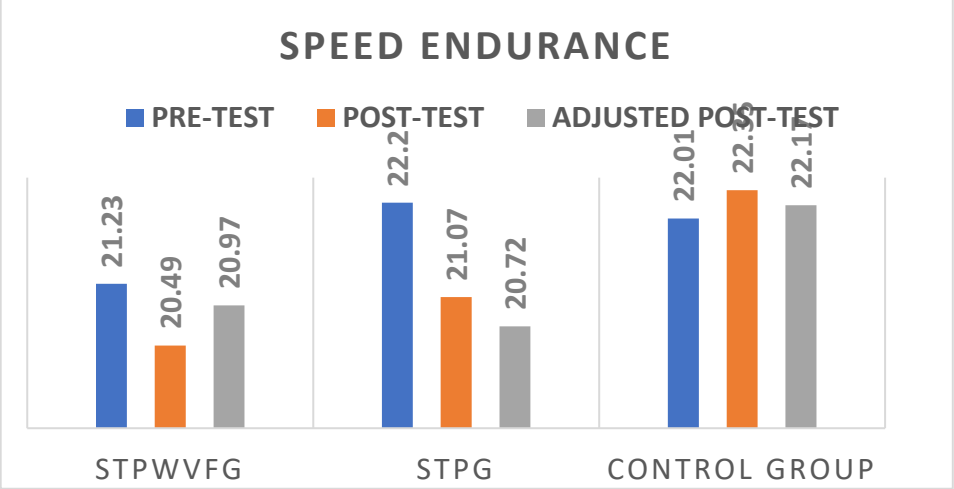


Table – III

Computation of F-Ratio between the Pre-Test, Post-Test and Adjusted Post-Test Means on Peak Expiratory Flow of Experimental Groups and Control Group

	STPWVFG	STPG	CG	Sources of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	4.52	4.39	4.30	BG	0.37	2	0.19	2.78
				WG	3.87	57	0.07	
Post-Test Mean	4.96	4.81	4.31	BG	4.24	2	2.12	27.85*
				WG	4.34	57	0.07	
Adjusted Post-Test Means	4.86	4.83	4.42	BG	2.24	2	1.12	120.03*
				WG	0.56	56	0.01	

(*Significance level of 0.05, Table value of 3.16 with df 2,57 & Table value of 4.01 with df 1,56)

Table III indicates that the pre-test means of peak expiratory flow for the specific training programme with video feedback group (STPWVFG), specific training programme group (STPG), and control groups were 4.52, 4.39 and 4.30, respectively. The pretest's attained F-ratio was 2.78, whereas the table's F-ratio was 3.16. Hence, for degrees of freedom 2 and 57, the pre-test means that the F-ratio was insignificant at the 0.05 significance level. The specific training programme with video feedback group (STPWVFG), specific training programme group (STPG), and the control group were post-test means of peak expiratory flow of 4.96, 4.81 and 4.31 respectively. The acquired F-ratio for the post-test was 27.85*, whereas the table F-ratio was 3.16. Therefore, the post-test mean F-ratio for degrees of freedom 2 and 57 was statistically significant at the significance level of 0.05. The specific training programme with video feedback group (STPWVFG), specific training programme group (STPG), and the control group had adjusted post-test means of peak expiratory flow 4.86, 4.83 and 4.42 respectively. The table F-ratio was 4.01but the obtained F-ratio for the adjusted post-

test means was 120.03. Hence, for degrees of freedom 2 and 56, the adjusted post-test means the F-ratio was statistically significant at the significance level of 0.05.

Figure-2
Bar diagram showing the pre-test post-test and adjusted post-test mean value of experimental groups and control on peak expiratory flow

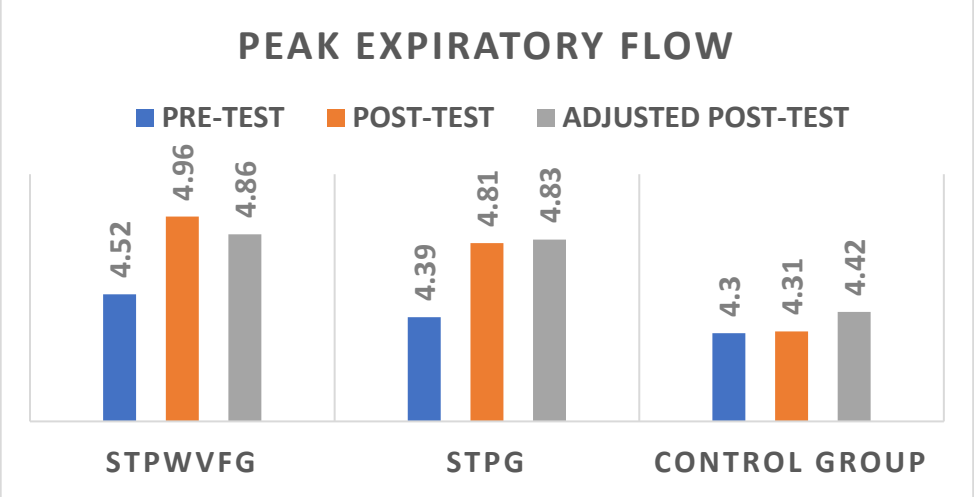


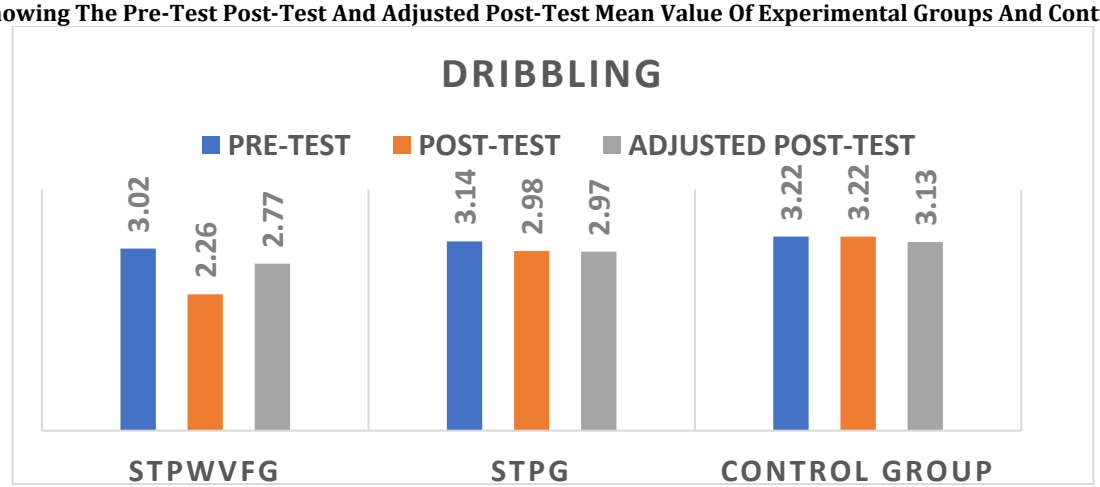
Table – IV
Computation of F-Ratio between the Pre-Test, Post-Test and Adjusted Post-Test Means on Dribbling of Experimental Groups and Control Group

	STPWVFG	STPG	CG	Sources of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	3.02	3.14	3.22	BG	0.40	2	0.20	1.34
				WG	8.59	57	0.15	
Post-Test Mean	2.26	2.98	3.22	BG	3.03	2	1.57	9.24*
				WG	9.37	57	0.16	
Adjusted Post-Test Means	2.77	2.97	3.13	BG	1.21	2	0.60	26.36*
				WG	1.29	56	0.02	

(*Significance level of 0.05, Table value of 3.16 with df 2,57 & Table value of 4.01 with df 1,56)

Table IV indicates that the pre-test means for the specific training programme with video feedback group (STPWVFG), specific training programme group (STPG), and control group of dribbling were 3.02, 3.14 and 3.22 respectively. The pretest's attained F-ratio was 1.34 whereas the table's F-ratio was 3.16. Hence, for degrees of freedom 2 and 57, the pre-test means that the F-ratio was insignificant at the 0.05 significance level. The specific training programme with video feedback group (STPWVFG), specific training programme group (STPG), and the control group of dribbling were post-test means of 2.26, 2.98 and 3.22 respectively. The acquired F-ratio for the post-test was 9.24*, whereas the table F-ratio was 3.16. Therefore, the post-test mean F-ratio for degrees of freedom 2 and 57 was statistically significant at the significance level of 0.05. The specific training programme group with video feedback group (STPWVFG), specific training programme group (STPG), and the control group had adjusted post-test means of dribbling were 2.77, 2.97 and 3.13 respectively. The table F-ratio was 4.01, but the obtained F-ratio for the adjusted post-test means was 26.36. Hence, for degrees of freedom 2 and 56, the adjusted post-test means the F-ratio was statistically significant at the significance level of 0.05.

Figure-3
Bar Diagram Showing The Pre-Test Post-Test And Adjusted Post-Test Mean Value Of Experimental Groups And Control On Dribbling



6. DISCUSSION OF FINDINGS

The study's findings indicate that a specific training program with and without video feedback significantly impacted selected speed endurance, peak expiratory flow and dribbling variables among school-level football players. After twelve weeks of training, specifically improved on speed endurance, peak expiratory flow and dribbling variables. The findings support the hypothesis that a specific training program with video feedback and a specific training programme would increase speed endurance, peak expiratory flow and dribbling variables, as reported by Ramya et al., (2024), Varley et al., (2023), Yeole et al., (2023), Vander et al., (2023), Kuswoyo & Lahinda (2020) and Asaad et al., (2024).

7. CONCLUSION

It was determined that the twelve weeks of the specific training program with video and without video feedback of school-level football players had considerably improved the following variables: speed endurance, peak expiratory flow and dribbling in the experimental groups. There was insignificant improvement in the control group.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

REFERENCE

Asaad, Hussein & Ahmed, Mazin. (2024). The activity of an educational field by means of assisting in the development the speed movement and shooting skill of football for youth. Doi: 10.13140/RG.2.2.26896.83202

Bompa, T. O., & Haff, G. G. (2009). *Periodization: Theory and methodology of training*. Human Kinetics.

Gabbett, T. J. (2016). The training-athletic performance relationship in football players. Journal of Strength and Conditioning Research, 30(8), 2214-2224. https://doi.org/10.1519/JSC.0000000000001374

Gheorghe, A., & Popescu, A. (2014). Football Training: Techniques and Tactics. Sports Science Journal.

Global Initiative for Asthma (GINA). (2023). Global Strategy for Asthma Management and Prevention. World Health Organization (WHO). https://ginasthma.org

Groom, R., Cushion, C., & Nelson, L. (2011). "The delivery of video-based performance analysis by England youth soccer coaches: Towards a grounded theory." Journal of Applied Sport Psychology, 23(1), 16-32.

KI Jabakumar, MS Kumar, R Kalidasan, Influence of e-content based coaching on selected fundamental skills in field hockey, Recent Research in Science and Technology, Vol 3, No.1, 2010, 59-62.

Kumar, MS. Impact of sport vision training for enhancing selected visual skills and performance factors of novice hockey players, Journal of Movement Education and Exercises Sciences, Vol 1, No. 1, 2011, 1-5.

Kuswoyo, D. D., & Lahinda, J. (2020). The effects of high-intensity interval training (HIIT) in improving VO2 max football student activity unit, *University of Musamus. Enfermeria Clinica, 30*, 507-511.

Ramya, S & Vadivel, Gopinath. (2024). Effect of traditional training and saq training on selected skill performance variables of football players. doi:10.13140/RG.2.2.11078.08001

Stolen, T., Chamari, K., Castagna, C., & Wisloff, U. (2005). *Physiological aspects of soccer: An update*. Sports Medicine, 35(6), 501-536.

Suresh Kumar M.& Needhi raja A. & Ivin Jabakumar, K. (2010). E-content based learning in physical education -with special reference to hockey. Conference proceedings, Bharathidasan University, 15-18.

Tannoubi, A., Ouergui, I., Srem-Sai, M., Hagan, J. E., Quansah, F., & Azaiez, F. (2023). Effectiveness of Video Modeling in Improving Technical Skills in Young Novice Basketball Players: A Quasi-Experimental Study. *Children (Basel, Switzerland)*, *10*(4), 687.

Van der Meer, B. R., van den Hoven, M. A. C., van der Kamp, J., & Savelsbergh, G. J. P. (2023). Self-Controlled Video Feedback Facilitates the Learning of Tactical Skills in Tennis. *Research Quarterly for Exercise and Sport,* 1–9.

Varley I, Sale C, Greeves JP, Morris JG, Sunderland C, Saward C. (2023). Relationship between Football-Specific Training Characteristics and Tibial Bone Adaptation in Male Academy Football Players. *Sports Basel,19*;11(4):86..

Yeole UL, Praneetha N, Panigrahy C. (2023). Effect of Position Specific Physiotherapy Training on performance of Indian football players: A Randomized Control Trial. Research in Sports Medicine.31(5):619-627.