Effect of Imagery Perspectives and Video Modelling on Performance Skills of Junior Soccer Players

[a] Sanjay E.S., [b] Dhinu M.R

[a] Ph.D Scholar, Dept. Of Physical Education, Sree Sankaracharaya University of Sanskrit, Kalady, Kerala India

[b] Deputy Director, Sree Sankaracharya University of Sanskrit, Kalady, Kerala India

Abstract

The purpose of the study was to find out the effect of imagery and video modelling on performance skill of soccer players. Forty (N- 40) soccer players within the age group of 15-18 were randomly selected from Govt. Higher Secondary School Erumapetty, Thrissur, Kerala as subjects of the study. The subjects were randomly assigned in to three experimental and one control group; Internal imagery group, External imagery group, Video modeling imagery group and Control group. The selected performance variables were Dribbling, Passing and Shooting. Experimetal groups underwent 12 weeks of training programme. Subjects of each group underwent training in the selected variables for every four weeks along with respective training of the concerned group following the Latin square repeated measure design. The selected variables were assessed before and after four weeks training programme. The result of study showed that there was significant improvement in dribbling and shooting skills among the three groups. The result of the study showed there was no significant difference in passing among three groups. The results are discussed in detail

KEYWORDS : Imagery, Video modeling, Internal Imagery, External Imagery

I.INTRODUCTION

Imagination is terrifically powerful employed by sportspersons to enhance performance. By mentally rehearsing a routine before a major competition, athletes can prepare themselves to achieve their optimal performance when it counts most. By imagining playing at their peak, athletes can build their confidence for a match. Imagery can also help a performer through a tough injury layoff by shifting attention away from the injury onto the mental rehearsal of sport skills. Knowing that research supports the value of imagery for maintaining skill level when physical practice is not possible can help motivate an athlete during recovery. When physical practice is not possible, such as during travel, imagery can provide athletes with a way to practice. It allows them to review previous strokes or movements so they can correct errors. It is difficult to think of anything else that has as much potential to enhance or destroy not only performance outcomes but the entire experience of sport.

Not all imagery has a positive impact, however. In some cases, imagery can stop fully recovered athletes from reproducing their preinjury form because they repeatedly imagine themselves breaking down at the point of maximum effort. What we imagine can make us anxious or confident, determine our focus durin3 play, motivate us to extra effort, or convince us that all is lost.

But athletes who bring the power of their imaginations under control can use it for personal improvement. Research indicates that elite athletes, their coaches, and sport psychologists employ imagery more than any other performance-enhancement technique (De Francesco and Burke 1997; Gould, Tammen, Murphy, and May 1989; Hall and Rodgers 1989). It also shows that imagery is a highly complex process that we must understand well if we are to optimize its benefits (Hall 2001)

Murphy (1985) found that when experienced golfers used positive imagery of putting (they imagined their shots dropping into the hole), they gave performances superior to those of golfers who did not image at all. Golfers in their study were instructed to use negative imagery (to imagine their putts missing the hole) produced performances inferior to the no-imagery golfers. Hence the study was conducted

II. METHODS

The subjects of the study were 40 Soccer players aged 15 to 18 from Govt. Higher Secondary School Erumapetty, Thrissur. They were given general imagery training one week to orient and prepare them for the specific imagery training. After they were tested for their imagery ability by the SIAM(Spots Imagery Ability Measure Questionnaire by Morris and Watt). According to the imagery ability, 40 subjects divided in to four groups; Internal imagery group, External imagery group, Video modelling imagery and Control group. They were selected as samples for the actual 12 weeks experimental training programme. Imagery training was given for three skills namely Dribbling, Passing and Shooting following the Latin square repeated measure design. Respective imagery trainings; internal imagery, external imagery and video modelling imagery on each of the selected skills were given to the group for a period of four weeks. After every four weeks, the subjects were moved to the next training group to ensure each group recieved different imagery trainings on the selected skills. The control group did not receive any training.

III. RESULTS OF THE STUDY

The results of the study are discussed below

Dribbling

The mean and standard deviation values of dribbling of Internal Imagery (II), External Imagery (EI), Video modelling Imagery (VI) and control group (CG) are presented in table 1.

Table 1

Descriptive Statistics of Dribbling among groups

Group	test	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
Internal Imagery	Pre	10.00	9.00	32.00	41.00	361.00	**36.10**	3.28
	Post	10.00	5.00	28.00	33.00	306.00	**30.60**	1.78
External Imagery	Pre	10.00	10.00	32.00	42.00	379.00	**37.90**	3.28
	Post	10.00	7.00	32.00	39.00	347.00	**34.70**	2.31
Video Modeling	Pre	10.00	5.00	32.00	37.00	341.00	**34.10**	1.37
	Post	10.00	8.00	30.00	38.00	332.00	**33.20**	3.01
Control	Pre	10.00	10.00	33.00	43.00	382.00	**38.20**	3.08
	Post	10.00	10.00	32.00	42.00	379.00	**37.90**	3.28

Table 1 shows that the pre test mean and standard deviation of Internal imagery, External imagery, Video modeling imagery and Control Group were 36.10±3.28, 37.90±3.28, 34.10±1.37 and 38.20±3.08 respectively.

The post test mean and standard deviation of Internal imagery, External imagery, Video modeling imagery and Control group were 30.60±1.78, 34.70±2.31, 33.20±3.01 and 37.90±3.28 respectively.

In order to find out the effect of imagery training analysis of covariance was applied and the results are presented in table 2

Table 2

Analysis of Co-variance on Dribbling of experimental and control groups

Source	Sum of Squares	df	Mean Square	F Ratio	Sig.
Between	197.74	3	65.92	11.18*	0.00
Within	206.32	35	5.90		

$F_{.05}(2.87)$

Table 2 reveals that the obtained F ratio value of 11.18 was significant at 0.05 level of confidence for degrees of freedom 3 and 35.

In order to determine which of the paired means have significant difference, Scheffe's test was computed and the results are presented in table 3.

Table 3

Adjusted mean difference scores of experimental and control groups

Internal	External	Video	Control	MD	Sig.
30.79	34.16			3.37*	0.01
30.79		34.20		3.41*	0.01
30.79			37.24	6.45*	0.00
	34.16	34.20		0.04	0.97
	34.16		37.24	3.08*	0.01
		34.20	37.24	3.04*	0.02

*Significant at 0.05 level of confidence

Table 3 shows that the adjusted post test paired mean difference between Internal Imagery and External Imagery group was 3.37 which is significant at 0.05 level of confidence. The adjusted post test paired means difference between Internal imagery and Video modelling group was 3.41 which is significant at 0.05 level of confidence. The adjusted post test paired mean difference between Internal imagery and Control group was 6.45 and it was significant at 0.05 level. The adjusted post test paired mean difference between External imagery and Video modelling imagery group was 0.04 and it was not significant at 0.05 level of confidence. The adjusted post test mean difference between External imagery and Control group was 3.08 which is significant at 0.05 level. The adjusted post test paired mean difference between Video modelling and Control group was 3.04 which is significant 0.05 level.

Passing

Table 4

Descriptive Statistics of Passing among groups

Group	test	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
Internal Imagery	Pre	10.00	4.00	3.00	7.00	53.00	**5.30**	1.34
	Post	10.00	3.00	6.00	9.00	78.00	**7.80**	1.03
External Imagery	Pre	10.00	4.00	4.00	8.00	64.00	**6.40**	1.26
	Post	10.00	5.00	5.00	10.00	76.00	**7.60**	1.84
Video Modeling	Pre	10.00	5.00	3.00	8.00	53.00	**5.30**	1.49
	Post	10.00	5.00	5.00	10.00	73.00	**7.30**	1.42
Control	Pre	10.00	4.00	4.00	8.00	60.00	**6.00**	1.25
	Post	10.00	5.00	4.00	9.00	61.00	**6.10**	1.60

Table 4 shows that the pre test mean and standard deviation of Internal imagery, External imagery, Video modelling and Control group were 5.30±1.34, 6.40±1.26, 5.30±1.49 and 6.00±1.25 respectively.

The post test mean and standard deviation of Internal imagery, External imagery, Video modelling imagery and Control group were 7.80±1.03, 7.60±1.84, 7.30±1.42 and 6.10±1.60 respectively.

In order to find out the effect of imagery training, analysis of covariance was applied and the results are presented in table 5

Table 5

Analysis of Co-variance on passing of experimental and control groups

Source	Sum of Squares	df	Mean Square	F Ratio	Sig.
Between	18.92	3	6.31	2.84	0.052
Within	1016.63	38	26.75		

$F_{.05}(2.87)$

Table 5 reveals that the obtained F ratio value of 2.84 is not significant at 0.05 level of confidence for degrees of freedom 3 and 35.

Shooting

Table 6

Descriptive Statistics of Shooting among groups

Group	test	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
Internal Imagery	Pre	10.00	30.00	30.00	60.00	430.00	**43.00**	9.49
	Post	10.00	50.00	60.00	110.00	842.00	**84.20**	13.01
External Imagery	Pre	10.00	50.00	30.00	80.00	524.00	**52.40**	15.77
	Post	10.00	40.00	40.00	80.00	600.00	**60.00**	14.91
Video Modeling	Pre	10.00	30.00	30.00	60.00	420.00	**42.00**	9.19
	Post	10.00	40.00	40.00	80.00	570.00	**57.00**	12.52
Control	Pre	10.00	50.00	30.00	80.00	500.00	**50.00**	16.33
	Post	10.00	30.00	40.00	70.00	520.00	**52.00**	12.29

Table 6 shows that the pre test mean and standard deviation of Internal imagery, External imagery, Video modelling imagery and Control group were 43.00±9.49, 52.40±15.77, 42.00±9.19 and 50.00±16.33 respectively.

The post test mean and standard deviation of Internal imagery, External imagery, Video modelling imagery and Control group were 84.20±13.01, 60.00±14.91, 57.00±12.52 and 52.00±12.29 respectively.

In order to find out the effect of training on shooting, analysis of covariance was applied and the results are presented in table 7

Table 7

Analysis of Co-variance on Shooting among groups

Source	Sum of Squares	Df	Mean Square	F Ratio	Sig.
Between	7633.45	3	2544.48	27.49*	0.00
Within	3240.11	35	92.57		

$F_{.05}(2.87)$

Table 7 reveals that the obtained F ratio value of 27.49 was significant at 0.05 level of confidence for degrees of freedom 3 and 35.

In order to determine which of the paired means have significant difference, Scheffe's test was computed and the results are presented in table 8.

Table 8

Adjusted mean difference scores of experimental and control group

Internal	External	Video	Control	MD	Sig.
86.90	56.11			30.79*	0.00
86.90		60.40		26.50*	0.00
86.90			49.79	37.11*	0.00
	56.11	60.40		4.29	0.35
	56.11		49.79	6.32	0.15
		60.40	49.79	10.61*	0.02

*Significant at .05 level of confidence

Table 8 shows that the adjusted post test paired mean difference between Internal Imagery and External Imagery group was 30.79 which is significant 0.05 level of confidence. The adjusted post test paired mean difference between Internal imagery and Video modelling imagery group was 26.50 which is significant at 0.05 level of confidence. The adjusted post test paired means difference between Internal imagery and Control group was 37.11and it is significant at 0.05 level. The adjusted post test paired mean difference between External imagery and Video modelling group was 4.29 and which was not significant at 0.05 level of confidence. The adjusted post test mean difference External imagery and Control group was 6.32 which is also not significant at 0.05 level. The adjusted post test paired mean difference between Video modelling and Control group was 10.61 which is significant 0.05 level.

IV.DISCUSSION ON FINDINGS

Dribbling

The result of the study indicates that imagery training resulted in the improvement of dribbling skill of the soccer players. It also shows that dribbling skill improved among internal imagery, external imagery, video modelling imagery when compared to the control group. However the improvement in dribbling skill was high in internal imagery group as compared to the external imagery and video modelling imagery. The least improvement was noted in video modelling group. This findings of the study are in conformity with the study conducted by Blair et.al (1993).

Passing

The result of the study indicates that there was no significant difference in passing skills of the experimental groups as a result of training. It may be noted that the experimental groups have performed better in passing even though it was not at a significant level.

Shooting

The result of the study indicates that shooting skills of the experimental groups improved significantly. It also shows that internal imagery and video modelling groups shooting skills improved significantly as compared to control group. How ever there was no significant difference in shooting skill of external imagery group when compared to control group. This findings of the study are in conformity with the study conducted by Blair et.al (1993).

Conclusions

The following conclusions are drawn based on the results of the study.

1. The improvement in dribbling skill was high in internal imagery group as compared to the external imagery and video modelling imagery. The least improvement was noted in video modelling group.
2. The three experimental groups have performed better in passing even though it was not at a significant level.

3. The internal imagery and video modelling groups shooting skills improved significantly. How ever there was no significant difference in shooting skill of external imagery group.

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