

**A COMPARATIVE EFFECT OF SOCCER TRAINING IN SMALL  
PLAYFIELD AND REGULAR OFFICIAL SIZE PLAYFIELD IN THE  
SELECTED SOCCER SKILL PERFORMANCE**

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**Abstract**

*The purpose of the present study was to determine the effect of training in small size playfield and regular official size playfield in the selected soccer skill performance of soccer players. Sixty six districts level male soccer players (age 17-25) of Assam were divided into three unequated group in equal number. Two experimental groups, Group-A and Group-B had gone through the 12 weeks training programme consist of general conditioning, techno-tactical (special conditioning) training and game practice progressively for two and half hour par day, five days per week in Small Playfield (SP) and Regular Official Size Playfield (ROSP) respectively and Control Group-C did not participate to any special training programme. The selected Soccer skill performances were measured before and immediately after completion of the training programme. To find out the pre and post training performance and significance differences among the groups the collected data were analyzed statistically through t-test, Analysis of Variance (ANOVA) and Analysis of Co-variance (ANCOVA). The level of significance was observed at 0.05 level of confidence. The finding shows that the selected soccer skill performance i.e. Dribbling ( $t=3.825>2.08$ ); Kicking for Accuracy ( $t=6.06>2.08$ ), Juggling ( $t=2.103 > 2.08$ ), and Running with the Ball ( $t=2.61 > 2.08$ ) of Group A (SP) were improved significantly. In case of Group- B (ROSP) there were significant improvement of Kicking for Accuracy ( $t=6.06>2.08$ ), Kicking for distance ( $t=2.58 > 2.08$ ), and Running with the Ball ( $t=2.61 > 2.08$ ) show significant improvement. There also significant differences were found between pre test and post test means of composite scores of selected soccer skill performance in both the experimental group A and B ( $t= 4.746$  and  $5.145 > 2.08$ ). Insignificant difference was found in the pre-test means of three selected groups as the obtained F-value of 0.072 is less than that of tabulated F-value of 3.144 for the d.f. of 2/63 at 0.05 level and significant difference was found in the post-test means and adjusted means of three selected groups as the F-Value 12.70 and 62.59 are quite higher than the tabulated F-value of 3.144 and 3.146 respectively at 0.05 level of confidence.*

Key Words: Soccer, Small Playfield, Regular Official Size Playfield, Skill

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## INTRODUCTION

Many people participate in sports and games for happiness, pleasure health and fitness. Increased participation in sports has resulted in competition, which has become an important element of modern life.

Soccer, Fuss ball, Football, Calcion whatever this game with round leather ball may be called in various languages; it now is the game with widest international followings. It is sessions one of the most ancient and popular sport in the world almost all the nation plays for enjoyment and competition and today it is more popular than before. It is considered as the most exciting game in the world in relation to other sports. It is known as the ninety minutes war among the competitors struggling for the title.

The game football is a very vigorous and strenuous one. Modern soccer is a very fast by its nature and it is skilled game for the well conditioned sportsman, who most possesses strength, speed, agility, balance, flexibility, endurance, co-ordination and many other undefined qualities such as dribbling, kicking, for passing and shooting at the goal.

Soccer players during the game gone to perform various skills according to their position varying their intensity right from the throwing, passing, stopping, kicking, dribbling etc. These movements have to be controlled throughout the duration of the match. This affects the players as to this degree of physical stress and physical fitness.

## METHODOLOGY

For the present study sixty six (66) district level male soccer players (age 17-25) from four district of Assam, India were selected randomly. The subjects were randomly divided into three unequated groups in equal number. The two experimental treatments were also assigned to the two groups randomly and the third group was served as control group. Each group was consisted of twenty two soccer players. The experimental groups were participated in two different training programs. Group A was given training in small playfield (SP) and Group B in Regular Official size playfield (ROSP). The training was administered for 12 weeks, 5 days a week in a progressive manner. The timing of the training was from 3 p.m. to 5.30 p.m. The pre test and post test data pertaining to this study were collected before and immediate after completion of training program. The tests were conducted only during the evening session.

The data were collected on the selected Soccer Skill Performance by administering the selected test items from “L. Heath and E.G. Rodgers, and SAI soccer skill Test” i.e. Dribbling, Kicking for Accuracy, Kicking for Distance, Juggling and Running with the ball and scores were recorded in second, meter, number and second respectively.

The collected data i.e. the raw-scores of each test were converted into t-scores and then all the t-scores of all the selected Soccer skill performances of each group were converted into composite scores. Then the data were analyzed by employing the studentized t-test to determine the significant difference between the pre-test and post-test means of all the three groups viz. Experimental Group- A training in small playfield, Experimental Group B training in regular playfield and Control Group C separately. With these composite scores Analysis of Variance and Covariance Statistical methods also employed to find out the difference among the groups as the groups were selected randomly and not equated. While F-test was found to be significant to determine the paired mean difference LSD Post hoc test was employed. For testing hypothesis the level of significance was set at 0.05, which was considered to be adequate for the purpose of the study.

## RESULTS AND DISCUSSION:

**TABLE - 1**  
**SUMMARY OF MEAN, STANDARD DEVIATION AND T-RATIO OF SOCCER SKILL PERFORMANCE OF EXPERIMENTAL GROUP-A**

<i>Parameter</i>	<i>Test</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Mean Difference</i>	<i>Standard Error</i>	<i>t-ratio</i>
Dribbling	Pre	12.65	1.14	1.28	0.334	3.825*
	Post	11.37	1.08			
Kicking for Accuracy	Pre	5.23	0.97	1.54	0.254	6.06*
	Post	6.77	0.69			
Kicking for Distance	Pre	47.59	5.53	1.96	1.58	1.24
	Post	49.55	4.92			
Juggling	Pre	68.59	33.66	21.45	10.095	2.103*
	Post	89.95	33.97			
Running with the Ball	Pre	5.46	0.45	0.35	0.134	2.61*
	Post	5.11	0.44			

\* Significant at 0.05 level

tabulated  $t_{.05(21)}=2.080$

It is evident from the above table that among the soccer skill performances Dribbling ( $t=3.825$ ), Kicking for Accuracy ( $t=6.06$ ), Juggling ( $t=2.103$ ) and Running with the ball ( $t=2.61$ ) show significant difference in between pre and post test means, as all the calculated t-values are greater than the tabulated t-value of 2.08 at 0.05 level of confidence. It is also observed from the same table that Kicking for Distance ( $t=1.24$ ) does not show significant difference as the calculated t-value is less than that of table value of 2.08 at 0.05 level of confidence.

**TABLE - 2**  
**SUMMARY OF MEAN, STANDARD DEVIATION AND T-RATIO OF SOCCER SKILL PERFORMANCE OF EXPERIMENTAL GROUP-B**

<i>Parameter</i>	<i>Test</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Mean Difference</i>	<i>Standard Error</i>	<i>t-ratio</i>
Dribbling	Pre	12.50	1.02	0.59	0.31	1.90
	Post	11.91	1.04			
Kicking for Accuracy	Pre	5.41	1.14	2.36	0.306	7.71*
	Post	7.77	0.87			
Kicking for Distance	Pre	46.18	5.52	4.05	1.57	2.58*
	Post	50.23	4.85			
Juggling	Pre	74.23	31.71	18.27	9.36	1.95
	Post	92.50	30.36			
Running with the Ball	Pre	5.49	0.61	0.59	0.179	3.296*
	Post	4.90	0.58			

\* Significant at 0.05 level

Tabulated  $t_{.05(21)}=2.080$

From the above table it is observed that among the soccer skill performances Kicking for Accuracy ( $t=7.71$ ), Kicking for Distance (2.58), and Running with the ball ( $t=3.296$ ) show significant difference in between pre and post test means, as all these obtained t-values are greater than the tabulated t-value of 2.08 at 0.05 level of confidence. It is also observed from the same table that Dribbling ( $t=1.90$ ) and Juggling ( $t=1.95$ ) do not show significant difference because the calculated t-value are less than that of tabulated t-value of 2.08 at 0.05 level of confidence.

**TABLE - 3**  
**SUMMARY OF MEAN, STANDARD DEVIATION AND T-RATIO OF SOCCER SKILL PERFORMANCE OF CONTROL GROUP-C**

<i>Parameter</i>	<i>Test</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Mean Difference</i>	<i>Standard Error</i>	<i>t-ratio</i>
Dribbling	Pre	12.52	1.00	00	0.30	00 <sup>@</sup>
	Post	12.52	0.99			
Kicking for Accuracy	Pre	5.45	1.18	0.19	0.349	0.544 <sup>@</sup>
	Post	5.64	1.14			
Kicking for Distance	Pre	48.41	6.31	0.68	3.895	0.174 <sup>@</sup>
	Post	47.73	5.17			
Juggling	Pre	70.05	33.39	2.13	9.835	0.22 <sup>@</sup>
	Post	72.18	31.83			
Running with the Ball	Pre	5.47	0.35	0.05	0.12	0.42 <sup>@</sup>
	Post	5.42	0.42			

<sup>@</sup> Not Significant of 0.05 level                      Tabulated  $t_{.05(21)}=2.080$

Above table reveals that the soccer skill performances i.e. Dribbling ( $t=00$ ), Kicking for Accuracy ( $t=0.544$ ), Kicking for Distance ( $t=0.174$ ), Juggling ( $t=0.22$ ) and Running with the ball ( $t=0.42$ ) do not show significant difference in between pre and post test means, as all these calculated t-values are less than that of tabulated t-value of 2.08 at 0.05 level of confidence.

**TABLE - 4**  
**SUMMARY OF MEAN STANDARD DEVIATION AND T-RATIO OF COMPOSITE SCORES OF SOCCER SKILL PERFORMANCES OF EXPERIMENTAL GROUP A, EXPERIMENTAL GROUP B AND CONTROL GROUP-C**

<i>Group</i>	<i>Test</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Mean Difference</i>	<i>Standard Error</i>	<i>t-ratio</i>
Experimental Group-A	Pre	233.39	30.46	39.54	8.33	4.746*
	Post	272.93	24.48			
Experimental Group-B	Pre	234.02	33.37	50.58	9.829	5.145*
	Post	281.60	31.81			
Control Group	Pre	237.93	33.54	1.35	13.875	0.097
	Post	239.28	31.39			

\* Significant at 0.05 level                      Tabulated  $t_{.05(21)}=2.080$

It is evident from the above table that in the soccer skill performance among the groups Experimental Group A ( $t=4.746$ ) and Experimental Group B ( $t=5.145$ ) show the significant difference in between pre and post test means as both the calculated t-values are greater than the tabulated t-value of 2.08 at 0.05 level of confidence. It is also shown by the same table that the



Control Group C ( $t=0.097$ ) does not show the significant difference because the obtained t-value is less than that of tabulated t-value of 2.08 at 0.05 level of confidence.

**TABLE - 5**  
**ANALYSIS OF VARIANCE AND COVARIANCE OF SELECTED SOCCER SKILL PERFORMANCES OF TWO EXPERIMENTAL GROUPS AND CONTROL GROUP**

	Group			Source of Variance	Mean Sum of Square	df	Mean Sum of Square	F-ratio
	Experimental Group-A	Experimental Group-B	Control Group C					
Pre-Test	233.39	234.02	237.93	A	266.35	2	133.175	0.13
				W	66494.58	63	1055.469	
Post Test	272.93	281.60	239.28	A	21992.05	2	10996.025	12.70*
				W	54527.77	63	865.520	
Adjusted Mean	274.29	282.46	237.05	A	25703.01	2	12851.51	62.59*
				W	1270.23	62	205.33	

\* Significant at 0.05 level

N=66; A=Among group variance;

W=within group variance

Tabulated  $F_{.05(2.63)}=3.144$

Tabulated  $F_{.05(2.62)}=3.146$

It is evident from the above table that the pre-test means of three selected groups do not differ significantly as the obtained F-value of 0.13 is less than that of tabulated F-value of 3.144 for the 2/63 degree of freedom. It is also observed from the same table that the post-test and adjusted means of three groups show significant difference because the calculated F-value of 12.70 and 62.59 are quite higher than the tabulated F-value of 3.144 and 3.146 respectively at 0.05 level of confidence. Since the adjusted mean has been found to be significant therefore Least Significant Difference post hoc test was applied to determine the paired mean difference among the groups. It has been shown in Table- 6.

**TABLE - 6**  
**PAIRED ADJUSTED FINAL MEANS AND DIFFERENCES BETWEEN MEANS FOR THE TWO EXPERIMENTAL GROUPS AND CONTROL GROUP IN SOCCER SKILL PERFORMANCES**

Mean of Groups			Mean Difference	Critical Difference
Experimental Group-A	Experimental Group-B	Control Group - C		
274.29	282.46	--	8.17	8.64
274.29	--	237.05	33.24*	8.64
	282.46	237.05	45.38*	8.64

\* Significant at 0.05 level

An observation of above table reveals that there is significantly greater improvement for the Experimental Group A Training in small size playfield and Experimental Group B Training in regular official size playfield than that of Control Groups-C did not undergo any specific training as the adjusted final mean difference values of 33.24 and 45.38 are greater than the critical difference value of 8.64 at 0.05 level of confidence. From the same table it is also learnt that there is no significant difference in the improvement between the Experimental group-A and Experimental Group B as the mean difference value of 8.17 is less than the critical difference value of 8.64 at 0.05 level of confidence. The comparison is graphically depicted in Fig. 17.

### Discussion of Findings:

Significant difference was found between the pre-test and post-test means of selected Soccer Skill Performances in Experimental Group A in Dribbling ( $t=3.825$ ), Kicking for Accuracy ( $t=6.06$ ), Juggling ( $t=2.103$ ), and Running with the Ball ( $t=2.61$ ), because all the calculated t-values were higher than the tabulated t-value of 2.08. Insignificant means difference was found in Kicking for Distance ( $t=1.24$ ) by the same group.

The significant differences were found in the skills of Kicking for Accuracy ( $t=7.71$ ), Kicking for Distance ( $t=2.58$ ) and Running with the Ball ( $t=3.296$ ) in Experimental Group B (training in regular official size playfield) because the obtained t-values were greater than that of tabulated t-value of 2.08 and there were no significant differences found between the pre-test and post-test means of Dribbling ( $t=1.90$ ) and Juggling ( $t=1.95$ ) as the calculated t-values were lesser than that of tabulated t-value of 2.08.

No insignificant differences were found in all the selected Soccer Skill performance by the Control Group C as the obtained t- values for Dribbling ( $t=0.00$ ), Kicking for Accuracy ( $t=0.544$ ), Kicking for Distance ( $t=0.174$ ), Juggling ( $t=0.22$ ) and Running with the Ball ( $t=0.42$ ) were less than the tabulated t-value of 2.08 at 0.05 level.

Significant differences were obtained between the pre-test and post-test means of composite scores of Soccer Skill Performance by both the Experimental Group A ( $t=4.746$ ) and Experimental Group B ( $t=5.145$ ), because both the obtained t-values were greater than the tabulated t- value of 2.08. Control Group did not show any significant difference in the

composite scores of Soccer Skill Performance as the calculated t-value of 0.097 was less than that of table value of 2.08.

From the Table- 1 it is learnt that subjects given training in small playfield were shown significant difference in Dribbling, Kicking for Accuracy, Juggling, and Running with the Ball so far as the pre-test and post-test mean scores are concerned. The reasons for the significant improvement in the said skill may be because the optimum development in finer neuro-muscular co-ordination, increased depth perception and increased mobility of nervous system hence players developed Dribbling, Kicking for Accuracy, Juggling and Running with the ball.

Table- 2 revealed that the significant improvement on Kicking for Accuracy, Kicking for Distance and Running with the Ball by the subjects of Experimental Group B- training in regular official size playfield. The reason for the significant improvement on the above mentioned skills may be attributed to the fact that playing in regular official size playfield players need to pass accurately, cover long distance through kicking, and Running with the Ball quickly, according to the desired qualities might have developed for the same.

The findings of Table- 3 did not show any significant difference between the means of pre-test and post-test scores of selected Soccer Skill Performance Control Group C. The reasons behind the insignificant improvement may be because the subjects did not undergo any specific training so as to significant improvement did not occur in the study.

The findings of Analysis of Variance and Co-variance revealed that there were significant difference in the means of pos-test and adjusted final means in selected parameters among the three groups.

The greater improvement in Soccer Skill Performance recorded by the subjects of Experimental Group B who were undergone training in regular official size playfield, followed by the subjects belonged to the Experimental Group A undergone training in small playfield and insignificant improvement was shown by the subjects of Control Group C. The reason behind the significantly greater improvement by the Experimental Group B may be because of training was given in regular official size playfield might have developed Explosive Leg Strength, neuro-muscular co-ordination and increased depth perception so as to improve the above mentioned skills.



**Conclusion:**

Within the limitations of the study and on the basis of statistical findings the following conclusions are drawn.

1. There was significant improvement in the soccer skills of Dribbling, Kicking for Accuracy, Juggling and Running with the Ball by the subjects who undergone training in small playfield, but no significant improvement was recorded by the subjects in Kicking for Distance.
2. There was significant improvement in Kicking for Accuracy, Kicking for Distance and Running with the Ball by the subjects who undergone training in regular official size playfield. Insignificant improvement in Dribbling and Juggling occurred within the subjects of the same group.
3. There was no significant difference in the improvement on the soccer skill performance as a whole using composite score between the two experimental groups i.e. training in small playfield and regular official size playfield.

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