



COMPREHENSIVE PROGRAMME OF DRILLS AND ITS EVALUATION FOR THE DEVELOPMENT OF FITNESS OF SOCCER PLAYERS

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ABSTRACT

Fitness is the pre-requisite for exhibiting better performance in all games and sports. Fit players can delay onset of fatigue during a match or competition. The more tired a player, the more prone he is making an error. Fitness aids in the proper execution of various skills and techniques. Soccer training is a multitask based complex and long process. Each task of training needs to be tackled in most planned way. The major training tasks that are to be dealt with are motor development task specific to soccer, skill and technical training task and tactical ability development task. Hence, the research project was titled as “Comprehensive programme of drills and its evaluation for the development of fitness of Soccer players”.

Fifty male football players pursuing Bachelor of Physical Education and Master of Physical Education programme in Lakshmibai National University of Physical Education, Gwalior were selected as subjects for this study using purposive sampling. The subjects were within the range of age group 18-24 years and were of University level performance standard. All the fifty selected subjects were randomly grouped into experimental (25) and control group (25).

The study was delimited to All India Inter University Level Soccer players. The comprehensive exercise drills for soccer players was further delimited to Fitness only. The Fitness variables chosen for the study were Cardiovascular Endurance, Speed and Agility. Descriptive statistics were used to highlight status of control and experimental group on each criterion test scores/parameters. Analysis of co-variance was exclusively used to find out the effect of comprehensive training drill programme on each selected parameter based on comparing pre and post data as well as equated comparison with control & experimental group. Level of significance was set on 0.05 level for testing the significance of statistical interpretation. Graphical representation was made for each fitness variable.

The finding shows first of all that SAQ based exclusive training program were highly comprehensive and the three fitness criterion tests on which the effect of training program was assessed for football fitness was found to be highly significant. In all three fitness criterion parameters i.e. speed, endurance and agility assessed by 50 meter dash, 12 minute run/walk test, and 4x10 meter shuttle run test respectively showed highly significant effect of the experimental training program. The concept of SAQ training provides good provision for adopting comprehensive training programme for football players. For instance, the fitness, skill and tactical ability of soccer players can be significantly develop through comprehensive and SAQ based skills & tactical drills. A minimum of eight weeks duration of comprehensive drill programme should be planned to significantly effect on performance parameters for soccer player. Drill based training programme is significantly effective because it ensures control experimentation, sufficient practice and game based specific movements.

KEYWORDS: exhibiting better performance , Physical Education.

INTRODUCTION

Fitness is the pre-requisite for exhibiting better performance in all games and sports. Fit players can delay onset of fatigue during a match or competition. The more tired a player, the more prone he is making an error. Fitness aids in the proper execution of various skills and techniques.

It is well known facts that fitness plays a vital role in the performance of all sports and games physical education teachers and medical professionals in numerous ways in relation to performance in sports and games and organic health have discussed the word ‘fitness’. A physiologist considers aerobic capacity to be an indicator of fitness. A physiotherapist thinks in terms of restoring normal movement around an injured joint. A physical educator is interested in all round development. A coach is interested in getting optimum performance from trainees. If their opinion about fitness is summed up, it is clear that they all talk about human body, its optimum development efficiency.

With the constant demand for “high sports performance” the concept of soccer today has been changed. The concept of “total soccer” applies skill development, technical development, development of all important components and physical parameters which are closely associated and contributes to performance in soccer.

Soccer training is a multitask based complex and long process. Each task of training needs to be tackled in most planned way. The major training tasks that are to be dealt with are motor development task specific to soccer, skill and technical training task and tactical ability development task. Hence, the research project was titled as “Comprehensive programme of drills for the development of fitness of Soccer players”

METHODOLOGY

Fifty male football players pursuing Bachelor of Physical Education and Master of Physical Education programme in Lakshmi Bai National University of Physical Education, Gwalior were selected as subjects for this study using purposive sampling. The subjects were within the range of age group 18-24 years and were of University level performance standard. All the fifty selected subjects were randomly grouped into experimental and control group as follows:

- Experimental group : 25 subjects
- Control group : 25 subjects.

The study was delimited to All India Inter University Level Soccer players. The comprehensive exercise drills for soccer players was further delimited to Fitness only.

SELECTION OF VARIABLES AND TESTS

Considering the primary purpose of the present study and appropriateness of variables to be assessed in relation to soccer players’ characteristics following variables and their tests were selected.

Sl. No.	Fitness Variable	Test	Criterion Measure
	1.1. Cardiovascular Endurance	12m Run/Walk	Meters
	1.2.Speed	50m Dash	Second
	Agility	10x10m Shuttle run	Second

On the basis of the knowledge reflected by the available literature, research findings, expert’s guidance and scholars own understanding of the problems, it was hypothesized that

1. A soccer specific comprehensive drills can be designed which can be practically used for multitask training with significant effect.

2. Further, fitness of soccer players can be significantly developed with single comprehensive drill based training programme.

TRAINING PROGRAMME

Monday Morning Session	Assembly Modern Warm up Specific Endurance Training distance time Rec. 5×200 m. 30sec 150 sec. 10×100m 15sec 75sec.	Thursday Morning Session	Assembly Modern Warm up Endurance Training Fartlek Training 150 jog - 50 m sprint 100 jog - 100 m. sprint Ar. 3 rounds = 1 series 5 series	Monday Morning Session	Assembly Modern Warm up Speed Endurance Shuttle Run 10yd., 20yd., 5 time 1 series 5 series
Evening Session	Assembly Warm up different types of Running Side ways, forward, Backward Partner Stretching	Evening Session	Assembly Warm up Plyometric drills (Box, hurdle)	Evening Session	Assembly Warm up Technical drills connected with conditional Aspects
Tuesday Morning Session	Assembly Warm up Strength Training Medicine ball Partner flexibility Exercises	Friday Morning Session	Assembly Modern Warm up Strength Training Weight Training Exercises	Tuesday Morning Session	Assembly Warm up Strength endurance Resisted Acceleration drills
Evening Session	Assembly Warm up Specific Aerobic Exercises	Evening Session	Assembly Warm up Ladder (Stick drills)	Evening Session	Assembly Warm up Coordinative Ability drills
Wednesday Morning Session	Assembly Modern warm up Coordinative ability (Reaction time & Agility Technical Training	Saturday Morning Session	Assembly Cross Country/ Long distance running Partner stretching Exercises Cool down	Wednesday Morning Session	Assembly Modern Warm up Coordinative ability (Reaction Times & Agility) Technical Training
Evening Session	Assembly Warm up (yoga/swimming)	Evening Session	Assembly Active Rest Lead up activity Small area games <i>(Sunday Rest)</i>	Evening Session	Assembly Warm up Active Rest football (Basketball)

STATISTICAL ANALYSIS

Descriptive statistics were used to highlight status of control and experimental group on each criterion test scores/parameters. Analysis of co-variance was exclusively used to find out the effect of comprehensive training drill programme on each selected parameter based on comparing pre and post data as well as equated comparison with control & experimental group. Level of significance was set on 0.05 level for testing the significance of statistical interpretation. Graphical representation was made for each fitness variable.

RESULTS

Table-1
ANALYSIS OF COVARIANCE OF THE MEAN OF EXPERIMENTAL GROUPS AND CONTROL GROUP ON 12 MINUTE RUNS

Means	Group		Sum of Square	df	Mean of Square	F Ratio
	Experimental	Control				
Pre-Test	1761.60	1750.4	A 1568 W 1456.32	1 48	1568 30334	0.052
Post Test	2748.8	1763.6	A 12132738 W 1256240	1 48	12132738 26171.66	463.58*
Adjusted Post Test	2747.69	1764.71	A 12065070.4 W 1198912.8	1 47	12065070.4 25508.78	472.98*

- Significant at 0.05 level of confidence
- N=50
- A= Among mean variance
- W= Within group variance

F-ratio needed for significance at 0.05 level of confidence =

It is evident from table-1 that the F- Value for 12 minute run is 472.98, which is significant at 0.05 level. It indicates that the adjusted mean scores of 12 minutes run of experimental and control group differs significantly.

Since the F- value was found to be significant, Post Hoc test was employed to find out the difference on 12 minutes run among the experimental and control group.

Table-2
PAIRED ADJUSTED MEANS AND DIFFERENCES BETWEEN MEANS FOR EXPERIMENTAL GROUPS AND THE CONTROL GROUP ON 12 MINUTE RUNS

Mean		Diff between Means	Critical diff for Adjusted Mean
Experimental group	Control group		
2747.69	1764.71	982.98*	91.2

- Significant at 0.05 level of confidence

It is clearly evident from table-2 that the adjusted post test mean difference 982.98 between experimental and control group higher than the critical difference 91.2.

The findings implies that the eight weeks experimentation of comprehensively designed exercise drills programme has significantly developed the cardio respiratory endurance of Soccer players of experimental group. In other words the designed exercise programme effected for the development of cardio-respiratory endurance of soccer players.

The graphical representation of mean comparison of 12 minutes run of experimental and control group is presented in fig-1

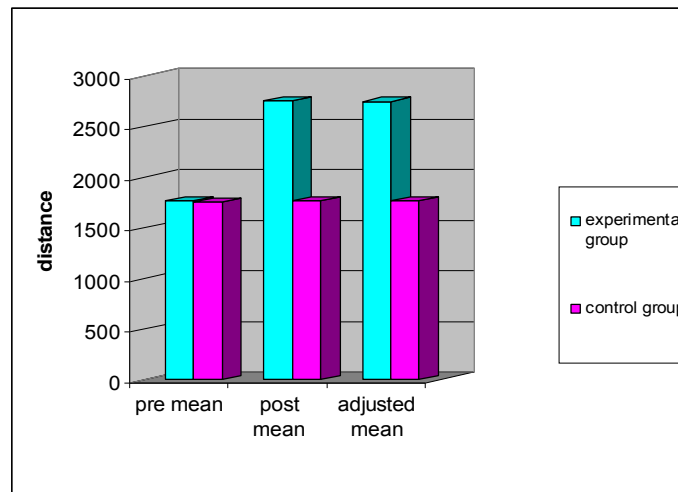


Figure-1. Mean Comparison of Experimental Group and Control Group on 12 Minute Run/Walk Test

Table-3
ANALYSIS OF COVARIANCE OF THE MEAN OF EXPERIMENTAL GROUPS AND CONTROL GROUP ON 50 METER DASH

Means	Group		Sum of Square	df	Mean of Square	F Ratio
	Experimental	Control				
Pre-Test	7.18	7.20	A 0.07 W 4.85	1 48	0.007 0.101	.071
Post Test	6.62	7.42	A8.08 W4.274	1 48	8.08 0.089	90.75*
Adjusted Post Test	6.62	7.41	A 7.846 W3.224	1 47	7.846 0.0069	114.37*

- Significant at 0.05 level of confidence
- N=50
- A= Among mean variance
- W= Within group variance

F-ratio needed for significance at 0.05 level of confidence

It is evident from table-3 that the F- Value for 50 metre Dash is 114.37, which is significant at 0.05 level. It indicates that the adjusted mean scores of 50 metre dash performance of experimental and control group differs significantly.

Since the F- value was found to be significant, Post Hoc test was employed to find out the difference on 50 metre dash performance among the experimental and control group.

Table-4
PAIRED ADJUSTED MEANS AND DIFFERENCES BETWEEN MEANS FOR EXPERIMENTAL GROUPS AND THE CONTROL GROUP ON 50 METER DASH

Mean		Diff between Means	Critical diff for Adjusted Mean
Experimental group	Control group		
6.62	7.41	-0.79*	0.0056

* Significant at 0.05 level of confidence

It is clearly evident from table-4 that the adjusted post test mean difference -0.79 between experimental and control group is higher than the critical difference 0.0056. Further the finding clearly indicates that comprehensive exercise drill programme has significantly affected on development of speed among Soccer Players of experimental group. Also the exercise drills have positive effect on speed development of the soccer players

The graphical representation of mean comparison of 50 meter dash of experimental and control group is represented in Figure 2.

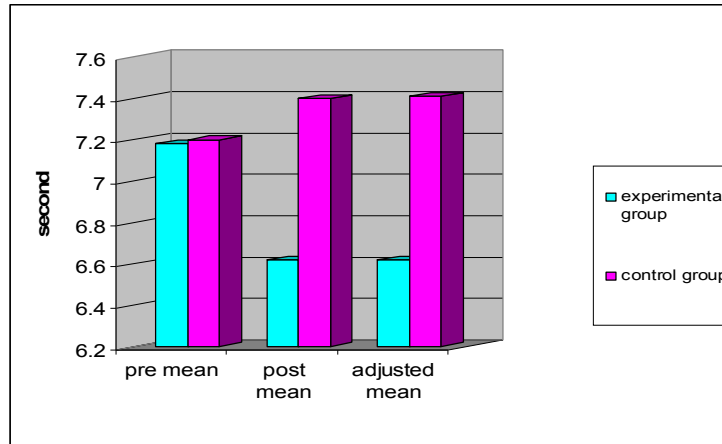


Figure-2 Mean Comparison of Experimental Group and Control Group on 50 Meter Dash

Table -5
ANALYSIS OF COVARIANCE OF THE MEAN OF EXPERIMENTAL GROUPS AND CONTROL GROUP ON SHUTTLE RUN

Means	Group		Sum of Square	df	Mean of Square	F Ratio
	Experimental	Control				
Pre-Test	10.48	10.49	A 0.002 W 15.332	1 48	0.002 0.319	0.006
Post Test	9.08	10.85	A38.89 W9.536	1 48	38.89 0.199	195.78*
Adjusted Post Test	9.09	10.85	A 38.66 W 6.516	1 47	38.66 0.139	278.84*

- Significant at 0.05 level of confidence
- N=50
- A= Among mean variance
- W= Within group variance

F-ratio needed for significance at 0.05 level of confidence

From the Table 5 it is clearly evident that the F-value for shuttle run is 278.84 which is significant at 0.05 level. It indicates that the adjusted mean scores of Shuttle Run performance of experimental and control group differs significantly.

Since the F- value was found to be significant, Post Hoc test was employed to find out the difference on Shuttle Run performance among the both the groups.

**Table -6
 PAIRED ADJUSTED MEANS AND DIFFERENCES BETWEEN MEANS FOR EXPERIMENTAL GROUPS AND THE
 CONTROL GROUP ON SHUTTLE RUN**

Mean		Diff between Means	Critical diff for Adjusted Mean
Experimental group	Control group		
9.09	10.85	-1.76*	0.113

* Significant at 0.05 level of confidence

It is evident from table-6 that the adjusted post test mean difference -1.76 between experimental and control group is higher than the critical difference 0.113. The findings revealed that eight weeks experimentation of the comprehensively designed exercise drills programme have significantly effected on agility of the experimental group of Soccer Players and there was significant improvement on Shuttle Run performance for agility of the experimental group.

The graphical representation of mean comparison of Shuttle Run of experimental and control group is represented in Figure 3.

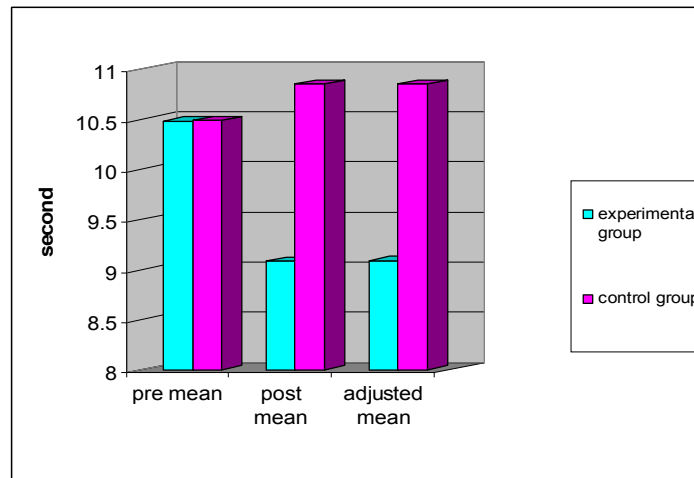


Figure-3 Mean Comparison of Experimental Group and Control Group on Shuttle Run

DISCUSSION

The findings of this study were of great relevance in terms of effects of specially design training program on selected performance parameters. The statistical findings shows, finding in terms of every performing parameters .i.e. three fitness test were significant in every aspects. More over research scholar is extremely satisfied as the very purposes on which the study was conceptualized were accomplished and fulfilled to best of expectation.

In nutshell the thrust and priority of the study was to design a comprehensive SAQ based training program, that ultimately could fulfill training requirements for development of fitness aspect of footballer. Though, theoretically the idea to experiment with, such a exclusively designing and implementation was appropriate, purposive and challenging and worth to take up as researcher project. However ultimately the findings after eight weeks of experimentation in most scientific way established the appropriateness of the study.

The finding shows first of all that SAQ based exclusive training program were highly comprehensive and the three fitness criterion tests on which the effect of training program was assessed for football fitness

was found to be highly significant. In all three fitness criterion parameters i.e. speed, endurance and agility assessed by 50 meter dash, 12 minute run/walk test, and 4x10 meter shuttle run test respectively showed highly significant effect of the experimental training program.

CONCLUSION

Based on understanding after deliberate discussion with experts and supervisor and also light of above understanding following conclusions were finally drawn.

1. The concept of SAQ training provides good provision for adopting comprehensive training programme for football players.
2. For instance, the fitness, skill and tactical ability of soccer players can be significantly develop through comprehensive and SAQ based skills & tactical drills.
3. A minimum of eight weeks duration of comprehensive drill programme should be planned to significantly effect on performance parameters for soccer player.
4. Drill based training programme is significantly effective because it ensures control experimentation, sufficient practice and game based specific movements.

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