

**INFLUENCES OF STRENGTH TRAINING PACKAGE WITH
AND WITHOUT YOGIC PRACTICES ON SELECTED
SKILLS AMONG SOCCER PLAYERS****Dr.K.Jayaraja**Director of Physical Education, J.J. College of Engineering and Technology, Tiruchirappalli,
Tamil Nadu.**Abstract:**

The objective of the study was to find out the influences of strength training package with and without yogic practices on selected skills among inter-collegiate soccer players. Three matched groups each having 15 males of 18 to 25 years of age served as subjects. By using the matching procedure on the basis of their initial Soccer playing ability performance test scores, the subjects were divided into three equal groups of fifteen each. The Group-I acted as control group, Group-II was given strength training without yogic practices and Group-III was given strength training with yogic practices. The experimental groups were subjected to strength training schedule which was specifically designed to improve the strength and also fitness components essential for Soccer players. The strength training was given for twelve weeks, four days per week of two hours duration each in the morning session. Yogic package was given for 45 minutes each for twelve weeks, four days in a week in the evening sessions to Group-III. Skills namely dribbling, kicking, passing and shooting were selected as variables as they may have direct relation to the performance of Soccer players in competitive situation. Analysis of covariance (ANCOVA) was used to analyze the collected data. Scheffe's test was followed as a post-hoc test to determine the level of significant difference between the paired means. The results clearly indicate that there was a significant difference in players' performance due to training. The result also showed that Strength training with Yogic practices group showed significant improvement in the skill levels of the players compared to other groups.

Introduction

Soccer is a game which involves many fundamental skills such as shooting, kicking, volleying, heading, throw-in et cetera. Homenkora (1996) said that "Nurturing and improving basic physical qualities and their elements are the main aspects of preparing athletes for sports and games" Strength training now plays a major role in Soccer. Strength is a part and parcel of all motor ability, technical skills and tactical action. Strength training, therefore, assumes high importance for achieving superlative performance in all sports. Reilly (1996) reported that "With appropriate training, performance of a player during a match can be increased and the risk of injury can be reduced. In order to design an efficient training

programme it is important to be aware of the different components of fitness training in soccer". However a high skill level on the ball and good knowledge of the game are also essential. Yoga is a system that benefits body, mind and spirit by teaching self control through series of postures and exercises as well as through breathing, relaxation and meditation techniques. Donna (2009) reported that Yoga practice increases flexibility, improves balance, develops coordination, reduces fatigue, clears the mind. Prakash (1988) observed that Yoga improves the performance of sportsmen in sports. The purpose of the study was to find out the influences of strength training packages with and without yogic practices on selected skills among Soccer players.

Methodology

To achieve these purpose forty-five Engineering College male Soccer players were randomly selected as subjects. Their age ranged from eighteen to twenty five years. By using the matching procedure on the basis of their initial Soccer playing ability performance test scores, the subjects were divided into three equal groups of fifteen each.

Group I	Control group
Group II	Experimental group "A" (Strength training without yogic practices group)
Group III	Experimental group "B" (Strength training with yogic practices group)

The control group was not exposed to any specific training / conditioning. The experimental groups 'A' was subjected to strength training schedule which was specifically designed to improve the strength

and also fitness components essential for Soccer players. The strength training was given for twelve weeks, four days per week of two hours duration each in the morning session. In addition to the above strength training, the experimental groups 'B' had undergone yogic package schedule. This yogic package was given for 45 minutes each for four days in a week in the evening sessions. The yogic packages mainly consisted of Asana (postures), Pranayama (breathing technique) and Dhyana (meditation). Three judges, who were trained Soccer coaches, recorded the performance of the subjects during the pre tests. The investigator gave the guidelines to the coaches for subjective rating of performance. Mor-Christian General Football Ability Test and Mc Donald's Football Ability Test for shooting were conducted to record skill levels of the subjects. Analysis of covariance (ANCOVA) was used to analyze the collected data.

Findings and discussions

Dribbling

The analysis of covariance on dribbling of the pre, post and adjusted post mean scores of each group have been analyzed and presented in table-I.

Table - I

Analysis of covariance of the data on dribbling of pre, post and adjusted post mean scores of control and experimental groups

Test	Control Group (Group -I)	Strength training packages without yogic practices (Group-II) Expt. Group 'A'	Strength training packages with yogic practices (Group-III) Expt. Group 'B'	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	8.68	8.20	9.11	Between groups	6.26	2	3.13	2.00
SD	±1.30	±0.87	±1.49	Within groups	65.57	42	1.56	
Post-				Between	30.75	2	15.37	13.33*

Test Mean	9.13	8.0	7.11	n groups				
SD	±1.56	±0.79	±0.63	Within groups	48.43	42	1.15	
Adjusted Post-Test Mean	9.11	8.32	6.80	Between sets	40.28	2	20.14	50.71*
				Within sets	16.28	41	0.39	

* Significant at 0.05 level of confidence

Table value for df (2, 42) at 0.05 level = 3.22
Table value for df (2, 41) at 0.05 level = 3.23

The table reveals that there was a significant difference between pre and post test means of each group. Moreover it showed that there was a significant difference between the adjusted post mean of control and experimental groups on dribbling.

Table - ii

Scheffe's test for the difference between paired means on dribbling

Since, three groups were compared, whenever the obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test was used to found out the paired mean difference and it was presented in table-II.

Control Group (Group-I)	Strength training packages without yogic practices (Group-II) Expt. Group 'A'	Strength training packages with yogic practices (Group-III) Expt. Group 'B'	Mean Difference	Confident Interval Value
9.11	8.32	---	0.79*	0.57
9.11	---	6.80	2.31*	
---	8.32	6.80	1.52*	

*Significant at 0.05 level of confidence

The results of the study showed that there was a significant difference between control and experimental groups. Moreover, it showed that there was significant difference between the two experimental groups. The above data also reveals that Strength training packages with

Yogic practices group had better dribbling ability compared to other groups. The pre, post and adjusted post mean values of each group on dribbling were graphically represented in the Figure -I.

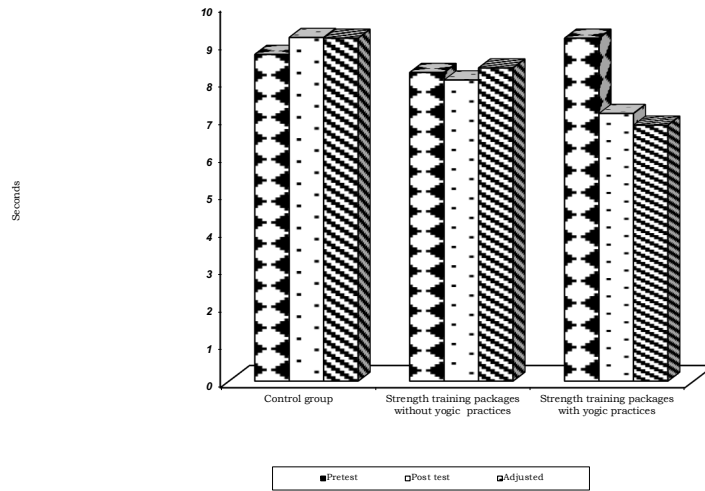


Figure-i: mean values of control, strength training without yogic practices and strength training with yogic practices groups on dribbling

Kicking

The analysis of covariance on kicking of the pre, post and adjusted post mean scores of each group have been analyzed and presented in table III.

Table - iii

Analysis of covariance of the data on kicking of pre, post and adjusted post mean scores of control and experimental groups

Test	Control Group (Group -I)	Strength training packages without yogic practices (Group -II) Expt. Group 'A'	Strength training packages with yogic practices (Group-III) Expt. Group 'B'	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	22.60	22.60	21.53	Between groups	11.37	2	5.68	0.73
SD	±2.94	±3.07	±2.26	Within groups	324.93	42	7.73	
Post-Test Mean	21.26	24.46	25.93	Between groups	170.84	2	85.42	18.34*
SD	±2.15	±2.89	±0.96	Within	195.60	42	4.65	

				groups				
Adjusted Post-Test Mean	21.02	24.22	26.41	Between sets	215.96	2	107.98	100.58*
				Within sets	44.01	41	1.07	

* Significant at 0.05 level of confidence

Table value for df (2, 42) at 0.05 level = 3.22

Table value for df (2, 41) at 0.05 level = 3.23

the above table reveals that there was a significant difference between pre and post test means of each group. moreover it showed that there was a significant difference between the adjusted post means of control and experimental groups on kicking.

since, three groups were compared, whenever the obtained 'f' ratio for adjusted post test was found to be significant, the scheffe's test was used to found out the paired mean difference and it was presented in table iv.

Table –IV

Scheffe's test for the difference between paired means on kicking

Control Group (Group-I)	Strength training packages without yogic practices (Group-II) Expt. Group 'A'	Strength training packages with yogic practices (Group- III) Expt. Group 'B'	Mean Difference	Confident Interval Value
21.02	24.22	---	3.2*	0.95
21.02	---	26.41	5.39*	
---	24.22	26.41	2.19*	

* Significant at 0.05 level of confidence

The results of the study showed that there was a significant difference between control and experimental groups. It also showed that there was a significant difference between two experimental groups.

The above data also reveals that Strength training packages with Yogic practices

group i.e. experimental group 'B' had better kicking ability compared to other groups.

The pre, post and adjusted post mean values of each group on kicking were graphically represented in the Figure – II.

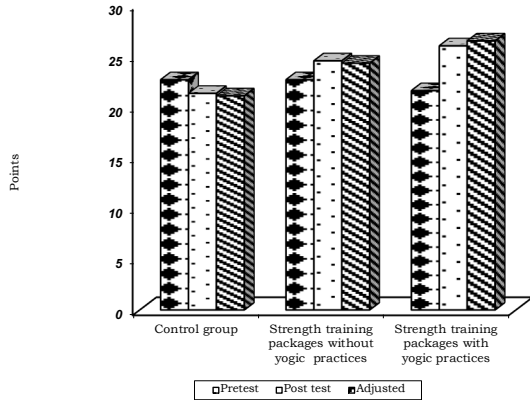


Figure-ii:

mean values of control, strength training without yogic practices and strength training with yogic practices groups on kicking

Passing

The analysis of covariance on passing of the pre, post and adjusted post mean scores of control, strength training without yogic practices and strength training with yogic practices group have been analyzed and presented in table-V.

Table - v

Analysis of covariance of the data on passing of pre, post and adjusted post mean scores of control and experimental groups

Test	Control Group (Group -I)	Strength training packages without yogic practices (Group -II) Expt. Group 'A'	Strength training packages with yogic practices (Group - III) Expt. Group 'B'	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	112.4	117.73	118.93	Between groups	362.84	2	181.42	0.34
SD	±31.21	±17.91	±17.92	Within groups	22631.47	42	538.84	
Post-Test Mean	102.47	130.27	159.2	Between groups	24143.24	2	12071.62	47.75*
SD	±22.43	±15.12	±5.17	Within groups	10619.07	42	252.83	
Adjusted Post-Test Mean	104.62	129.52	157.79	Between sets	20945.12	2	10472.56	110.35*
				Within sets	3891.16	41	94.91	

* Significant at 0.05 level of confidence

Table value for df (2, 42) at 0.05 level = 3.22
Table value for df (2, 41) at 0.05 level = 3.23

The above table reveals that there was a significant difference between pre and post test means of each group. Moreover it showed that there was a significant difference between the adjusted post mean values of control group, experimental groups ‘A’ and ‘B’ on passing.

Table –VI

Scheffe’s test for the difference between paired means on passing

Control Group (Group-I)	Strength training packages without yogic practices (Group-II) Expt. Group A	Strength training packages with yogic practices (Group-III) Expt. Group B	Mean Difference	Confident Interval value
104.62	129.52	---	24.9*	9.03
104.62	---	157.79	53.17*	
---	129.52	157.79	28.27*	

* Significant at 0.05 level of confidence

Figure-iii:

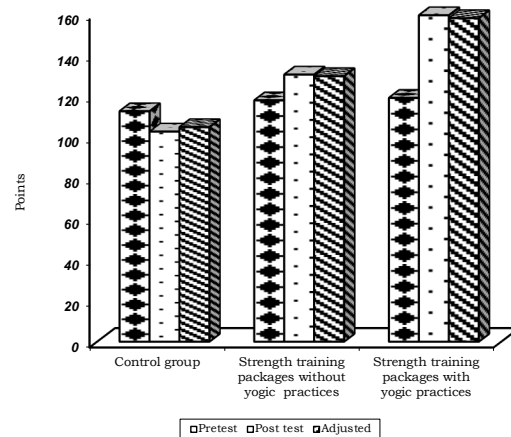
Mean values of control, strength training without Yogic practices and strength training with Yogic practices groups on passing

Since, three groups were compared, whenever the obtained ‘F’ ratio for adjusted post test was found to be significant, the Scheffe’s test was used to found out the paired mean difference and it was presented in table-VI.

The table-VI shows that there was a significant difference between control and experimental groups. It also shows that there was significant difference between the two experimental groups.

The above data also reveals that Strength training packages with Yogic practices group had better passing ability.

The pre, post and adjusted post mean values of strength training without yogic practices group, strength training with yogic practices group and control group on passing were graphically represented in the Figure – III.



Shooting

The analysis of covariance on shooting of the pre, post and adjusted test scores of control, strength training without yogic practices

and strength training with yogic practices groups have been analyzed and presented in table-VII.

Table - vii

Analysis of covariance of the data on shooting of pre, post and adjusted post mean scores of control and experimental groups

Test	Control Group (Group -I)	Strength training packages without yogic practices (Group-II) Expt. Group 'A'	Strength training packages with yogic practices (Group- III) Expt. Group 'B'	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	7.66	7.53	9.20	Between groups	25.73	2	12.86	6.80*
				Within groups	79.46	42	1.89	
SD	±1.23	±1.40	±1.47	Between groups	149.64	2	74.82	97.39*
				Within groups	32.26	42	0.76	
Post-Test Mean	6.86	8.40	11.26	Between groups	84.16	2	42.08	110.20*
				Within groups	15.65	41	0.38	
SD	±0.83	±0.98	±0.79	Between sets	84.16	2	42.08	110.20*
				Within sets	15.65	41	0.38	

* Significant at 0.05 level of confidence

Table value for df (2, 42) at 0.05 level = 3.22

Table value for df (2, 41) at 0.05 level = 3.23

The above table reveals that there was a significant difference between pre and post test means of each group. Moreover it showed that there was a significant difference between the adjusted post mean values of control and experimental groups on shooting.

Since, three groups were compared, whenever the obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test was used to found out the paired mean difference and it was presented in table-VIII.

Table –viii
Scheffe's test for the difference between paired means on shooting

Control Group (Group-I)	Strength training packages without yogic practices (Group-II) Expt. Group A	Strength training packages with yogic practices (Group-III) Expt. Group B	Mean Difference	Confident Interval Value
7.66	8.67	---	1.01*	0.57
7.66	---	10.77	3.11*	
---	8.67	10.77	2.10*	

* Significant at 0.05 level of confidence

The table VIII shows that the mean difference values of control group and experimental groups were 1.01 and 3.11 respectively which were greater than the confidence interval value of 0.57 on dribbling at 0.05 level of confidence. The results of the study showed that there was a significant difference between control and experimental groups.

The mean difference value of strength training without yogic practices group & strength training with yogic practices group was 2.10 which were greater than the confidence interval value of 0.57 on shooting at 0.05 level of confidence. The results of the study also showed that there was a significant difference between two experimental groups. The above data also reveals that Strength training packages with Yogic practices group had better shooting ability. The pre, post and adjusted post mean values of each group on shooting were graphically represented in the Figure –IV.

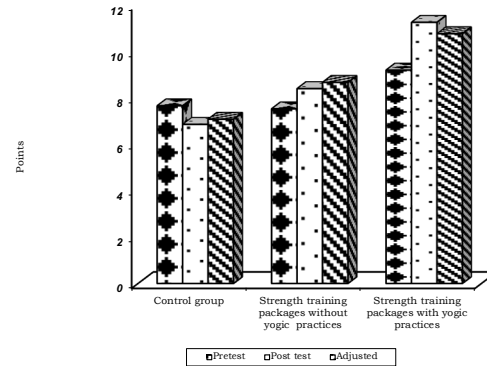


Figure-iv:

Mean values of control, strength training without yogic practices and strength training with yogic practices groups on shooting. These findings were supported by the research works of Rajakumar (2007) and Wong et.al (2010).

Conclusions

From the above findings, discussion and within the limitation of the present study, the following conclusions were drawn. The control group had not shown significant change on the selected variable. The Soccer players of both the experimental groups had shown significant improvement in the selected skills due to strength training with and without yogic practices. The Soccer players who had undergone strength training with yogic practices showed better improvement in all the selected skills as compared to other groups.

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