



## EFFECT OF STRENGTH TRAINING ON SELECTED MOTOR COMPONENTS AMONG FOOTBALL PLAYERS

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### Abstract:

The purpose of the study was to investigate the effect of strength training on selected motor components among football players. It was hypothesized that there would be significant differences on selected motor components due to the effect of strength training among football players. For the present study the 40 male football players from Karaikudi district, Tamilnadu were selected at random and their age ranged from 18 to 25 years. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of twenty each and named as Group 'A' and Group 'B'. Group 'A' underwent strength training and Group 'B' have not underwent any training. Speed was assessed by 50 metre dash and agility was assessed by shuttle run. The data was collected before and after twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA). The level of significance was set at 0.05. The strength training had positive impact on speed and agility among football players.

**Key Words:** Strength Training, Motor, Speed, Agility & Football

### Introduction:

The strength training is the training of doing exercise with the help of the barbell apparatus to increase the strength. General strength training is to increase the strength and the power through general exercises. Specific strength training is to develop specific strength of an event or a specific game. According to the season, the volume and intensity of strength training also change. Strength training is the most widely used and popular method of increasing strength and power. Strength training also known as strength training is a common component of sports and physical fitness programs for young people, although some adolescents may use strength training as a means to enhance muscle size for improving appearance. Strength training programs may include the use of free weights, weight machines, elastic tubing, or an athlete's own body weight. The amount and form of strength used and the frequency of strength exercises are determined by specific program goals. The popularity of strength training has increased in recent times. Not only is strength training used to increase muscular strength, power, endurance, and hypertrophy in athletes, but the adaptations to strength training have been shown to benefit the general population as well as clinical (i.e., those individuals with cardiovascular ailments, neuromuscular disease, etc.) populations (Byrne, 2000).

### Methodology:

The purpose of the study was to investigate the effect of strength training on selected motor components among football players. It was hypothesized that there would be significant differences on selected motor components due to the effect of strength training among football players. For the present study the 40 male football players from Karaikudi district, Tamilnadu were selected at random and their age ranged from 18 to 25 years. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of twenty each and named as Group 'A' and Group 'B'. Group 'A' underwent strength training and Group 'B' have not underwent any training. Speed was assessed by 50 metre dash and agility was assessed by shuttle run. The data was collected before and after twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA). The level of significance was set at 0.05.

### Results:

The findings pertaining to analysis of co-variance between experimental group and control group on selected motor components among football players for pre-post test respectively have been presented in table 1 to 2.

Table 1: ANOVA between Experimental Group and Control Group on Speed of Football Players for Pre, Post and Adjusted Test

|                | Experimental Group | Control Group | Source of Variance | Sum of Squares | df | Mean Square | F        |
|----------------|--------------------|---------------|--------------------|----------------|----|-------------|----------|
| Pre Test Mean  | 6.52               | 6.57          | BG                 | 1.215          | 1  | 1.215       | 1.01     |
|                |                    |               | WG                 | 45.520         | 38 | 1.197       |          |
| Post Test Mean | 6.11               | 6.52          | BG                 | 207.005        | 1  | 207.005     | 262.907* |
|                |                    |               | WG                 | 29.920         | 38 | 0.787       |          |
| Adjusted Post  | 6.14               | 6.53          | BG                 | 203.621        | 1  | 203.621     | 253.396* |

|      |  |  |    |        |    |       |  |
|------|--|--|----|--------|----|-------|--|
| Mean |  |  | WG | 29.732 | 37 | 0.803 |  |
|------|--|--|----|--------|----|-------|--|

\* Significant at 0.05 level.

df: 1/37= 4.10

Table 1 revealed that the obtained 'F' value of 253.396 was found to be significant at 0.05 level with df 1, 37 as the tabulated value of 4.10 required to be significant at 0.05 level. The same table indicated that there was a significant difference in adjusted means of speed of football players between experimental group and control group. The graphical representation of data has been presented in figure 1.

Figure 1: Comparisons of Pre – Test Means Post – Test Means and Adjusted Post – Test Means for Control Group and Experimental Group in Relation to Speed

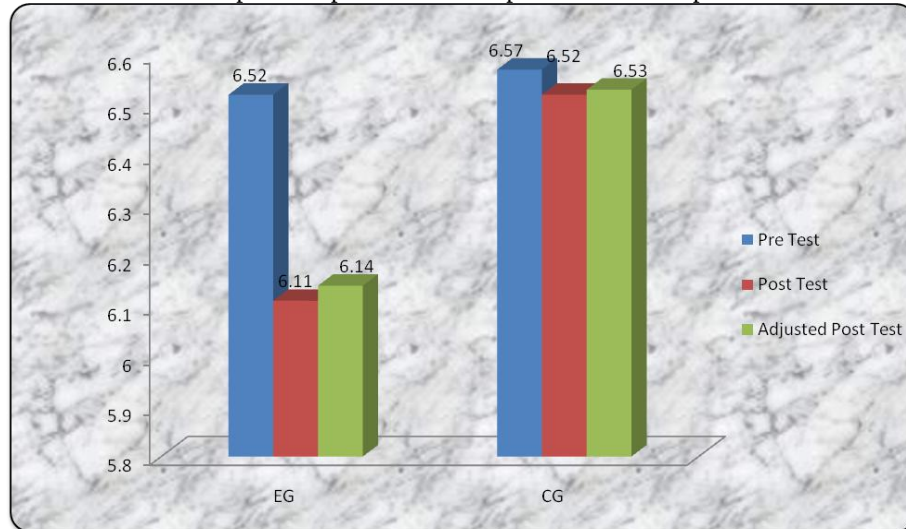


Table 2: Anova between Experimental Group and Control Group on Agility of Football Players for Pre, Post and Adjusted Test

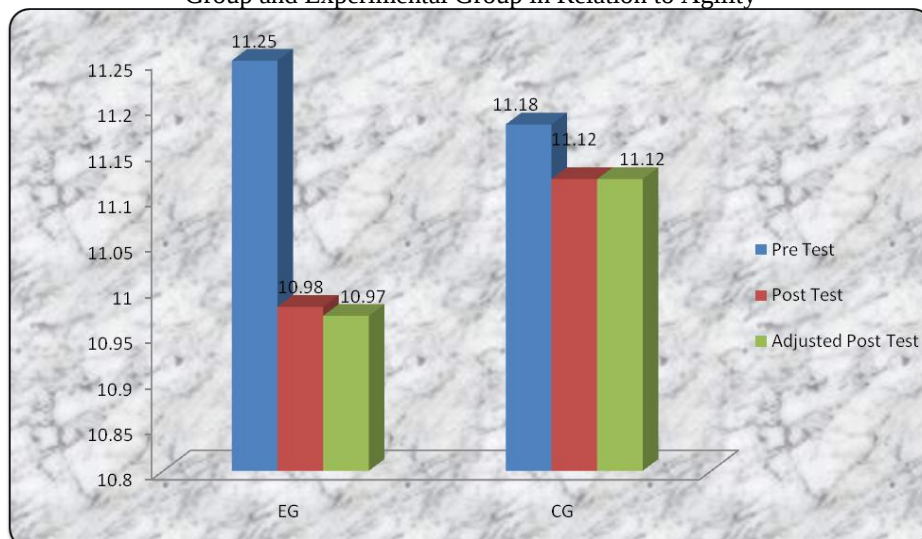
|                    | Experimental Group | Control Group | Source of Variance | Sum of Squares | df | Mean Square | F        |
|--------------------|--------------------|---------------|--------------------|----------------|----|-------------|----------|
| Pre Test Mean      | 11.25              | 11.18         | BG                 | 0.245          | 1  | 0.245       | 0.297    |
|                    |                    |               | WG                 | 31.250         | 38 | 0.822       |          |
| Post Test Mean     | 10.98              | 11.12         | BG                 | 160.100        | 1  | 160.100     | 193.751* |
|                    |                    |               | WG                 | 31.400         | 38 | 0.826       |          |
| Adjusted Post Mean | 10.97              | 11.12         | BG                 | 160.416        | 1  | 160.416     | 193.065* |
|                    |                    |               | WG                 | 30.727         | 37 | 0.830       |          |

\* Significant at 0.05 level.

df: 1/37= 4.10

Table 2 revealed that the obtained 'F' value of 193.065 was found to be significant at 0.05 level with df 1, 37 as the tabulated value of 4.10 required to be significant at 0.05 level. The same table indicated that there was a significant difference in adjusted means of agility of football players between experimental group and control group. The graphical representation of data has been presented in figure 2.

Figure 2: Comparisons of Pre – Test Means Post – Test Means and Adjusted Post – Test Means for Control Group and Experimental Group in Relation to Agility



**Conclusion:**

On the basis of findings and within the limitations of the study the following conclusions were drawn:

- ✓ The strength training had positive impact on speed and agility among football players.
- ✓ The experimental group showed better improvement on speed and agility among football players than the control group.

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