

EFFECT OF SHORT TERM PLYOMETRIC TRAINING PROGRAM ON SPEED, STRENGTH AND AGILITY PERFORMANCE IN SOCCER PLAYERS

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DOI : 10.48047/IJFANS/V10/ISS10/002**ABSTRACT**

This study under investigation involved the experimentation of plyometric training programme on Speed, Strength and Agility performance in soccer players. For this study 21 male soccer players were selected from summer soccer coaching camp held at Yellandu, Kothagudem district, age between 14-19 years. The selected 21 subjects were randomly divided into two groups one group was experimental group (n=11) another group was control group (n=10). Plyometric training was given to the experimental group control group did not take any training. The training programme was carried out weekly 3 days for 6 weeks, speed measured by 50mts sprint start, strength measured by standing broad jump, agility measure by Illinois agility test. After completed of six weeks training post-test taken from control group and experimental group. Our results notice that there is a significant difference 0.5 level in speed, strength, agility performance of soccer players due to short term plyometric training.

KEY WORDS : Plyometric, Illinois, speed, strength, agility.**Introduction:**

Speed and strength are integral components of fitness found in varying degrees in virtually all athletic sporting movements. Simply put the combination of speed and strength is power. For many years coaches and athletes have sought to improve power in order to enhance performance. Throughout this century and no doubt long before, jumping, bounding and hopping exercises have been used in various ways to enhance athletic performance. In recent years the distinct method of training for power or explosiveness has been termed plyometric, whatever the origins of the word the term is used to describe the method of training which seeks to enhance the explosive reaction of the individual through powerful muscular contractions as a result of rapid eccentric contraction. (Essentials of phy.ed .2006)

Objective of the study:

To investigate the effect of short term plyometric training program on speed, strength and agility performance in soccer players.

Table 1 Demographic data. Data are means (\pm Sd)

| | control group | plyometric group |
|-------------|---------------|------------------|
| Age(yrs) | 16.8(3.10) | 16.9(2.60) |
| Height(mts) | 1.49(10.22) | 1.51(12.03) |
| Weight(kgs) | 46.6(10.06) | 46.45(10.48) |

Table 2 Summary of plyometric training program

| Week 1 and 2 1-2 sets/10 repetition | Week 3 and 4 1-2 sets/8 repetition | Week 5 and 6 1-2 sets/6 repetition |
|--|---------------------------------------|---------------------------------------|
| Double leg jump forward | Ankle jump | single leg cone hope |
| Double leg jump backward | lateral cone hope | single leg zig-zag drill |
| Double leg jump sideward | Zig-Zag jump drill | jump and turn 180 degree |
| Double leg X hope | jump and turn 90 degree | tuck jumps, Alternate bounding |
| Arrow cone drill | power skipping | spilt squat jump, X drill |

Methodology

This study under investigation involved the experimentation of plyometric training programme on Speed, Strength and Agility performance in soccer players. For this study 21 male soccer players were select from summer soccer coaching camp held at Yellandu, kothagudem district, Telangana. The age group between 14 to 19 years, height 128 to 170 cms. Mass 30 to 69 kg. The selected 21 subjects were randomly divided in to two groups one group was experimental group (n=11) another group was control group (n=10). Plyometric training was given to the experimental group, control group did not take any training. The training programme was carried out for 3 days for week for 6 weeks, speed measured by 50 mts dash, strength measured by standing broad jump, agility measure by Illinois agility test. After completed of six weeks training post-test taken from control group and experimental group. We want to test there is any deference between plyometric group and control group. We use paired t test to give the significance about these two variables. H0 there is no significance deference between two variables. H1 there is significance deference between two variables. In our results we reject H0 for all cases.

| | | Paired Differences | | | | | t | Df | Sig (2-tailed) |
|--------|---|--------------------|----------------|-----------------|---|---------|--------|----|-------------------|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | Speed pre Plyometric group Control group | - .63900 | 1.25995 | .39843 | - 1.54031 | .26231 | -1.604 | 9 | .143 |
| Pair 2 | Speed post Plyometric group Control group | - 1.7470 0 | 1.26994 | .40159 | - 2.65546 | -.83854 | -4.350 | 9 | .002 |
| Pair 3 | Strength pre Plyometric group Control group | - .44000 | .67150 | .21235 | -.92036 | .04036 | -2.072 | 9 | .068 |

| | | | | | | | | | | |
|--------|------------------|--------------------------------------|-------------|---------|--------|--------------|---------|-------|---|------|
| Pair 4 | Strength post | Plyometric group Control group | .16400 | .61170 | .19344 | -.27359 | .60159 | .848 | 9 | .419 |
| Pair 5 | Agility pre | Plyometric group Control group | 1.1800 0 | 2.79977 | .88536 | -.82283 | 3.18283 | 1.333 | 9 | .215 |
| Pair 6 | Agility post | Plyometric group Control group | - .18800 | 2.88755 | .91312 | - 2.25363 | 1.87763 | -.206 | 9 | .841 |

Result&discussions

Table3

Above table shows the paired difference between plyometric group, control group. paired t value speed pre -1.604,post -4.350, strength pre -2.072,post .848, agility pre 1.333,post -.206.

Conclusions

We consider 0.5 level of significance. We give the conclusions are short term plyometric training improve the speed, strength, agility performance in soccer players. It is useful for soccer players.

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