

**EFFECT OF RUNNING ABC DRILLS ASSOCIATED WITH SPEED
TRAINING ON SPEED PARAMETERS AMONG
INTERCOLLEGIATE ATHLETES**

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ABSTRACT

The purpose of the study was to find out the effect of running ABC drills associated with speed Training on speed parameters among inter collegiate athletes. Twenty four male students studying from Department of Physical Education and Centre for Research, H. H. The Rajah's College, Pudukkottai were selected randomly as subjects. The age of the subjects ranged from 17 to 25 years. The selected subjects were divided into two groups. Group I underwent running ABC drills associated with speed training and Group II acted as control. The experimental group was subjected to the running ABC drills associated with speed training for alternative three days per week up to six weeks. The running ABC drills associated with speed training was selected as independent variable and the criterion variables speed, acceleration and speed endurance were selected as dependent variables and the selected dependent variables were assessed by the standardized test items. speed was assessed by 50m run and the unit of measurement in seconds, acceleration was assessed by 30m fly and the unit of measurement in seconds and speed endurance was assessed by 150m run and the unit of measurement in seconds. The experimental design selected for this study was pre and post test randomized design. The data were collected from each subject before and after the training period and statistically analyzed by using dependent 't' test and analysis of covariance (ANCOVA). It was found that there was a significant improvement and significant different exist due to the effect of running ABC drills associated with speed training on speed parameters among inter collegiate athletes when compared to control group.

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INTRODUCTION

Running form can be improved through form of drills that coordinate the movement of the fundamental movements of the athletes. The drill developed by Coach *Gerard Mach* in the 1950s. The running ABC drills are simple to and cause little impact stress to the body. The drills commonly referred to as the ABCs of running, it has various phases like gait cycle, knee lift, upper leg motion, and push off. Through the construction of each phase the athletes may develop the kinesthetic performance, and also they can promote neuromuscular response. Even they emphasize the development of strength. A perfect running ABC drill should lead to proper running form because the good beginners may become the great runners. Originally these drills were designed for sprinters, but they can be used by all runners. Drills should be performed once or twice a week and can be completed in 15 minutes. **(Joe Puleo and Patrick Milroy)**

The running ABC technique drills for runners are usually performed by using three activities like marching (walking), skipping and running. Each activity helps to develop important components of proper and economical running technique. The exercise serves as an excellent warm – up for both training and competitive situations. Running drills should develop the specific characteristics of technically sound runners, including upright posture of the running stride, proper knee action and leg action and the coordinated dynamic balance associated with shifting weight from one leg to other. The drills help to develop the important proprioceptive and kinesthetic (body awareness) abilities of a runner. At the beginning stage these drills may perform slowly for the development of proper technique. The proper technique is gradually carried over to fastest speed. Speed is the ability to move quickly across the ground or move limbs as minimum possible time. Speed is not just how fast someone can run (or cycle, swim etc.), but is dependent on their acceleration (how quickly they can accelerate from a stationary position), maximal speed of movement, and also speed maintenance (minimizing deceleration). Movement speed requires good strength and power, but also too much of body weight and air resistance can resist the speed. In addition, the fast twitch muscle fibers have the vital role to have efficient mechanics of movement to optimize the muscle power for the most economical movement technique. The common people may think that, the elite sprinters have the “natural” gift of speed, for many cases this is true. Genetics are may be the most

important determinant of sprinting potential. However, the improvement of speed ability is not a easy thing, it is the long process. The world class sprinters are produced by their coach made by this procedure.

METHODOLOGY

To achieve the purpose, twenty four men inter collegiate athlete studying from Department of Physical Education and Centre for Research, H. H. The Rajah's College, Pudukkottai were selected randomly as subjects. The age of the subjects ranged from 17 to 25 years. They were assigned randomly into two groups (group I) underwent running ABC drills associated with speed training and (group II) acted as control of twelve subjects each. The experimental group was subjected to the training during morning hours for alternative three days for six weeks and group II acted as control. The running ABC drills associated with speed training was selected as independent variable and the criterion variables speed, acceleration and speed endurance were selected as dependent variables and the selected dependent variable were assessed by the standardized test items. speed was assessed by 50m run and the unit of measurement in seconds, acceleration was assessed by 30m fly and the unit of measurement in seconds and speed endurance was assessed by 150m run and the unit of measurement in seconds. The experimental design selected for this study was pre and post test randomized design. The data were collected from each subject before and after the training period and statistically analyzed by using dependent 't' test and analysis of covariance (ANCOVA).

RESULTS AND DISCUSSIONS

The data pertaining to the variables in this study were examined by using dependent 't' test to find out the significant improvement and analysis of covariance (ANCOVA) for each variables separately in order to determine the difference and tested at .05 level of significance. The analysis of dependent 't' test on data obtained for speed, acceleration and speed endurance of the pre test and post test means of experimental and control group have been analyzed and presented in Table I.

TABLE- I

MEAN AND DEPENDENT 't' TEST OF EXPERIMENTAL AND CONTROL GROUPS ON SELECTED VARIABLES

| Variables | Mean | Jumping ABC drills Associated with Plyometric Training Group | Control Group |
|------------------------|-----------------|---------------------------------------------------------------------|----------------------|
| Speed | Pre test Mean | 7.23 | 7.32 |
| | Post test Mean | 7.09 | 7.34 |
| | 't' test | 6.12* | 1.48 |
| Acceleration | Pre test Mean | 5.58 | 5.60 |
| | Post test Mean | 5.46 | 5.62 |
| | 't' test | 9.57* | 1.48 |
| Speed Endurance | Pre test Mean | 21.92 | 21.77 |
| | Post test Mean | 21.77 | 21.78 |
| | "t" test | 9.95* | 1.48 |

*Significant at 0.05 level of confidence (11) = 2.201

The obtained 't' ratio value of experimental group is higher than the table value, it is understood that jumping ABC drills associated with speed training had significantly improved the performance of speed, acceleration and speed endurance. However, the control group has no significant improvement as the obtained 't' value is less than the table value; because it was not subjected to any specific training. The analysis of covariance on the data obtained on speed, acceleration and speed endurance due to the effect of jumping ABC drills associated with speed training and control groups have been analysed and presented in Table II.

TABLE- II
ANALYSIS OF COVARIANCE OF EXPERIMENTAL AND CONTROL
GROUPS ON SELECTED VARIABLES

| Variables | Adjusted Post Test Means | | Source of Variance | SS | df | Mean Squares | 'F'- Ratio |
|-----------------|---------------------------------------------------|---------------|--------------------|-------|----|--------------|------------|
| | Jumping ABC Drills Associated with Speed Training | Control Group | | | | | |
| Speed | 7.13 | 7.30 | Between | 0.152 | 1 | 0.052 | 38.72* |
| | | | Within | 0.08 | 21 | 0.04 | |
| Acceleration | 5.47 | 5.61 | Between | 0.122 | 1 | 0.122 | 67.79* |
| | | | Within | 0.038 | 21 | 0.002 | |
| Speed Endurance | 21.69 | 21.85 | Between | 0.152 | 1 | 0.152 | 69.21* |
| | | | Within | 0.046 | 21 | 0.002 | |

*Significant at .05 level of confidence, $df(1, 21) = 4.32$

Table II shows that the obtained 'F' ratio value are 38.72, 67.79 and 69.21 which are higher than the table value 4.32 with df 1 and 21 required to be significant at 0.05 level. Since the obtained value of 'F' ratio is higher than the table value, it indicates that there is significant difference among the adjusted post- test means of running ABC drills associated with speed training and control group on speed, acceleration and speed endurance.

To the most sports people, running ABC drills associated with speed training offered a better method of developing speed, acceleration and speed endurance. The present study also produced the same result.

CONCLUSIONS

1. The running ABC drills associated with speed training had significantly improved the speed, acceleration and speed endurance.
2. There was significant difference among the adjusted post – test means of running ABC drills associated with speed training and control group on speed, acceleration and speed endurance.

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