



## INFLUENCE OF INTERVAL TRAINING ON SPEED AND AGILITY AMONG COLLEGE MEN STUDENTS

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### Abstract:

The purpose of the study was designed to examine the effect of interval training on speed and agility of college men students. For the purpose of the study, thirty men students from Sri Meenakshi Vidiyal Arts and Science College, Valanadu Kaikatti, Tiruchirapalli, Tamil Nadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of the fifteen subjects. Group I underwent interval training for three days per week for twelve weeks. Group II acted as control who did not undergo any special training programme apart from their regular physical education programme. The following variables namely speed and agility were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using 50 mts run and shuttle run respectively at prior to and immediately after the training programme. The analysis of covariance was used to analyze the significant difference, if any among the groups. The .05 level of confidence was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance, which was considered appropriate. The results of the study showed that there was a significant difference between interval training group and control group on speed and agility. And also it was found that there was a significant improvement on speed and agility due to twelve weeks of interval training.

**Key Words:** Interval Training, Speed, Agility, College Men Students

### Introduction:

Interval training is a popular and effective method of exercise that involves alternating between periods of high-intensity effort and periods of lower-intensity recovery or rest. Interval training challenges the cardiovascular system by pushing the heart rate up during intense intervals, leading to improved heart and lung function over time. This can enhance overall cardiovascular endurance and efficiency. Interval training can boost metabolism not only during the workout but also post-exercise.

The body continues to burn calories at an elevated rate during the recovery period after intense intervals, known as excess post-exercise oxygen consumption (EPOC). Intense intervals in interval training help improve anaerobic capacity, which refers to the body's ability to perform high-intensity exercises without oxygen. This can benefit athletes in sports that require short bursts of intense effort. Interval training offers variety in workouts by allowing individuals to mix different exercises, speeds, and durations.

This variety can help prevent boredom and keep individuals motivated to stick to their exercise routine. Interval training can be adapted to various fitness levels, making it accessible to beginners as well as seasoned athletes. Intensity, duration, and recovery periods can be adjusted based on individual fitness levels and goals. Unlike steady-state cardio, which can sometimes lead to muscle loss, interval training helps preserve muscle mass while promoting fat loss. This is particularly important for individuals aiming to improve body composition.

### Methodology:

The purpose of the study was designed to examine the effect of interval training on speed and agility of college men students. For the study, thirty men students from Sri Meenakshi Vidiyal Arts and Science College, Valanadu Kaikatti, Tiruchirapalli, Tamil Nadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of fifteen subjects. Group I underwent interval training for three days per week for twelve weeks. Group II acted as control who did not undergo any special training programme apart from their regular physical education programme. The following variables namely speed and agility were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using 50 mts run and shuttle run respectively at prior to and immediately after the training programme. The analysis of covariance was used to analyze the significant difference if any among the groups. The .05 level of confidence was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance, which was considered appropriate.

### Analysis of the Data:

#### Speed:

The analysis of covariance on speed of the pre and post test scores of interval training group and control group have been analyzed and presented in table 1.

Table 1: Analysis of Covariance of the Data on Speed of Pre and Post Tests Scores of Interval Training and Control Groups

| Test               | Interval Training Group | Control Group | Source of Variance | Sum of Squares | df | Mean Squares | Obtained 'F' Ratio |
|--------------------|-------------------------|---------------|--------------------|----------------|----|--------------|--------------------|
| Pre Test           |                         |               |                    |                |    |              |                    |
| Mean               | 7.52                    | 7.50          | Between            | 0.0030         | 1  | 0.0030       | 0.12               |
| S.D.               | 0.16                    | 0.10          | Within             | 0.6840         | 28 | 0.0244       |                    |
| Post Test          |                         |               |                    |                |    |              |                    |
| Mean               | 7.29                    | 7.48          | Between            | 0.2539         | 1  | 0.2539       | 10.69*             |
| S.D.               | 0.14                    | 0.13          | Within             | 0.6651         | 28 | 0.0238       |                    |
| Adjusted Post Test |                         |               |                    |                |    |              |                    |
| Mean               | 7.29                    | 7.48          | Between            | 0.2898         | 1  | 0.2898       | 64.17*             |
|                    |                         |               | Within             | 0.1219         | 27 | 0.0045       |                    |

\* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 2 and 28 and 2 and 27 are 3.34 and 3.35 respectively).

The table 1 shows that the adjusted post-test means of interval training group and control group are 7.29 and 7.48 respectively on speed. The obtained "F" ratio of 54.17 for adjusted post-test means is more than the table value of 3.35 for df 1 and 27 required for significance at .05 level of confidence on speed.

The results of the study indicated that there was a significant difference between the adjusted post-test means of interval training group and control group on speed.

#### Agility:

The analysis of covariance on agility of the pre and post test scores of interval training group and control group have been analyzed and presented in table 2.

Table 2: Analysis of Covariance of the Data on Agility of Pre and Post Tests Scores of Interval Training and Control Groups

| Test               | Interval Training Group | Control Group | Source of Variance | Sum of Squares | df | Mean Squares | Obtained 'F' Ratio |
|--------------------|-------------------------|---------------|--------------------|----------------|----|--------------|--------------------|
| Pre Test           |                         |               |                    |                |    |              |                    |
| Mean               | 8.35                    | 8.37          | Between            | 0.005          | 1  | 0.005        | 0.43               |
| S.D.               | 0.11                    | 0.09          | Within             | 0.347          | 28 | 0.012        |                    |
| Post Test          |                         |               |                    |                |    |              |                    |
| Mean               | 8.19                    | 8.35          | Between            | 0.192          | 1  | 0.192        | 11.52*             |
| S.D.               | 0.11                    | 0.10          | Within             | 0.467          | 28 | 0.017        |                    |
| Adjusted Post Test |                         |               |                    |                |    |              |                    |
| Mean               | 8.20                    | 8.34          | Between            | 0.150          | 1  | 0.150        | 32.45*             |
|                    |                         |               | Within             | 0.125          | 27 | 0.005        |                    |

\* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 2 and 28 and 2 and 27 are 3.34 and 3.35 respectively).

The table 2 shows that the adjusted post-test means of interval training group and control group are 8.20 and 8.34 respectively on agility. The obtained "F" ratio of 32.45 for adjusted post-test means is more than the table value of 3.35 for df 1 and 27 required for significance at .05 level of confidence on agility.

The results of the study indicated that there was a significant difference between the adjusted post-test means of interval training group and control group on agility.

#### Conclusions:

- There was a significant difference between interval training group and control group on speed and agility.
- And also it was found that there was a significant improvement on selected criterion variables such as speed and agility due to interval training.

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