

# Efficacy of Fartlek Training on selected Physical and Psychological Variables Among the RSA Academic Respondents in Trichy

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**Abstract** - The study was carried out to identify the effect of fartlek training on selected psychological variables among the academic respondents in trichy.

**Materials and Methods:** To achieve the purpose of the study, thirty male respondents were selected from Rock fort Star Athletic Academic in Trichy district, Tamilnadu state. The age ranged between 18 to 23 years. The subjects (N=30) were randomly selected and divided into two groups. The experimental group (N=15) underwent fartlek training during morning hours weekly three days over six weeks. The control group (N=15) was left out from the training. The criterion variables selected for this study were physical variable as Cardiovascular Endurance and psychological variables such as Trait anxiety. The following standardized test items and questionnaire were used to assess the dependent physical variable such as Cooper's 12 minutes Run/Walk and psychological variables such as Trait anxiety.

**Results:** The data were collected before and the after experimental period. The data pertaining to the variable for this study were examined by using analysis covariance (ANCOVA). The level of confidence was fixed at 0.05 levels for all the cases.

**Conclusions:** The result of the study revealed that there was a significant improvement on selected physical variables such as cooper 12 minutes run/walk and psychological variable such as trait anxiety level decrease to improve the higher level of performance of experimental group due to the influence of fartlek training when compared to control group of criterion variables.

**Index Terms** - Fartlek training, Cooper 12 minutes run/walk, Trait anxiety and ANCOVA.

## I.INTRODUCTION

A trait is a characteristic way in which an individual perceives, feels, believes or acts. When we casually describe someone, we are likely to use trait terms.

Trait theorists generally assume that traits are relatively stable over time, traits differ among individuals, traits influence behaviour. The trait that dominates and shapes a person's behaviour. The general characteristic is found to some degree in every person and basic building blocks that shape most of our behaviour although they are not as overwhelming as cardinal traits.

Trait anxiety represents worrying about future events, close to the concepts of neuroticism, anxiety disorders are a group of mental disorders characterized by the feeling of anxiety and fear (V.Satyanarayana).

Cardiovascular endurance is nothing but the measurement of your heart's strength. It also implies the ability of the body to deliver oxygen and nutrients to tissue and to remove wastes. Physical fitness helps you achieve cardiovascular endurance and helps to increase the oxygen flow to all the body muscles. The efficiency with which the body delivers oxygen and nutrients needed for muscular activity and transports waste product from the cells.

Anxiety can be further sub-divided into somatic cognitive anxieties. Somatic anxiety refers to the bodily symptoms of autonomic reactivity butterflies, sweating, increased heart - rate and shaking. Cognitive anxiety refers to negative concerns about performance, lack of concentration and poor attention. Levels of anxiety can affect athletes individually, there is not a single optimal level of anxiety, the effect of anxiety on performance is largely attributable to whether the athletes perceive anxiety to be facilitating or debilitating. (J.S.Pattankar).

## II. MATERIALS AND METHODS

The study was carried out to identify the effect of fartlek training on selected psychological variables among the academic respondents in trichy.

Selection of the respondents: To achieve the purpose of the study, thirty male respondents were selected from Rock fort Star Athletic Academic in Trichy district, Tamilnadu state. The age ranged between 18 to 23 years.

Sample Size and design: The subjects (N=30) were randomly selected and divided into two groups. The experimental group (N=15) underwent fartlek training during morning hours weekly three days over six weeks. The control group (N=15) was left out from the training.

Selection of variables: The criterion variables selected for this study were physical variable as Cardiovascular Endurance and psychological variables such as Trait anxiety. The following standardized test items and questionnaire were used to assess the dependent physical variable such as Cooper's 12 minutes Run/Walk and psychological variables such as Trait anxiety.

### III. RESULT (STATISTICAL AND INTERPRETATION OF THE DATA)

The data were collected before and the after experimental period. The data pertaining to the variable for this study were examined by using dependent t-test and analysis covariance (ANCOVA). The level of confidence was fixed at 0.05 levels for all the cases.

TABLE-I THE SUMMARY OF MEAN VALUE FOR THE PRE AND POST OF CARDIORESPIRATORY ENDURANCE OF EXPERIMENTAL AND CONTROL GROUP

| Group              | Number | Mean     |           |
|--------------------|--------|----------|-----------|
|                    |        | Pre test | Post test |
| Experimental group | 15     | 5.4      | 6.1       |
| Control group      | 15     | 4.5      | 4.2       |

Table -I indicate that the experimental group of pre and post-test mean value is 5.4 and post-test value is 6.1 and control group of pre and post mean value is 4.5 and 4.2 respectively. Hence, it is understood that fartlek training group were a significant difference between the mean score of pre and post-test of cardiorespiratory endurance.

TABLE-II ANALYSIS OF COVARIANCE ON CARDIORESPIRATORY ENDURANCE OF CONTROL AND EXPERIMENTAL GROUP

| Variable                    | Adjusted post-test mean |               | Sum of square | Source of variance | df | Mean square | F-ratio |
|-----------------------------|-------------------------|---------------|---------------|--------------------|----|-------------|---------|
|                             | Experimental group      | Control group |               |                    |    |             |         |
| Cardiorespiratory endurance | 6.1                     | 5.4           | Between       | 835.863            | 1  | 835.863     | 10.54*  |
|                             |                         |               | Within        | 971.470            | 27 | 35.980      |         |

\*Significant at 0.05 level (The table value required for significance at 0.05 level with df 1 and 27 is 4.28)

It is observed from the above table that the adjusted post-test means of experimental and control groups were 6.1 and 5.4 respectively. The obtained 'F' ratio value of adjusted post means of the experimental and control group on cardiorespiratory endurance was 10.54 which is higher than the table value of 4.28 with 1 and 27 at 0.05 levels of confidence. Since the obtained 'F' value is higher than the table value, it indicates that there existed a significant difference in cardiorespiratory endurance between the experimental and control groups. Hence it is inferred that the experimental group which underwent fartlek training had significantly improved the cardiorespiratory endurance.

TABLE - III GRAPHICAL REPRESENTATION FOR PRE AND POST TEST OF EXPERIMENTAL GROUP MEAN VALUE OF CARDIORESPIRATORY ENDURANCE

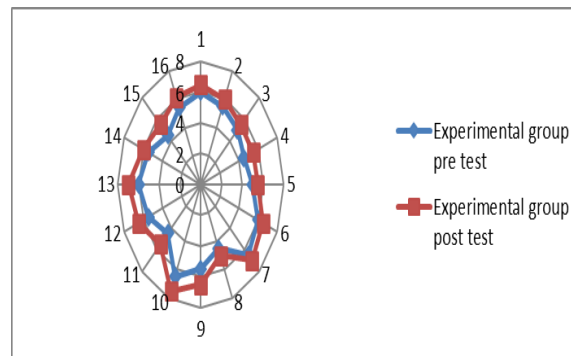


TABLE-IV THE SUMMARY OF MEAN VALUE FOR THE PRE AND POST OF TRAIT ANXIETY OF EXPERIMENTAL AND CONTROL GROUP

| Group              | Number | Mean     |           |
|--------------------|--------|----------|-----------|
|                    |        | Pre test | Post test |
| Experimental group | 15     | 43.2     | 42.3      |
| Control group      | 15     | 35.5     | 34.0      |

Table -I indicate that the experimental group of pre and post test mean value is 43.2 and post test value is 42.3 and control group of pre and post mean value is 35.5 and 34.0 respectively. Hence, it is understood that fartlek training group had significant difference between the mean score of pre and post test of Trait anxiety.

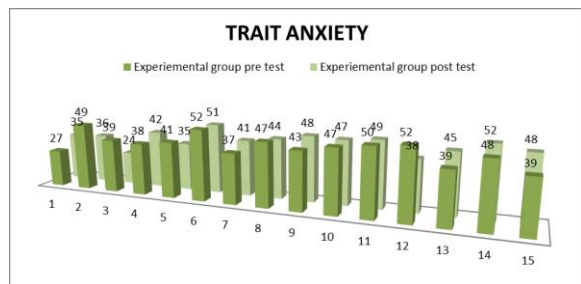
TABLE-V ANALYSIS OF COVARIANCE ON TRAIT ANXIETY OF CONTROL AND EXPERIMENTAL GROUP

| Variable      | Adjusted post-test mean |               | Sum of square | Source of variance | df | Mean square | F-ratio |
|---------------|-------------------------|---------------|---------------|--------------------|----|-------------|---------|
|               | Experimental group      | Control group |               |                    |    |             |         |
| Trait Anxiety | 42.3                    | 34.0          | Between       | 174.965            | 1  | 174.965     | 2.89*   |
|               |                         |               | Within        | 1632.368           | 27 | 60.458      |         |

\*Significant at 0.05 level (The table value required for significance at 0.05 level with df 1 and 27 is 4.28)

It is observed from the above table that the adjusted post test means of experimental 42.3 and control groups 34.0 were and respectively. The obtained 'F' ratio value of 2.89 adjusted post means of the experimental and control group on trait anxiety was which is lesser than the table value of 4.28 with 1 and 27 at 0.05 levels of confidence. Since the obtained 'F' value is lesser than the table value, it indicates that there existed a significant difference in trait anxiety between the experimental and control groups. Hence it is inferred that the experimental group which underwent fartlek training had significantly decreased the level of Trait anxiety.

TABLE – VI GRAPHICAL REPRESENTATION FOR PRE AND POST TEST OF EXPERIMENTAL GROUP MEAN VALUE OF TRAIT ANXIETY



#### IV. DISCUSSION ON FINDINGS

Fartlek training helps us to train our body to react to changing intensities which can be important in few sports. The academic students had farlek training in between of the days. To feel comfortable and make a mind refresh such training more useful for the trainers. M.Gopi1 & Dr. M.Rajkumar 2017., it is inferred that ball badminton players had significantly improved the performance level of regular practice of fartlek training. Ramesh K.A., 2013 It shows that endurance has improved significantly for the experimental group as a result of fartlek training. Suresh D., 2020 the result of the study indicates that there was a significant difference among experimental and control groups on endurance. This study reveals that significant difference between the pre and post means valve of trait anxiety and cardiorespiratory endurance. The regular practice of fartlek training was significantly improved the endurance among the academic respondents. Trait anxiety psychological variables were significant decreased the level of anxiety before the competition.

#### V. CONCLUSION

1. The result of the study reveals a significant improvement on selected physical variables such as cardiorespiratory endurance by the influence of fartlek training.
2. The study reveals that selected psychological variables such as trait anxiety decreased the level of anxiety due to the influence of fartlek training.

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