



EFFECT OF 12 WEEKS LONG DISTANCE TRAINING AND PRANAYAMA PRACTICES ON ATHLETIC PERFORMANCE

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ABSTRACT The aim of the study was designed to find out the effect of 12 weeks long distance training and pranayama practices on athletic performance. To attain the purpose, Forty five (N=45) athletes who have participated Visvesvaraya Technological University, Belagavi, Karnataka inter-collegiate athletic meet during the academic year 2017-2018 were selected randomly as subjects. Their age ranged from 18 to 21 years. The subjects were assigned at random into three groups of fifteen each (n=15). Group-I underwent Long Distance Training (n=15), Group-II underwent Pranayama Practice (n=15) and Group-III acted as Control. Among various athletic performance parameters Speed only selected and it was assessed through 50 meters run test. The Experimental groups underwent their respective training for 12 weeks duration. And the number of session was conformed into five days per week. All the subjects were tested prior to and immediately after the training for the selected variable. Data were collected and statistically analyzed using ANCOVA. Scheffe's post hoc test was applied to determine the significant difference between the paired means. In all the cases 0.05 level of significance was fixed. The results of the study showed that there was a significant difference among all the Experimental groups' namely Long Distance Training and Pranayama Practices. Further the results showed Long Distance Training group was found to have greater impact on the group concerned than the Pranayama Practices group and Control group in enhancing the performance of Speed.

KEYWORDS : Long Distance Training, Pranayama Practices, Speed

INTRODUCTION

Distance runners have traditionally focused their training on improving cardiovascular and muscular endurance. The principle of training specificity suggests improvement in endurance performance may be achieved most effectively through aerobic training, which, for the distance runner may include long distances at a moderate pace, or shorter distance but distances at a moderate pace, or shorter distance but combination of both. This type of aerobic training has been shown to impact several factors which are thought to determine success in distance running (Jones and Carter, 2000).

Long-distance running requires mental training as well as physical training, and runners need strategies to deal with fatigue, boredom, pain, performance anxiety, and negative thoughts. The repetitive nature of running allows the mind to wander and lose attention to proper running technique and breathing, making it difficult to notice poor running form. Long-distance running can also elicit fatigue and pain, which can trigger intrusive negative thoughts that interfere with running form, speed, and motivation (Driskell et al., 2004).

The Prana may be defined as the finest vital force in everything which becomes visible on the physical plane as motion and action and on the mental plane as thought. The word Pranayama, therefore, means the restraint of vital energies. It is the control of vital energy which tingles through the nerves of persons. It moves his muscles and causes him to sense the external world and think his internal thought. This energy is of such a nature that it may be called the vis viva of the animal organism. The control of this force is what is aimed at by the Yogins by means of Pranayama. He, who conquers this, is not only the conqueror of his own existence on the physical and mental plane, but the conqueror of the whole world. For, the Prana is the very essence of cosmic life, that subtle principle which evolved the whole universe into its present form and which is pushing it towards its ultimate goal (Sivananda, 2000).

TABLE – 1 ANALYSIS OF COVARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON SPEED OF EXPERIMENTAL GROUPS AND CONTROL GROUP

Test	Long Distance Training Group	Pranayama Practices Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Mean	7.38	7.42	7.42	Between groups	0.02	2	0.01	0.39
				Within groups	0.87	42	0.02	
Post-Test Mean	6.33	6.79	7.43	Between groups	9.17	2	4.58	168.31*
				Within Groups	1.14	42	0.03	
Adjusted Post-Test Mean	6.34	6.78	7.43	Between sets	8.86	2	4.43	173.74*
				Within Sets	1.05	41	0.03	

Pranayama is more than a simple breathing exercise. It is not merely breath control but is one of the powerful yogic techniques used to regulate the flow of energy, '*prana*' in the body to a higher frequency. Traditional *yogic* literature suggests four important aspects of breathing utilized in *Pranayama*. They are *Puraka* or inhalation, *Rechaka* or exhalation, *Anthar kumbhaka* or Internal Breath Retention and *Bahir kumbhaka* or External Breath Retention (Saraswati, 2002).

METHODOLOGY

For this study forty five (N=45) athletes who have participated Visvesvaraya Technological University, Belagavi, Karnataka inter-collegiate athletic meet during the academic year 2017-2018 were selected randomly as subjects. Their age ranged from 18 to 21 years. The subjects were assigned at random into three groups of fifteen each (n=15). Group-I underwent Long Distance Training (n=15), Group-II underwent Pranayama Practice (n=15) and Group-III acted as Control. The Experimental groups underwent their respective training for 12 weeks duration. And the number of session was conformed into five days per week. Among various athletic performance parameters Speed only selected and it was assessed through 50 meters run test. All the subjects were tested prior to and immediately after the training for the selected variable.

ANALYSIS OF THE DATA

The data collected from the experimental groups and control group on prior and after experimentation on selected variables were statistically examined by analysis of covariance (ANCOVA) was used to determine differences, if any among the adjusted post test means on selected criterion variables separately. Whenever they obtained f-ratio value was significant the Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. In all the cases 0.05 level of significance was fixed.

The Analysis of covariance (ANCOVA) on Speed of Experimental Groups and Control group have been analyzed and presented in Table -1.

**Significant at 0.05 level of confidence*

Table value for df (2, 42) at 0.05 level = 3.22 Table value for df (2, 41) at 0.05 level = 3.23 (Speed scores are in Seconds)

The table-1 shows that the pre-test mean values on speed of Long Distance Training group, Pranayama Practices group and Control group are 7.38, 7.42 and 7.42 respectively. The obtained 'F' ratio of 0.39 for pre-test scores was less than the table value of 3.22 for degrees of freedom 2 and 42 required for significance at 0.05 level of confidence on Speed.

The post test mean values on speed of Long Distance Training group, Pranayama Practices group and Control group are 6.33, 6.79 and 7.43 respectively. The obtained 'F' ratio of 168.31 for post-test scores was higher than the table value of 3.22 for degrees of freedom 2 and 42 required for significance at 0.05 level of confidence on Speed.

The adjusted post-test means on Speed of Long Distance Training group, Pranayama Practices group and Control group are 6.34, 6.78 and 7.43 respectively. The obtained 'F' ratio of 173.74 for adjusted post-test scores was higher than the table value of 3.23 for degrees of freedom 2 and 41 required for significance at 0.05 level of confidence on Speed.

The results of the study indicate that there are significant differences among the adjusted post test means of Long Distance Training group, Pranayama Practices group and Control group in Speed performance.

To determine which of the paired means have a significant difference, the Scheffe's test is applied as Post hoc test and the results are presented in Table-2.

TABLE – 2 SCHEFFE'S TEST FOR THE DIFFERENCE BETWEEN PAIRED MEANS ON SPEED

Long Distance Training Group	Pranayama Practices Group	Control Group	Mean Difference	Confident Interval Value
6.34	6.78	---	0.44*	0.15
6.37	---	7.43	1.09*	
---	6.78	7.43	0.65*	

**Significant at 0.05 level of confidence.*

Table-2 shows that the mean difference values of Long Distance Training group and Pranayama Practices group, Long Distance Training group and Control group, Pranayama Practices group and Control group are 0.44, 1.09 and 0.65 respectively, which are greater than the confidence interval value of 0.15 on Speed at 0.05 level of confidence.

The results of the study showed that there was a significant difference between Long Distance Training group and Pranayama Practices group, Long Distance Training group and Control group, Pranayama Practices group and Control group.

The above data also reveal that Long Distance Training group had shown better performance than Pranayama Practices group and Control group in Speed.

The adjusted post mean values of Long Distance Training group, Pranayama Practices group and Control group on Speed are graphically represented in the Figure -1.

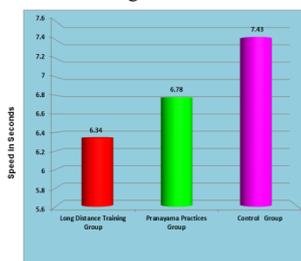


FIGURE: 1 The Adjusted Post Test Mean Values of Long Distance Training group, Pranayama Practices group and Control group on Speed

CONCLUSION

From the analysis of the data, the following conclusions were drawn.

1. Significant differences in achievement were found between Long Distance Training group, Pranayama Practices group and Control group in Speed.
2. The Experimental groups namely, Long Distance Training group and Pranayama Practices group had significantly decreased in Speed.
3. The Long Distance Training group was found to be better than the Pranayama Practices group and Control group in decreasing Speed.

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