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Effect of fartlek training on speed and cardio-respiratory endurance of university men students

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Abstract

The purpose of the study was to find out the effect of sand running on speed and cardio respiratory endurance. To achieve this purpose of the study, thirty men students studying in the Department of Physical Education and Sports Sciences, Gujarat Vidyapith, Ahmedabad, Gujarat, India were selected as subjects at random. The age of the subjects were ranged from 18 to 24 years. The selected subjects were divided into two equal groups of fifteen subjects each, such as sand running group and control group. The group I underwent sand running programme for three days per week for twelve weeks. Group II acted as control group did not participate any special training programmes apart from their regular physical education activities as per their curriculum. The following variables such as speed and cardio-respiratory endurance were selected as criterion variables. All the subjects of three groups were tested on selected criterion variables at prior to and immediately after the training programme by using 50 mts run and cooper's 12 minutes run/walk test respectively. The analysis of covariance was used to analyse the significant difference, if any between the groups. The level of significance to test the "F" ratio obtained by the analysis of covariance was tested at 05 level of confidence, which was considered as an appropriate. The results of the study revealed that there was a significant difference between sand running group and control group on selected speed and endurance parameters namely speed and cardiorespiratory endurance.

Keywords: Fartlek training, men, speed, cardiorespiratory endurance

Introduction

A training individual is in a better state of physical fitness than the individual who follows a sedentary, and inactive life. Fartlek Training exercise convergent and at the same time provides aerobic conditioning strength and endurance.

Fartlek is a Swedish term which means "speed play" and has been used by distance runners for years. Fartlek is a form of road running on cross-country running in which the runner, usually changes the pace significantly during the run.

Fartlek is similar to interval training in that short fast runs alternate with slow running or jogging recovery intervals. However, in Fartlek the running is done on the road or on parkland or bush tracks. There is no predetermined schedule to follow, but instead the athlete will set her/his own interval lengths and pace in response to their own feeling of the work load. An advantage of Fartlek is that the athlete can pace judgement skills. Also the athlete is free to experiment with pace and endurance, and to experience changes of pace

Methodology

The purpose of the study was to find out the effects of Fartlek Training on speed and cardio respiratory endurance. To achieve this purpose of the study, thirty men students studying in the Department of Physical Education and Sports Sciences, Gujarat vidyapith, Ahmedabad, Gujarat were selected as subjects at random. The age of the subjects ranged from 18 to 24 years. The selected subjects were divided into two equal groups of fifteen subjects each, such as Fartlek

Training group and control group. The selected subjects had undergone the fartlek training for 9 weeks with three days per week in alternate days. The fartlek training group trained for three alternative days in a week for 9 weeks. Fartlek training group after a warm up for 5 minutes underwent fartlek exercises such as hill running. Uphill and downhill, running on different

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surfaces having with variation of slow, medium, high, medium and slow speed walk and sprints alternatively and finished each session with cool down exercises from their regular physical education activities as per their curriculum. The following variables namely speed and cardiorespiratory endurance were selected as criterion variables. All the subjects of three groups were tested on selected dependent variables at prior to and immediately after the training programme. The analysis of covariance was used to analyse 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 as an appropriate. Fartlek training group underwent Fartlek training programme for 9 weeks for

three days per week. Training was given in the morning session. The training session includes warming up and limbering down. Every day the workout lasted for 45 to 60 minutes approximately. The subjects underwent training programmes as per the schedules under the strict supervision of the investigator. During experimental period control group did not participate in any of the special training.

Analysis of Data

The influence of Fartlek training on each criterion variables were analysed separately and presented below. The analysis of covariance on speed of pre and post tests for sand running group and control group was analysed.

Table 1: Analysis of covariance of the data on speed of pre and post test scores of Fartlek training group and control group

Test	Fartlek training group	Control Group	Source of Variance	Sum of Squares	DF	Mean Squares	Obtained ‘F’ Ratio
Pre Test Mean	8.20	8.30	Between	0.0013	1	0.0013	0.165
Pre Test SD	0.06	0.05	Within	0.22	28	0.0079	
Post Test Mean	8.12	8.30	Between	0.33	1	0.33	2.75
Post Test SD	0.08	0.05	Within	3.25	28	0.12	
Adjusted Post Test Mean	8.16	8.30	Between	0.184	1	0.184	0.479
			Within	10.351	27	0.384	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 1 and 28 and 1 and 27 are 4.20 and 4.215 respectively).

The table I shows that the adjusted post-test means of Fartlek training group and control group are 8.16 and 8.30 respectively. The obtained “F” ratio of 0.479 for adjusted post-test means is less than the required table value of 4.215

for DF 2 and 27 for significance at .05 level of confidence on speed. The results of the study indicated that there was no significant difference between the adjusted post-test means of Fartlek training group and control group on speed. The analysis of covariance on cardio-respiratory endurance of pre and post tests for Fartlek training group and control group was analysed and presented in Table II.

Table 2: Analysis of covariance of the data on cardio-respiratory endurance of pre and post test scores of Fartlek training group and control group

Test	Fartlek training group	Control Group	Source of Variance	Sum of Squares	DF	Mean Squares	Obtained ‘F’ Ratio
Pre Test Mean	1240.10	1231.40	Between	5603.37	1	5603.37	2.495
Pre Test SD	2.97	2.99	Within	62893.30	28	2246.19	
Post Test Mean	1410.50	1235.50	Between	86403.37	1	86403.37	55.16*
Post Test SD	2.10	2.98	Within	42293.30	28	1566.42	
Adjusted Post Test Mean	1395.10	1235.10	Between	42292.60	1	42292.60	9.18*
			Within	124403.00	27	4607.55	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 1 and 28 and 1 and 27 are 4.20 and 4.215 respectively).

The table II shows that the adjusted post-test means of Fartlek training group and control group are 1395.10 and 1235.10 respectively. The obtained “F” ratio of 9.18 for adjusted post-test means is more than the required table value of 4.215 for DF 2 and 27 for significance at .05 level of confidence on cardio respiratory endurance. The results of the study indicated that there was a significant difference between the adjusted post-test means of Fartlek training group and control group on cardio respiratory endurance.

Conclusions

Based on the findings of the study, the following conclusions were drawn.

1. There was a significant difference between Fartlek training group and control group on speed.
2. There was a significant difference between Fartlek training group and control group on cardio-respiratory

endurance.

3. There was a significant improvement on cardio-respiratory endurance due to Fartlek training.
4. There was no significant improvement on speed due to Fartlek training.

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