International Journal of Current Research and Modern Education (IJCRME)
Impact Factor: 6.925, ISSN (Online): 2455 - 5428
(www.rdmodernresearch.com) Volume 7, Issue 1, 2022

AFFLUENCE OF ALTERNATE PACE RUNNING ON SELECTED PHYSIOLOGICAL PARAMETERS AMONG COLLEGE MEN STUDENTS

Dr. R. Thanalakshmi
Associate Professor, Dr. Sivanthi Aditanar College of Physical Education, Tiruchendur, Thoothukudi, Tamilnadu

Cite This Article: Dr. R. Thanalakshmi, "Affluence of Alternate Pace Running on Selected Physiological Parameters Among College Men Students" International Journal of Current Research and Modern Education, Volume 7, Issue 1, Page Number 54-56, 2022.

Abstract:

The purpose of the study was designed to examine the effect of alternate pace running on speed and strength endurance among college men students. For the purpose of the study, thirty college men students from Dr. Sivanthi Aditanar College of Physical Education, Tiruchendur, Tamilnadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of the fifteen subjects. Group I underwent alternate pace running 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 strength endurance were selected as criterion variables. All the subjects of the two groups were tested on selected dependent variables namely speed and strength endurance by using 50 mts run and bend knee sit ups 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 alternate pace running group and control group on speed and strength endurance. And also, it was found that there was a significant improvement on selected criterion variables such as speed and strength endurance due to alternate pace running.

Key Words: Alternate Pace Running, Speed, Strength Endurance, College Men Students

Introduction:

Alternate pace running involves alternating between periods of higher-intensity running and lower-intensity recovery or rest. This form of training is beneficial for improving cardiovascular fitness, endurance, speed, and overall running performance. Short bursts of maximum effort running over a specific distance or time. Running at a challenging pace, closer to your maximum effort, for a set duration. Running uphill at a high intensity. A light and easy pace to allow for recovery between high-intensity intervals. Complete rest or very low-intensity activities like standing or walking in place during rest intervals.

Alternating between high and low-intensity intervals challenges the cardiovascular system, leading to increased heart health and improved aerobic capacity. High-intensity intervals help improve your running speed and power by pushing your limits and promoting adaptations in muscle strength and efficiency. The combination of high-intensity efforts and recovery periods can enhance calorie burn during and after the workout, supporting fat loss and weight management. Training at different paces helps improve your overall endurance, making it easier to sustain longer periods of running without fatigue. Alternate pace running can be a time-efficient way to achieve a high-quality workout in a shorter amount of time compared to steady-state running.

Methodology:

The purpose of the study was designed to examine the effect of alternate pace running on speed and strength endurance among college men students. For the purpose of the study, thirty college men students from Dr. Sivanthi Aditanar College of Physical Education, Tiruchendur, Tamilnadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of fifteen subjects. Group I underwent alternate pace running 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 strength endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables namely speed and strength endurance by using 50 mts run and bend knee sit ups 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 alternate pace running 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 Alternate Pace Running and Control Groups

Test	Alternate Pace Running Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	7.51	7.49	Between	0.0030	1	0.0030	0.14
S.D.	0.13	0.09	Within	0.5867	28	0.0210	
Post Test							
Mean	7.31	7.47	Between	0.2017	1	0.2017	9.13*
S.D.	0.15	0.14	Within	0.6189	28	0.0221	
Adjusted Post Test							
Mean	7.30	7.48	Between	0.2358	1	0.2358	45.55*
			Within	0.1398	27	0.0052	

* 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 alternate pace running group and control group are 7.30 and 7.48 respectively. The obtained "F" ratio of 45.55 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 alternate pace running group and control group on speed.

Strength Endurance:

The analysis of covariance on strength endurance of the pre and post test scores of alternate pace running group and control group have been analyzed and presented in table 2.

Table 2: Analysis of Covariance of the Data on Strength Endurance of Pre and Post Tests Scores of Alternate Pace Running and Control Groups

Test	Alternate Pace Running Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	36.67	36.93	Between	0.53	1	0.53	0.23
S.D.	1.49	2.23	Within	64.27	28	2.30	
Post Test							
Mean	44.80	37.13	Between	440.83	1	440.83	22.90*
S.D.	1.44	1.26	Within	538.97	28	19.25	
Adjusted Post Test							
Mean	44.91	37.03	Between	462.23	1	462.23	223.49*
			Within	55.84	27	2.07	

* 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 alternate pace running group and control group are 44.91 and 37.03 respectively. The obtained "F" ratio of 223.49 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 strength endurance. The results of the study indicated that there was a significant difference between the adjusted post-test means of alternate pace running group and control group on strength endurance.

Conclusion:

- There was a significant difference between alternate pace running group and control group on speed and strength endurance.
- And also it was found that there was a significant improvement on selected criterion variables such as speed and strength endurance due to alternate pace running.

References:

1. Billat, V. L., & Hill, D. W. (2012). Interval training for performance: a scientific and empirical practice. Special recommendations for middle- and long-distance running. Part I: aerobic interval training. Sports Medicine, 42(1), 13-38
2. Buchheit, M., Laursen, P. B., & Ahmed, N. U. (2013). Reliability and validity of GPS devices for measuring movement demands of team sports. Journal of Science and Medicine in Sport, 16(2), 185-189

3. Ingham, S. A., Whyte, G. P., & Pedlar, C. R. (2008). A case study of the physiological variables associated with the running speed of a multistage treadmill test in professional academy soccer players. International Journal of Sports Physiology and Performance, 3(4), 435-438.
4. Midgley, A. W., McNaughton, L. R., & Jones, A. M. (2007). Training to enhance the physiological determinants of long-distance running performance: can valid recommendations be given to runners and coaches based on current scientific knowledge? Sports Medicine, 37(10), 857-880.
5. Seiler, S., Jøranson, K., & Olesen, B. V. (2007). Adaptations to aerobic interval training: interactive effects of exercise intensity and total work duration. Scandinavian Journal of Medicine & Science in Sports, 17(6), 605-614.