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

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Abstract:

The purpose of the study was designed to examine the effect of alternate pace running on resting pulse rate and breath holding time among college men students. For the purpose of the study, thirty college men students from Yogi Vemana University, Kadapa, Andhra Pradesh, 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 resting pulse rate and breath holding time were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables namely resting pulse rate and breath holding time by using radial pulse and holding the breath for time 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 as an appropriate. The results of the study showed that there was a significant difference between alternate pace running group and control group on resting pulse rate and breath holding time. And also it was found that there was a significant improvement on selected criterion variables such as resting pulse rate and breath holding time due to alternate pace running.

Introduction:

Alternate pace running, is a dynamic and effective approach to cardiovascular exercise that involves alternating between periods of higher-intensity running and lower-intensity recovery or rest. This method adds variety to your running routine, challenging both your aerobic and anaerobic systems. By incorporating bursts of high-intensity effort followed by active recovery, alternate pace running can lead to improved cardiovascular fitness, increased endurance, and enhanced calorie burn. The concept is rooted in the idea that varying your running speed engages different energy systems in your body, promoting more comprehensive fitness gains. This approach is suitable for runners of various levels, allowing beginners to gradually increase their fitness and experienced runners to push their limits and breakthrough performance plateaus.

In alternate pace running, individuals typically perform short bursts of faster running, often referred to as high-intensity intervals, followed by slower-paced recovery periods. This method not only boosts cardiovascular health but also helps improve speed, stamina, and overall running efficiency. It's a versatile training technique that can be adapted to various fitness goals, from general fitness improvement to specific race preparation. As with any exercise regimen, it's crucial to customize alternate pace running to individual fitness levels and goals. This can involve adjusting the duration and intensity of intervals, as well as incorporating variations such as hill sprints or tempo runs. By incorporating alternate pace running into your routine, you can inject excitement into your workouts while reaping the numerous physical benefits associated with this dynamic form of exercise.

Methodology:

The purpose of the study was designed to examine the effect of alternate pace running on resting pulse rate and breath holding time among college men students. For the purpose of the study, thirty college men students from Yogi Vemana University, Kadapa, Andhra Pradesh, 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 resting pulse rate and breath holding time were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables namely resting pulse rate and breath holding time by using radial pulse and holding the breath for time 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 as an appropriate.

Analysis of the Data:

Resting Pulse Rate:

The analysis of covariance on resting pulse rate 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 Resting Pulse Rate 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	72.53	72.27	Between	0.53	1	0.53	0.90
S.D.	0.62	1.19	Within	16.67	28	0.60	
Post Test							
Mean	69.67	71.60	Between	28.03	1	28.03	13.31*
S.D.	0.85	0.80	Within	58.97	28	2.11	
Adjusted Post Test							
Mean	69.58	71.68	Between	31.98	1	31.98	35.08*
			Within	24.61	27	0.91	

* 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 69.58 and 71.68 respectively. The obtained "F" ratio of 35.08 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 resting pulse rate. 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 resting pulse rate.

Breath Holding Time:

The analysis of covariance on breath holding time 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 Breath Holding Time 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	43.27	42.87	Between	1.20	1	1.20	0.79
S.D.	1.34	0.93	Within	42.67	28	1.52	
Post Test							
Mean	48.07	43.13	Between	182.53	1	182.53	24.43*
S.D.	1.02	0.96	Within	209.20	28	7.47	
Adjusted Post Test							
Mean	47.97	43.23	Between	164.30	1	164.30	256.55*
			Within	17.29	27	0.64	

* 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 47.97 and 43.23 respectively. The obtained "F" ratio of 256.55 for adjusted post-test means is more than the table value of 3.35 for df 1 and 27 required for significance at 0.05 level of confidence on breath holding time. 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 breath holding time.

Conclusions:

- There was a significant difference between alternate pace running group and control group on resting pulse rate and breath holding time.
- And also it was found that there was a significant improvement on selected criterion variables such as resting pulse rate and breath holding time due to alternate pace running.

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