



IMPACT OF INTERMITTENT RUN ON SELECTED PHYSICAL FITNESS QUALITIES AMONG COLLEGE MEN STUDENTS

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Abstract:

The purpose of the study was designed to examine the effect of intermittent run on back strength and muscular endurance 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 intermittent run 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 back strength and muscular endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables namely back strength and muscular endurance by using back lift with dynamometer 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 as an appropriate. The results of the study showed that there was a significant difference between intermittent run group and control group on back strength and muscular endurance. And also it was found that there was a significant improvement on selected criterion variables such as back strength and muscular endurance due to intermittent run.

Introduction:

Intermittent training, often known as High-Intensity Interval Training (HIIT), is a dynamic and efficient approach to cardiovascular exercise that has revolutionized the fitness landscape. It's characterized by alternating short bursts of intense activity with periods of lower-intensity exercise or rest. This method has gained popularity for its ability to deliver impressive fitness benefits in a relatively short amount of time. Intermittent training thrives on diversity. It allows individuals to mix high-intensity efforts with recovery periods, creating a workout that's not only effective but also engaging. One of the standout features of intermittent training is its time efficiency.

By pushing your body to work at maximum capacity during intervals, one can achieve in minutes what might take much longer with traditional steady-state cardio. This training method can be tailored to various fitness levels and preferences. Whether you prefer running, cycling, or bodyweight exercises, HIIT can be customized to suit one's needs. Intermittent training is a versatile and effective fitness strategy that fits the demands of our fast-paced lives. Whether a person is a fitness enthusiast looking to break through plateaus or a beginner seeking a time-efficient workout, incorporating intermittent training into your routine can unlock a new level of fitness efficiency.

Methodology:

The purpose of the study was designed to examine the effect of intermittent run on back strength and muscular endurance 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 intermittent run 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 back strength and muscular endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables namely back strength and muscular endurance by using back lift with dynamometer 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 as an appropriate.

Analysis of the Data:

Back Strength:

The analysis of covariance on back strength of the pre and post test scores of intermittent run group and control group have been analyzed and presented in Table I.

Table 1: Analysis of Covariance of the Data on Back Strength of Pre and Post Tests Scores of Intermittent Run and Control Groups

Test	Intermittent Run Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	92.80	92.27	Between	2.13	1	2.13	2.36
S.D.	1.05	1.32	Within	25.33	28	0.90	
Post Test							
Mean	95.00	92.60	Between	43.20	1	43.20	15.75*
S.D.	0.77	0.71	Within	76.80	28	2.74	
Adjusted Post Test							
Mean	94.77	92.83	Between	26.18	1	26.18	46.55*
			Within	15.18	27	0.56	

* 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 intermittent run group and control group are 94.77 and 92.83 respectively. The obtained "F" ratio of 46.55 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 back strength. The results of the study indicated that there was a significant difference between the adjusted post-test means of intermittent run group and control group on back strength.

Muscular Endurance:

The analysis of covariance on muscular endurance of the pre and post test scores of intermittent run group and control group have been analyzed and presented in table 2.

Table 2: Analysis of Covariance of the Data on Muscular Endurance of Pre and Post Tests Scores of Intermittent Run and Control Groups

Test	Intermittent Run Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	40.73	40.13	Between	2.70	1	2.70	0.82
S.D.	1.77	2.12	Within	92.67	28	3.31	
Post Test							
Mean	45.67	40.40	Between	208.03	1	208.03	18.04*
S.D.	1.75	1.78	Within	322.97	28	11.53	
Adjusted Post Test							
Mean	45.37	40.70	Between	159.06	1	159.06	180.00*
			Within	23.86	27	0.88	

* 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 intermittent run group and control group are 45.37 and 40.70 respectively. The obtained "F" ratio of 180.00 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 muscular endurance. The results of the study indicated that there was a significant difference between the adjusted post-test means of intermittent run group and control group on muscular endurance.

Conclusions:

- There was a significant difference between intermittent run group and control group on back strength and muscular endurance.
- And also it was found that there was a significant improvement on selected criterion variables such as back strength and muscular endurance due to intermittent run.

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