



EFFECT OF FARTLEK AND COMPLEX TRAINING ON MUSCULAR STRENGTH AMONG PHYSICAL EDUCATION STUDENTS

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Abstract:

The purpose of the study was to find out the effect of fartlek and complex training packages on muscular strength among physical education students. To achieve the purpose of the present study, forty five physical education students from AVVM Sri Pushpam College, Poondi were selected as subjects at random and their ages ranged from 18 to 21 years. The subjects were divided into three equal groups at random. The subjects were divided into three equal groups of fifteen subjects each. Group I acted as Experimental Group-I (Fartlek Training), Group II acted as Experimental Group- II (Complex Training) and Group III acted as Control Group. The pre test and post test scores were subjected to statistical analysis using Analysis of Covariance (ANCOVA) to find out the significance among the mean differences, whenever the 'F' ratio for adjusted test was found to be significant, Scheffe's post hoc test was used. In all cases 0.05 level of significance was fixed to test hypotheses. It was observed that the twelve weeks of fartlek training and complex training have significantly improved the muscular strength of physical education students and produced similar effect.

Key Words: Complex Training, Muscular Strength, Physical Education Students.

Introduction:

Fartlek training sessions can significantly aid runners in improving their speed and stamina. This is particularly helpful if your training sessions have plateaued. While newcomers to the running circuit can use Fartlek to help with their speed and endurance training and to add variety to their cardio workout program, seasoned runners who are already involved in interval training can use it to increase their anaerobic threshold and stamina. There are several ways in which Fartlek outperforms interval training. First of all, it allows the athlete to become more self-aware, push herself further, and improve her ability to gauge her own speed. One of the most sophisticated types of sports training, complex training incorporates plyometrics, strength training, and movement specific to a given sport. It consists of a plyometric exercise after a strenuous strength training session. A workout that consists of a resistance exercise and a corresponding plyometric exercise is known as complex training. These matched exercises make sense because the resistance training activates the central nervous system, which frees up more Type IIb fibres for the explosive exercise and improves training outcomes. This type of training is suggested by subjective reports as a way to increase muscular power and athletic performance. A number of recent studies have looked at complex training.

Methodology:

The purpose of the study was to find out the effect of fartlek and complex training packages on muscular strength among physical education students. To achieve the purpose of the present study, forty five physical education students from AVVM Sri Pushpam College, Poondi were selected as subjects at random and their ages ranged from 18 to 21 years. The subjects were divided into three equal groups at random. The subjects were divided into three equal groups of fifteen subjects each. Group I acted as Experimental Group-I (Fartlek Training), Group II acted as Experimental Group- II (Complex Training) and Group III acted as Control Group. The pre test and post test scores were subjected to statistical analysis using Analysis of Covariance (ANCOVA) to find out the significance among the mean differences, whenever the 'F' ratio for adjusted test was found to be significant, Scheffe's post hoc test was used. In all cases 0.05 level of significance was fixed to test hypotheses.

Results:

Table 1: Computation of Analysis of Covariance of Mean of Fartlek Training Complex Training and Control Groups on Muscular Strength

	FTG	CTG	Control Group	Source of Variance	Sum of Squares	df	Means Squares	F-RATIO
Pre-Test Means	10.00	9.86	10.08	BG	0.17	2	0.08	0.14
				WG	25.73	42	0.61	
Post-Test Means	13.40	13.66	9.86	BG	134.97	2	67.48	114.91*
				WG	24.66	42	0.58	
Adjusted Post-Test Means	13.39	13.67	9.86	BG	134.97	2	67.48	112.48*
				WG	24.59	41	0.60	

An examination of table - I indicated that the pre test means of fartlek training, complex training and control groups were 10.00, 9.86 and 10.08 respectively. The obtained F-ratio for the pre-test was 0.14 and the

table F-ratio was 3.21. Hence the pre-test mean F-ratio was insignificant at 0.05 level of confidence for the degree of freedom 2 and 42. This proved that there were no significant difference between the experimental and control groups indicating that the process of randomization of the groups was perfect while assigning the subjects to groups. The post-test means of the fartlek training, complex training and control groups were 13.40, 13.66 and 9.86 respectively. The obtained F-ratio for the post-test was 114.91 and the table F-ratio was 3.21. Hence the post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 2 and 42. This proved that the differences between the post test means of the subjects were significant. The adjusted post-test means of the fartlek training, complex training and control groups were 13.39, 13.67 and 9.86 respectively. The obtained F-ratio for the adjusted post-test means was 112.48 and the table F-ratio was 3.22. Hence the adjusted post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 2 and 41. This proved that there was a significant difference among the means due to the experimental trainings on muscular strength.

Table 2: The Scheffe's Test for the Differences between the Adjusted Post Test Paired Means on Muscular Strength

Adjusted Post-test means			Mean Difference	Required CI
FTG	CTG	Control Group		
13.39	13.67	---	0.28	1.71
13.39	---	9.86	3.53*	
---	13.67	9.86	3.81*	

* Significant at 0.05 level of confidence

The multiple comparisons showed in table 2 proved that there existed significant differences between the adjusted means of fartlek training and control group (3.53) and complex training and control group (3.81) at 0.05 level of confidence with the confidence interval value of 0.71. The mean difference between fartlek training and complex training group (0.28) was not significant at 0.05 level of confidence with the confidence interval value of 1.71.

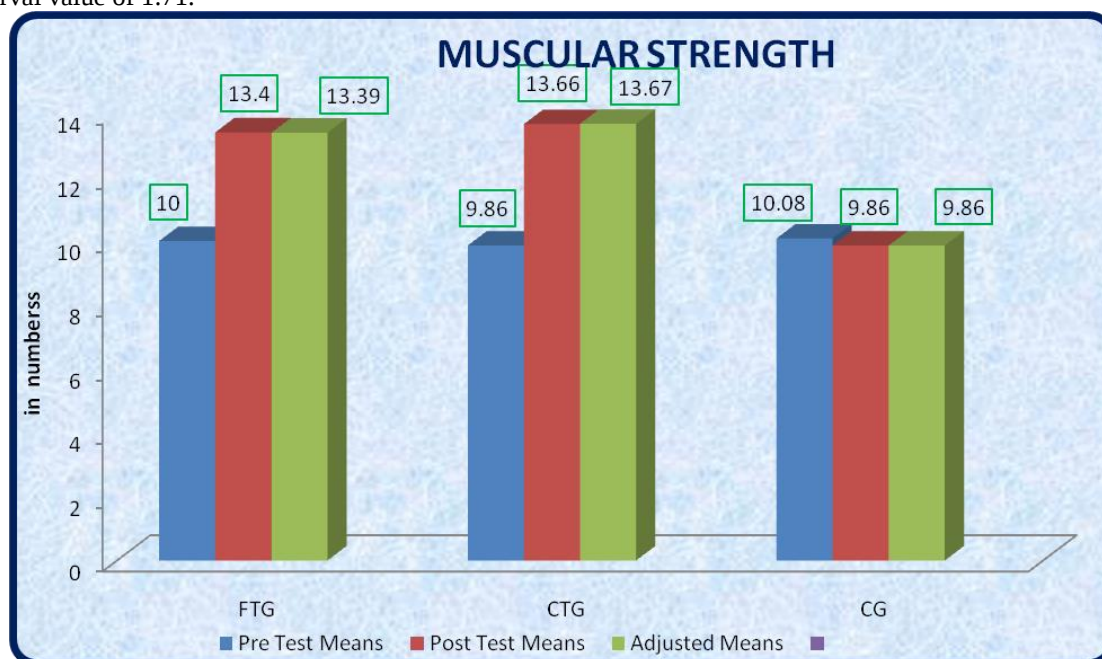


Figure 1: Pre Post and Adjusted Post Test Differences of the Fartlek Training Complex Training and Control Groups on Muscular Strength

Conclusion:

It was observed that the twelve weeks of fartlek training and complex training have significantly improved the muscular strength of physical education students and produced similar effect.

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