



EVALUATION OF MUSCULAR ENDURANCE AS A RESULT OF LADDER TRAINING: AN INVESTIGATION

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Abstract:

The purpose of the study was to find out the effect of ladder training on muscular endurance among football players. To achieve the purpose of the present study, thirty football players from Bengaluru, Karnataka were selected as subjects at random and their ages ranged from 18 to 21 years. The subjects were divided into two equal groups at random. Group 1 acted as Experimental Group (Ladder Training) and Group 2 acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study. The duration of experimental period was 6 weeks. After the experimental treatment, all the thirty subjects were tested on muscular endurance. 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. In all cases 0.05 level of significance was fixed to test hypotheses. It was observed that the six weeks of experimental group have significantly improved the muscular endurance of football players.

Key Words: Ladder Training, Muscular Endurance, Speed.

Introduction:

Ladder training is an effective and challenging form of conditioning. It is effective for improving strength, endurance (both aerobic and anaerobic), flexibility, and coordination. Its versatility has made it popular among both the general public and elite athletes. It can be used by sportsmen and women during the off-season and early pre-season to help develop a solid base of fitness and prepare the body for more stressful future training. Ladder training is an effective organisational method of performing physical exercises that improves overall muscular endurance. Before and after training, the experimental and control groups underwent initial and final tests for variables such as speed, agility, power, coordination, static balance, and dynamic balance. Ladder training is an exercise programme that promotes overall fitness. Ladder training, when performed on a regular basis, improves muscular strength, endurance, cardiovascular fitness, and flexibility (Malathy & Robert Alexandar, 2016).

Methodology:

The purpose of the study was to find out the effect of ladder training on muscular endurance among football players. To achieve the purpose of the present study, thirty football players from Bengaluru, Karnataka were selected as subjects at random and their ages ranged from 18 to 21 years. The subjects were divided into two equal groups at random. Group 1 acted as Experimental Group (Ladder Training) and Group 2 acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study. The duration of experimental period was 6 weeks. After the experimental treatment, all the thirty subjects were tested on their muscular endurance. 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. In all cases 0.05 level of significance was fixed to test hypotheses.

Results:

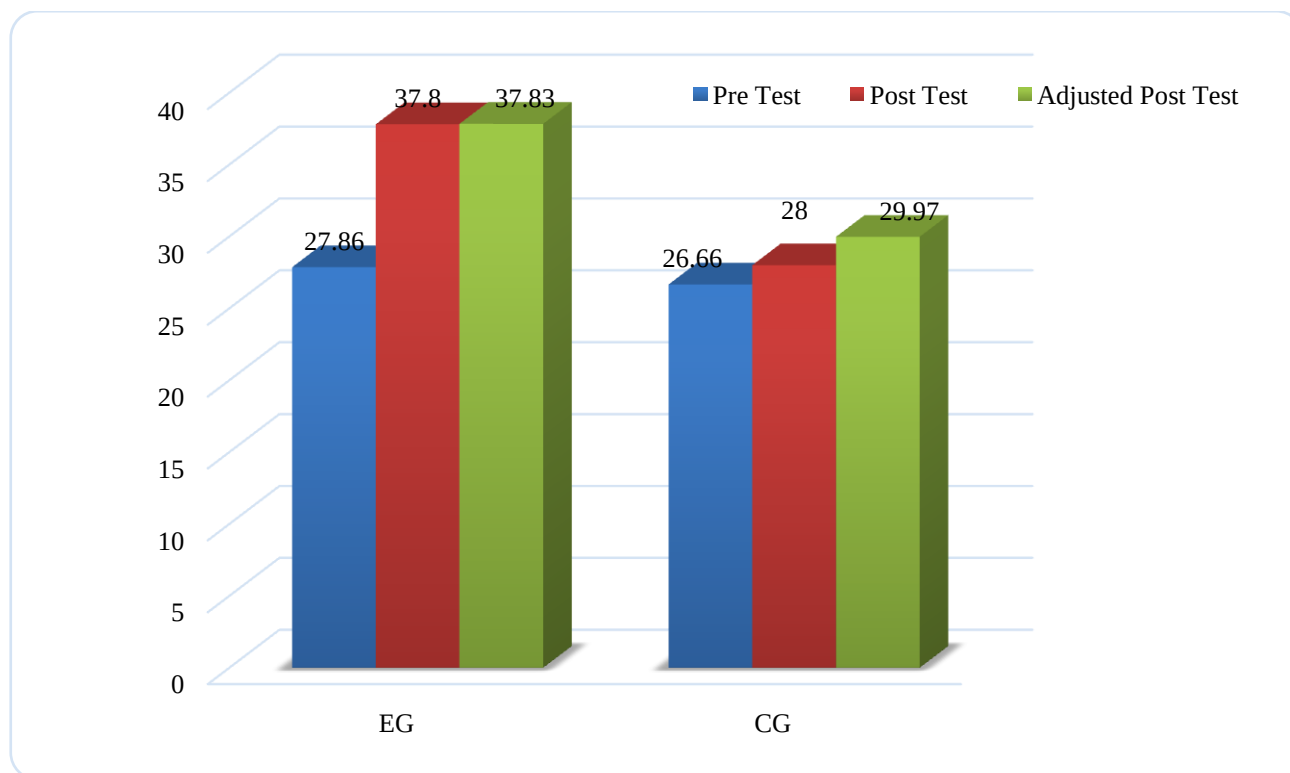
Table 1: Computation of Mean and Analysis of Covariance of Muscular Endurance of Experimental and Control Groups

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	27.86	26.66	BG	10.80	1	10.80	1.81
			WG	167.06	28	5.96	
Post Test Mean	37.80	28.00	BG	720.30	1	720.30	152.32*
			WG	132.40	28	4.72	
Adjusted Post Mean	37.83	29.97	BG	684.92	1	684.92	140.12*
			WG	131.97	27	4.88	

* Significant at 0.05 level table value for df 1 and 28 was 4.20, 1 and 27 was 4.21

The above table indicates the adjusted mean value of muscular endurance of experimental and control groups were 37.83 and 29.97 respectively. The obtained F-ratio of 140.12 for adjusted mean was greater than the table value 4.21 for the degrees of freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among experimental and control groups on muscular endurance. The above table also indicates that both pre and post test means of experimental and control groups differ significantly. The pre, post and adjusted post mean values of muscular endurance of both experimental and control groups are graphically represented in the figure 1.

Figure 1: Shows the Mean Values on Muscular Endurance of Experimental Group and Control Groups



Conclusion:

It was observed that the six weeks of experimental group have significantly improved the muscular endurance of football players.

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