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Effect of Plyometric Training on Performance Related Component in Explosive Power of Athletics

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ABSTRACT

Plyometric exercises can come in many forms and intensities. Some activities such as bilateral jumping to a box are lower level plyometric while others such as single leg jumps from a box are intense. The present study is examined to the effect of plyometric training on performance related component in leg explosive power of Leg explosive power. The research scholar reviewed the available literature pertaining to the plyometric training, from books, journals, periodicals, magazines and research papers. There were studies proved that the plyometric training had positive effects on certain game performance related component in leg explosive power of school level Leg explosive power. The age group 15 – 18 and selected Namakkal region, Tamilnadu, India school level Leg explosive power. Statistically significant improvements in standard scores in leg explosive power was comparable between the three groups of Leg explosive power. Leg explosive power improved by 2.16 in plyometric group, 2.06 in the control group. The research on short - duration intervention in establishment players may help to organize the role of plyometric in conventional Leg explosive power to maintain proper alignment and posture during movement for training.

KEY WORDS: Physical fitness, leg explosive power, Plyometric training

INTRODUCTION

Plyometrics are designed specifically to build muscle power, strength, balance, and agility. Also known as jump training, plyometrics helps the muscles maximize their power. If you want to build and tone your muscles, continue reading below and learn more about what you need to know about plyometric exercises

Plyometrics are exercises that involve a jumping or explosive movement. For example, skipping, bounding, jumping rope, hopping, lunges, jump squats, and clap push-ups are all examples of plyometric exercises. Plyometric training is a type of HIIT (high-intensity interval training). The high-intensity exercise be made up of a four-minute workout consisted of eight sets of 20 seconds of exercise utmost effort each followed by a 10-second rest.

METHODOLOGY

The Methodology for the present investigation is on the effect of plyometric training on performance related component in leg explosive power of Leg explosive power. The purpose of study 30 male athletes' students selected from various schools in Namakkal district, TamilNadu. Their age ranges between 15 to 18 years .the subjects were randomly assigned into two groups, namely experimental group I (plyometric training) and control group. In order to make sure the full cooperation from the subjects, the scholar had a meeting with them and explained the purpose of the research. It was made clear by explanation in order to ascertain that there was no uncertainty among the players regarding the effort, which they had to put in for the successful completion of this study. Experimental group I participated for a period of eight weeks plyometric training and control group have no any specific training. The subjects were tested on selected criterion variable of leg explosive power before the training and after 8 weeks of training.

TRAINING PROCEDURE

Experimental Group-I undertake plyometric training and the control group was un explored to any specific training programme. The experimental treatments namely plyometric training was administrated for duration of eight weeks and the number of session per week was confined to three alternative days and each session lasted 60 minutes.

STATISTICAL TECHNIQUE

The collected data from the two groups prior to and after the experimental treatments on selected variables was leg explosive power were statistically analyzed by using the statistical technique of analysis of covariance (ANCOVA). Whenever the 'F' ratio for adjusted post-test means was found to be

significant, scheffe's post hoc test test was followed as a post hoc test to determine which of the paired means difference was significant. In all the cases 0.05 level of confidence was fixed as a level of confidence to test the hypotheses.

RESULTS AND ANALYSIS

The influence of independent variables on each of the criterion variables is analyzed and presented below.

The training period was limited to eight weeks. The dependent variables selected for this study was health related variable of leg explosive power. All the subjects were tested prior to and immediately after the experimental period on the selected dependent variables.

The data obtained from the experimental groups before and after the experimental period were statistically organized with dependent 't'-test and Analysis of covariance (ANCOVA). Whenever the 'F' ratio for adjusted post-test means was found to be outstanding performance study. The Scheffe's Post hoc test was organised to determine the paired mean differences. The level of confidence was fixed at 0.05 level for all the cases.

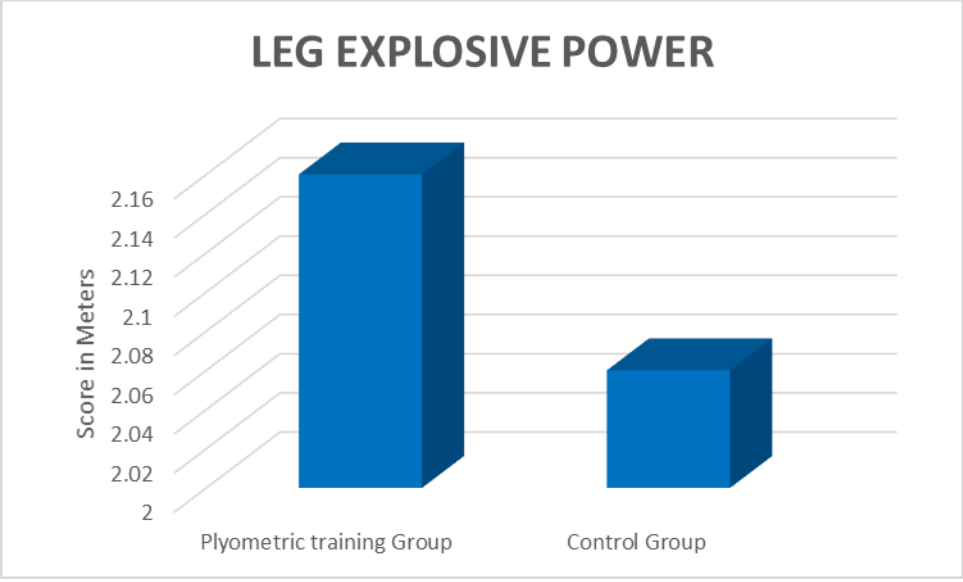
TABLE – 1

ANALYSIS OF COVARIANCE AMONG PLYOMETRIC TRAINING GROUP I AND CONTROL GROUP ON LEG EXPLOSIVE POWER

	Plyometric training Group	Control Group	Source of Variance	Sum of square	df	Mean square	F-value
Pre test Mean	2.04	2.04	Between	0.00	1	0.00	0.005
			Within	0.164	28	0.006	
Post test Mean	2.16	2.06	Between	0.076	1	0.076	14.60*
			Within	0.146	28	0.005	
Adjusted post mean	2.16	2.06	Between	0.079	1	0.079	99.83*
			Within	0.021	27	0.001	

FIGURE – 1

THE ADJUSTED POST TEST MEAN VALUES OF PLYOMETRIC TRAINING GROUP I AND CONTROL GROUP ON LEG EXPLOSIVE POWER



CONCLUSION

The findings of the study showed that there was a statistically significant improvement in the health related variable of leg explosive power as compared to control group.

1. The results of the study shows that the experimental group-I that had undergone plyometric training group, improved health related variable in leg explosive power of athletes.

RECOMMENDATIONS

It is recommended that coaches and physical educators in the game of athletes should give due to include plyometric training in their training schedules.

In the physical exercise, while designing the training programme the effect of varied training modalities is explained on positively on physical fitness parameters of Leg explosive power, the physical education teachers and coaches can prefer this type of training so as to achieve aim in time.

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