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## **Effects of Complex Training on Explosive Strength in Adolescent Male Football Players**

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### **ABSTRACT**

Complex training alternates biomechanically similar high load weight training exercises with plyometric exercises, set for set, in the same workout. Specifically, it's a Complex training occurs when the explosive strength under power like your leg muscle during the lowering phase of a leg calf muscle. The present study is examined to the effects of complex training on explosive strength in adolescent male football players. The research scholar reviewed the available literature pertaining to the Complex training, from books, journals, periodicals, magazines and research papers. There were studies proved that the Complex training had positive effects on certain game performance related component in explosive strength of school level football players. The age group 15 – 18 and selected Coimbatore region, Tamilnadu, India school level football players. Statistically significant improvements in standard scores in explosive strength was comparable between the three groups of football players. Explosive strength improved by  $P \leq 1.91$  in Complex training group,  $P \leq 1.76$  in the control group. The research on short - duration intervention in establishment players may help to organize the role of Complex training in conventional football players to maintain proper alignment and posture during movement for training.

**KEY WORDS:** Physical fitness, explosive strength, Complex training

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### **INTRODUCTION**

There is countless workout styles have probably heard about over the years, and all of them are meant to help to reach the fitness goals. It increase strength, loses weight, improve flexibility or build muscle. Whatever the goals are, most exercise programs can help to reach them, as long as the stick to the plan.

A new program to add to routine, to give Complex training a try. Complex training is a muscular strength developed training workout, featuring exercises that last four minutes. Each exercise in a given Complex training workout lasts only four minutes, but it's likely to be one of the longest four minutes ever endured. The structure of the program is as follows: Eccentric contraction occurs when the muscle lengthens under tension like your biceps muscle during the lowering phase of a biceps curl. Once complete eight sets of push-ups, rest for one minute.

Complex training is a type of explosive strength. The resistance exercise be made up of an eccentric contraction is a motion where the muscle is activated while lengthening under a given load. In the case of the hamstring, the eccentric contraction occurs when there is more time and tension during extension (or straightening) of the affected leg.

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### **METHODOLOGY**

The Methodology for the present investigation is on the effect of Complex training on performance related component in explosive strength of football players. The purpose of study 30 male football students selected from various schools in Trichy district, TamilNadu. Their age ranges between 15 to 18 years .the subjects were randomly assigned into two groups, namely experimental group I (Complex training 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 Complex training and control group have no any specific training. The subjects were tested on selected criterion variable of explosive strength before the training and after 8 weeks of training.

### **TRAINING PROCEDURE**

Experimental Group-I undertake Complex training and the control group was un explored to any specific training programme. The experimental treatments namely Complex 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 explosive strength 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 explosive strength. 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 COMPLEX TRAINING TRAINING GROUP I AND CONTROL GROUP ON EXPLOSIVE STRENGTH

	Complex training Group	Control Group	Source of Variance	Sum of square	df	Mean square	F-value
Pre test Mean	1.76	1.75	Between	0.00	1	0.00	0.22
			Within	0.042	28	0.001	
Post test Mean	1.90	1.76	Between	0.147	1	0.147	58.01*
			Within	0.071	28	0.003	
Adjusted post mean	1.90	1.76	Between	0.145	1	0.145	55.29*
			Within	0.071	27	0.003	

FIGURE – 1  
THE ADJUSTED POST TEST MEAN VALUES OF COMPLEX TRAINING GROUP I AND CONTROL GROUP ON EXPLOSIVE STRENGTH



## CONCLUSION

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

1. The results of the study shows that the experimental group-I that had undergone Complex training group, improved health related variable in explosive strength of football players.

### **RECOMMENDATIONS**

It is recommended that coaches and physical educators in the game of football should give due to include Complex 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 and skill performance variables of football players, the physical education teachers and coaches can prefer this type of training so as to achieve aim in time.

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