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Effect of Varied Explosive Training with Training Aids on Selected Locomotor Abilities of School Students

Dr. MB. Palanikumar

Professor, School of Physical Education and Sports Science, Saveetha Deemed University, Chennai, India.

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Abstract

The purpose of the present study was to find out the effect of explosive training selected on variables of locomotor abilities. To achieve the purpose of this study, the investigator selected 30 school students. The age of the subjects ranged from 10 to 14 years. The selected subjects (N=30) were one group was underwent the modified drill training for six weeks. the differences in their measures of physical fitness variable namely explosive training and locomotor ability performance variables namely jumping, and throwing was measured by a standardized test with tools. The training program was scheduled at 60 min for five days a week. The pre-test and post-test were conducted before and after the training period. The investigator used the dependent 't-test to find out the significant difference between pre and post-tests. in all the cases 0.05 level of confidence was fixed to test the hypotheses. the signification of the means of the obtained test result was tested at. a 0.05 level of confidence, it was considered sufficient for the present study. The obtained result the selected locomotor abilities were significantly increased due to the effect of varied explosive training with training aids.

Keywords: Explosive Training, Locomotor, School Students.

Introduction

Explosive training is a concept that appeals to a great number of strength and conditioning professionals, athletic trainers, athletes, and non-athletes alike. Performing exercises in an explosive. The neural adaptations which occur during explosive training provide the greatest explanation for their effectiveness. Improved motor unit recruitment may account for the most important adaptation encountered during explosive training regimens. Since larger motor units (composed predominantly of Type II muscle fibers, or fast twitch) have higher neural thresholds than do smaller motor units, therefore they are stimulated only under greater intensity training. Manner has been shown to produce favorable results in terms of athletic and human performance (5,6,10). This would seem logical since explosive power output is the main determinant of performance in activities requiring jumping, throwing, striking, accelerating, and rapidly changing direction. However, this type of exercise is also beneficial to a wide range of individuals, from adolescents to seniors, who merely perform normal everyday activities of daily living. Training explosively (1,4,5) involves performing the eccentric (lowering) portion of a lift at normal speed while the concentric (lifting) portion is performed as rapidly and forcefully as possible. Explosive training is designed to increase muscular power which is defined as the rate of performing work. In addition, the explosive performance of an exercise appears to increase both the rate of force development and the rate of velocity development or an individuals ability to produce force and velocity in a very short time period (5,9). The adaptations to explosive training continue to be researched, but there are a few widely accepted fundamental principles which underlie the effectiveness of these exercises.

Methodology

The purpose of the present study was to find out the effect of explosive training selected on variables of locomotor abilities. To achieve the purpose of this study, the investigator selected 30 school students. The age of the subjects ranged from 10 to 14 years. The selected subjects (N=30) were one group undergoing the modified drill training for six weeks. the differences in their measures of physical fitness variable namely explosive training and locomotor ability performance variables namely jumping, and throwing was measured by a standardized test with tools. The training program was scheduled at 60 min for five days a week. The pre-test and post-test were conducted before and after the training period.

Training Programme

The training in the yogic practices and aerobic dance activities was given to the experimental groups for 6 weeks as follows:

- **Training period**: 6 weeks
- **Training sessions**: 5 days per week
- **Duration of one session**: 60 minutes

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Post-tests were conducted for the groups in all the selected variables as in the pre-tests.

Statistical Techniques

Paired 't' test was used to test the mean difference between the pre and post-test. Descriptive statistics such as mean. Standard deviation and standard error mean were found in order to get the basic idea of the data distribution-test was done for finding whether there was any statistically significant pre-test mean differences in their respective variable of explosive training basic due to modified drills training. In this statistical test level of significance was chosen at 0.05. It was considered sufficient for the present study. This statistical analysis was carried out with the help of the statistical package SPSS for windows.

Results of the Study

Throwing

The data obtained on the throwing of the group have been analyzed by using the 't' ratio is present in table -1.

Table 1. Table showing the mean difference, standard deviation, and 't' value of throwing

Group	Mean	MD	SD	St. Error of the mean	DF	't'	Table value
Pre-test	4.07	0.09	1.42	2.60	29	3.109*	2.04
Post-test	4.16		1.44	2.63			

Signification at 0.05 level of confidence

To find out the significant difference between the pre-test and post-teston throwing 't' ratio was employed and the level of significance was set at 0.05. The varied explosive training group pre-test value was 4.07 and the post-test value was 4.16 respectively. The mean difference value was 0.09 and the varied explosive training group obtained a 't' ratio of 3.109 was greater than the table value of 2.04. It shows that the varied explosive training group had significant improvement in throwing. Pre-test and post-test mean values of varied explosive training group throwing showed in figure-1.

Figure 1. Figure Showing the Mean Values of Throwing

Jumping

The data obtained on jumping of the group have been analyzed by using the 't' ratio present in table - 2

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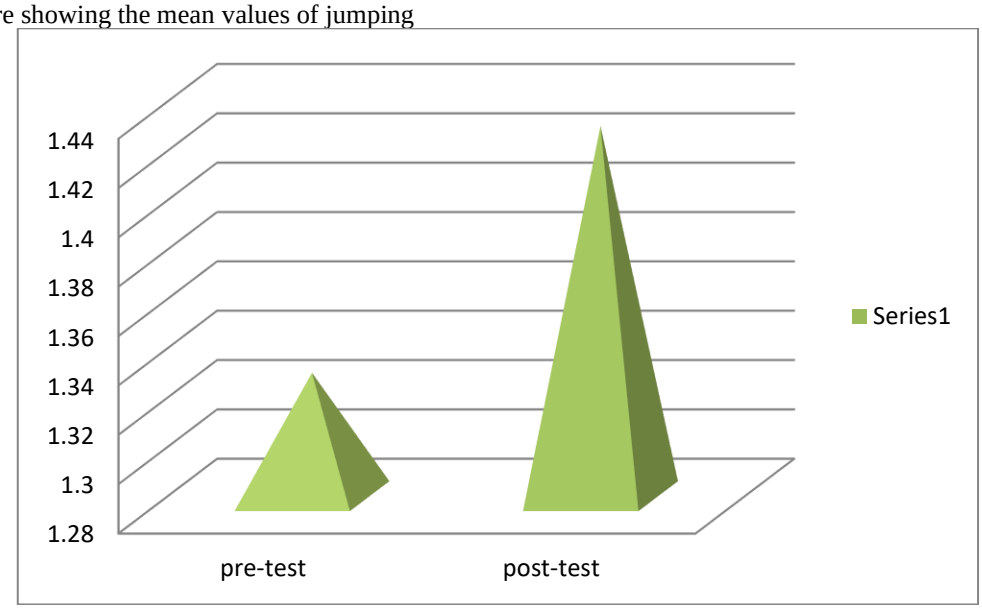
Table 2. Table showing the mean difference, standard deviation, and 't' value of jumping

Group	Mean	MD	SD	Std. Error of the mean	DF	't'	Table value
Pre-test	1.33	0.1	2.96	0.54	29	3.89*	2.04
Post-test	1.43		3.30	0.60			

Signification at 0.05 level of confidence

To find out the significant difference between the pre-test and post-test on jumping 't' ratio was employed and the level of significance was set at 0.05. The varied explosive training group value pre-test was 1.33 the and post-test value was 1.43 respectively. The mean difference value was 0.1 and the varied explosive training group obtained a 't' ratio of 3.89 was greater than the table value of 2.04. It shows that the varied explosive training group had significant improvement in jumping. Pre-test and post-test mean values of varied explosive training groups on jumping showed in figure-2

Figure 2. Figure showing the mean values of jumping



Discussion on Findings

Throwing

The result of the 't' ratio shows that there is a significant improvement in throwing due to the effect of varied explosive training the pre-test and post-test on throwing 't' ratio were employed and the level of significance was set at 0.05. The group pre-test value was 4.07 and the post-test value was 4.16 respectively. The mean difference value was 0.09 and the varied explosive training group obtained a 't' ratio of 3.109 was greater than the table value of 2.04. It shows that the varied explosive training group had significant improvement in throwing.

Jumping

The result of the 't' ratio shows that there is a significant improvement in jumping due to the effect of varied explosive training the pre-test and post-test on jumping 't' ratio were employed and the level of significance was set at 0.05. The varied explosive training group value pre-test was 1.33 and the post-test value was 1.43 respectively. The mean difference value was 0.1 and the varied explosive training group obtained a 't' ratio of 3.89 was greater than the table value of 2.04. It shows that the varied explosive training group had significant improvement in jumping.

Conclusion

- It is concluded that the selected locomotor abilities were significantly increased due to the effect of varied explosive training with training aids.

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