



EFFECT OF SIX WEEKS DYNAMIC EFFORT LIFTING WITH HEAVY TRAINING PROGRAM IN IMPROVEMENT OF SQUAT PERFORMANCE OF POWER LIFTING

Bhargab Borah* & Wilfred Vaz**

* Assistant Professor, Lakshmbai National University of Physical Education, Gwalior, Madhya Pradesh

** Professor, Lakshmbai National University of Physical Education, Gwalior, Madhya Pradesh

Cite This Article: Bhargab Borah & Wilfred Vaz, "Effect of Six Weeks Dynamic Effort Lifting With Heavy Training Program in Improvement of Squat Performance of Power Lifting", International Journal of Multidisciplinary Research and Modern Education, Volume 3, Issue 1, Page Number 115-116, 2017.

Copy Right: © IJMRME, R&D Modern Research Publication, 2017 (All Rights Reserved). This is an Open Access Article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract:

The purpose of this study was to examining the effect of six weeks dynamic effort lifting with heavy training program for improving performance of squat in powerlifting. It was an experimental study in which pre-test & post- test randomized groups design was used. 30 male power lifters age ranging between (22±2) were selected as sample by using simple random sampling technique (N=30) from Madhya Pradesh through the simple random technique as sample. (N=30) They were equally divided into, Experimental group (N=15) and Control group (N=15). Maximum Strength 1RM Squat test was conducted on both the groups. Result shows that data collected was analyzed by using Descriptive Statistics to see the change of dynamic effort lifting with heavy training program was useful to improve bench press performance. Further data was analyzed by using ANCOVA, the mean score of experimental group of squat is M=90.47 and control group is M=85.33, F value is 69.67 which shows the significant difference at 0.05 level, thus researcher concludes that there was improvement of performance 1RM squat of Experimental group as compared to control group due to the treatment given.

Key Words: Dynamic Effort Lifting With Heavy Training Program & 1RM Squat

Introduction:

The genealogy of lifting can be traced back to the beginning of recorded history, where humanity's fascination with physical abilities can be found among numerous ancient writings. Progressive resistance training dates back at least to Ancient Greece, when legend has it that wrestler Milo of Croton trained by carrying a newborn calf on his back every day until it was fully grown. Another Greek, the physician Galen, described strength training exercises using the theaters (an early form of dumbbell) in the 2nd century. The basic principles of weight training are essentially identical to those of strength training, and involve a manipulation of the number of Repetitions (reps), sets, tempo, exercise types, and weight moved to cause desired increases in strength, endurance, and size. The specific combinations of reps, sets, exercises, and weights depend on the aims of the individual performing the exercise. Power lifting requires specialized training techniques that are focused on strength and explosive power. Traditional training methods dictated low repetitions with maximal weight. These practices are still true today, however training methods have advanced to include emphasis on explosive power. This may be achieved dynamic exercises which utilize lighter weight and alternating repetition patterns. The squat bench press and dead lift are the three main lifts in competition. Dynamic effort lifting with heavy training is basically modified version of the upper and lower body. In power lifting each training trained the entire body in two days which allows for four workouts per week. This type of workout buildup the muscle power of lifter and related to power lifting. Muscles get workout by max & dynamic effort training program through to improvement in the power lifting performance of lifter. (Jim Stoppani 2008 Encyclopedia of Muscle & Strength).

Purpose of the Study:

The purpose of the study is to see the effect of six weeks dynamic effort lifting with heavy training program in improvement of squat performance in power lifting.

Experimental Design:

Pre-test and post test randomized group design was employed in the study. The subjects were divided into experimental group and control group. The experimental group was imparted dynamic effort lifting with heavy training for six week under the supervision and guidance of the scholar. While no training was imparted to control group. At the end of six weeks post test was conducted for both the group.

Procedure and Methodology:

The design for this study was pre-test post-test random group design. The statistical population was all the male power lifters. Total no of lifters were 30 (N=30). The participants were randomly assigned into two groups. (Group 1) Experimental group (N=15) and (group 2) Control group (N=15). To measure the pre and

post data standard 1RM squat test was used $1RM = (\text{weight lifted}) / [1.0278 - (\text{repetitions} \times 0.0278)]$. Both the group were (experimental & control group) had regularly received their daily training program but along with that the experimental group was received dynamic effort lifting with heavy training for 30 minutes 3days in a week for 6 weeks. Before taking pre test 10 minute warm up was given to both group. Six week and dynamic effort lifting with heavy training program was administered on the experimental group to follow FITT formula was used & progression of exercise load was increased in every week as per subject's adaptation, and control group was doing their regular workout. To study the effect of training on improving the performance descriptive statistics (Mean & SD) were employed. While ANCOVA statistical technique was used to determine the significant difference between the groups.

Statistical Technique:

In order to find out the effect of training ANCOVA was calculated. The level of significance was set at 0.05.

Results:

Descriptive Statistics			
Dependent Variable: Post Squat			
Group	Mean	Std. Deviation	N
experimental group	240.4667	4.80872	15
control group	185.2333	4.49153	15
Total	187.8500	5.29012	30

Anova Table:

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power ^b
Corrected Model	765.716 ^a	2	382.858	225.414	.000	.943	1.000
Intercept	14.612	1	14.612	8.603	.007	.242	.807
Bppre	560.308	1	560.308	329.891	.000	.924	1.000
Group	118.327	1	118.327	69.667	.000	.721	1.000
Error	45.859	27	1.698				
Total	232340.250	30					
Corrected Total	811.575	29					

Graphical Representation:

Discussion and Findings:

O' Shea and Wagner, (1981) Studied the effect of weight training program on maximum strength 1RMBench press and 1RM Squat in thirteen male and thirteen female lifters. This study was designed to evaluate the effect of six weeks weight training program on squat and bench press the results shows that 1RM Bench and Squat was significantly improve the 1RM performance so may be recommended the weight training program improve maximum strength. Many attempts have been made to determine which training is more effective, lifting maximal weight or intermediate weights. The ideal type of training to increase a muscle's cross sectional area is different from ideal type of training to increase neuromuscular efficiency, dynamic effort lifting with heavy training is one of them. As dynamic effort lifting is defined as lifting a non-maximal load with the greatest speed possible, we can work on our motor recruitment efficiency by generating force quickly and explosively, requiring a co-ordinated and simultaneous recruitment of high numbers of motor units.

Conclusion:

On the basis of the result obtained in the study the researcher made the conclusion that the six weeks dynamic effort with heavy training program has significant effect on maximum strength of improvement of power lifter performance in squat. From the finding of the study further conclusion was made after treatment to the experimental group it was observe that it was observed that there was improvement of performance 1RM Squat of Experimental group in comparison to Control group due to the treatment given to it which was significant.

References:

1. Good body John & George Kirkley. 1971, "The Manual of Weight-Training", Stanley Paul & Co Ltd (3 Fitzroy Square, London WI)
2. Technical Rules book of the International Power lifting Federation (2015)
3. Brad J. Schoenfeld. 2010, "Squatting kinematics and kinetics and their application to exercise performance", Journal of Strength and Conditioning" Research Global Fitness Services, Scarsdale, New York, volume 24
4. Paul W. Winwood, (2012) "Interrelationships between strength, anthropometrics, and strongmen performance in novice strongman athletes" Journal of Strength and Conditioning Research, Vol.26 (2)