

## Effect Of Training Program On Improving Powerlifters Performance Of Washim City

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### Introduction -

**P**ower lifting is a strength sport that consists of three attempts at maximum weight on three lifts squat, bench press, and deadlift. As in the sport of Olympic weightlifting, it involves lifting weights in two attempts. Powerlifting evolved from a sport known as "odd lifts", which followed the same three-attempt format but used a wider variety of events, akin to strongman competition. Eventually odd lifts became standardized to the current three. In competition, lifts may be performed equipped or unequipped (typically referred to as "raw" lifting or "classic" in the IPF specifically). Equipment in this context refers to a supportive bench shirt or squat/deadlift suit or briefs. In some federations, knee wraps are permitted in the equipped but not unequipped division in others, they may be used in both equipped and un-equipped lifting. Weight belts, knee sleeves, wrist wraps and special footwear may also be used, but are not considered when distinguishing equipped from unequipped lifting.

This researcher is very interested in studying this subject especially as it pertains to the development of strength, explosive power, and endurance which are the three important elements athletes must develop. This study was designed to find out whether or not muscular development can be improved by a standard weight training program and a dynamic weight lifting program. It was also developed to indicate which program was more effective in the development of muscular strength, power, and endurance. In actuality, research has shown that for athletes who want maximum physical development, standard weight training is the best method if scientifically planned. But dynamic weight lifting and power lifting can also be used for this development if the lifting is done progressively by

the gradual increasing of resistance as the muscles grow in size, strength, and power. In recent years, world training and power lifting have become extremely popular throughout the world as a method of preparation for participation in athletics, particularly among weight throwers, football players, baseball players, swimmers, basketball players, runners, gymnasts, karate, wrestlers, and boxers. Therefore, there seems to be a need for research dealing with physical fitness in terms of strength, power, and endurance as they relate to standard weight training and dynamic weight, power, and endurance as they relate to standard weight training and dynamic weight lifting programs. This study was undertaken to give more definite results as to the value and effectiveness of standard weight training and dynamic weight lifting programs and their effect on muscular strength, power, and endurance.

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. In order to maximize their effectiveness at these lifts athletes typically train with a cyclic routine a common split is to give each of the three a day where exercise designed to increase that lift are performed or to treat the dead lift and squat as one lift and perform upper and lower body sessions, however there are many different methods. Training consists of mostly compound lifts a compound lift being any movement across multiple joint)

**Significance of the Study :**

- 1) This study will provide power lifting knowledge and awareness about their present power lifting performance, need and importance performance improves their interest and awareness towards game.
- 2) The power lifter those who will undergo this Twelve week maximum and dynamic effort training program will have positive effort on their lifting performance.
- 3) This study also emphasize on benefit of power lifter’s for improving performance.
- 4) The result of the study will help to indicate the level of powerlifting performance.

- 6) Researcher did not have any control over the Grip width.
- 7) Researcher did not have control supplement of creation monohydrate.
- 8) Researcher did not have any control over the joint action duration full and partial range of motion.
- 9) Researcher did not have any control the flexibility.

**Objectives of the Study:**

- 1) To develop the maximum and dynamic effort training program for powerlifter`s
- 2) To measure the pre-test performance by.
  - 1) 1RM Bench Press Test
  - 2) 1RM squat test.
  - 3) 1RM deadlift test.
- 3) To prepare and implement the twelve weeks maximum and dynamic effort training program on power lifting performance.
- 4) To Study the effect of maximum and dynamic efforts training program on power lifter’s to improve the performance.

**Delimitation :**

- 1) The present study wash delimited only on the washim city age between 18 to 30
- 2) This present study was delimited only on the male power lifter’s
- 3) The present study was delimited only on the experimental period consist of twelve week only maximum and dynamic efforts training program.
- 4) The present study was delimited only 1RM Bench Press, 1RM Squat & 1RM Deadlift test.
- 5) The Present study was delimited only 150 power lifters in groups, 75 from experimental group 75 control group.

**Hypothesis :**

It was hypothesized that there will be no significant effect powerlifting performance due to then daily routine of maximum and dynamic efforts training program.

**Method of the Study**

The methodology adapted by the research scholar to the purpose of the study includes the method of the study, research design, test descriptions and administration, method of sampling, tools for the data collection, procedure for data collection, testing the hypothesis, statistical tools is explained are as follows

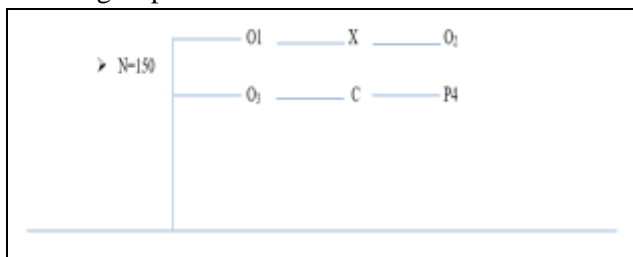
**Limitations :**

- 1) Researcher did not have any control over diet individual habits, medicinal treatment, and day to day routine of power lifter’s was selected for the study.
- 2) Researcher did not have the control the day to day activity of the lifters.
- 3) Researcher did not have the control over psychological feeling of the lifters about the treatment,
- 4) Socio economic condition of the lifters was considered as limitation for the study.
- 5) Genetic potentials of the lifters were considered as limitation for the study.

The present stdy was an experimental research which was conducted with a purpose to see the efficiency of the maximum and dynamic efforts training program in improving power lifter’s performance.

True experimental design was used for this study to check the hypothesis. i.e, Subjects was divided into two groups: one was experimental group and second was control group. This research was based on pre-test and post-test non equivalent group design. Before the maximum and dynamic efforts training program researcher has taken pre-test of both the groups. After that the researcher gave treatment of Twelve week maximum and dynamic efforts

training program only to experimental group. After the implementation training program researcher has taken post-test of both groups i.e, experimental and control groups.



N = Number of subjects

X = Treatment.

O<sub>1</sub> = Pre-test of experimental group.

O<sub>3</sub> = Pre-test of control group.

O<sub>2</sub> = Post-test of experimental group.

O<sub>4</sub> = Post-test of control group.

**Test Description and Administration**

**Descriptions of 1RM maximum strength test are a follows**

One repetition Maximum test (1RM) is a popular method of measuring isotonic muscle strength. It is a measure of the maximal weight a subject can lift with one repetition. It is important to reach the maximum weight without prior fatiguing and correct lift of weight.

One Repetition Maximum test originated in a maximum strength developed for the three different lifts of powerlifting game. The 1RM tests consist of three tests which indicate the one repetition maximum and maximum strength of key-muscle groups. Usually, the scoring of each test evaluates lift maximum weight in one repetition in three attempt was maximum weight lifted attempt good lift was recorded as 1RM best lift of poworlifter`s

**1RM Bench press Test**

**Purpose:-** To measure maximum strength of lower body muscle groups. (1RM Squat press performance)

**Equipment required:-** Squat stand, Platform, barbell and plates free weight in kg, wrist wraps, Knee wraps and waist belt.

**Supporting Assistant :** - One Spotter, two Loader, Referee and record keeper.

**Procedur :-** The subject should perform an adequate warm up before test. An example would be to warm up with 5-10 reps of a light-to-moderate weight, then

after a minute test subject should then rest two to four minutes, and then perform the one-rep-max attempt with proper technique. If the lift is successful, rest for another two to four minutes and increase the load 5-10%, and attempt another lift. If the subject fails to perform the lift with correct technique, rest two four minutes and attempt a weight 2.5-5% lower. Keep increasing and decreasing the weight until a maximum left is performed.

Selection of the starting weight is crucial so that the maximum lift is completed within approximately five attempts after the warm-up sets.

**1RM Deadlift Test**

**Purpose :-** To measure maximum strength of lower back and lower body muscle groups. (1RM Deadlift performance)

**Equipment required :-** Platform, barbell and plates free weight in kg, wrist wraps, knee wraps and waist belt.

**Supporting Assistant :-** One Spotter, two Loader, Referee and record keeper.

**Procedure :-** The subject should perform an adequate warm up before test .An example would be to warm up with 5-10 reps of a light-to-moderate weight, then after a minute rest perform two heavier warm-up sets 2-5 reps, with a two-minute rest between sets. The subject should then rest two to four minutes, and then perform the one-rep-max attempt with proper technique. If the lift is successful, rest for another two to four minutes and increase the load 5-10%, and attempt another lift. If the subject fails to perform the lift with correct technique, rest two to four minutes and attempt a weight 2.5-5% lower. Keep increasing and decreasing the weight until a maximum left is performed.

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**Method of sampling :-**

**Population :-** population any of individuals that has or more characteristics in common and that are of interest of the researcher. Hence it is defined as a group of individuals with at least one common characteristic with distinguishes that group from other individuals.

**Analysis and Data**

The data pertaining to the variables under the study was examined by analysis of independent sample t-for each criterion variable separately in order to determine the difference, between the groups. The initial and final performance of experimental and control groups were analyzed statistically. The difference between the means of two groups in pre-test had to be taken into account during the analysis of the post-test difference among the means. This was achieved by application of analysis of compare were in the final means were adjusted for the difference in the initial means and the test was used to analyze the data of the control and experimental groups between the of independent sample t-test was fixed at 0.05 level of confidence

which was considered used for more stringent levels of significance

**4.1.2 Analysis of 1RM Bench Press Test**

**Table no 4.1**

**Pre & Post test Descriptive statistics of 1RM Bench press**

1RM Bench Press Test			
Group		Pre-Test	Post-Test
<b>Experimental</b>	N	75	75
	Mean (Kg)	90.50	93.70
	Std.Deviation	19.039	20.042
<b>Control</b>	N	75	75
	Mean (Kg)	75	75
	Std.Deviation	18.497	15.629

**Table no 4.2**

**Descriptive statistics**

**Change in performance of 1RM Bench press**

Group	N	Mean (Kg)	Std. Deviation	Std. Error Mean
<b>Experimental</b>	75	4.10	1.50	0.157
<b>Control</b>	75	3.63	1.33	0.33

**Table no 4.3**

**Comparison between change in performance of maximum & dynamic effort training program using Independent sample Test of 1RM Benchp Test**

	Levene`s Test for Equality of Variances		t-test for Equality of Means				
	F	Si g.	t	df	Sig. (2-tail ed)	Mean Differ ence	Std.Er ror Differ ence
<b>Equal varia nces assumed</b>	0.20	0.22	1.916	187	0.055	0.45	0.21
<b>Equal varia nces not assumed</b>			1.96	193.949	0.46	0.415	0.21

**Table no 4.4**

1RM Squat Press Test			
Group		Pre-Test	Post-Test
Experimental	N	75	75
	Mean (kg)	102.70	107.60
	Std. Deviation	10.150	10.36
Control	N	75	75
	Mean (kg)	101.10	105.63
	Std. Deviation	10.75	10.12

**Table no 4.5**

**Descriptive statistics  
Change in performance of 1RM Squat press**

Group	N	Mean (Kg)	Std. Deviation	Std. Error Mean
Experimental	75	4.75	2.47	0.236
Control	75	4.48	2.27	0.54

**Table no 4.6**

**Comparison between change in performance of maximum & dynamic effort training program using Independent sample Test of 1RM Squat Test**

Levene's Test for Equality of Variances		t-test for Equality of Means					
	F	Sig	T	df	Sig (-2 tail ed)	Mean Difference	Std. Error Difference
Equal Variances Assumed	0.589	0.444	0.753	90	0.386	0.65	0.50
Equal Variances not assumed			0.53	197.16	0.386	0.65	0.50

**Table no 4.7**

1RM Deadlift Test			
Group		Pre-Test	Post-Test
Experimental	N	75	75
	Mean (kg)	131.8	138.20

	Std. Deviation	13.000	13.300
Control	N	75	75
	Mean (kg)	122.48	128.00
	Std. Deviation	11.11	11.81

**Table no 4.8**

**Descriptive statistics  
Change in performance of 1RM Deadlift**

Group	N	Mean (Kg)	Std. Deviation	Std. Error Mean
Experimental	75	03	2.37	0.44
Control	75	5.33	1.69	0.68

**Table no 4.9**

**Comparison between change in performance of maximum & dynamic effort training program using Independent sample Test of 1RM Deadlift Test**

Levene's Test for Equality of Variances			t-test for Equality of Means				
	F	Sig	T	df	Sig (-2 tail ed)	Mean Difference	Std. Error Difference
Equal Variances Assumed	86.36	0.000	5.62	197	0.000	1.700	0.31
Equal Variances not assumed			5.62	177.009	0.000	1.700	0.31

**Findings :**

From the above analysis and interpretation of data following findings may be drawn;

1. Maximum and dynamic efforts training program improve the 1RM Bench press performance significantly.
2. Maximum and dynamic efforts training program improve the 1RM Squat press performance significantly.
3. Maximum and dynamic efforts training program improve the 1RM Deadlift performance significantly.

4. Maximum and dynamic efforts training program improve the maximum strength significantly.

**Squat Press performance**

From the findings of this study it can be concluded that twelve weeks maximum and dynamic efforts training program was significantly effective to increase the 1RM Bench press, Squat and Deadlift performance of powerlifter`s which indicate the gain of 1RM performance and maximum strength of key muscle group and also findings of the study may be helpful to the powerlifter`s to doing regular practice of maximum and dynamic efforts training program of powerlifter`s to improve their performance.

**Refarcance**

- 1) Bhaskarn. P. (2012) studied the effects of suryanamaskar and physical exercise on selected physiological variables among college men students.
- 2) Jerica Kreitinger (2010) studied the effect of resistance training program on muscular strength 1RM Deadlift and squat in 38 lifters.
- 3) Adams et al. (1992) studied the effect of three training programs and their ability to increase hip and thigh power via the vertical jump.
- 4) Stone et al. (2003) investigated the relationship.

