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# A PILOT STUDY EFFECTS OF RESISTANCES TRAINING ON ATHLETIC ABILITY AMONG STUDENT ATHLETES

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**Abstract:** The purpose of the research was to effects the resistance training on Athletic Ability ( (Strength ability ) among Student Athletes. The 15 Student Athletes as a experimental group who were practicing Inter Collegiate Tournament and 15 other students as a control group was selected as subject for present study, their age ranged between 18-28 years. Only training was given to the experimental groups. Voluntary to participate in the Resistance training programmes. The resistance training was planned as 06 weeks 05 Days a week and 45 min. The exercise includes Hip-dominant (deadlifts, hinges, and swings), Knee-dominant (squats and lunges), Pushing movements (pushups, dips, and presses), Pulling movements (rows and pull-ups), Gait patterns, such as walking and running. Study was conducted at Aurangabad . Mean score and standard deviation were taken and T test was applied. The result reveals that there was significant effect of resistance training on work power (F-p<0.05) It is found that resistance training improve the work power performance on Student Athletes.

**Key words**: Resistance Training, Student Athletes, Athletic Ability

## INTRODUCTION

Greater Athletic Ability can enhance the ability to perform general sport skills such as jumping, sprinting, and change of direction tasks. Further research indicates that stronger athletes produce superior performances during sport specific tasks. Muscular power commonly means the ability to recruit a large number of muscle motor units quickly to move a load. Muscular strength and endurance are important for many reasons: Increase your ability to do activities like opening doors, lifting boxes or chopping wood without getting tired. Reduce the risk of injury. Help you keep a healthy body weight. Resistance training increases muscle strength by making your muscles work against a weight or force. Different forms of resistance training include using free weights, weight machines, resistance bands and your own body weight. strength training also improves upon a person's posture and helps to strengthen your bones. As a result of this, the likelihood of an injury among athletes as well as the severity of the injury itself is greatly reduced. Resistance training is any exercise that causes the muscles to contract against an external resistance with the expectation of increases in strength, tone, mass, and/or endurance. ... When you lift weights at the gym to get stronger or bigger or more toned, you are performing resistance exercise. Resistance training increases muscle strength by making your muscles work against a weight or force. Different forms of resistance training include using free weights, weight machines, resistance bands and your own body weight. A beginner needs to train two or three times per week to gain the maximum benefit.

## MATERIAL AND METHODS

**Subjects:** The 15 Student Athletes (Collegiate Students ) as a experimental group who were practicing Inter Collegiate Tournament and 15 other students as a control group was selected as subject for present study, their age ranged between 18-28 years. Only training was given to the experimental groups. Voluntary to participate in the Resistance training programmes. Exclusion criteria were the presence of chronic medical conditions such as asthma, heart disease or any other condition that would put the subjects at risk when performing the experimental tests. The resistance training was planned as 06 weeks 05 Days a week and 45 min. Study was conducted at Aurangabad . Mean score and standard deviation were taken t test was applied. The subjects were free of smoking, alcohol and caffeine consumption, antioxidant supplementation and drugs during the programmes. They completed an informed consent document to participate in the study. The age, height, weights, athletic ability of all subjects were measured in physical education department laboratory.

## MEASUREMENT OF ATHLETIC POWER

**Athletic Power**: Athletic power measured by the Standing Broad Jump.

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**Standing Broad Jump**: This test measures the power of legs in jumping horizontal distance and may be applied to children of both sexes aged seven years above.
**Equipment:** Floor Mat or long jump pit may be used, measuring tape, marking tape.
**Test Administration:** A demonstration of the standing Broad jump is given to a group of Subjects to be tested. The Subject is then asked to stand behind the starting line with the feet parallel to each other. He is instructed to jump as farthest as possible by bending knees and swinging arms to take off for the broad jump in the forward direction. The subject is given three trials.
**Scoring:** The distance between the starting line and the nearest point of landing provides the score of the test. The best trial is used as the final score of the test.

**Training Programme:**

A warm-up period of approximately 10 minutes this should combine calisthenics' type stretching exercises and progressive aerobic activity . A cool-down period of 5-10 minutes. Training program would be planned as 06 weeks 5 days a week and 45 min. The exercise includes Hip-dominant (deadlifts, hinges, and swings), Knee-dominant (squats and lunges), Pushing movements (pushups, dips, and presses), Pulling movements (rows and pull-ups), Gait patterns, such as walking and running.

**Collection of data:**

Data was taken from the 15 Student Athletes as a experimental group of Aurangabad similarly Pre and Post Test was taken from 15 other students as a control group Resistances training was given to the experimental group. And analysis the data mean, S.D. and analysis of Covariance was utilized the level of significant was set up at 0.05 level.

**TABLE-1 , MEAN SCORES AND STANDARD DEVIATIONS OF PRE AND POST-TEST OF ATHLETIC POWER AMONG CONTROL GROUP.**

| components | Test | Number | Mean Scores | S. D. | T-Test |
|---|---|---|---|---|---|
| Athletic Power | Pre Test | 15 | 224.12 | 10.36 | 1.59 NS |
| | Post Test | 15 | 223.98 | 10.34 | |

Table-1 illustrates the mean scores and standard deviations of Athletic power using through Standing Broad Jump test among Control group. The mean scores obtained from Table 4, the mean score of Pre-test was 224.12 and the post test was 223.98 respectively of Athletic power among Control group. The standard deviations of Pre-test were 10.36 and the post test was 10.34 respectively of Athletic power among Control group.

**The Mean Scores and Standard Deviations of Pre and Post-test of Athletic Power among Control group has been presented through graphically in figure -1**

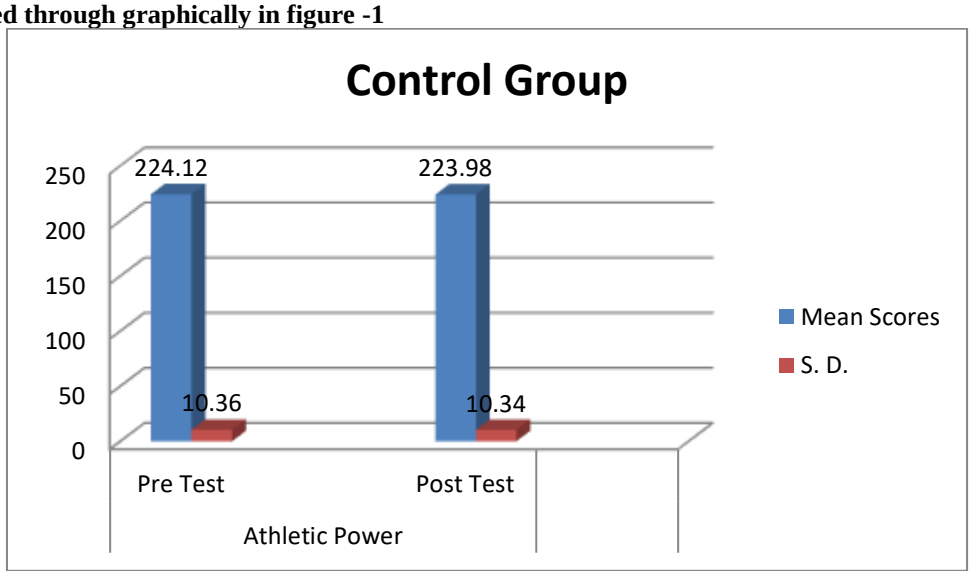

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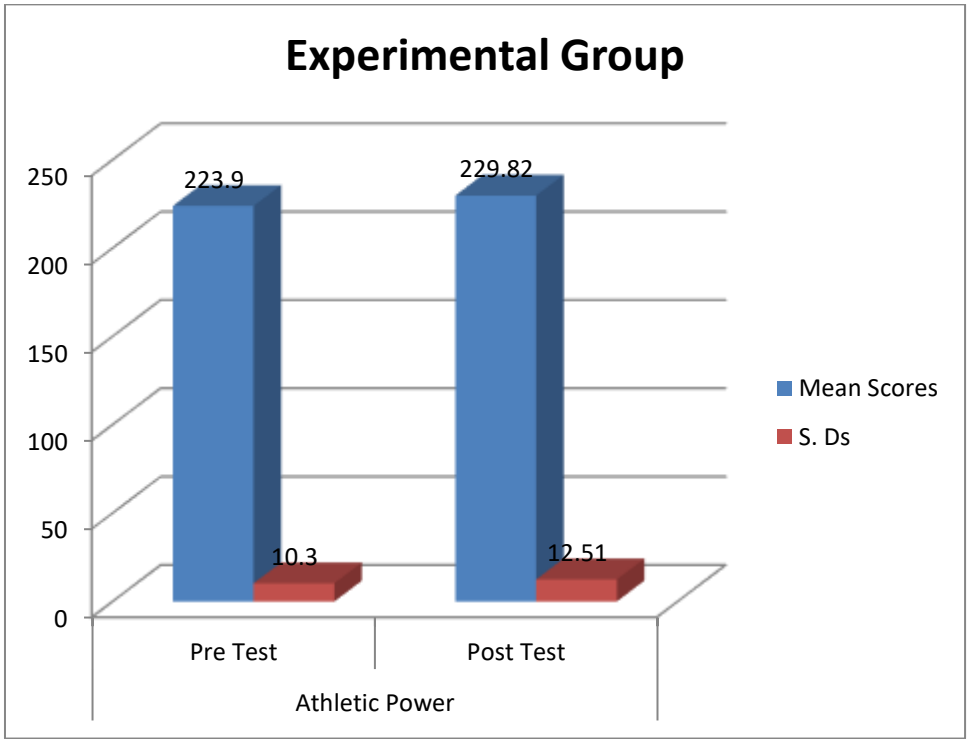
**Table-2, Mean Scores and Standard Deviations of Pre and Post-test of Athletic power ability among Experimental group.**

| components | Test | Number | Mean Scores | S. Ds | T-Test |
|---|---|---|---|---|---|
| Athletic Power | Pre Test | 15 | 223.90 | 10.30 | 3.69 * |
| | Post Test | 15 | 229.82 | 12.51 | |

**As per Table-5**, illustrates the mean scores and standard deviations of **Athletic power** using through Standing Broad Jump test among experimental group (Student Athletes ) .The mean scores obtained from Table 2, the mean score of Pre-test was **223.90** and the post test was **229.82** respectively of **Athletic power** among experimental group. Mean while the standard deviations of Pre-test were **10.30** and the post test was **12.51** respectively of **Athletic power** among experimental group.

**The Mean Scores and Standard Deviations of Pre and Post-test of Athletic Power among Control group has been presented through graphically in figure -2**




## DISCUSSION

The results of the study found that , there was significant difference in relation to pre and post test of work Power between Experimental group . This means that Six weeks Resistance training programme has improved work power performance among Student Athletes . Student Athletes who participated in athletics tended to fare better than nonathletic in their academic, personal and professional life during college and after graduation, a new Gallup study on alumni outcomes found Student-athletes learn valuable, practical skills such as sportsmanship, time management, verbal communication with adults and peers, and interaction and coordination in diverse groups. Their athletic endeavors enrich and augment the education they receive inside the classroom. Student-athletes . teaches you honesty, acceptance, sportsman spirit and teamwork. Being a student-athlete will make you feel like an allrounder, thus increasing your self-confidence. An athlete will also build physical strength and perseverance while practicing drills for the sports event. Resistance training increases muscle strength by making your muscles work against a weight or force. Resistance training is an exercise that increases muscle strength through weights or in the case of The Man Challenge via resistance bands and your own body weight. The training is based on the principle that your muscles will work to overcome a resistant force whenever it needs to. It had been hypothesized that there would be significant effect of Resistance training to the improvement of sports performance-related physical fitness components with respect to Athletic power ability among physical education

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