



EFFECT OF PLYOMETRIC EXERCISES FOR DEVELOPMENT OF SHOULDER STRENGTH AND SPEED AMONG THROWERS OF ANDHRA UNIVERSITY

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Abstract:

Plyometric exercises are a vital component for Throwers for obtaining the maximal strength, speed and force during the athletics event and should be included in any conditioning program of Throwers. The purpose of the present study to find out the effect of plyometric exercises for the development of Shoulder strength speed among Throwers. The sample for the present study consists of 50 Male Throwers Affiliated Colleges of Andhra University out of which 25 are experimental group and 25 are controlled group. Plyometric exercises such as hopping, bounding, depth jumps, tuck jumps, Push-ups etc were given to experimental group on alternate days i.e. three sessions per week and controlled group were given the general training for six weeks. Pre Test and Post Test were conducted in Pull ups to measure the shoulder strength and 30 M Run to measure the speed among experimental group and controlled group .This study shows that due to the plyometric training there is a improvement of experimental group in the Shoulder strength and Speed and controlled group is decreased in performance of shoulder strength and speed. Throwers is all about explosive power. Explosive power is a combination of speed, muscular endurance and muscular strength, all of which can be developed through plyometric exercises. It is concluded that due to plyometric exercises there will be improvement in shoulder strength and speed among Throwers.

Key Words: plyometric exercises, maximal strength ,Speed, Throwers In Andhra University.

INTRODUCTION

Sports are most often played just for fun or for the simple fact that people need exercise to stay in good physical condition. Although they do not always succeed, sports participants are expected to display good sportsmanship, standards of conduct such as being respectful of opponents and officials, and congratulating the winner when losing.

One of the important aims of every sports programme should be to develop physical fitness of the participants. In the narrow understanding, Games and Sports is a competitive activity. In other words, the activity which has been historically formed in the sphere of physical culture as competitions which aim to identify, compare and develop certain human abilities. Self understanding is a basic to an integrated personality, sports gives a clear estimate of more than one dimension of the individual. Attitude of students is an important area for research. It is an important segment of an individual's readiness. Status has an effect on the individual's reaction to a situation may be further stated that attitudes are learned or acquired they may be influenced by teaching. Attitude has environmental effects also. Individual's attitude is guided and guarded by his parents' views, well wishers' views and by some social factors. Home and School are two unique institutions to form right attitude towards and object. Games and Sports contribute towards social, mental, emotional and intellectual development. Vigorous activity is basically meant for increasing the efficiency of the body and human being need to be fit efficiently throughout their lives.



To take part in games and sports activities one can develop his health definitely. A healthy society needs the healthy individual

Plyometric exercises are a vital component for Throwers for obtaining the maximal strength, speed and force during the throwing event and should be included in any conditioning program of Throwers. Successful Throwers are athletic, technically sound and tactical savvy in the ring. Spending long hours in the gym makes you more technical and tactical. With an effective workout routing and the right training, your coordination, quickness and explosiveness should improve through Plyometric training Plyometric train your nervous system to trigger quick, Powerful muscle contractions, workouts include high intensity exercises that emphasize short bursts of energy. Throwers a sport that requires explosive and powerful movements for an athlete to succeed. Plyometric mimics the physical demands of a fight and will train your body to move more quickly and explosively. When completing plyometric exercises, they must be done in short bursts at the highest intensity possible.

Fitness is a very important in the success of a Throwers. Throwers need excellent levels stamina, speed, agility and power. In order to improve as a judo player you should be testing and monitoring your fitness levels and adjusting your training so you can fully reach your potential.

STATEMENT OF THE PROBLEM

The purpose of the study “Effect of Plyometric Exercises for development of Shoulder Strength and Speed among Throwers Of Andhra University”

METHODOLOGY

The purpose of the present study to find out the effect of plyometric exercises for the development of Shoulder strength and speed among Throwers. The sample for the present study consists of 50 Male Throwers in Affiliated Colleges of Andhra University out of which 25 are experimental group and 25 are controlled group. Plyometric exercises such as Push ups, Medicine Ball Throws, Hopping, Bounding, Tuck Jumps, Box Jumps, dumbbell throws etc were given to experimental group on alternate days i.e. three sessions per week and controlled group were given the general training for six weeks. Pre Test and Post Test were conducted in Pull ups to measure the shoulder strength and 30 M Run to measure the speed among experimental group and controlled group.

RESULTS

This results of the study shows that due to the plyometric training there is a improvement of experimental group in the Shoulder strength and Speed and controlled group is decreased in performance of shoulder strength and speed due to the general training.

Table I: Mean values of 30 M run test between experimental and control groups of Throwers.

Variable	Group	Pre Test M	Post Test M	t' value	P' Value
30 M Run	Expermental	6.42	5.45	3.06	0.00
	Countrol	6.43	6.13		

Table 1 : The Experimental Group of 30 M Run Men is 6.42 in Pre Test and Controlled Group mean is 6.43 in Pre Test there is a difference of 0.01 in Pre Test. The Experimental Group Mean is 5.45 in Post Test and Controlled Group mean is 6.13, the Experimental Group mean in Post Test in 30 M Run is decreased from 6.42 to 5.45 there is a improvement of 0.97 from Pre Test to Post and Control Group Mean is post test is 6.43 there is a increase of 6.43 to 6.13 from Pre Test to Post, the performance is



come down to 0.30 in the controlled group. Due to the Plyometric Training the Experimental group has improved a lot.

Table II: Mean values of Pull Ups test between experimental and control groups of Throwers in athletics.

Variable	Group	Pre Test	Post Test	t' value	P' Value
Pull ups	Expermental	13.00	18.00	8.01	0.00
	Countrol	13.00	12.50		

Table 2 : The Experimental Group of Pull ups in Pre Test is 13.00 and Controlled Group mean is 13.10 in Pre Test there is a difference of 0.00 in Pre Test. The Experimental Group Mean in Pull Ups Test is 18.00 in Post Test and Controlled Group mean is 12.50, the Experimental Group mean in Post Test in Pull ups Test is improved from Pre Test 13.00 to Post Test 18.00 and Control Group Mean is post test is 13.00 there is a decrease in the performance from 13.00 to 15.50. The Experimental Group has improved due to Plyometric exercises in Pull ups Test and Controlled Group is decreased due to general training.

Figure 1: : Mean values of 30 M run test between test between experimental and control groups of Throwers.

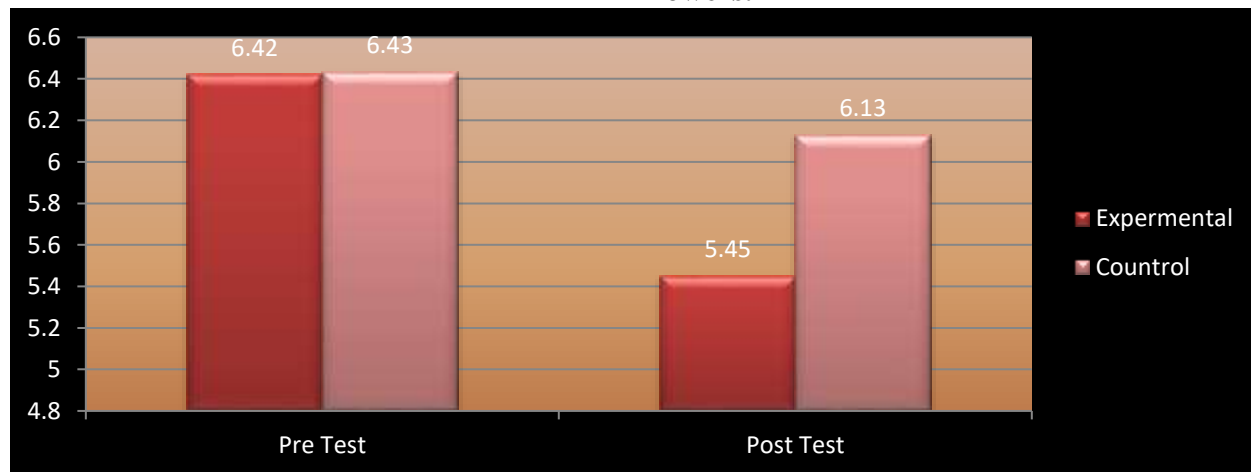
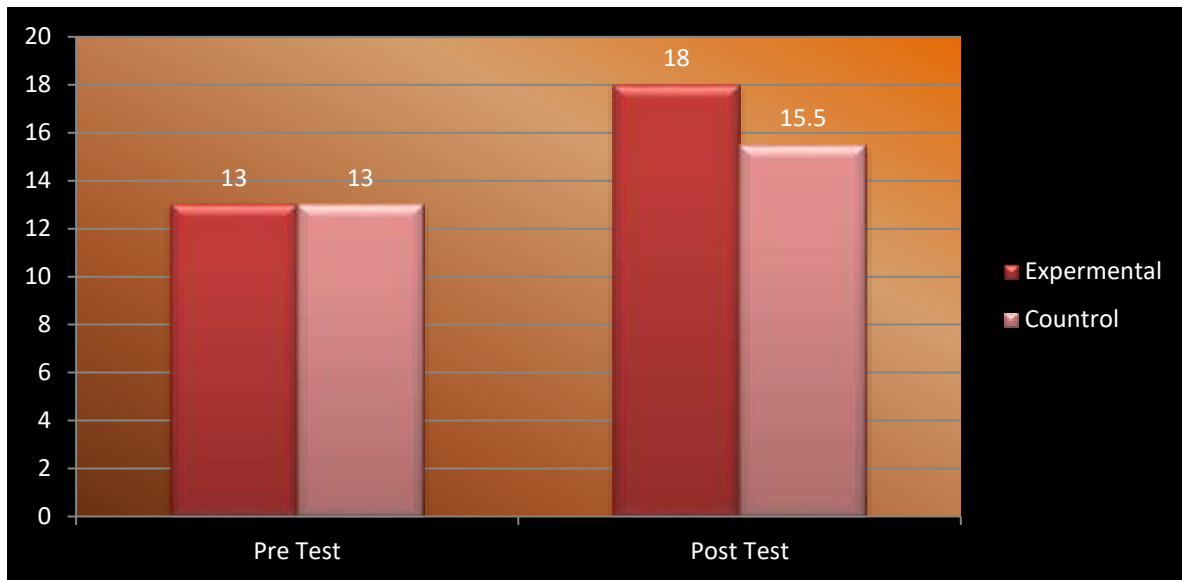


Figure 2 : Mean values of Pull ups test between test between experimental and control groups of Throwers.



CONCLUSION

Throwing Events in athletics is all about explosive power. Explosive power is a combination of speed, muscular endurance and muscular strength, all of which can be developed through plyometric exercises. In a competitive sport such as Throwing events overall body strength and ability to Moments quickly are distinct advantage. Competition are according to the Events High Performance .It is concluded that due to plyometric exercises there will be improvement in shoulder strength and speed among Thrower Athletes.

REFERENCES:

1. Adams, K., O'Shea, J.P., O'Shea, K.L. and Climstein, M (1992) "The effect of six weeks of squat, plyometric and squat-plyometric training on power production." **Journal of Strength and Conditioning Research** 6, 36-41.
2. Campo S, Vaeyens R, Philippaerts RM, Redondo JC, de Benito AM, Cuadrado G. (2009) "Effects of lower-limb plyometric training on body composition, explosive strength, and kicking speed in female soccer players". **Journal of Strength Conditioning Res.** 23(6):1714-22.
3. Chetna Chaudhary and Birendra Jhahharia, (2010) "Effects of plyometric exercises on selected motor abilities of university level female basketball players," **British Journal of Sports Medicine**, 44:i23.
4. Christopher C. Michal Lehnert, Ivona Lamrova, Milan Elfmark, (2009) "Changes in speed and strength in female volleyball players during and after a plyometric training programme", **Acta Univ. Palacki. Olomuc., Gymn.** 39, 1.
5. Vishnu Raj R (2017)"Effect of Plyometric Training on Selected Physical and Physiological Variables Among College Level Volleyball Players", **International Journal of Yoga, Physiotherapy and Physical Education**, 2(5), 181-184.
6. Young, W B., James, R., and Montgomery, I.(2002). "Is Muscle Power Related to Running Speed with Changes of Direction"? **Journal of sports medicine physical fitness**,42, 282-288.
7. Zabchi Noredine a , Mokrani Djamel a ,Benzidane Houcine a and Sebbane Mohammed (2016)"The Effect of the Contrastive Training Using Weights and Plyometrics on the



- Development of the Vertical Jump Ability to Improve the Performance of the Smash for Volleyball Players”, **European Journal of Physical Education and Sport**, 11.
8. Sinku, S.K. (2012)“Effect of Health-Related Physical Fitness Programmes on the Cardio-Respiratory Function of Sedentary Students”, **Journal of Exercise Science and Physiotherapy**,8(2), 58-62.
 9. Sporis, G., Milanovic, L., Jukic, I., Omrcen, D & Molinuevo, J.S.(2010).“The Effect of Agility Training on Athletic Performance”. **Kinesiology**, 42(1), 65-72.
 10. Sporis, G., Milanovic, Z., Trajkovic, N., & Joksimovic, A.(2011).“Correlation Between Speed, Agility and Quickness in Elite Young Soccer Players”. **Acta kinesiologica**, 5(2), 36-41.
 11. Srihari. K, Suthakar. S and Sundarraj (2018)“Effects of Skill Based Plyometric Training on Explosive Power of School Level Volleyball Players”, **International Journal of Recent Research and Applied Studies**, 5(11).
 12. Shawn Johnson, Steve Burns, and Kari Azevedo (2013)“Effects of Exercise Sequence in Resistance-Training on Strength, Speed, and Agility in High School Football Players”, **International Journal of Exercise Science** 6(2): 126-133.
 13. Aleksandar Rajkovic, Vlatko Vucetic And Dario Basic, (2014). Influence of specific speed, agility and quickness training (SAQ) on speed and explosiveness of football players. *Journal of Sport Science*, 7(1), 48-51.
 14. Satake, E. B., Jagaroo, V., & Maxwell, D. L. (2008). *Handbook of statistical methods: Single subject design*. San Diego, CA: Plural Publishing.
 15. Nageswaran. A.S, (2015). Eight week sand based speed workout applied among football players. *International journal of scientific research*, 4(2), 310-312.
 16. Satake, E. B., Jagaroo, V., & Maxwell, D. L. (2008). *Handbook of statistical methods: Single subject design*. San Diego, CA: Plural Publishing.
 17. Nageswaran. A.S, (2015). Eight week sand based speed workout applied among football players. *International journal of scientific research*, 4(2), 310-312.
 18. Vivian, H.H. (2006) *Advanced fitness assessment and exercise prescription*. 5th edition. Human kinetics.
 19. Mridha, S. (2010). A Comparative Study on Motor Fitness of 12 to 14 Years Tribal and Non-Tribal Boys. *Abstract Book National Conference on Trends & Practices in Physical Education*, Department of Physical Education, Vishva Bharti Santiniketan University, West Bengal, Vol. 1, No. 1 (p. 11).
 20. Singh Sunil (2010). Comparative Between Selected Physical Fitness Variables of Offensive and Defensive Football Players of University Level, *Abstract Book, National Seminar on Recent Trends & Future of Physical Education and Sports Science*, Mahatma Gandhi Vidyapith, Varanasi (UP), India, Vol. 1, (p. 37).
 21. Thakur Geeta (2011) “Comparison of Motor Fitness Components of Rural and Urban School Hockey Boys.