



## Effect of Plyometric Training on explosive strength of Beginner football players of Pune city

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### Abstract:

The main aim of the study was to check the effect of plyometric training on explosive strength of beginner football players of Pune city. For this study total 20 male football players having maximum one year of experience in playing football at club level with irregular exercises were chosen. Only players with No history of lower limb injuries were given preferences. The subject's age were ranged in between 16-20 years. Convenience sampling was adopted as a sample for this study. A pre-test data had collected with the help of jump and reach test. Further all the subjects were given regular plyometric exercises for next four weeks with proper training schedule by setting a training protocol. After the completion of four weeks again the data were collected with the help of jump and reach test and later on the pre- and post-performance of the group was analyzed with the help of statistical t-test. The results of this study showed that 4-weeks plyometric training program significantly improve the explosive strength of beginner football players.

**Key word:** *Plyometric, Training, Explosive strength, Beginner, football, Players.*

### Introduction:

Soccer, also known as football in many areas of the world, is a popular team sport played by millions of people of all ages and genders across the world. It consists of two teams of eleven players each attempting to score goals by kicking a ball into the opposing net. Soccer is famed for its simplicity, since all you need to play is a ball, a field, and a few markings. It does, however, need a high degree of ability, athleticism, and collaboration, making it a difficult and thrilling sport to watch and play. Soccer has become one of the most popular sports in the world, bringing people from many countries and backgrounds together, thanks to its global appeal and fan enthusiasm.

Football is a sport that requires a wide range of skills, including technical, physical, and mental abilities. A player's skill level can be measured by their ability to perform a variety of techniques, such as dribbling, passing, shooting, and defending. In order to be successful in football, players must master these skills and be able to execute them in a variety of game situations. Technical ability is maybe the most significant part in football. Dribbling, passing, shooting, and ball handling are examples of these skills. Players with good technical ability can keep control of the ball, generate scoring opportunities, and defend successfully. Football requires physical abilities such as speed, agility, and strength. To outmaneuver their opponents, players must be able to move rapidly and change direction with ease. Physical strength is also required to contend for the ball and hold off defenders. Mental abilities such as decision

making, spatial awareness, and tactical knowledge are also essential for football success. Players must be able to read the game, make rapid judgments under duress, and grasp their position in the tactics and strategy of their team.

### Methodology:

This was an experimental study which was done to check the effect of plyometric training on explosive strength of beginner football players of Pune city. The subjects were selected conveniently from Pune city. For this study total 20 beginner football players were chosen. The data were analyzed with the help of t test.

#### ➤ Inclusion Criteria

- Beginner players having maximum one year of experience in playing football at club level with irregular exercises were included.
- Players with no history of lower limb injuries were given preferences.
- Only age groups above 16 and below 20 years were included.

#### ➤ Exclusion Criteria

- Players with Presence of any injuries were excluded.
- Players should not have taken part in any plyometric training prior to the study.
- Ages below 16 and above 20 years were excluded.

### Method of Measurement of Variable:

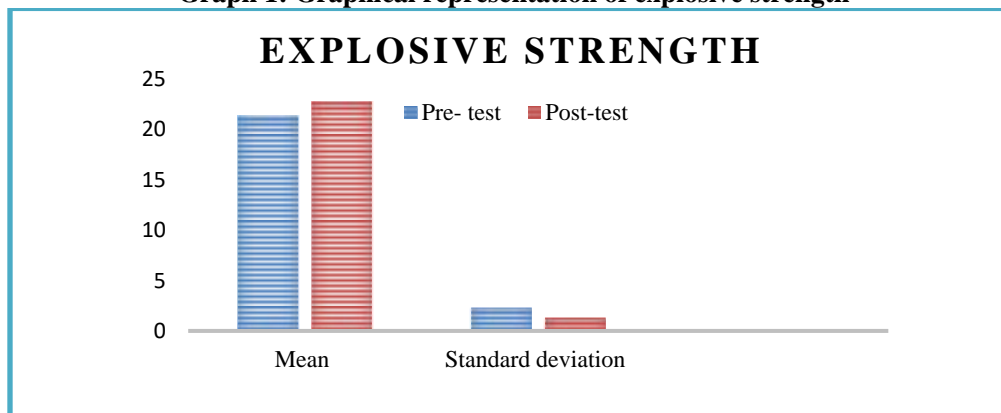
Explosive strength was the variable for this study. Plyometric training program was given for 4 weeks.

Intensity	Exercises	Set/Repetitions	Progression	
<b>Low intensity</b> (2 weeks) 4 sessions /weeks	Squat jump	3x4-6	2 min (30 sec. to 45sec.for each set)	Add one repetition after a week
	Double leg ankle bounce	3x4-6		
	Lateral cone jump	2x4-6		
	Standing Broad Jump	3x4-6		
<b>Medium intensity</b> (2weeks) 4 sessions/ week	Double leg vertical jump	3x6-8	2min. (30sec to 45sec. for each set)	Add one repetition after a week
	Hip twist ankle	3x6-8		
	double leg hop	3x6-8		
	Split squat jump	2x6-8		
	Depth jump	2x6-8		
	Spot jump	3x6-8		
<b>High intensity</b> (2weeks) 4 session/ week	Single leg vertical jump	3x8-10	2min. (30sec to 45sec. for each set)	Add one repetition after a week
	Single leg speed hop	3x8-10		
	Stadium hops	3x8-10		
	Side jumps and sprint	3x8-10		
	Spring arm action	3x8-10		
	Medicine ball sit ups	3x8-10		

**Table No. 1: Descriptive Analysis of the data on Explosive Strength**

Variable	Phases	No	Mean	SD	DF	Cal 't'	Tab t'
Explosive Strength	Pre- test	20	21.30	2.3193	19	1.823	1.729
	Post-test		22.75	1.3328			

**Graph 1: Graphical representation of explosive strength**



#### Level of Significant at 0.05

#### Statistical analysis:

In the pre and post-test show the descriptive analysis of explosive strength were as follows:

On plyometric training of badminton player of pre-test mean value was 21.30 and standard deviation 2.3193. On other hand of post-test mean value was 22.75, standard deviation was 1.3328 and calculated t value was 1.823. All the data were analysed with the help of statistical tool t-test.

#### Discussion and Conclusion:

Football players require significant strength in lower body. Plyometric training can strengthen and improve the quickness performance of beginner football players. The results of this study revealed that 4-weeks plyometric training program can significantly improve the explosive strength in beginner football players of Pune city. Hence, plyometric training can be utilized by football coaches and players to improve explosive strength.

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