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Change in Motor Qualities Due to Four weeks Plyometric Training Among Football Players

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ABSTRACT
The study was intended to find out the change in motor qualities due to four weeks plyometric training among football players. The study was conducted on the school level male football players. The age of the football players were ranged between 14 to 16 years as per their school records. The study was conducted on only fifteen subjects who had participated in inter school matches. The data were collected from the Alagappa model higher secondary school Karaikudi sivagangai Tamilnadu. The collected data before and after the plyometric training were statistical analysis by paired 't' test. The level of significance was fixed at 0.05 level of confidence. The results of the study revealed that there is significant difference in standing broad jump and there is no significant difference in speed between pretest and posttest in school level football players.

Keywords: Standing Broad, Jump, Speed, plyometric training.

INTRODUCTION

Using plyometrics for soccer is one the most effective ways to increase explosive speed and power. First formalized in the early 1960's as a scientific training system by Dr. Yuri Verkhoshansky. Earliest published use of the term seems to be in a Soviet publication in1966.Verkhoshansky favored the term 'shock method' to distinguish between naturally occurring plyometric actions in sport and the training system he devised to develop speed-strength . Plyometric action basically consists of stimulating the muscles by means of a sudden stretch preceding any concentric voluntary effort. It is characterized by a reflexive action, referred to as stretch-shortening action, between the end of the eccentric braking phase, and the beginning of the concentric acceleration phase

METHODOLOGY

The study was intended to find out the change in motor qualities due to four weeks plyometric training among football players. The study was conducted on the school level male football players. The age of the football players were ranged between 14 to 16 years as per their school records. The study was conducted on only fifteen subjects who had participated in inter school matches. The subjects were randomly assigned constant intensity 60-70 % four weeks training programme each session 45 minutes programme weekly six sessions totally 24 sessions all the subjects were played their football game normally after the training. The data were collected from the Alagappa model higher secondary school Karaikudi sivagangai Tamilnadu. The collected data before and after the plyometric training were

statistical analysis by paired 't' test. The level of significance was fixed at 0.05 level of confidence. The results of the study revealed that there is significant difference in standing broad jump and there is no significant difference in speed between pretest and posttest in school level football players.

Training schedule

I – IV weeks

Time	Session	Exercises	Reps./ Sets	Rest between Sets
5mins.	Warming Up	jogging		
5mins.	Fundamental exercises	Mobility exercises		
20 mins.	Main Exercises	Bounding, Galloping, Single leg jump, Front and back jump and Double leg jump	Each- 25 rep 4-6sets	30- 45 Seconds
10mins	Training implementation to game	Minor game: Football		**Intensity 60- 70%**
5mins.	Cooling Down	Stretching exercises		

Physical variables

1. Explosive power
2. Speed

TESTING PROCEDURE

Explosive power (Standing broad jump)

Purpose: To measure the explosive power of the legs.

Equipment required: Tape measure to measure distance jumped, non-slip floor for takeoff, and soft landing area preferred. Commercial Long Jump Landing Mats are also available. The take off line should be clearly marked.

Procedure: The subject stands behind a line marked on the ground with feet slightly apart. A two foot take-off and landing is used, with swinging of the arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards. Three attempts are allowed.

Scoring: The measurement is taken from take-off line to the nearest point of contact on the landing (back of the heels). Record the longest distance jumped, the best of three attempts were taken.

SPEED TEST (50 meters dash)

Purpose: To test the acceleration and speed.

Equipments : Measuring tape and stop watches.

Procedure: The test involved running a single maximum sprint over 50 meters distance and the time was

recorded. A through warm up was given, including some practice starts and accelerations. Start was given from a stationary position, with one foot in front and other foot at the rear side. The front foot was kept behind the starting line. Once the subjects were ready and motionless, the starter gave "set" and then "go" the subjects ran with maximum speed. The investigator encouraged to run fast from the start line to finish line.

Scoring: The length of the time required to complete the course was recorded and the nearest one tenth of a second has been considered as a result.

TABLE – I THE TABLE SHOWS THAT MEAN, STANDARD DEVIATION, STANDARD ERROR OF THE MEAN AND PAIRED 't' RATIO ON STANDING BROAD JUMP BETWEEN PRE TEST AND POST TEST FOR SCHOOL LEVEL FOOTBALL PLAYERS

Speed	Mean	S.T.D	S.E.M	D.F	Correlation	'T' ratio
Pre test	**1.85**	**19.65**	**5.08**	**1**	**0.991**	**3.209**
Post test	**1.87**	**20.58**	**5.32**	**14**		

***Significant at 0.05 level of confidence with degrees of freedom 14. The table value is 2.145.**

Table I indicates that calculated paired 't' value was 3.207, which is lesser than the table value of 2.145 at 0.05 level of confidence for 14 degrees of freedom. This indicates that there is significant difference between pretest and posttest school level football players. Hence the null hypothesis is rejected the research hypothesis accepted.

BAR DIAGRAM SHOWING THE MEAN VALUES OF STANDING BROAD JUMP BETWEEN PRETEST AND POSTTEST FOR SCHOOL LEVEL FOOTBALL PLAYERS

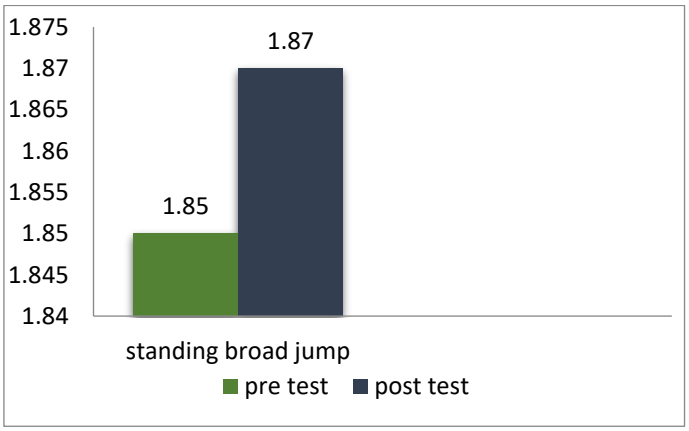


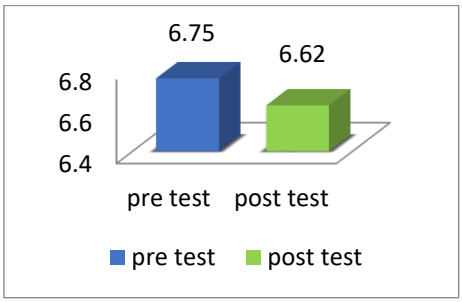
TABLE – II THE TABLE SHOWS THAT MEAN, STANDARD DEVIATION, STANDARD ERROR OF THE MEAN AND PAIRED 't' RATIO ON SPEED BETWEEN PRE TEST AND POST TEST FOR SCHOOL LEVEL FOOTBALL PLAYERS (50 mts DASH)

Speed	Mean	S.T.D	S.E.M	D.F	Correlation	'T' ratio
Pre test	**6.75**	**0.73**	**0.19**	**1**	**0.933**	**1.765**
Post test	**6.62**	**0.82**	**0.21**	**14**		

***Significant at 0.05 level of confidence with degrees of freedom 14. The table value is 2.145.**

Table II indicates that calculated 't' value was 1.765, which is lesser than the table value of 2.145 at 0.05 level of confidence for 14 degrees of freedom. This indicates that there is no significant difference between pretest and posttest school level football players. Hence the null hypothesis is accepted the research hypothesis rejected.

BAR DIAGRAM SHOWING THE MEAN VALUES OF SPEED BETWEEN PRE TEST AND POST TEST FOR SCHOOL LEVEL FOOTBALL PLAYERS (50 mts DASH)



CONCLUSION

Speed

Analysis of speed data revealed that there was no significant difference in speed between school level football players pretest and posttest. But the speed is slightly increased the time was reduced because of the Influence of four weeks plyometric training programme but there was no significant improvement as per the table value. Hence the hypothesis is rejected.

Standing Broad Jump

Analysis of standing broad jump data revealed that there was significant difference in explosive power in school level football players between pretest and posttest. The explosive power has increased because of the influence four weeks plyometric training programme. Hence the hypothesis is accepted.

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