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## EFFECT OF PLYOMETRIC TRAINING ON SELECTED SKILL PERFORMANCE VARIABLES AMONG FEMALE HOCKEY PLAYERS

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**Abstract:-** The purpose of the study was to find out the effect of plyometric training on selected skill performance variables among female hockey players. To achieve the purpose of the present study, thirty female hockey players were randomly selected from PKR Women College of Arts and Science and Gopi Arts and Science College, Erode district, Tamilnadu, India and their age ranged from 18 to 21 years. The selected subjects were divided into two groups of fifteen subjects in each. Group I acted as plyometric training group and Group II acted as control group. The Plyometric Training group participated for a period of eight weeks for alternate three days in a week and the post-tests were taken. To find out the difference between the two groups paired 't' test was used. The result reveals that the plyometric training group showed better performance on dribbling, hit and scoop than the control group.

**Keywords:** Plyometric, Hockey, Dribbling, Scoop, Hit.

### INTRODUCTION

Plyometrics have their roots in Europe, where it was initially termed as jump training. During the early 1970s the interest jump training has increased in East European athletes materialized as powers on the world sport arena. The Eastern countries begin to produce superior athletes in track and field, gymnastics and weight lifting which give rise to practicing this training method. In 1975 Fred Wilt the American Track and Field coach coined the term plyometrics. The elements ply means "increase" and metric means "measure" derived from Latin thus the combined meaning 'measurable increase' (Thomas, 1994). Plyometric rapidly got popular among the coaches and athletes as exercises, aimed at linking strength with speed of movement to produce power. Plyometric training started became essential for athletes. The necessity for power development in sports needs no argument. Strength and conditioning specialists dedicate a great deal of time researching muscular power development techniques and implementing only those that produce significant results on athletes. Recent studies suggest that plyometric and resistance training exercises can increase vertical jump height, explosive power, and sprint speed by improving the production of peak muscle force and power. Presently many coaches and athletes have successfully used plyometric exercises as a method of training for performance enhancement.

Hockey is a popular sport played in many countries. But its official name is Hockey. However, in some countries in order to differentiate from ice hockey it was termed as field Hockey. The origin of the word Hockey is not clear. In hockey the players attempt to place a ball into their opponent's goal using wooden sticks. Historical records show that game was played in various antique civilizations and believed to be an ancient sport. The evidences of 4,000 year old drawings in Beni Hasan Tombs, in Nile Valley, Egypt confirmed that the sport has been played. The Persians, the Romans, the Ethiopians, as well as the Aztecs have also played their own variation of the game (Dureha & Akhil, 2003).

### PURPOSE OF THE STUDY

The purpose of the study was to find out the effect of plyometric training on selected skill performance

G. Vasanthi<sup>1</sup> and P. Y. Sivachandran<sup>2</sup>, "EFFECT OF PLYOMETRIC TRAINING ON SELECTED SKILL PERFORMANCE VARIABLES AMONG FEMALE HOCKEY PLAYERS", Golden Research Thoughts | Volume 4 | Issue 6 | Dec 2014 | Online & Print

variables among female hockey players.

**Hypothesis**

It was hypothesized that the plyometric training group would show significant improvement on selected skill performance variables among female hockey players than control group.

**METHODOLOGY**

To achieve the purpose of the present study, thirty female hockey players were randomly selected from PKR Women College of Arts and Science and Gopi Arts and Science College, Erode district, Tamilnadu, India and their age ranged from 18 to 21 years. The selected subjects were divided into two groups of fifteen subjects in each. Group I acted as plyometric training group and Group II acted as control group. The Plyometric Training group participated for a period of eight weeks for alternate three days in a week and the post-tests were taken. To find out the difference between the two groups paired ‘t’ test was used.

**RESULTS AND DISCUSSIONS**

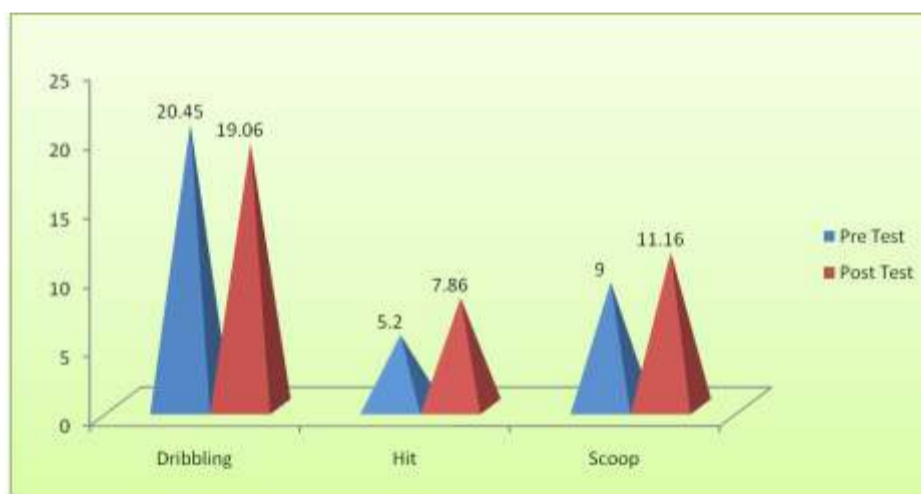
The primary objective of the paired ‘t’ ratio was to describe the differences between the pre-test and post-test mean.

**TABLE – I**  
**SUMMARY OF ‘t’ RATIO ON SELECTED SKILL PERFORMANCE VARIABLES OF EXPERIMENTAL GROUP**

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	DM	‘t’ Ratio
1	Dribbling	20.45	19.06	1.38	2.13	0.55	2.51*
2	Hit	5.20	7.86	2.66	1.71	0.44	6.01*
3	Scoop	9.00	11.16	2.15	0.41	0.10	20.07*

An examination of table - I indicates that the obtained ‘t’ ratios were 2.51, 6.01 and 20.07 for dribbling, hit and scoop respectively. The obtained ‘t’ ratios were found to be greater than the required table value of 2.14 at 0.05 level of significance for 1, 14 degrees of freedom. Hence it was found to be significant.

**FIGURE – I**  
**PRE AND POST TEST DIFFERENCES OF THE EXPERIMENTAL GROUP ON SELECTED SKILL PERFORMANCE VARIABLES**

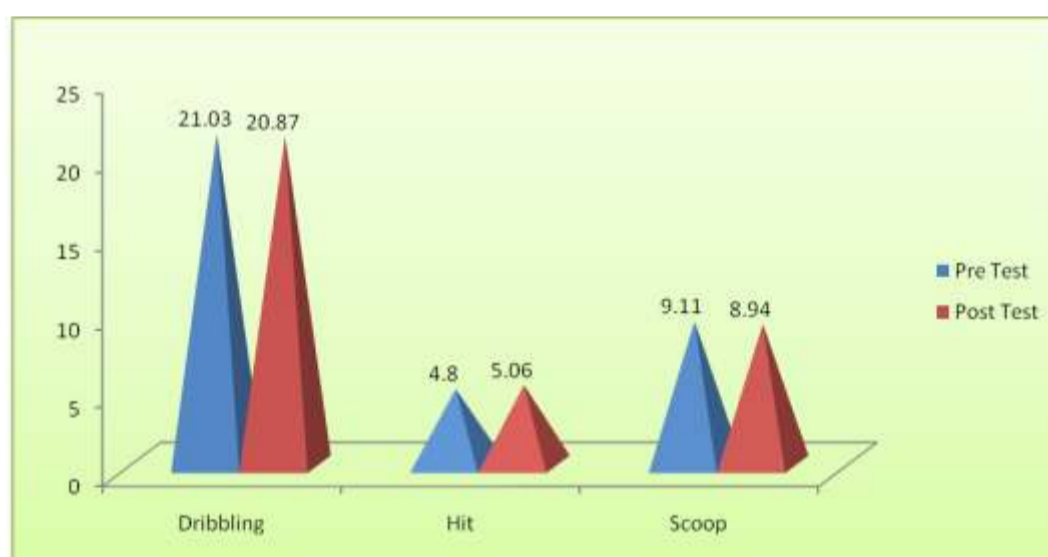


**TABLE – II**  
**SUMMARY OF ‘t’ RATIO ON SELECTED SKILL PERFORMANCE VARIABLES OF CONTROL GROUP**

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	DM	‘t’ Ratio
1	Dribbling	21.03	20.87	0.15	1.62	0.41	0.37
2	Hit	4.80	5.06	0.26	0.88	0.22	1.16
3	Scoop	9.11	8.94	0.17	0.53	0.13	1.26

An examination of table - II indicates that the obtained ‘t’ ratios were 0.37, 1.16 and 1.26 for dribbling, hit and scoop respectively. The obtained ‘t’ ratios on all the selected variables were found to be lesser than the required table value of 2.14 at 0.05 level of significance for 1, 14 degrees of freedom. Hence it was found to be insignificant. The results of this study showed that the control group was statistically insignificant.

**FIGURE – II**  
**PRE AND POST TEST DIFFERENCES OF THE CONTROL GROUP ON SELECTED SKILL PERFORMANCE VARIABLES**



#### DISCUSSIONS AND CONCLUSIONS

In case of skill performance variables i.e. dribbling, hit and scoop the results between pre and post (8 weeks) test has been found significantly higher in experimental group in comparison to control group. The findings of the present study have strongly indicates that eight weeks of plyometric training group had significant influence on selected skill performance variables i.e. dribbling, hit and scoop of female hockey players. Hence the hypothesis earlier set that plyometric training would have been Significant influence on selected skill performance variables in light of the same the hypothesis was accepted. The result reveals that the plyometric training group showed better performance on dribbling, hit and scoop than the control group.

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