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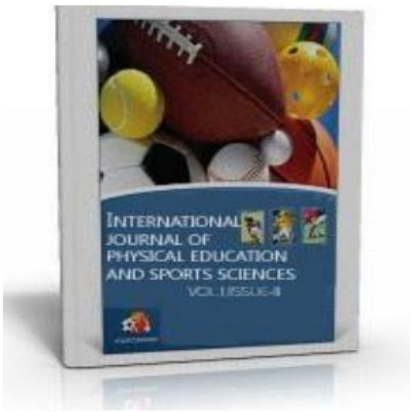
Effects of Technique Training and Strength Training On Dribbling and Hitting Among Hockey Players



Dr. K. M. Valsaraj
Associate Professor and Head, Dept. of Physical Education,
Lucknow Christian College, Lucknow

ABSTRACT

The purpose of the present investigation was to find out the effect of the technique training with and without strength training on dribbling and hitting. To achieve this purpose, sixty men students were selected randomly as subjects. Their age ranged from 20 to 25 years. They were assigned randomly into two experimental groups (group I and group II) and a control group (group III) of twenty each. All the subjects of three groups were tested on selected dependent variables before and after the treatment. The data pertaining to the variables in this study were examined by using dependent t-test and analysis of covariance (ANCOVA) for each variable separately. Two experimental groups namely technique training with and without strength training groups have achieved significant improvement on dribbling and hitting when compared to the control group. Significant differences were found between technique training with and without strength training groups towards improving the selected variables such as Dribbling and hitting. It may be concluded that technique training with strength training group is found to be better.

INTRODUCTION

Training is a systematic athletic activity of long duration, progressively and individually graded aiming at modeling the human physiology and functions to meet demanding tasks. Though many methods prevail to develop technique, the role of skill training followed by

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strength training is an undisputed one. Strength training is now a popular activity utilized by both men and women of all ages as an attempt to improve physical condition and technique.

The total hockey performance is that general hockey playing ability by hockey players. The playing ability of the players may differ during competition. The general playing ability of any game depends on the proficiency of fundamental skills, physical variables, physiological variables and anthropometrical variables besides psychological make-up. Modern performance in any game gives greater emphasis on preparing the players psychologically than physically though both play sufficient role. Different investigation revealed that performance in games and sports depends not only upon physiological, psychological, sociological and scientific training but physical composition influence the total performance considerably. At higher levels of competition even though there is variety of players from anatomic stand point it is more likely that specific qualities are necessary for players to achieve at these levels of play. The playing ability is the true indicator of the player's efficiency and proficiency in the execution of fundamental skills besides all other quality.

METHODOLOGY

To achieve the purpose of this study, sixty men students studying bachelor's degree course at the department of Physical Education, Lucknow Christian College, Lucknow, India were randomly selected as subjects. The subjects were divided into three groups namely technique training with strength training group, technique training without strength training group and control group of twenty subjects each.

The experimental groups were subjected to their respective training programmes during morning hours namely technique training with strength training and technique training without strength training over the period six weeks and four sessions in a week in addition to their regular schedule. However, control group was not exposed to any specific training but they participated in the regular schedule.

Among the technique parameters, the following variables were selected as criterion variables namely dribbling and hitting. All the subjects were tested on selected criterion variables prior to and immediately after the training period. Dribbling and hitting were estimated by standard field test in Hockey.

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The collected data were analysed statistically by using dependent 't' test to determine the differences, if any among the groups prior to and immediately after the training period on selected criterion variables separately. Analysis of covariance (ANCOVA) was used to determine the differences, if any among the adjusted post test means on selected dependent variables separately. Whenever the 'F' ratio for adjusted test was found to be significant, the Scheffe's test was applied as post-hoc test to find out paired mean differences. The level of significance was fixed at .05 level of confidence, which was considered as appropriate.

ANALYSIS OF THE DATA

The influence of independent variables on each criterion variables were analyzed and presented in table.

TABLE I

MEANS AND DEPENDENT 't'-TEST FOR THE PRE AND POST TESTS ON CRITERION VARIABLES OF EXPERIMENTAL AND CONTROL GROUPS

Criterion variables	Mean and 't'- test	Technique training with strength training group	Technique training without strength training group	Control group
Dribbling	Pre test	7.58	7.53	7.40
	Post test	6.63	6.78	4.26
	't'test	**5.11***	**6.08**	**1.30**
Hitting	Pre test	7.00	7.10	7.05
	Post test	8.20	8.10	6.95
	't'-test	**4.49***	**4.36***	**0.46**

*Significant at .05 level.

(Table value required for significance at .05 level for 't'-test with df 19 is 2.09)

From the table I the dependent 't'-test values of dribbling and hitting between the pre and post tests means of technique training with strength training and technique training without strength training groups were greater than the table value 2.09 with df 19 at .05 level of confidence, it is concluded that technique training with strength training and technique training without strength training groups had significant improvement in the performance of dribbling and hitting when compared to control group.

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TABLE II

ANALYSIS OF COVARIANCE ON CRITERION VARIABLES OF EXPERIMENTAL AND CONTROL GROUPS

Criterion Variables	Adjusted post test means			Source of Variance	Sum of Squares	df	Mean Squares	'F'- Ratio
	Technique training with strength training group	Technique training without strength training group	Control Group					
Dribbling	6.59	6.76	7.30	B	5.38	2	2.69	8.72 *
				W	17.27	56	0.31	
Hitting	8.23	8.07	6.95	Between	19.45	2	9.72	14.31 *
				Within	38.04	56	0.68	

*Significant at .05 level of confidence.

(The table value required for significance at .05 level with df 3 and 55 is 2.78).

From the Table II, the obtained F-ratio of dribbling and hitting for adjusted post test means were more than the table value of 2.78 for df 3 and 55 required for significant at .05 level of confidence. The results of the study indicate that there is significant difference among the adjusted post test means of technique training with strength training and technique training without strength training groups on the development of dribbling and hitting.

It may be concluded that technique training with strength training is better than the technique training without strength training groups in improving dribbling and hitting. To find out which of the three paired means had a significant difference on dribbling and hitting, the Scheffe's post-hoc test was applied and the results are presented in Table III, IV and V respectively.

TABLE III

SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN THE ADJUSTED POST TEST PAIRED MEANS OF DRIBBLING

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Adjusted Post Test Mean			Mean Differences	Confidence Interval
Training with Strength Group	Training without Strength Group	Control Group		
6.59	6.76		0.17	0.44
6.59		7.30	0.71*	0.44
	6.76	7.30	0.54*	0.44

*Significant at .05 level.

TABLE IV

SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN THE ADJUSTED POST TEST PAIRED MEANS OF HITTING

Adjusted Post Test Mean			Mean Differences	Confidence Interval
Training with Strength Group	Training without Strength Group	Control Group		
8.23	8.07		0.16	0.66
8.23		6.95	1.28*	0.66
	8.07	6.95	1.12*	0.66

*Significant at .05 level.

TABLE V

SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN THE ADJUSTED POST TEST PAIRED MEANS OF PUSHING

Adjusted Post Test Mean			Mean Differences	Confidence Interval
Training with Strength Group	Training without Strength Group	Control Group		
7.97	7.62		0.36	0.79
7.97		6.72	1.25*	0.79
	7.62	6.72	0.90*	0.79

*Significant at .05 level.

The table III, IV and V shows that the adjusted post test mean difference in dribbling and hitting between technique training with strength training and control groups, and technique training without strength training and control groups are higher than the confidence interval

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value of 0.66 at .05 level of confidence. The adjusted post test mean differences between technique training with strength training and technique training without strength training groups is less than the confidence interval value.

CONCLUSIONS

From the analysis of the data, the following conclusions were drawn.

1. Two experimental groups namely technique training with strength training and technique training without strength training groups had achieved significant improvement on Dribbling and hitting when compared to the control group.

2. Significant differences were found between technique training with strength training and technique training without strength training groups towards improving the selected variables such as Dribbling and hitting.

3. It may be concluded that technique training with strength training group is found to be better than technique training without strength training to increase Dribbling and hitting.

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