



## Comparative Analysis of Skill Performance Variables among the Southern State Junior Women Hockey Players

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Received 13th February 2015, Accepted 20th April 2015

### Abstract

*The purpose of the study was to analyze the skill performance variables among the southern state junior women hockey players. To achieve the purpose of the study one hundred Junior State Women Hockey players from five Southern States who have participated in the Junior National Hockey Championship for women held during the year 2012-13 and 2013-2014 were selected as subjects. The five States were Karnataka, Tamil Nadu, Kerala, Andhra Pradesh and Pondicherry. The age of subjects were ranged from 16 to 18 years. Stopping and scooping were selected as skill performance variables as they may have direct relation to the performance of hockey players in competitive situation. The collected data was statistically analyzed by using analysis of variance. The scheffe's test was used as a post hoc test to determine which of the paired mean differ significantly. The result reveals that the Karnataka state junior women Hockey players were better in stopping and scooping skill performance than the other southern state junior women hockey players.*

**Keywords:** Analysis, Women, Hockey, Skill Performance, Stopping, Scooping.

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### Introduction

The Field Hockey is one of the most popular games in India. The origin of Indian Hockey dates back to the days of the imperial rule. It was introduced in India by the British (Hendricks, 1988). India has won many laurels at the international level matches. India had bagged eight gold, one silver and two bronze medals in the Olympics Games until 1980. India is the cradle of World Hockey. Hockey is a game in which players attempt to score goal by hitting, pushing or flicking the ball with hockey sticks into the opposing team's goal (Miroy, 1986). The performance of Indian men's hockey team has been highly depended on the success of its penalty corner conversion. Skill is the outcome of message sent by the sensory organs to the brain which in turn makes the concerned muscles act in a certain way to perform a complicated action in the desired manner. In general, a skill is learnt by repeatedly making attempts at movements in such a way that particular muscles are forced to act in certain directions until the requisite skill is acquired. A hockey player therefore must understand that to get good results he should first grasp the intricacies involved in a skill. He must make up in his mind a clear picture of what he is going to attempt. If his mind grasp the whole movement involved in a skill his tasks in acquiring that

skill will become easier. In hockey, the term skill is applied to a pattern of movements which a player is able to make with his stick and ball in a manner that corresponds to rules and is effective in its objective. Hockey is played at a fast pace and a player must use his skills in a manner which corresponds to the tempo of the game.

### Methodology

The purpose of the study was to analyse the skill performance variables among the southern state junior women hockey players. To achieve the purpose of the study one hundred Junior State Women Hockey players from five Southern State who have participated in the Junior National Hockey Championship for women held during the year 2012-13 and 2013-2014. The five States were Karnataka, Tamil Nadu, Kerala, Andhra Pradesh and Pondicherry. The age of subjects were ranged from 16 to 18 years. Stopping and Scooping were selected as Skill performance variables as they may have direct relation to the performance of hockey players in competitive situation. The collected data was statistically analysed by using analysis of variance. The scheffe's test was used as a post hoc test to determine which of the paired mean differ significantly.

### Results

The following tables illustrate the results of skill performance variables among the southern state junior

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women hockey players.

**Table I.** One way analysis of variance for stopping of the southern state junior women hockey players

Source of variance	df	Sum of square	Mean square	F-Ratio
Between the groups	4	32.640	8.160	17.381*
Within the groups	95	44.600	0.469	
Total	99	77.240		

\* Significant at 0.05 level for the df 4, 95 = 2.46

The statistical analysis of data from Table I clearly shows that the obtained F ratio 17.38 was

significant at 0.05 level as the calculated F ratio value was lesser than the table value 2.46.

**Table II.** Post hoc test analysis of variance for stopping of the state junior women hockey players

KARNATAKA	TAMIL NADU	KERALA	ANDRA PRADESH	PONDICHERRY	Mean Difference	CI
8.05	7.75	---	---	---	0.30	0.47
8.05	---	7.05	---	---	1.00*	0.47
8.05	---	---	7.00	---	1.05*	0.47
8.05	---	---	---	6.45	1.60*	0.47
---	7.75	7.05	---	---	0.70*	0.47
---	7.75	---	7.00	---	0.75*	0.47
---	7.75	---	---	6.45	1.30*	0.47
---	---	7.05	7.00	---	0.05	0.47
---	---	7.05	---	6.45	0.60*	0.47
---	---	---	7.00	6.45	0.55*	0.47

As given in the Table II the mean difference between Karnataka and Kerala, Karnataka and Andhra Pradesh, Karnataka and Pondicherry, Tamilnadu and Kerala, Tamilnadu and Andhrapradesh, Tamilnadu and Pondicherry, Kerala and Pondicherry, Andhrapradesh and Pondicherry were 1.00, 1.05, 1.60, 0.70, 0.75, 1.30, 0.60

and 0.55 respectively were greater than the critical interval value of 0.47. Hence, there exist significant differences. In case of Karnataka and Tamil Nadu, Kerala and Andhrapradesh were 0.30 and 0.05 respectively were lesser than the critical interval value of 0.47. Hence, there exist insignificant differences.

**Figure I.** Bar diagram showing the stopping of the southern state junior women hockey players



**Table III.** One way analysis of variance for scooping of the southern state junior women hockey players

Source of variance	df	Sum of square	Mean square	F-Ratio
Between the groups	4	1159.010	289.753	9.079*
Within the groups	95	3032.038	31.916	
Total	99	4191.048		

\* Significant at 0.05 level for the df 4, 95 = 2.46

The statistical analysis of data from Table III clearly shows that the obtained F ratio 9.07 was

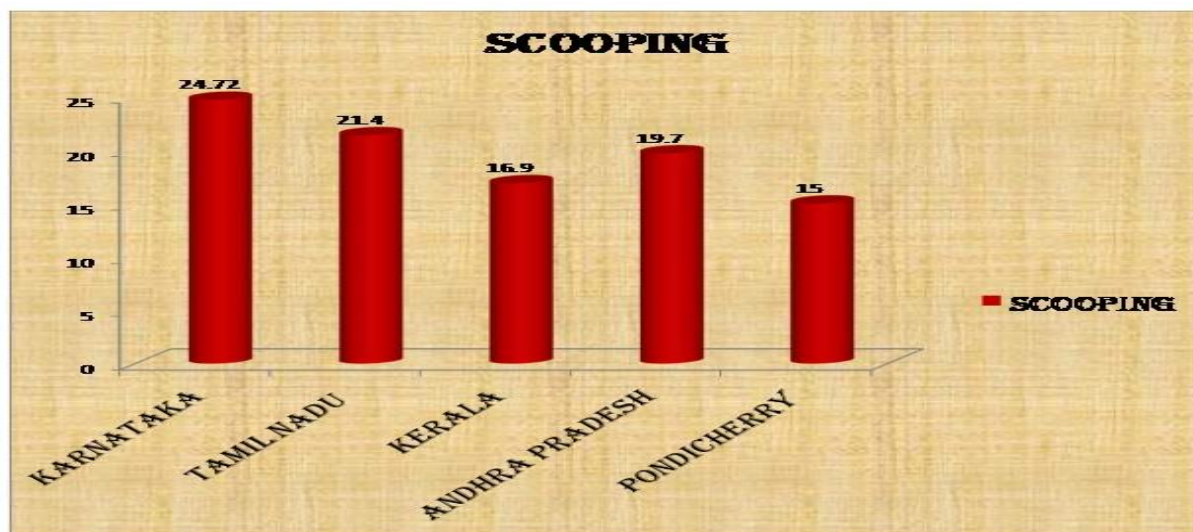
significant at 0.05 level as the calculated F ratio value was lesser than the table value 2.46.

**Table IV.** Post hoc test analysis of variance for scooping of the state junior women hockey players

KARNATAKA	TAMIL NADU	KERALA	ANDRA PRADESH	PONDICHERRY	Mean Difference	CI
24.72	21.40	---	---	---	3.32	3.95
24.72	---	16.90	---	---	7.82*	3.95
24.72	---	---	19.70	---	5.02*	3.95
24.72	---	---	---	15.00	9.72*	3.95
---	21.40	16.90	---	---	4.50*	3.95
---	21.40	---	19.70	---	1.70	3.95
---	21.40	---	---	15.00	6.40*	3.95
---	---	16.90	19.70	---	2.80	3.95
---	---	16.90	---	15.00	1.90	3.95
---	---	---	19.70	15.00	4.70*	3.95

As given in the Table II the mean difference between Karnataka and Kerala, Karnataka and Andhra Pradesh, Karnataka and Pondicherry, Tamilnadu and Kerala, Tamilnadu and Pondicherry, Andhrapradesh and Pondicherry were 7.82, 5.02, 9.72, 4.50, 6.40 and 4.70 respectively were greater than the critical interval value

of 3.95. Hence, there exist significant differences. In case of Karnataka and Tamil Nadu, Tamilnadu and Andhrapradesh, Kerala and Andhrapradesh, Kerala and Pondicherry were 3.32, 1.70, 2.80 and 1.90 respectively were lesser than the critical interval value of 3.95. Hence, there exist insignificant differences.

**Figure II.** Bar diagram showing the scooping of the southern state junior women hockey players

### Discussion on Findings

From the above statistical analysis it was found out that the stopping skill performance ability of the Karnataka state junior women Hockey players was better than the other state junior women hockey players of southern state. During the training session the Karnataka state women hockey players normally take practice in the synthetic surface because the training facilities are more when compare to other southern junior women states. As they are experienced in the synthetic surface they are able to stop the ball better than the other state junior women hockey players. It is clear that the regular and continuous training on the specific skills brings out enormous changes in the Stopping Skill performance because the training improves the technical abilities. and the Karnataka state players play more number of Tournaments, Because of the above said reasons the Karnataka state junior women Hockey players are found better in the Stopping abilities than the other southern state junior women hockey players.

The scooping Skill performance of the Karnataka state junior women Hockey players was also better than the state junior women hockey players of southern state. During the training session the Karnataka state women hockey players normally take practice in the synthetic surface because the training facilities are more when compare to other southern junior women states. As they are experienced in the synthetic surface they are able to run faster than the other state junior women hockey players. It is clear that the regular and continuous skill training brings out enormous changes in the Scooping Skill performance because the specific training improves the technical abilities. Because of the

above said reasons the Karnataka state junior women Hockey players were found better in Stopping and Scooping skill performance than the other southern state junior women hockey players.

### Conclusions

In the light of the study undertaken with certain limitations imposed by the experimental conditions, the following conclusions were drawn.

1. It was found out from the analysis that the stopping ability of the Karnataka state junior women Hockey players was better than the other southern state junior women hockey players.
2. It was found out from the analysis that the scooping ability of the Karnataka state junior women Hockey players was better than the other southern state junior women hockey players.

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