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RELATIONSHIP BETWEEN SKILL PERFORMANCE AND SELECTED MOTOR ABILITY VARIABLES OF HIGH SCHOOL HOCKEY PLAYERS

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ABSTRACT

The purpose of this study was to find out the relationship of motor ability variables with skill performance of high school level Hockey players. Sixty Hockey players who were studying Government Junior College, Kodlipet and Shanivarasanthe, Kodagu



District, Karnataka during the year 2015-16 were randomly selected as subjects for this study. The age of the subjects were ranged from 14-16 years. With regard to motor fitness variables speed, agility, arm and leg explosive power and coordination were taken into consideration under the independent variables. Hitting

and dribbling skill performance was assessed by Hitting Accuracy Test and Indian Dribble Test respectively. Speed was assessed by 50m run, agility was assessed by semo-agility, arm and leg explosive power were assessed by sitting medicine ball throw and standing broad jump and coordination was assessed with fig-8-duck test. The Pearson Product Moment Coefficient of Correlation as a statistical tool used to find out the relationship between variables. The level of significance was fixed at 0.05 level. The dribbling ability had a negative correlation with speed and agility and a positive correlation with leg explosive power. The hitting ability had a positive correlation with arm and leg explosive power.

KEYWORDS :Motor ability, hitting, dribbling, speed, agility, explosive power.

INTRODUCTION

Hockey is the game involving sticks and balls have been played for thousands of years. Hockey game has been proved to be highly competitive sports in the world and this game offers a wide range of

opportunity for the development of motor abilities i.e. strength, speed, endurance, flexibility, agility and co-ordination and other psychological and physiological variables. Field hockey is one of the most ancient, and popular game today plays in all over the world.

In order to reach optimum performance in Hockey game, motor ability variables such as speed, agility, endurance, power, strength, flexibility, coordination, balance etc are pre-requisite. Physical education and sports scientists have made numerous efforts to identify the factors underlying skillful performance in various games.

Speed, Agility, Strength and coordination are important for a player's field hockey fitness. It is important to have excellent endurance when running, and to be able to push one's body to great speeds, when running for field hockey, it is important to vary speed and to change one's path periodically. Field hockey players need to be able to change directions quickly and tactic themselves around other players. Speed and Strength needed to perform field hockey moves is worth very little on the field if they cannot be performed skillfully.

The fitness variable helps to elevate the 'skills' to higher levels of performance in the game. Motor fitness and skills are interrelated and based on the line of this statement the researcher was keen and became interested to study the "Relationship between Motor Fitness and Skill Performance of Hockey players, which will highlight the importance of motor fitness on skills like hitting and dribbling considered as vital and widely needed by a Hockey player.

METHODOLOGY:

Method : Descriptive Survey Method

Selection of Samples : Sixty Hockey players who were studying Government Junior College, Kodlipet and Shanivarasanthe of Kodagu District, Karnataka during the year 2015-16 were randomly selected as subjects for this study. They were in the age group of 14 to 16 years.

SELECTION OF VARIABLES :

The following variables selected for the study with tests and criterion measures

Sl. No.	Variables	Tests	Criterion Measure
	Skill Performance Variables		
1.	Hitting	Hitting Accuracy Test	In Scores
2.	Dribbling	Indian Dribble Test	In Secs.
	Motor Fitness Variables		
1.	Speed	50 Mtrs. Run	In Secs.
2.	Agility	Semo Agility Test	In Secs.
3.	Arm Explosive Power	Sitting Medicine Ball Throw - 3Kg	In Meters
4.	Leg Explosive Power	Standing Broad Jump	In Meters
5.	Coordination	Fig-8-duck	Secs.

Statistical Procedure :

The Pearson Product Moment Coefficient of Correlation as a statistical tool used to find out the relationship between skill performances and selected motor ability variables. The level of significance was fixed at 0.05 level.

RESULTS AND DISCUSSION :**Relationship of Hitting Skill Performance with selected Motor Ability Variables**

The relationship of selected motor ability variables with hitting ability of school level Hockey players were ascertained by the obtained values of coefficient of correlation. The results are presented in Table-1.

Table-1

Table showing relationship of selected motor ability variables with Hitting Skill Performance of Hockey players.

Sl. No.	Variables	Mean	Standard Deviation	'r' value and Sig. level
	Hitting with	3.816	0.812	-
1	Speed	7.967	0.329	0.217
2	Agility	14.405	0.589	0.075
3	Arm Explosive Power	3.478	0.434	0.349*
4	Leg Explosive Power	1.907	0.100	0.117
5	Coordination	19.422	0.884	0.362*

* Significant at 0.05 level.

Hitting skill performance of subjects was correlated with selected motor fitness variables and the result is presented in table-1. The table clearly reveals that there is positive correlation of hitting ability with arm explosive power and coordination since the obtained 'r' values 0.349 and 0.362 are greater than the table value 0.250 at 0.05 level of significance.

Relationship of Dribbling Skill Performance with selected Motor Ability Variables

The relationship of selected motor ability variables with hitting ability of school level Hockey players were ascertained by the obtained values of coefficient of correlation. The results are presented in Table-2

Table-2

Table showing relationship of selected motor ability variables with Hitting Skill Performance of Hockey players.

Sl. No.	Variables	Mean	Standard Deviation	'r' value and Sig. level
	Dribbling with	17.400	1.229	-
1	Speed	7.967	0.329	- 0.254*
2	Agility	14.405	0.589	- 0.310*
3	Arm Explosive Power	3.478	0.434	0.090
4	Leg Explosive Power	1.907	0.100	0.014
5.	Coordination	19.422	0.884	0.261*

* Significant at 0.05 level.

Dribbling skill performance of subjects was correlated with selected motor fitness variables and the result is presented in table-2. The table clearly reveals that there is a positive correlation of dribbling skill performance with coordination since the obtained 'r' value 0.261 is greater than the table

value 0.250 @ 0.05 level. The results also clearly indicate that dribbling ability has negative correlation with speed and agility, since the obtained 'r' values -0.254 and -0.310 greater than table value 0.250 @ 0.05 level

The following bar graph showing mean scores of skill performance and motor ability variables of high school hockey players.

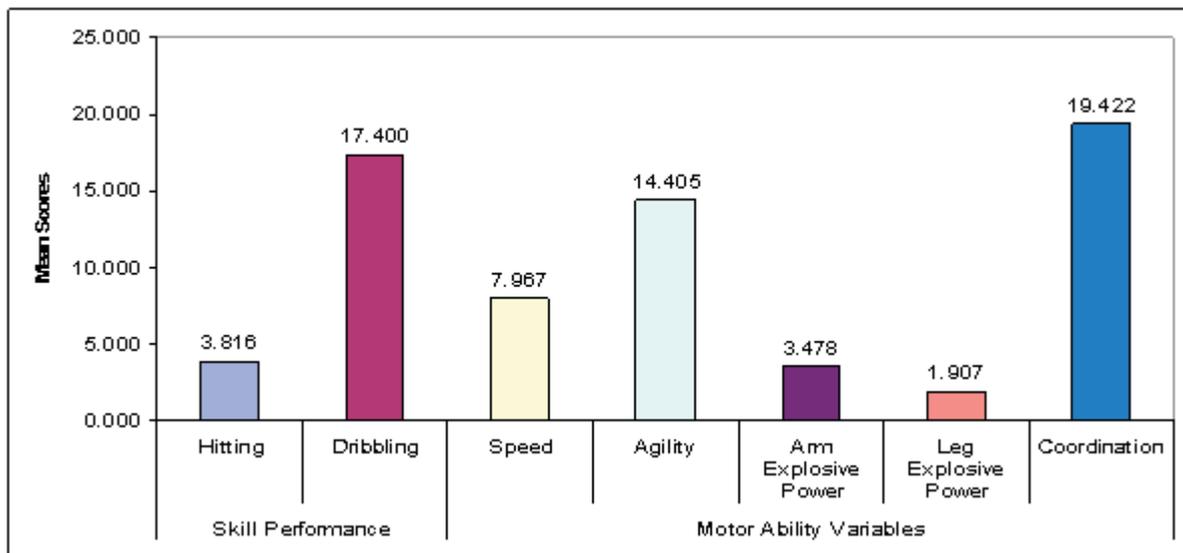


Fig.1 Bar graph shows mean scores of skill performance and motor ability variables of high school hockey players.

DISCUSSION OF RESULTS

Every game needs specific skills which are essential for success in the competitions. The fitness components required differ as per the demands of the skills and the game. Hockey is a modern game involving varied fitness components. The results of the study showed that there was significant correlation between selected motor ability variables and the selected hockey skill performance variables. The similar results confirmed with Mark Tonner Keven (2005) he stated that fitness factors and skill tests are interrelated to each other and similar results concurred with Arvind Bahadur Singh (2012) found out significant relationship of motor fitness variables with skill tests of Basketball players. The motor ability and skill performance will be improved through circuit and interval training.

CONCLUSION

On the basis of above result, the following conclusions may be drawn:

1. Arm explosive power and coordination have positive influence on hitting skill performance.
2. Hitting may not be influenced by speed, agility and leg explosive power.
3. Dribbling skill performance can be performed better if the player has coordination.
4. Dribbling skill performance influenced by speed and agility negatively.
5. Dribbling skill performance has no effect by arm and leg explosive power.

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