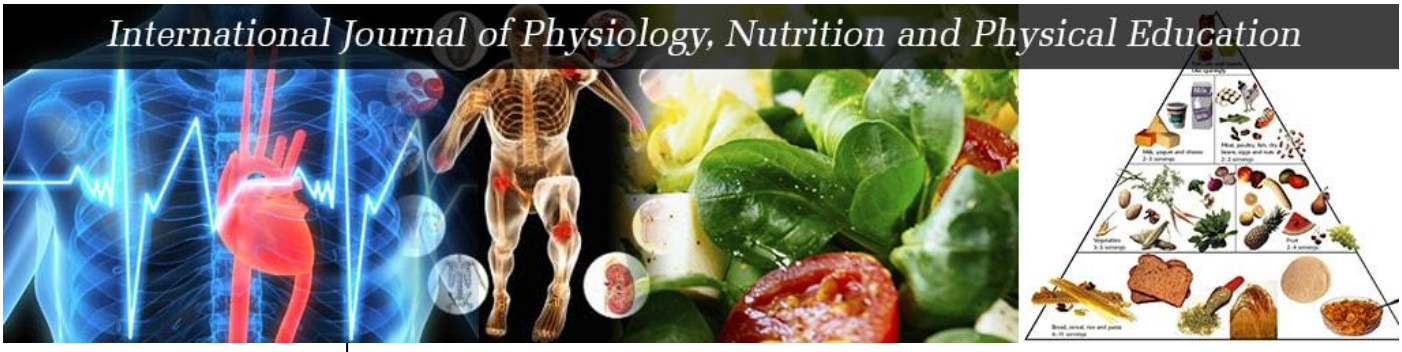

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Comparative study of speed performance among inter-district level hockey players

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Abstract
The purpose of the study was to compare the performance of speed among Inter District level Hockey players. To achieve the purpose of the study sixty junior boys Hockey players (N=60) who have attained first four positions in the 7th Inter District Junior Hockey Championship-2018 held at Madras Veterinary College, Chennai. The first four qualified teams were Trichy District (Winner), Ariyalur District (Runner), Ramnad District (Third position) and Dindigul District (Fourth position).The age of the players ranged between 12-14 years. The selected teams were considered as Independent variables. The performance of speed was chosen as dependent variable. To observe speed ability of the players 50 meters run test was administered and final scores were recorded in seconds. The one way analysis of variance (ANOVA) was used to find out the significant differences, if any, among the four teams. The level of significance was set at 0.05 level of confidence for observe the significant difference. The results of the study pointed out that there was a significant difference on the performance of speed among the four teams.

Keywords: 1. Inter district 2. Junior boys 3. Speed 4. Hockey 5. Anova

Introduction
Physical fitness is the ability to perform daily task with energy and enjoy leisure time pursuits and to meet the unpredicted emergencies. Physical fitness is defined as a set of ability to carry out physical ability. Regular physical exercise is an important part to remain fit and active in the long run and we also feel better. Exercise can help you to remove some diseases like diabetes, prevention of cancer and heart problems (Rao, 2010) [4]. Hockey is referred to as intermittent sports due to the pattern of repeated short bursts of high intensity activity interspersed with active and passive recovery. Such a pattern requires lactate removal and rapid regeneration of Phosphocreatine (PCr) stores to allow for sustained performance.
Muscle strength is relevant to striking the ball and to tackling and tolerating physical impacts with other players. Anaerobic power is also important in accelerating the body during short movements and changing direction quickly. Players who can sustain a high work-rate throughout a match gain an advantage over equally skilled players, whose energy can approach depletion towards the end of a game or after a series of high intensity efforts, resulting in reduced performance (Reilly, *et al*., 2000) [5]. Speed: The ability to think and react to all situations as they arise. The quick and controlled responses to the when, where and why of ball and player movement. Speed of thought is the ability to react quickly through anticipation, deception, clue reading, visual skills, and the use of width and depth. Hence the present study was made an attempt to find out the comparison of the performance of speed among Inter District Hockey players.

Materials and Methods
Experimental Design
The purposive random group design was used to find out the performance of speed among the Inter District Hockey players. The independent variables, Tricky District (Winner), Ariyalur District (Runner), Ramnad District (Third place) and Dindigul District (Fourth).The performance of speed was chosen as criterion variable.

Participants

Sixty junior boys Hockey players (N=60) who entered in to first four places in the 7th Inter District Junior Hockey Championship-2018 held at Chennai. The district teams were Trichy, Ariyalur, Ramnad and Dindigul.

Testing Procedure

To observe speed ability of the players, 50 meters run test was administered and final scores were recorded in seconds.

Data Analysis

The one way analysis of variance (ANOVA) was applied to find out any significant difference among the selected teams on the performance of speed. The 0.05 level of confidence was fixed to test the significance difference among the groups.

Table 1: The Computation of Analysis Of Variance on Speed among the Four Teams (Performance in seconds)

Variable	Mean				Source of Variance	Sum of Square	Mean Square	Obtained 'F' value
	G1 (Winner)	G2 (Runner)	G3 (Third Position)	G4 (Fourth Position)				
Speed	5.04	5.61	6.28	6.45	Between	18.79	6.26	16.31*
					Within	21.52	0.18	

The Table-I shows the analysis of variance on performance of speed among the four teams. The mean value on speed of group-1 (winner) was 5.04, group-2 (runner) 5.61, group-3 (third position) was 6.28 and group-4 (fourth position) was 6.45. It can be seen from table-1 the significant differences were found with regard to the performance of speed among four district teams. Since the obtained 'F' ratio 16.31 was greater than the required table 'F' value 2.77. Therefore, the four teams were found to be significant at 0.05 level of confidence for the degrees of freedom 3 and 56.

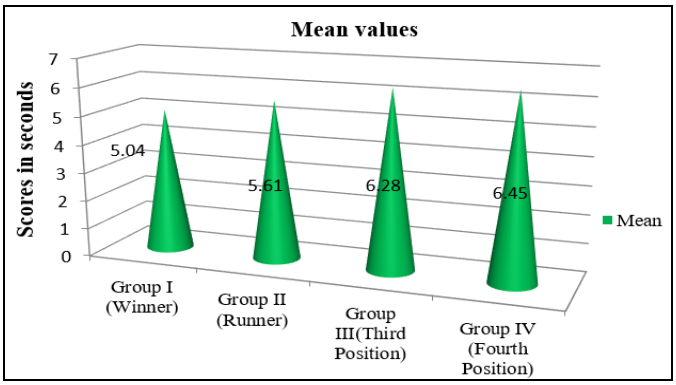

Fig 1: Mean Values on Speed among Four Teams

Table 2: Scheffe's Post Hoc Test Paired Mean Differences on Speed among Four Teams (Performance in seconds)

Comparisons		Mean Difference	CI Value
G1 (Winner) (5.04)	G2(Runner) (5.61)	0.56	0.56
	G3 (Third position) (6.28)	1.23*	
	G4 (Fourth position) (6.45)	1.41*	
G2 (Runner) (5.61)	G3(Third Position) (6.28)	0.66*	
	G4 (Fourth position) (6.45)	0.84*	
G3 (Third position) (6.28)	G4 (Fourth Position) (6.45)	0.17	

Table- II shows the results of Scheffe's Post-Hoc test to assess pair wise difference of speed among the four groups.

Comparison 1 (Winner and Runner): The comparison of speed performance between winner and runner teams shown insignificance, because of the mean difference value 0.56 and confidential Interval value 0.56 were similar. Hence both the teams had similar nature in speed. Comparison 2 (Winner and third position): The comparison of speed performance between winner and third position teams shown significance, because of the mean difference value 1.23 was higher than the confidential interval value 0.56. Hence the performance of speed was better in winner team than the third position team. Comparison 3(Winner and fourth position): The comparison of speed performance between winner and fourth position teams shown significance, because of the mean difference value 1.41 was higher than the confidential interval value 0.56. Hence the performance of speed was better in winner team than fourth position team. Comparison 4 (runner and third position): The comparison of speed performance between runner and third position teams shown significance, because of the mean difference value 0.66 was higher than the confidential interval value 0.56. Hence the performance of speed was better in runner team than the third position team.

Comparison 5 (runner and fourth position): The comparison of speed performance between runner and fourth position teams was significant because of the mean difference value 0.84 was higher than the confidential interval value 0.56. Hence the performance of speed was better in runner team players than fourth position team players. Comparison 6 (Third and fourth position): The comparison of speed performance between third and fourth position teams shown insignificant because the mean difference value 0.17 was lesser than the confidential interval value 0.56. Hence the performance of speed was similar in both the team.

Discussion on Findings

The analysis of data using analysis of variance (ANOVA) test showed that variations exist among the selected teams. Vishal Subhash Pawar (2016) [7] conducted a study on speed ability among football and hockey male players of Pune Maharashtra. They recommended that Football and Hockey players must be given good speed training to enhance the performance. Rajesh Karthi and Krishnakanthan (2014) [2] investigated a study on Comparative Analysis of Selected Physical Variables among Football Hockey and Basketball Players. They found that the basketball players were better speed comparing than the hockey and Footbalsl players. Manoj Kumar (2017) [1] conducted a study on comparison of speed among school level hockey football and cricket players. He found that the hockey players were better in speed than cricket and football players at school level. Sandeep Chaudhary and Vandana Verma (2018) [6] conducted a comparative study of Selected Physical Fitness among University Level Hockey and Football Players. Their study revealed that no significant different has been found between speed variable of hockey and football player. Significant different has been found between agility variable of hockey and football player. Raju and Johnson (2011) [3] conducted a study on comparison of speed and aerobic fitness between high and low achievers of RDT hockey academy, hockey players. They found that the high achievers hockey players exhibited higher performances in sprint test and aerobic

fitness that seems to be the result of a combined effect of age and level of competition. The findings of the present study well documented in line with the earlier studies.

Conclusion

It is concluded that, significant differences were found among the four district hockey players on speed. The Winner (Trichy District) team players have better performance on Speed than the other three team players. The Runner (Ariyalur District) team players have better in speed than the third and fourth position team players and third position (Ramnad District) team players have better speed than the fourth position (Dindigul) team players.

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