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Comparative Study on Speed and Agility among National Junior Boys and Intercollegiate Men of Hockey and Football Players of Manipur

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Abstract

The purpose of study was to find out National Junior Boys and Intercollegiate Men of hockey and football players on speed and agility. Forty (40) each National Junior Boys and Intercollegiate Men were selected as subject with different categories as twenty subjects each as hockey and football players. The average age groups of National Junior Boys and Intercollegiate Men were ranged from and 18-20 and 19-21 years respectively who had participated in the National Junior Boys and Intercollegiate Competition Men in the year of 2012-13 at Khuman Lampak Sport Complex and Biramangol College, Sawombung respectively. The statistical techniques like Descriptive statistics (mean, standard deviation (SD)) and two-wayANOVA (F-ratio) at 0.05 level of significant were utilized. The study revealed that there were no significant difference between National Junior Boys and Inter Collegiate Men on speed and agility.

Key words: Speed, Agility, Hockey, Football

INTRODUCTION

On the nature of game and likewise superficial circumstances is depended of the player's physical fitness like speed, endurance, agility and strength. Games comparable handball, football, volleyball, basketball and hockey aid in evolving power, agility and speed of the players while other games like boxing; gymnastics, wrestling etc. develop agility and power of its players better.

Mutually skillful and competitive games that must agility, speed and stamina to success the game like Football and hockey. Football and hockey is similar in many way but they differ in football player use his all body parts except hands on the other side hockey stick is used by players no use of body parts. There is also difference in ball size.

Speed can be defined by the ability to move the body in the desired direction as quickly as possible. Speed is not just how fast someone can run (or cycle, swim etc.), but is dependent on their acceleration (how quickly they can accelerate from a

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stationary position), maximal speed of movement, and also speed maintenance (minimizing deceleration).

Agility is the ability to move quickly and easily agility relies on quickness and it works on multiple planes of movements. Body can move laterally (side to side) vertically (ups and down) and through frontal plane (forward and backward).

Hockey and football are reflected as determined games because of high grade of fitness as well as intelligence and alertness of mind, speed, agility, jumping ability which is the basic qualities for the players. The purpose of study was to find out the comparison between hockey and football players on speed and agility.

METHODOLOGY

The determination of the study was to find out the comparison on selected physical variables of Hockey and Football players of Manipur who had participated in the National Junior Boys and Intercollegiate Competition Men in the year of 2012-13 at Khuman Lampak Sport Complex and Biramangol College, Sawombung respectively were randomly selected as subjects. The samples of the selected subjects were highlighted in Table 1.

Table 1: Selected samples of the study of the Hockey and Football players

Categories	Sport	Competition Level	Sample sizes
Boys	Hockey	National Junior	20
	Football		20
Men	Hockey	Intercollegiate	20
	Football		20

The average age groups of National Junior Boys and Intercollegiate Men were range from and 18-20 and 19-21 years respectively.

In all sports, speed and agility are important qualities. Through proper digesting a number of books, periodicals, journals, research articles, coaching handbooks had reflected to find out physical variables. Physical parameters are the ideal indicators of sports performance status of an individual.

A repeated measure research design was used with game performance of as the criterion variable and selected the physical variables as the independent/correlated variables (Table 2).

Table 2: Variables, Tests and Criterion Measures

Sl. No.	Variables	Equipment/Tests	Criterion Measures
1	Speed	50 Meters Run Test	In Seconds
2	Agility	4 x 10 Meters Shuttle Run Test	In Seconds

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The reliability of the data was ensured by establishing the test and retest method. The measurements were collected twice and correlated for reliability. The inter class correlation coefficient obtained by test-retest method was presented in Table 3.

Table 3: Reliability Coefficient of the Subjects in Physical variables by Test and Retest Method

Sl. No	Variables	Coefficient of Correlation
1	Speed	0.86
2	Agility	0.92

Significance at 0.05 level confidence

The statistical techniques like Descriptive statistics (mean, standard deviation (SD)) and two-way ANOVA (F-ratio) at 0.05 level of significant were utilized.

ANALYSIS OF THE DATA

From the Table 4, it revealed the descriptive statistics results on speed between National Junior Boys and Inter Collegiate Men hockey and football players of Manipur. The mean value ± SD of National Junior Boys between hockey and football players were 7.38 ± 0.75 and 7.05 ± 1.31 respectively whereasInter Collegiate Men between hockey and football players were 6.42 ± 1.29 and 6.54 ± 0.62 respectively on speed. By two-way ANOVA outcome highlighted that F-ratio exposed that for rows 14.17 was greater than the tabulated value at 0.05 level of significant showing the significant difference between National Junior Boys and Inter Collegiate Men players on speed. For column 0.27 was lesser than the tabulated value at 0.05 level of significant showing no significant difference between hockey and football players on speed. And also for interaction 1.31 was lesser than the tabulated valueat 0.05 level of significant showing no significant difference between National Junior Boys and Inter Collegiate Men on speed.

Table 4: Descriptive statistics and Two-way ANOVA results concerning to speed between National Junior Boys and Inter Collegiate Men Hockey and Football players of Manipur

National Junior Boys			Source of variance	SS	Df	MS	F
	Hockey	Football					
Mean ± SD	7.38 ± 0.75	7.05 ± 1.31	Row	20.26	1	20.26	14.17
			Columns	0.386	1	0.699	0.27
Inter Collegiate Men							
	Hockey	Football					
Mean± SD	6.42 ± 1.29	6.54 ± 0.62	Interaction	1.88	1	1.88	1.31
			Residual	22.34	156	1.43	

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Significant at 0.05 level of confidence

From the Table 5, it revealed the descriptive statistics results on agility between National Junior Boys and Inter Collegiate Men hockey and football players of Manipur.

The mean value ± SD of National Junior Boys between hockey and football players were 11.76 ± 1.31 and 11.14 ± 1.15 respectively whereasInter Collegiate Men between hockey and football players were 9.07 ± 0.82 and 10.8 ± 1.78 respectively on agility. By two-way ANOVA outcome highlighted that F-ratio exposed that for rows 9.05 was greater than the tabulated value at 0.05 level of significant showing the significant difference between National Junior Boys and Inter Collegiate Men players on agility. For column 1.14 was lesser than the tabulated value at 0.05 level of significant showing no significant difference between hockey and football players on agility. And also for interaction 3.34 was lesser than the tabulated value at 0.05 level of significant showing no significant difference between National Junior Boys and Inter Collegiate Men on agility.

Table 5: Descriptive statistics and Two-way ANOVA results concerning to a gility between National Junior Boys and Inter Collegiate Men Hockey and Football players of Manipur

National Junior Boys			**Source of variance**	**SS**	**Df**	**MS**	**F**
	Hockey	**Football**					
Mean ± SD	11.76 ± 1.31	11.14 ± 1.51	Row	88.66	1	88.66	9.05
			Columns	11.18	1	11.18	1.14
Inter Collegiate Men							
	Hockey	**Football**					
Mean ± SD	9.07 ± 0.82	10.8 ± 1.78	Interaction	32.71	1	32.71	3.34
			Residual	1529.29	156	9.8	

Significant at 0.05 level of confidence

DISCUSSIONAND CONCLUSION

The results of the study conclude that the mean agility timings of footballers are more or less similar hockey players of National Junior boys which indicate both players have good agility. Whereas the mean agility timings of hockey are less than football players of Inter collegiate men which indicate hockey players have good agility as compared to footballers. This may be because hockey players are in good practice and uses agility more in game. And for speed variable study shows no significant difference in footballers and hockey players which indicate no difference in speed variable in both the group. This may be because of the same requirement of speed variable in both the games.

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