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Comparative analysis of playing ability of hockey players in relation to their playing age

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Abstract

The purpose of the study was to compare the playing ability of hockey players in relation to their playing age. The study was conducted on 30 players, age ranged from 14 to 21 years was selected. Subjects were divided into three groups (each group consist of ten players) on the basis of their playing age after entering into hockey academy (0-2, 2-4, 4-6). Collected data was analyzed by using ANOVA at 0.05 level of significance and significant difference was found between means of different playing age groups of hockey players.

Keywords: playing ability, hockey players, playing age

Introduction

Modern day hockey requires that players who wish to take the game seriously realize the importance of fitness. In the past there has been too much play in relation to preparation. Preparation includes improving skills, tactical understanding and fitness. Fitness must be looked at as more than running and a few exercises; fitness training has to be seen as an ongoing planned part of a player's preparation. Training is broken down into two parts: pre session and during the session. Scientific measurement of the results of teaching has an established place in the field of education today. However, reliable and valid tests of ability and achievement in physical education activities are as yet comparatively few. A battery of tests for any game, if it were valid index of playing ability might be useful in several ways. It might be used in classifying players, in determining progress in skill, in providing an incentive to practice, and in judging a teacher's efficiency. While there is no single battery of tests which measures all the skills of basketball for women, various achievement tests have been devised in both the men's and women's game.

Objective of the Study

The purpose of the study was to compare the playing ability of hockey players in relation to their playing age.

Methodology

The study was to compare the playing ability of hockey players in relation to their playing age. For achieve this purpose 30 Hockey Players, their age were ranged between 14 to 21 years old from MP women hockey academy, Gwalior, and was selected as a subjects of this study. To compare the playing ability of hockey players in relation to their playing age ANOVA Test were employed. Playing Ability was measured by taking scores out of 10 by three judges during the hockey match.

Statistical Methods

Anova test was applied to compare the playing ability of hockey players. The hypothesis was tested at 0.05 level of significance.

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Table 1: Descriptive statistics for the data on anthropometric variables of hockey players

	Minimum	Maximum	Mean		Std. Deviation		Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error	
playing ability	5.67	8.67	7.15	.13	.75	.24	.42	-.18	.83	

Table-1 indicates the values of descriptive statistics (Minimum, Maximum, Mean, Standard Deviation, Skewness,

Kurtosis, Standard Error of Skewness (SES) and Standard Error of Kurtosis (SEK) of the data measured.

Table 2: Significance of Means difference of playing ability of 2 years, 4 years and 6 years playing age of hockey players

		Anova				
		Sum of Squares	DF	Mean Square	F	Sig.
playing ability	Between Groups	5.80	2	2.90	7.41	.00*
	Within Groups	10.57	27	.39		

It is evident from table 6 that results of analysis of variance with regard to playing ability of hockey players in according to playing age and the p value of playing ability is found statistically significant as less than 0.05. Obtained F- ratio of players is playing ability= 7.41 found greater than critical

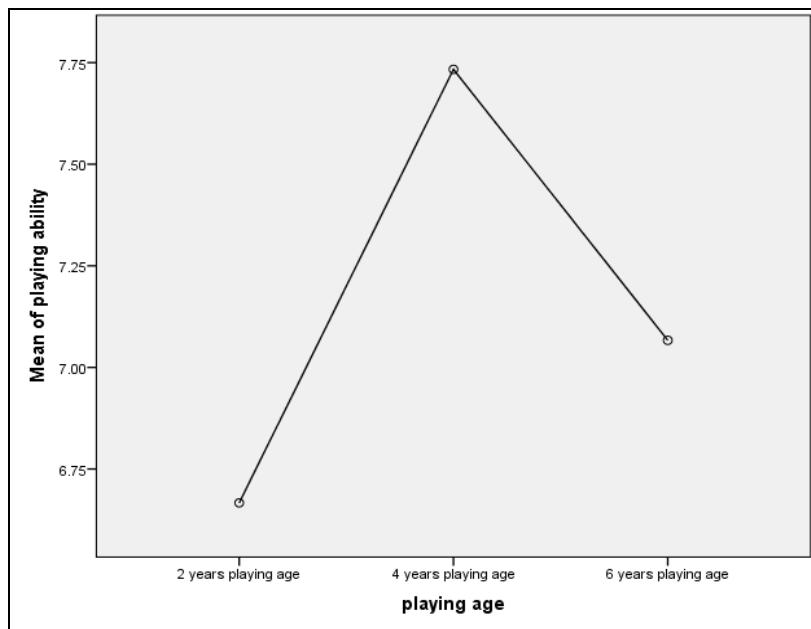
value i.e. $F(0.05,2,27) = 3.37$. Since the F- value is significant, the null hypothesis is rejected. Therefore post hoc test (tukey HSD) is applied to find out differences between paired means among the variable. The results of post hoc test have been presented below.

Table 3: Post hoc test for the difference of means for the data on playing ability

Dependent Variable	(I) playing age	(J) playing age	Tukey HSD			
			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval
playing ability	2 years playing age	4 years playing age	-1.06*	.27	.00	-1.76 -.37
		6 years playing age	-.40	.27	.34	-1.09 .29
	4 years playing age	2 years playing age	1.06*	.27	.00	.37 1.76
		6 years playing age	.66	.27	.06	-.02 1.36
	6 years playing age	2 years playing age	.40	.27	.34	-.29 1.09
		4 years playing age	-.66	.27	.06	-1.36 .02

*. The mean difference is significant at the 0.05 level.

From Table 3 it can be seen that the difference between 2 years of playing age and 4 years of playing age on playing ability is significant at 5% level, as the p-value for this mean difference is 0.00, which is less than 0.05.

**Fig 1:** Graphical representation of the Group Means of playing ability in Three Different Playing age

Discussion of Findings

The analysis of data reveals that playing ability was significant difference for the hockey players of 2years, 4 years and 6 years playing age and it is clear the mean value of playing ability is highest among the players in the 4 years group in comparison to that of 2 and 6 years groups. On the basis of the results obtained above, it may be inferred that the

playing ability among the players in the different playing age 4 years group is maximum. Experience and motivation is the key factor to determine the playing ability of players. More experienced and motivated player has much better visualization and understanding of game.

Conclusions

With the limitations of the study it may be concluded that, there was significant difference found between the means of hockey players in relation to their playing age.

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