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Manish Kumar
Assistant Professor
Indra Gandhi University,
Meerapur, Rewari, Haryana,
India.

Analysis of body fat among different ball games players

Manish Kumar

Abstract

The present study has been designed to investigate the body fat among different ball game players who participated at inter-university level. For accomplish the study total 80 ball game players (20 cricket, 20 football, 20 basketball and 20 hockey) were randomly selected as sample. All samples were selected from the MDU, Rohtak. The age of the subjects was ranged from 18-28 years. One-way analysis of variance method was applied for analyzing the data obtained from the present study if there were significant difference than the LSD post-hoc test was use to analyze the mean differences and their significance. For testing the hypothesis the level of significance was set at 0.05. We find out that cricket and basketball game players having more body fat comparison of football and hockey game players.

Keywords: body fat, cricket, basketball, football, hockey

Introduction

Different sports have different requirements in terms of body composition. In some contact sports such as football or rugby, higher body weight is generally considered an advantage. In sports such as gymnastics, running marathon and other activities that support weight, lower body weight and a high power to weight ratio, they are extremely important. Therefore, in these sports both low-fat body and a low body weight are needed. In sports such as bodybuilding, increasing lean body mass and gaining body weight without increasing body fat are desirable. There is an acceptable percentage of body fat for athletes. The ideal body composition depends strongly on the particular sport or discipline and must be discussed with the coach, physiologist and nutritionist or dietician. Body weight and body composition should be discussed in relation to functional capacity and exercise performance.

Objective of the study

The main objective of the study is to compare the body fat among different ball games players.

Hypothesis of the study

There would be no difference in the body fat among different ball games players.

Research Process and Methodology

For this study 80 ball game players (20 cricket, 20 football, 20 basketball and 20 hockey) were selected from MDU, Rohtak who participated at inter-university level were randomly selected. The age of the subjects was ranged from 18-28 years.

Tool and Techniques

The body weight of each subject was taken on a portable weighing machine. The subjects were asked to wear only shorts and made to stand bare foot on the weighing machine and the reading was recorded to the nearest half a kilogram. To obtain the percent body fat and lean body mass, following four Sites of skinfolds were used I. Biceps, 2. Triceps 3. Subscapular, 4. Suprailiac.

Statistical Method

One-way analysis of variance method was applied for analyzing the data obtained from the present study if there were significant difference than the LSD post-hoc test was use to analyze the mean differences and their significance. For testing the hypothesis the level of significance was set at 0.05.

Correspondence
Manish Kumar
Assistant Professor
Indra Gandhi University,
Meerapur, Rewari, Haryana,
India.

Table 1: Body fat

	Sum of squares	Df	Mean square	F	Sig.
Between Groups	33.28	3	11.09	2.78	.046
Within Groups	302.37	76	3.97		
Total	335.66	79			

An analysis of table -1 reveals that there is significant difference in body fat among cricket, football, basketball and hockey inter-university players. Because significant value is less than level of significance which is 0.05 since the calculated significance value is found significant, therefore to determine the pair mean difference among the selected different levels LSD post hoc test was computed and its shows in table no 2.

Table 2: Mean Difference of Body Fat among Different Ball Game Players body Fat

Grouping Variable		Mean Difference	Std. Error	Sig(p)
Cricket	Football	1.32*	.630	.039
	Basketball	.31	.630	.625
	Hockey	.80	.630	.207
Football	Cricket	1.32*	.630	.039
	Basketball	1.63*	.630	.012
	Hockey	.52	.630	.412
Basketball	Cricket	.31	.630	.625
	Football	1.63*	.630	.012
	Hockey	1.11	.630	.082
Hockey	Cricket	.80	.630	.207
	Football	.52	.630	.412
	Basketball	1.11	.630	.082

The post-hoc test result revealed that there is significant difference in body fat among different ball game players. Significant difference was found between the cricket and football game players, basketball and football game players in their body fat. The mean values clearly shows that cricket and basketball game players having more body fat in comparison to football and hockey game players. The estimated mean value of the player’s body fat is illustrated below in Fig 1:

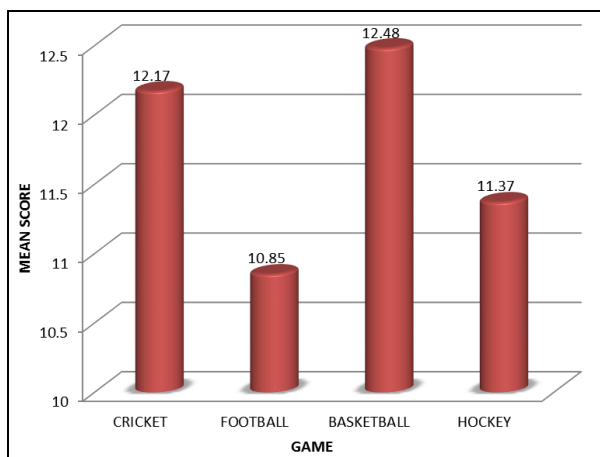


Fig 1: Mean Difference of Body Fat among Different Ball Game Players

Discussion on findings

The findings of the study are that there was significant difference in the obtained value of body fat of different ball game players. Cricket and basketball games players are having significantly more body fat in comparison to football and hockey inter-university game players.

Conclusion

On the basis of result obtained from the study, following conclusions are drowning:-

The data showed that significant difference observed in body fat of different ball game players who participated at inter-university level. Significant difference was found between the cricket and football game players, basketball and football game players in their body fat. We can say that cricket and basketball game players having more body fat comparison of football and hockey game players.

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