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Comparison of body mass index between football and hockey players

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Abstract

The objective of the study was to find out the difference of body mass index between football and hockey male player of Kurukshetra University. To achieve the purpose of present study, all subjects were selected in terms of random sampling (Probability Sampling). Only male football and hockey players of Kurukshetra University were selected as subjects. In this study only those players were selected as sample, who had played at inter college or interuniversity level competitions. Total 300 (N = 300) male football and hockey players (150 - 150 each) of Kurukshetra University were recruited as subjects for present study. The age of the subjects was ranged from 18 to 25 years. After the collection of relevant data, unpaired t-test was employed with the help of Statistical Package for the Social Sciences (SPSS) 17.0. The level of significance was set at 0.05 percent.

Keywords: Comparison of body, mass index, football and hockey players

Introduction

The body mass index is a value derived from the mass and height of an individual. The BMI is defined as the body mass divided by the square of the body height, and is universally expressed in units of kg/m², resulting from mass in kilograms and height in metres.

Anthropometry is an emerging scientific specialization concerned with the application of measurement to appraise human size, shape, proportion, composition, maturation and gross function. It is a basic discipline for problem-solving in matters related to growth, exercise, performance and nutrition. The area has been defined as the quantitative interface between anatomy and physiology. It puts the individual athlete into objective focus and provides a clear appraisal of his or her structural status at any given time, or, more importantly, provides for quantification of differential growth and training influences. Without an understanding of the growth of children and youth and their structural evolution, selection of talent and monitoring of training is largely a matter of sophistry and illusion. Anthropometry provides the essential structural basis for the consideration of athletic performance.

Procedure and methodology

Selection of Subjects

To achieve the purpose of present study, all subjects were selected in terms of random sampling (Probability Sampling). Only male football and hockey players of Kurukshetra University were selected as subjects. In this study only those players were selected as sample, who had played at inter college or interuniversity level competitions. Total 300 (N = 300) male football and hockey players (150-150 each) of Kurukshetra University were recruited as subjects for present study. The age of the subjects was ranged from 18 to 25 years.

Tool for Data collection

The height of subjects was measured with the help of standardized Anthropometric rod. The height of the subject was read and recorded in whole centimeters. The weight of the subject was measured by using a weighing machine. While in minimum dress. The weight of the subject was recorded in kilograms. Fraction upto 500gms was allowed. Body Mass Index (BMI) was obtained by following formula $\text{Weight (kg)}/[\text{Height (m)}]^2$.

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Statistical Analysis

After the collection of relevant data, unpaired t-test was employed with the help of Statistical Package for the Social Sciences (SPSS) 17.0. The level of significance was set at 0.05 percent.

Data analysis and results of the study

Table 1: Comparison of body mass index between football and hockey players

Variable	Group	Mean	S.D.	't' value
Body Mass Index (BMI)	Football players	21.604	2.534	1.570
	Hockey players	22.084	2.754	

't'_{0.05} (298)=1.962

Table 1: depict that the Mean and SD values of Peak BMI of Football and Hockey players were 21.604 ±2.534 and 22.084 ±2.754 respectively. The obtained "t" value 1.570 (1.962) was found statistically insignificant, ($P>.05$) .05 level of significance.

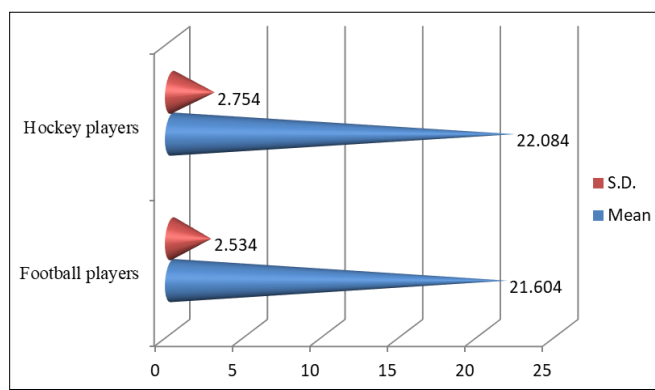


Fig 1: shows mean and standard deviation of body mass index between football and hockey players

Conclusion

The outcomes of the study depicted that the insignificant differences of Body Mass Index parameter between football and hockey players of Kurukshetra University. These findings are supported by Neogi, *et al.* (2018) [1]. It was hypothesized that there would be no significant difference between Body Mass Index (BMI) of football and hockey players of Kurukshetra University. In present investigation, 3rd hypothesis is accepted because insignificant differences were found between Body Mass Index of football and hockey players.

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