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Assessment of body mass index of various age group boys student of Madhya Pradesh

Najnin Pathan and Dr. Mukesh Solanki

Abstract

The subjects selected for this study was (N=1000) one thousand students from Private Schools of Indore, Bhopal, Gwalior and Jabalpur (M.P). To Describe the of Body mass index for the different age groups from 10 years to 14 years of school going boys students from urban city of Indore, Bhopal, Jabalpur and Gwalior of Madhya Pradesh. To compare of Body mass index for the different age groups from 10 years to 14 years of school going boys students from urban city of Indore, Bhopal, Jabalpur and Gwalior of Madhya Pradesh. The subjects was selected on the basis of their BMI of school going children from various district, Indore, Bhopal, Gwalior and Jabalpur, of Madhya Pradesh. Keeping in view the purpose of the study, a large number of students was randomly selected on the basis of their BMI. The measurement of the selected students was taken. The dates of birth of all subjects was take from their respective schools records. The all the subjects from Private Schools of various district, Indore, Bhopal, Gwalior and Jabalpur, of Madhya Pradesh. In this study Descriptive statistics was used for to compare the body mass index (BMI) Analysis of variance (ANOVA) with LSD post hoc test was used The information studying tools spss- 21 software turned into used. There was significance Mean score of Body Mass Index (BMI) the different age groups like 10 year to 14 year school going boys' students of various district of urban city of Indore, Bhopal, Jabalpur and Gwalior Madhya Pradesh.

Keywords: BMI, Gwalior, Madhya Pradesh, urban, etc.

Introduction

Lifestyle issues have penetrated very deeply into our society. Lifestyle modifications are mirrored in each adult and children, as many contributing elements are common. Childhood weight problems is an alarming growing style in city areas of India. Interestingly, in our country, we see instances of each malnutrition and overeating, of course, in two distinct strata of society.

BMI tables had been used to decide whether or not a man or woman is obese or underweight. These had been based totally on the dimension of the frame. The BMI desk does now not differentiate between fats and lean weights, which is frustrating when evaluating athletic humans with giant lean mass. For example, a supporter of a soccer line who is 6 feet two inches (1.9 m) and weighs 220 kilos (100 kg) is viewed obese via BMI requirements (BMI = $28.3 \text{ kg} \cdot \text{m}^{-2}$), when in reality it can also have a very low BF percentage. On the different hand, an inactive character of comparable peak and weight is probable to have extra fats tissue. There are two primary types of adipose tissue, categorized in accordance to its place inside the body: subcutaneous fats is deposited below the skin, whilst visceral fats is determined round the organs. Fatty tissue in the hips, thighs, and buttocks is normally subcutaneous, whilst fats saved in the stomach tends to be in particular visceral. Central weight problems happens when fats accumulates round the top and centre areas of the body, ensuing in a massive waist circumference and a physique structure that is every so often described as "apple-shaped" in contrast. With the "pear shape" produced via the accumulation of fat. Round the hip and thigh area. The presence and extent of central weight problems is assessed by means of measuring waist circumference (WC) and evaluating it with that of the hips. The relationship between the two measurements is referred to as the waist-to-hip ratio (WHR) Health can be described as the physical, social, psychological and non-secular well-being of people. The commonplace fitness of the populace is decided by way of income, education, employment and housing, as nicely as with the aid of a mixture of prevention and rehabilitation processes and services.

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Objectives of the study

1. To Describe the of Body mass index for the different age groups from 10 years to 14 years of school going boys students from urban city of Indore, Bhopal, Jabalpur and Gwalior of Madhya Pradesh.
2. To compare of Body mass index for the different age groups from 10 years to 14 years of school going boys students from urban city of Indore, Bhopal, Jabalpur and Gwalior of Madhya Pradesh.

Statistical Procedure

In this study Descriptive statistics was used for to compare the body mass index (BMI) different age groups from 10 years to 14 years of school going boys’ students from urban city of Indore, Bhopal, Jabalpur and Gwalior of Madhya Pradesh. Analysis of variance (ANOVA) with LSD post hoc test was used the information studying tools spss- 21 software turned into used.

Methodology

The subjects selected for this study was 1000 students from Private Schools of Indore, Bhopal, Gwalior and Jabalpur (M.P). The subjects was selected on the basis of their BMI. The selection of the variables Body Mass Index BMI different age groups from 10 years to 14 years of school going boys’ students from urban city of Indore, Bhopal, Jabalpur and Gwalior of Madhya Pradesh. Keeping in view the purpose of the study, a large number of students was randomly selected on the basis of their BMI. The measurement of the selected students was taken. The dates of birth of all subjects was take from their respective schools records. The all the subjects from Private Schools of various district, Indore, Bhopal, Gwalior and Jabalpur, of Madhya Pradesh. In this study Descriptive statistics was used for to compare the body mass index (BMI) Analysis of variance (ANOVA) with LSD post hoc test was used The information studying tools spss- 21 software turned into used.

Criterion measure

Body Mass Index (BMI)

The BMI for a person is defined as their body weight divided by the square of their height—with the value universally being given in units of kg/m²

$$BMI = \text{Weight (kg)} / \text{Height (m)}^2$$

Height

Purpose: The reason for this check was once to measure the standing height.

Equipment: A stadiometer (stable, correct measuring device) with a portable headboard is used.

Administration: The topics used to be recommended to stand upright, with the returned in opposition to the wall and the head erect (horizontal plane), going through forwarding, and searching straight ahead. Subjects the heels positioned together; buttocks and shoulders have been in contact with the measuring device. The portable headboard used to be diminished gently till it touches the pinnacle of the head. No socks or footwear used to be worn at the time of measurement.

Scoring: The dimension was once recorded from the Stadio meter’s eye to the nearest half of a centimeter.

Weight

Purpose: The cause of this check used to be to measure the Total Body Weight.

Equipment: Standard Tanita (Body Composition Analyzer) Company weighing machine.

Administration: The topics used to be urged to stand rectangular foot platform of the stability with equal weight on each toe of the machine. Minimum fabric i.e a brief and a t-shirt used to be worn at the time of measurement. No socks or footwear used to be worn at the time of measurement when Tanita Body Composition Analyzer computing device was once used. The machine is digital. The zero error of the desktop used to be checked earlier than the topics stand on its platform. (Note - The BMI used to be calculated with the assist of Body Composition Analyzer in which the peak statistics was once fed manually via the researcher.)

Table 1: Descriptive statistics of BMI for various age group boys of various district of Madhya Pradesh

Variables	Groups	Mean	Std. Deviation	Minimum	Maximum
BMI	10 Years	19.0	5.2	9.20	38.30
	11 Years	18.5	4.4	9.20	34.10
	12 Years	19.5	4.8	10.70	34.00
	13 Years	19.7	4.5	11.50	34.30
	14 Years	19.2	4.3	12.60	32.60
	Total	19.2	4.7	9.20	38.30

Table-1 This study was carried results for the various groups under 10 years, under 11 years, under 12 years, under 13 years, and under 14 years boys students from urban city of Indore, Bhopal, Jabalpur and Gwalior of Madhya Pradesh heights mean and standard deviations let me lean this up here standard deviations are extremely helpful in analyzing the data sets, hence, that BMI, group Statistics, is shown in Figure 1 This table includes descriptive statistics mean and standard deviations for each group of value of BMI for various groups 10 years, 11 years, 12 years, 13 years, and 14 years boys students. In detail table includes that the mean and standard deviations of BMI for the show various groups under 10 years (19.0±5.2), under 11 years (18.5±4.4), under 12 years (19.5±4.8), under 13 years (19.7±4.5), and under 14 years (19.2±4.3), boys students from urban city of Indore, Bhopal, Jabalpur and Gwalior of Madhya Pradesh The Analysis of Variance of standing height of boys students at different age groups is presented in table –3
The analysis of variance (ANOVA), for analyzing the difference between the means of BMI between various age groups is presented in Table – 2.

Table 2: Analysis of variance of means of BMI for various age groups boys of various district of Madhya Pradesh

Variable	Variance	Sum of Squares	df	Mean Square	F	Sig.
BMI	Between Groups	171.757	4	42.939	1.968	.097
	Within Groups	21706.705	995	21.816		
	Total	21878.462	999			

*Significant at 0.05 level 4, 995 (2.38)

Table 3 reveals that analysis of variance (ANOVA) for BMI for various age groups of boys students from Private Schools of Indore, Bhopal, Gwalior and Jabalpur Madhya Pradesh is found no significant as the calculated “F” value is 1.968 as the

p-value is .097 This p-value indicates that “F” is no significant at 0.05 level of significance. As the “F” value is found significant the LSD Post Hoc test is applied to find between which groups the significant difference is found. The finding of the LSD Post Hoc test and their p-value is presented in table 3.

Table 3: Mean, mean difference and critical mean difference value of LSD post hoc test for BMI

Mean of Groups					Mean	CD
10 Years	11 Years	12 Years	13 Years	14 Years	Difference	
19.0	18.5				.41850	0.92
19.0		19.5			-.54200	
19.0			19.7		-.76450	
19.0				19.2	-.27850	
	18.5	19.5			-.96050*	
	18.5		19.7		-1.18300*	
	18.5			19.2	-.69700	
		19.5	19.7		-.22250	
		19.5		19.2	.26350	
			19.7	19.2	.48600	

*Significant at 0.05 level

The above table indicates the BMI that means the value of 10 Years students (19.0) and 11 years (18.5) it is determined that groups were found significant whereas that the greater than the calculated “F” value was observed significant and mean difference (.41850) is less than the CD Value (0.92). There was a no significant difference between 10 years (19.0) and 12 (19.5) years students Mean difference MD (-.54200) fee is less than the CD (0.92). And no significant difference between 10 years (19.0) and 13 years students (19.7) students

Mean difference vale (-.76450). There was a no significant difference between 10 years (19.0) and 14 years (19.2) students it is determined that groups were found no significant whereas that the less than the calculated “F” value was observed no significant and mean difference (-.27850) is less than the CD Value (0.92).

The BMI of mean value of 11 Years students (18.5) and 12 years (19.5) it is determined that groups were found significant difference whereas that the greater than the calculated “F” value was observed significant and mean difference (-.96050*) is more than the CD Value (0.92). This groups indication that mean value of 11 years (18.5) and 13 years students (19.7) it is determined that groups were created significant difference mean difference value (-1.18300*) is more than the CD value (0.92). There was a no significant difference between 11 years (18.5) and 14 years students (19.2) mean difference (-.69700) is less than the CD value (0.92).

Show that BMI of means score of 12 Years students (19.5) and 13 years (19.7) it is determined that groups were found no significant difference whereas that the less than the calculated “F” value was observed significant and mean difference (-.22250) is less than the CD Value (0.92). There was a no significant difference between 12 year (19.5) and 14 years students (19.2) so that mean difference value (-.26350) is less than the CD (0.92) value for those groups. And last both groups between 13 years (19.7) and 14 years (19.2) were found significant difference mean difference value (.48600) is less than the CD value (0.92).The graphical representation of the mean of the BMI is shown in Fig 1.

The mean of the BMI for 10 to 14 Years are presented in Fig-1

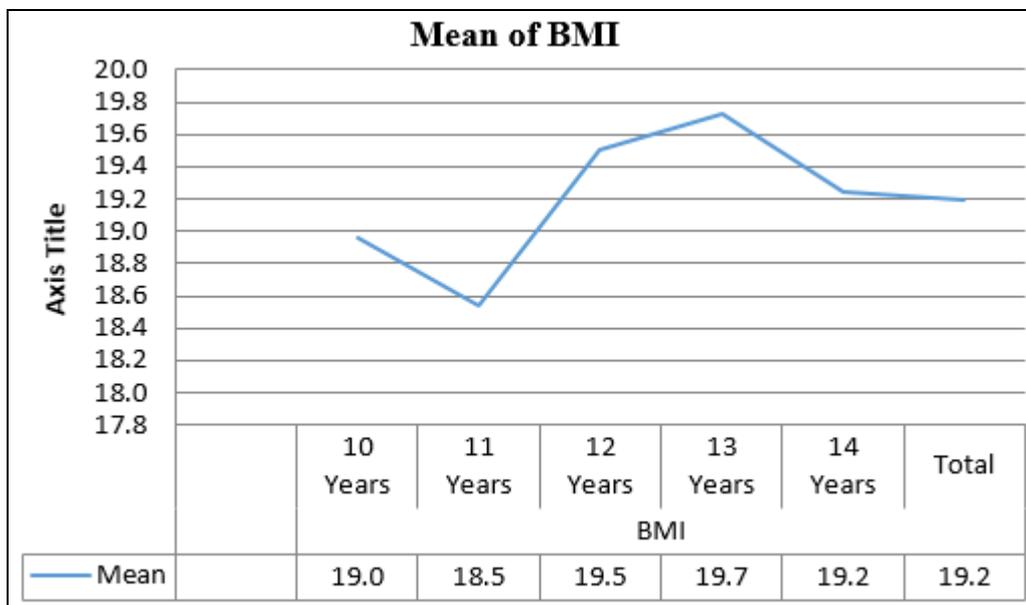


Fig 1: Mean of BMI for 10 to 14 Years of Students

Discussion of Findings

To find out the Mean and Standard Deviation score of Body Mass Index (BMI) the different age groups like 10 year to 14 year school going boys’ students of various district of urban city of Indore, Bhopal, Jabalpur and Gwalior Madhya Pradesh. To find out the compare (f-value) and multiple compare of Body Mass Index (BMI) the different age groups like 10 year to 14 year school going boys’ students of various district of urban city of Indore, Bhopal, Jabalpur and Gwalior Madhya Pradesh. The reason of these differences can be

associated with above results this is probably due to the different nature of the physical components training and pre-requisite for students. Number of participation and level of participation. The reason may be attributed that the physically trained student or level of achievements and taken deferent types nutrition food. These results may be due to a small sample of size and other factors such as different types of body, differences in body composition. These results may be nutrition diet schedule deference. The reason may be Psychological variables like stress, sports competition

anxiety, aggression, fear, motivation confidence, attention concentration etc.

Conclusions

According to objectives of the study the following conclusions were drawn

- There was significance Mean score of Body Mass Index (BMI) the different age groups like 10 year to 14 year school going boys' students of various district of urban city of Indore, Bhopal, Jabalpur and Gwalior Madhya Pradesh.

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