

To Determine BMI group of Undergraduate Medical Students of Quaid-e-Azam Medical College, Bahawalpur

AJWAD FAROGH¹, SIDRA KHURSHID², AHSAN ALTAF³, SHAMILA AFSHAN⁴

ABSTRACT

Aim: To find out BMI Group of medical students.

Design: A descriptive study.

Place of study: Quaid-e-Azam Medical College, Bahawalpur.

Duration of study: February to May, 2017.

Methodology: Weight and height of student were measured of 174 undergraduate medical students of the 1st profession and group of BMI were calculated by dividing the weight with (height). We defined low, normal, over weight and obesity by using the international scale of BMI recommended by WHO. All collected information was entered and analyzed using SPSS version 20. The Quantitative variables were presented as as mean and standard deviation.

Results: Total 174 students of medical college were enrolled , the age students were 18 to 22 years and 114(65%) of female and 60(35%) of male students. The average height of student was 165.1 meters (St.D = 9.8); the height of male 's students was 178.6 meters (St.D = 7.3) as compare with female 159.90 meters (St.D = 6.4). The average weight of 174 students was 65.7 kg (St.D= 10.1); Men 75.14 kg (St.D = 11.3) as compare with women 61.69 kg (St.D = 11.3), 101 (58.05%) of the students were in the normal weight range, 45(25.86%) students labeled as overweight.

Conclusion: Normal BMI group was found in both genders. The trend of increase body weight and group of underweight also observed among students.

Keywords: BMI, Standard Deviation, , underweight, overweight, obesity

INTRODUCTION

Fat of body is an important source of energy, acts as a thermal insulator and shock absorber and for human body. Being a heavy weight or skinning structure always creates problems, History of human race showed that obesity was very rare before the 20th century; The World Health Organization (WHO) officially recognized obesity as a global problem. Since 2005, the WHO estimates that at least 400 million adults (9.8%) are overweight, with higher rates in women than in men¹. The obesity rate also increases with age of at least up to 50 or 60 years² and severe form of obesity in the United States, Australia and Canada increases faster than the overall rate of obesity³.

Medically, obesity is defined as a condition in which excess body fat has accumulated to the extent that it adversely affects health, resulting in a shorter life expectancy and possibly an increase in health problems⁶⁻⁷. Body mass index (BMI) defined as people overweight (pre-obese) if their BMI is between 25 and 30 kg/m², and obese if their weight is greater than 30 kg / m²⁸. The body mass index (BMI) was further evaluated for the distribution of fat over

the waist-hip ratio and the general cardiovascular risk factors⁹⁻¹⁰. and BMI is closely related to both total body fat and body fat¹¹.

Obesity and associated risk factors are the most common cause of heart disease, diabetes (type II), hypertension, arthritis, menstrual disorders and risks of anesthesia, and some types of cancers .¹²⁻¹⁴ The BMI group can obtained by division of weight by height .¹⁵ Among the many indices, which are used for the evaluation of obesity, the BMI showed the strongest correlation with continuous hypertension in men and women¹⁶ Data regarding BMI groups of medical students in Pakistan is not properly documented or recorded,

METHODOLOGY

A descriptive study was conducted from February to May 2017 at Quaid-e-Azam Medical College (QMC), Bahawalpur. The study population included 174 1st Professional medical students of QMC. A proforma structure was used to record information regarding age, sex, weight and height of each student The BMI was estimated by using the formula defined by WHO criterion⁷, the value of less than 18.49 was considered underweight, 19-24.99 as normal weight, the BMI group consider as overweight if value lies between 25-29.9 and 30 or more belonged to obese students. Data was analyzed after entering SPSS version 20.

¹Assistant Professor Cardiac Surgery Quaid-e-Azam Medical College/BV Hospital Bahawalpur

²MO, Nishter Hospital, Multan

³Vice Principal and Director Medical Education, CIMS, Bahawalpur

⁴Biostatistician , Punjab Institute of Cardiology, Lahore

Correspondence to Shamila Afshan Cell:0333-4241076

RESULT

Table 1:

Mean Age	Mean±S.D	19.97 ± 1.02	
		Frequency	%age
Gender	Male	60	35
	Female	114	65

Among the 174 study participants of the study, the average age was 19 ± 1.02 years old, mostly students 119(67%) having age group 19-21 years, remaining student were 55(33%) equal of more than ≥ 23 years of age. The ration of male and female students was, (M: F = 0.6:1)., males 60(35%) as

compare to female as 114(65%) Table and Graph 1 showed mean age and distribution with respect to gender. The average height of the students was 165.1 ± 9.8 while their mean weight was 65.7 ± 10.1 . The mean height of males was 178.6 meters (sd= 7.3) and their mean weight was 75.14 kg (sd=11.3). The mean height of girls were 159.90 ± 6.4 and average weight was 61.69. (Graph 2 and 3). All students were categorized according to BMI group, 58% of students had normal BMI, 25% students were overweight 10% of students were obsess while 5% of them were underweight.

Fig. I: Graphical Presentation of 174 Medical Students according to their AGE

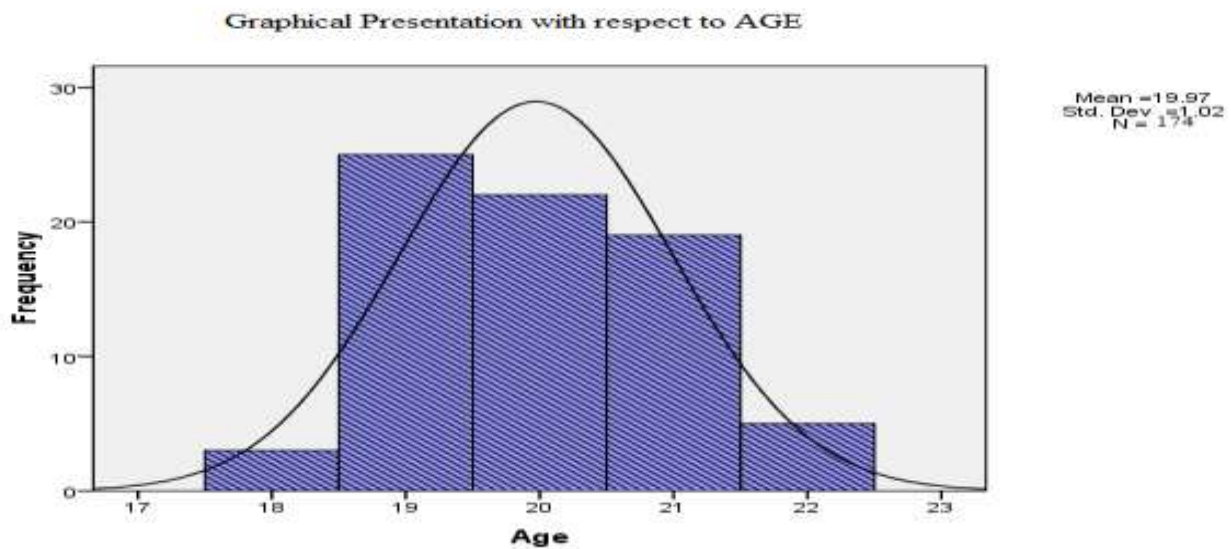


Fig. II: Mean Weight of 174 Medical Students

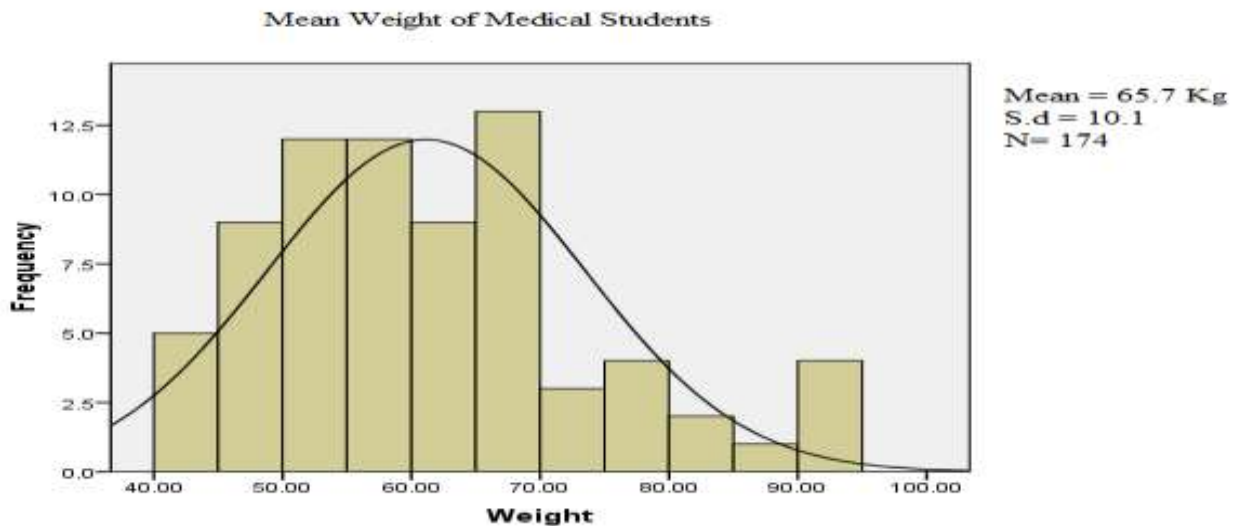
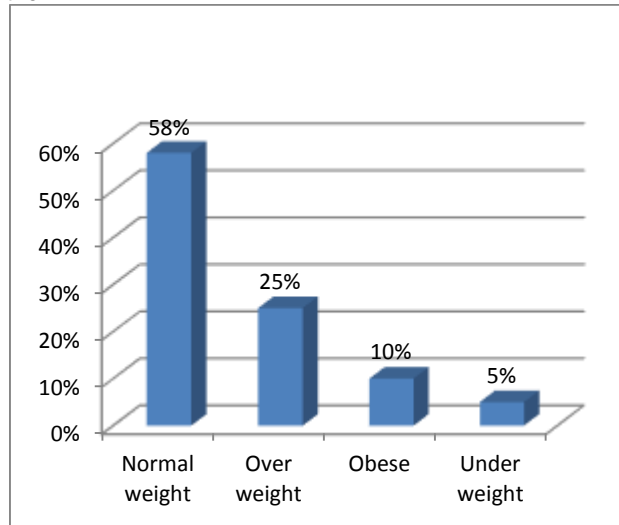


Fig. III: Presentation of 174 medical students according to their BMI



DISCUSSION

In the current study, the majority of students (58%) had a normal BMI. A study by Molenaar EA showed that 59% of students with a normal BMI which support our study. Reports from a medical school in Malaysia. Haslam DW, James WP. reported that 69% of students had a normal BMI¹⁰.

In the present study, obesity was only found among 25% of students which is very high as compare with other studies. A study reported by Barness LA et. al that medical around 8% medical students had overweight¹¹. Another study conducted by Aziz J et.al in Abbottabad, it was found obesity in 3% medical students of government sector⁹ and 13% in a private medical colleges¹³. Carroll JF et al. found 3% obesity among students of medical profession¹⁵ while Boo NY et al. showed that 2% of Malaysian medical students were obese¹³. At Ribat University, Khartoum study conducted by Abdalla and Mohamed, they found that medical students and found 9 % student were overweight¹.

In this present study, 25% males and females of medical students were over weighted, the frequency of overweight medical students were reported by Jokela M et al. was 17.5%⁶ Tukker A et al found that 12%⁷ and Abdalla and Mohamed stated it to be 18%¹⁷.

In the current study, 5% underweight students were found. A study reported in Malaysia by Booo et al. It was shown that 15% of medical students were underweight.

CONCLUSION

It was concluded that mostly medical students of both gender were physically fit and energetic having normal BMI.

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