

BMI Status of 1st Year Medical Students of Medical College of Karachi – A Cross Sectional Study

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ABSTRACT

Objective: To determine the BMI status of first year medical students.

Study Design: Cross-sectional study

Place and Duration of Study: This study was conducted at the This study was conducted at Al-Tibri Medical College & Hospital, Isra University campus, Karachi, from July 2019 to December 2019.

Materials and Methods: All 89 students enrolled in first year MBBS class were involved in the study. Data was evaluated using SPSS version 25.

Results: Mean age of students was 19.64. Females were n=50 (56.2%) and males were n=39 (43.8%). The mean Body Mass Index was 21.98. First year male medical students overweight and obese are n=17 (43.6%). Female medical students overweight and obese are n=15 (30%). The overall daily physical activity done by the students is n=60 (67.4%).

Conclusion: Study reveals majority of first year medical students falls into the category of having normal BMI and female students are more physically active in their daily chores.

Key Words: BMI, First year medical students, Overweight, under weight

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INTRODUCTION

The prevalence of non-communicable diseases is increasing day by day, and creating a major public health problem in all age groups, all over the world and fortunately most of these diseases are preventable only through the modification of life style¹. Obesity and overweight are killing 2.8 million people each year. WHO announced obesity as an epidemic globally². In obesity large amount of fat is stored in the body and can lead to cardiac diseases, type 2 diabetes, obstructive sleep apnea, certain types of cancer, asthma, osteoarthritis and decreasing life expectancy³. Obesity affects roughly 20-40% of children worldwide. In humans, the body mass index (BMI) is used to classify overweight and obesity. It is calculated by dividing a person's weight in kg by the square of his height in meters (kg/m²)⁴.

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In Pakistan the prevalence of obesity and overweight is about 9-46%, different studies conducted in Pakistan reported different statistics regarding abnormal weight among medical students⁵. In Past obesity and overweight was considered problems of only developed countries⁶, taking high-calorie foods and a non-active life style have increased the threefold rate of obesity in developing countries over the last two decades. Result of many scientific studies conducted among university students in different developing countries like India, Bangladesh, and China indicate a high prevalence of obesity⁷. The developing countries are facing a lot of problems because of urbanization among them dietary and life style changes are prominent, especially in children and adult. Increase use of salted snack foods, gum, candy, sweet desserts, fried fast food, and sugary carbonated beverages, hamburgers, pizza, and tacos in children and young population with the lack of healthy diet is alarming and on other hand mobile phones, laptop, computers, online games increase the screen time increases the health problems⁸. Our country is also facing these problems and now obesity is emerging as an important non communicable disease in Pakistan⁸. This behavior and lack of physical activity are behind the increasing trend of non-communicable diseases in community⁹. The medical students also belong from this community; they are more vulnerable because of their increased study time. They are future doctors and role models for the community. The purpose of this study is to find out their BMI, eating behavior and physical activity.

MATERIALS AND METHODS

Study Design: Cross-sectional study.

Sample Size: 89 students.

Site of study: Al-Tibri Medical College & Hospital, Isra University, Karachi.

Duration of study: July 2019 to December 2019.

Inclusion Criteria: All first year medical students of Al-Tibri Medical College.

Exclusion Criteria: Not willing to participate in the study, second, third and fourth year MBBS student & Students from other disciplines of Isra University.

Data Collection Procedure: Every student's age, sex, height in meters, and weight in kilograms were collected using a closed ended questionnaire. Standard registered scales and a non-stretch tape mounted to a level vertical wall were used to measure body weight to measure and height to the nearest 0.1 kg and 0.5 cm respectively. The scales were checked for accuracy by weighing an object of known weight to minimize measurement errors. The BMI was determined using the following formula: weight (kg)/height (m²). Using the following cutoff points adapted from the WHO criteria which is as follows:

BMI	Nutritional Status
Below 18.5	Normal Weight
18.5-24.9	Underweight
25.0-29.9	Overweight
30.0-34.09	Obesity Class I
35.0-39.09	Obesity Class II
Above 40	Obesity Class III

The data obtained were compiled and analyzed by using SPSS version 21.0 software.

RESULTS

Mean age of students was 19.64. Females were n=50 (56.2%) and males were n=39 (43.8%). The mean Body Mass Index was 21.98. Students living in Isra hostel were n=32 (36%), residing in Karachi city with the family were n=52 (58.4%) and student who rented privately owned accommodation were n=5 (5.6%).

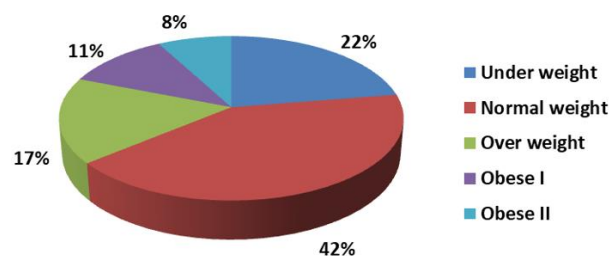


Figure No.1: Shows the BMI categories of first year medical students

First year male medical students who were underweight are n=7 (17.9%), normal weight n=15 (38.5%) and those who are overweight and obese are n=17 (43.6%).

Female medical students who were underweight are n=13 (26%), normal weight n=22 (44%) and those who are overweight and obese are n=15 (30%).

The overall daily physical activity done by the students is n=60 (67.4%), students who do not perform physical activity daily are n=28 (31.5%) and finally the students who sometimes do the physical activity daily is n=1 (1.1%).

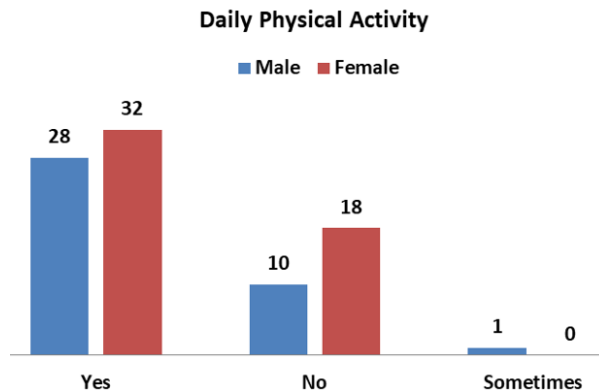


Figure No.2: Shows the daily physical activity carried out by Males and Females medical students of first year

DISCUSSION

In our study the mean age of medical students was 19.64 years with standard deviation of 1.73 as compared to study conducted by Kerwani⁹. The mean age of the students was 20.69 years with a standard deviation of 1.41 years. The results of our study regarding the gender 43.8% were male and 56.2% were female, were same as compared to multicenter study conducted in Pakistan¹⁰. The study conducted by Mani¹¹, 65(43.3%) were female 85(56.7%) were male in this study 70% students living in hostel but in our study the result were vice versa, 56.2% were female and 36% students living in hostel, the reason can be Karachi is a economical hub of Pakistan and all over county the people come and live here so the majority of the students is living at home. Female ratio is more in our study, reason behind the females are more serious about their study and their career and they choose medical profession by their own choice because it is a noble profession and upgrade the status of female in our male dominant society. A study conducted on medical students and house officer 71.6% join this medical profession by their own choice¹². In current study 22.5 % were under weight, 16.9% were overweight as compared to 21.34% students were underweight study conducted in India¹³ and 25% were overweight study conducted in Bahawalpur¹⁴. the difference because of eating habits culture and festivity, they like to consume more meat and dairy products like butter, ghee and high caloric diet.

CONCLUSION

Study reveals majority of first year medical students falls into the category of having normal BMI and female students are more physically active in their daily chores.

Author's Contribution:

Concept & Design of Study: Syed M. Maqsood
 Drafting: Zeba Saeed, Riaz Ahmed Bhutto
 Data Analysis: Pavan Kumar, Shahid Kamran, Irfan Khan
 Revisiting Critically: Syed M. Maqsood, Zeba Saeed
 Final Approval of version: Syed M. Maqsood

Conflict of Interest: The study has no conflict of interest to declare by any author.

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