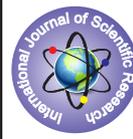


Prevalence of Overweight and Obesity among 3rd Year Medical (preclinical) Students in Taibah University



Medicine

KEYWORDS: Body Mass Index, Obesity, Overweight, Medical students.

Mohammed N Albsher	MBBS, Taibah university, Saudi Arabia
Mohammed M Abusayf	MBBS, Taibah university, Saudi Arabia
Mohammed F Abdala'al	MBBS, Taibah university, Saudi Arabia
Faisal S Alhawiti	MBBS, Taibah university, Saudi Arabia
Abdallah F Mahabat	MBBS, Taibah university, Saudi Arabia
Belal A Alharthy	MBBS, Taibah university, Saudi Arabia
Umar M Alabbasi	MBBS, Taibah university, Saudi Arabia
Abdallah S Aljunaidi	MBBS, Taibah university, Saudi Arabia

ABSTRACT

Objective: This study aimed to determine the prevalence of obesity and overweight among medical students and its relationship with their dietary intake and physical activities. **Methods:** We calculated the body mass index for 35 students. Also, a questioner was used to determine some behavioral habits. **Results:** From 35 students, 12 students (34.29%) were obese and 7 (20%) were overweight. **Conclusion:** The study revealed that the prevalence of overweight and obesity among the medical students in the preclinical year in Taibah University exceeded 50%, phrasing the need to encourage healthy lifestyle, healthy food habits and a physically active daily routine, among them.

INTRODUCTION

Obesity means having too much body fat. It is different from being overweight, which means weighing too much.[1] The weight may come from muscle, bone, fat and/or body water. Both terms mean that a person's weight is greater than what's considered healthy for his or her height. Obesity doesn't occur abruptly, it is noticed over a long period of time when the person eats calories more than needed. The balance between calories-in and calories-out differs from person to person. Several factors are indicated to change the balance of person's weight just like the genetic makeup, overeating, eating high-fat foods and not being physically active. Obesity and its related disorders are increasing vastly in both developing and developed countries. The latest WHO projections indicate that at least one in three of the world's adult population is overweight and almost one in 10 is obese. Additionally there are over 20 million children under age five who are overweight. Evidence from previous studies suggests that the increase might be a result of an interaction between hereditary and environmental factors in the way that several genetic variants interact with an 'at-risk' environment, and adults are relatively at high risk for many chronic diseases such as diabetes, cardiovascular disease, and certain cancers.[2] Doctors and health workers are role models for the population when it comes to the healthy lifestyle the community needs. However, studies on medical students and health personnel in many countries suggest that obesity is a problem among these population groups. For example, a study conducted in a Japanese university found a progressive and significant rise in obesity levels among medical students from 1979 to 1991.[3] In Greece, a study on 989 third-year medical students showed that around 40% of men and 23% of women had a body mass index (BMI) more than 25.0 kg/m². Furthermore, 33.4% of male and 21.7% of female students in this study had central obesity. In a study carried out among healthcare workers employed in a large hospital in Sicily, Italy, 13.3% of males and 13.6% of females were found to be obese.[4] It is important to say that overweight and obesity are largely

preventable. The key to success is to achieve an energy balance between calories consumed on one hand, and calories used on the other hand. To reach this goal, people can limit energy intake from total fats and shift fat consumption away from saturated fats to unsaturated fats; increase consumption of fruit and vegetables, as well as legumes, whole grains and nuts; and limit their intake of sugars. And to increase calories used, people can boost their levels of physical activity to at least 30 minutes of regular, moderate-intensity activity on most days.[5] Although BMI provides the most useful population-level measure of overweight and obesity as it is the same for both sexes and for all ages of adults. However, it should be considered as a rough guide because it may not correspond to the same degree of fatness in different individuals. In Saudi Arabia, There was a progressive increase of BMI for male and female subjects with age, reaching maximum at the 5th decade. The prevalence of overweight among male subjects was significantly higher than for female subjects (29% vs. 27%). The prevalence of obesity among female subjects was significantly higher than for male subjects (24% Vs 16%)[6]. Another study, was published in 1996, have been conducted to determine the prevalence of obesity among Saudi female medical and nursing students estimated that 30.6% of 222 students were obese [7]. On international basis, several studies have been conducted to determine the prevalence of overweight and obesity among medical students. One study published in 2012 in Malaysia, revealed that the prevalence of overweight and obesity among the medical students of AIMST University is on the high [8]. Another study published in 2013 in Thailand, revealed that Thai medical students have a lower prevalence of overweight/obesity than the general population of the same age group [9].

The present study aims to determine the prevalence of obesity among male medical students in the third year at Taibah University.

MATERIALS AND METHODS

This study is a cross-sectional study. The study was conducted in the period of 1-27/05/2012, aimed to explore the prevalence of obesity and overweight among 3rd year (preclinical) medical students in Taibah university, age ranges of the candidates were 21 – 24 years and all of them were males. Using a questioner evaluating junk food eating & exercise hours of respondents as an evaluating of life style effect on obesity and BMI (body mass index). Data collected by the researchers using standardized techniques and equipment to measure Height and weight. For the terms underweight, overweight and obesity we used the BMI as an indicator (Body Mass Index (BMI) is a simple index of weight-for-height that is commonly used to classify underweight, overweight and obesity in adults. It is defined as the weight in kilograms divided by the square of the height in meters (kg/m²). BMI values are age-independent and the same for both sexes. However, BMI may not correspond to the same degree of fatness in different populations due, in part, to different body proportions. The health risks associated with increasing BMI are continuous and the interpretation of BMI grading in relation to risk may differ for different populations. BMI is classified as underweight <18.50, normal range 18.50, 24.99, overweight ≥25.00 and obese ≥30.00 for adults[10]. Data was analyzed by researchers using a calculator in terms of numerical data and the results presented in form of figures using pie chart & bar chart for these numerical data. The authors, for ethical consideration, preserved records of all subjects.

RESULTS

The study estimated that 34.29%, 20%, 40%, 6% were obese, overweight, normal and underweight respectively (Tab.1, Fig.1).

Category	Student Numbers
Under Weight	2
%	6
Normal Weight	14
%	40
Over Weight	7
%	20
Heavily Overweight	12
%	34
Total	35

Fig.1: BMI among 35 Students of 3rd Year Medical Students Class at Taibah University

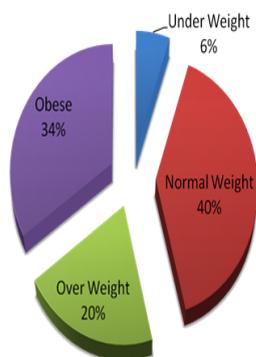


Fig.2: Frequency of Fast Food Eating Per Week

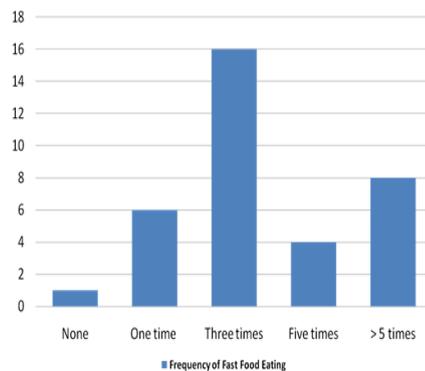
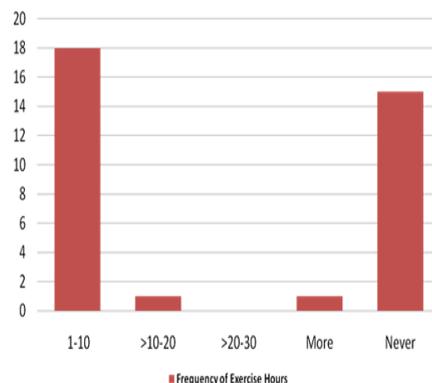


Fig.3: Exercise Hours During The Week



DISCUSSION

From the previous results we found that the prevalence of obesity and overweight among this sample is high and this may be reflected from the behavioral habits such as eating too much fast food (Fig.2) and spending less time (Fig.3) in exercising, another thing to be considered in this sample is spending a lot of time in studying. The main limitation of this study was that we were unable to take a detailed dietary history on the types and quantities of food consumed by the students in their main meals. As a consequence, this study was unable to determine the impact of these meals on the weight of the students. Based on the findings of the present study, it is recommended that students in this college increase the frequency of their physical exercise to at least three times a week, avoid or reduce their consumption of fatty meals and junk food. They are future doctors who are expected to treat patients as well as to serve as promoters and good role models for healthy lifestyles in their community. It is therefore important to identify the gaps in knowledge and practice in the curriculum of this medical school so as to address this issue. The rising in IHD/CHD and sudden death nowadays making studying and researching about obesity and their correlation and predisposing to those diseases very important. We recommended also, that more researches to be done to identify the associations and risk factors for this seriously increasingly issue.

ACKNOWLEDGMENTS

We are thankful to the physiology department in Taibah University for their fundamental support.

REFERENCES

- (1) Cole TJ, Bellizzi MC, Flegal KM, et al. Establishing a standard definition of child overweight and obesity worldwide: international survey. *Br Med J* (2000) 320:12403.
- (2) Abbate C, Giorgianni C, Munao F, et al. Evaluation of obesity in healthcare workers. *Med Lav* 2006; 97:13-9.
- (3) Ohe K, Hachiya Y, Takahashi Y, Oda S, Takahara K. The significance of obesity in UOEH medical students—multiple regression analysis of the annual physical checkup data in 1991. *J UOEH* 1992; 14:279-88. Japanese.
- (4) Bertisias G, Mammias I, Linardakis M, Kafatos A. Overweight and obesity in relation

- to cardiovascular disease risk factors among medical students in Crete, Greece. *BMC Public Health* 2003; 3:3.
- (5) Jequier E, Tappy L. Regulation of body weight in humans. *Physiol Rev* 1999; 79:451-80.
 - (6) Al-Nuaim AR, al-Rubeaan K, al-Mazrou Y, al-Attas O, al-Daghari N, Khoja T. High prevalence of overweight and obesity in Saudi Arabia. *Int J Obes Relat Metab Disord*. 1996 Jun; 20(6):547-52.
 - (7) Rasheed, P, B. M. Abou-Hozafa, and A. Khan. "Obesity among young Saudi female adults: a prevalence study on medical and nursing students." *Public Health* 108.4 (1994): 289-294.
 - (8) Gopalakrishnan, S., et al. "Prevalence of overweight/obesity among the medical students, Malaysia." *The Medical Journal of Malaysia* 67.4 (2012): 442-444.
 - (9) Ekpanyaskul, Chatchai, Pornchai Sithisarankul, and Somkiat Wattanasirichaigoon. "Overweight/Obesity and Related Factors Among Thai Medical Students." *Asia-Pacific Journal of Public Health* 25.2 (2013): 170-180.
 - (10) Method WHO http://apps.who.int/bmi/index.jsp?introPage=intro_3.html