



Research Article

The risk of Obesity in relation to dietary habits among medical students at Minia University



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Abstract

Background: Non-communicable diseases risk factors include poor eating habits, being overweight and obesity are becoming prevalent. Concerns about lifestyle risk factors are important when it comes to students' health. This study aimed to identify patterns of eating habits and the prevalence of overweight and obesity among undergraduate medical students at Minia University. **Methods:** This cross-sectional study conducted among 280 undergraduate students from the 4th year students of the Faculty of Medicine, Minia University, Egypt. Data were gathered using a self-administered questionnaire encompassing questions on socio-demographics and eating habits. Anthropometric measurements were obtained. **Results:** A total of 280 medical students including 42.5% males and 57.5% female were studied. About 57% had no fixed mealtime. Only 28.2% of students had breakfast at least 6 days/week. About half of students consumed 2 servings of fruits 3-5 days/ week and 34.6% consumed 3-4 pieces of vegetable every day. Only 18.2% of students never/ rarely consumed fast-food. Significant difference was found regarding sweets and sugary beverage consumption being higher among males. Males had a higher BMI compared to females and this was statistically significant. The prevalence of central obesity was 41.8%. **Conclusion:** Overweight and obesity were prevalent among medical students and the majority had unhealthy eating patterns. These findings made them more likely to develop non-communicable diseases. Therefore, organized nutrition educational program should be implemented targeting new students. Policy makers should increase healthy lifestyle choices inside universities and encourage healthy food stores, also integrate health education programs regarding healthy lifestyle practice at students' curricula.

Keywords: collage; medical students; diet; BMI.

Introduction

One of the most important health-enhancing habits is eating healthy food such as the consumption of daily requirements of fruits and vegetables, natural foods, and foods containing minerals and vitamins⁽¹⁾. It also entails actions and dietary practices that are advantageous for sustaining and promoting both physical and mental health⁽²⁾. Various personal social

and environmental factors have an impact on healthy eating⁽³⁾.

Due to time constraints and stressors, adult students making the transition from high school to university find it difficult to maintain good eating routines. Instead, they miss meals, consume unhealthy snacks, eat at restaurants, and consume fast-food⁽⁴⁾.

The period spent through college represents a critical period. Additionally, it encompasses stress for students attempting to succeed in their academic goals that could impact both life quality and eating habits (EH) in adulthood⁽⁵⁾.

According to research by Gan et al., students are more likely to acquire bad eating habits and don't get enough nutrients⁽⁶⁾. Irregular mealtime, skipping breakfast, consuming more fried foods, and eating fewer fruits and vegetables are some of these behaviours⁽⁷⁾. Along with dietary changes, inadequate exercise routine, poor time management, and rising levels of stress from schoolwork also contribute to weight increase⁽⁸⁾.

Because they have more medical information about healthy eating habits, medical students are expected to have good eating habits and lead healthy lifestyles⁽⁹⁾. However, because of their busy schedules and stress, the majority were exposed to unhealthy eating habits. They probably do not have time to cook a healthy meal or exercise⁽¹⁰⁾.

Studying the change in dietary habits and lifestyle practices among university students in addition to determining overweight/obesity prevalence among them can help educate them about the importance of preventing the development of chronic diseases by adopting healthy lifestyles.

Recent research on BMI and eating patterns among Egyptian medical students was scarce. For this reason, it was necessary to explore this critical issue among medical students. Thereby, this study aimed to determine pattern of eating habits and the prevalence of overweight and obesity among undergraduate medical students at Minia University.

Methods

Design and Sample:

A cross-sectional study was conducted at the Faculty of Medicine, Minia University, Egypt during the 2019/2020 academic year. A sample consisting of 280 students of the 4th year participated in the study after giving verbal consent. Data were collected in the period from January 2020 to April 2020. The response rate was 95.3%.

Data collection

Data were collected using an Arabic self-administered questionnaire covering students' sociodemographic characteristics and dietary habits. Anthropometric measurements were obtained by the investigator.

a- **Sociodemographic data:** (such as age, gender, residence and family income)

b- **Dietary habits questions:** including different questions about dietary habits in addition to the *Wright and Scott's (2000)* Fat and Fiber Barometer, Modified (FFB). A total of nine questions regarding

intake frequency were included in the FFB. Each question was rated between one and five and included a categorical range of possible answers. Poor scores indicated high fat and low fiber intake, and the FFB scores were added to produce an overall nutrition score that ranged from nine to 45. Therefore, the better the participant's eating habits, the higher the score⁽¹¹⁾.

c- Anthropometric measurements

Each student had their weight, height, and waist circumference (WC) measured after completing the questionnaire. Participants were measured for height in a standing position, without shoes, with a wall-fixed scaled meter, to the nearest 1cm. A portable electronic scale was used to determine body weight to the nearest 0.1 kg while the circumference of the waist was measured in centimeters midway between last rib and the anterior superior iliac crest at the end of a normal exhalation with the arms relaxed at the sides. The ratio of weight in kilograms to square of height in meters is known as the body mass index (BMI). BMI and central obesity were both classified using WHO standards⁽¹²⁾.

BMI was categorized as - Underweight: (<18.5 kg/m²), normal (18.5–24.9 kg/m²), overweight (25.0–29.9 kg/m²) and obese (> 30.0 kg/m²). Central obesity was defined as WC ≥ 94 cm for men and ≥ 80 cm for women

The researcher conducted the measurements at the public health department's well-equipped facilities while respecting the subjects' privacy and confidentiality.

The students were briefed about the study and given directions on how to fill out the questionnaire completely and honestly before completing it and providing the anthropometric measures, and they verbally consented to participate in the study.

Ethical considerations:

-**Administrative aspects:** the study was performed after taking the consent from the dean of the Faculty of Medicine.

- **Ethical approval:** the study IRB number is 370:1/2020

Data Analysis:

Data collected from the questionnaires were entered and analyzed using IBM SPSS Statistics version 21.0 for Windows. Results were expressed as percentage (categorical data) and means ± standard deviations (numerical data). All reported p values were made based on the two-tailed tests. Differences were considered statistically significant at P values < 0.05 with 95% confidence interval (CI). Chi-square test was used to compare percentages and independent sample t-test for comparing numerical data.

Results

Table 1 described the demographic data of the respondents. A total of 280 university students who agreed to participate were studied including 42.5% males and 57.5% females. Moreover, 45.7% were rural and 54.3% were urban residents and only 1.1% were smokers.

Table (2) showed that about half of students (48.6%) consumed 2 servings of fruits 3-5 days/week and 34.6% consumed 3-4 pieces of vegetables every day. A large proportion (41.1%) of students always prefer lean meat consumption, 20.7% consume processed meat once/week and 35.7% always use added fat/butter. Only 18.2% of students never/ rarely consumed fast food while 36.4% consumed fast food 3-5 times /week. Significance differences were found between males and females regarding the frequency of use of added butter/fat, legume and processed meat consumption/week (P value= 0.013, 0.002, 0.048 respectively). However, the total FFB mean score did not differ significantly between males and females.

Table (3) showed that 51.5% usually consumed three meals/ day while 34.6% usually skipped a meal, more than half of students (57.1%) had no fixed time for meals and 42.5% of students consumed sweets or sugary beverages daily.

More than two-third of students usually had snacks daily. One-third of students eats despite feeling full and were night eaters. About 23% of students classified themselves as having a fast speed of eating

compared to the others and only 28.2% of students had breakfast at least 6 days/week and 13.2% didn't have breakfast any day.

The majority of females (75.2%) consumed snacks daily compared to 58% of males ($p=0.002$). Half of the male students consume sweets or sugary beverages daily compared to 34.7% of females ($p=0.002$). The larger percentage of male students were fast or very fast eaters 33.6% and 5.1% compared to lower percentages among females 15.6% and 1.3% respectively ($p=0.0001$).

Table 4 showed that students' weight ranged from 41 to 130 Kg with a mean weight of 69.35 ± 16.09 , while students' height ranged from 1.47 m to 1.92 m with a mean height of 1.66 ± 0.09 . The mean BMI among the studied students was 24.75 ± 4.47 and ranged from 15.78 to 43.94. The mean waist circumference was 90.76 ± 12.17 for males and 78.84 ± 10.19 for females. Male students were significantly higher than females as regards to their mean weight, height, waist circumference and BMI.

The prevalence of central obesity was 41.8% with no significant difference between males (39.5%) and females (43.5%). More than half of students had a waist circumference within the normal range (<94 cm and <80 cm for males and females respectively). However, 31.1% of both males and females had waist circumference between 94-102 and 80-88 cm for male and females respectively and 8.4% of males and 12.4 % of females had waist circumference higher than 102cm, 88 cm respectively.

Table (1): Sociodemographic characteristics of medical students of Minia University, 2019-2020

Variable	Categories	N	%
Sex	Male	119	42.5
	Female	161	57.5
Residence	Rural	128	45.7
	Urban	152	54.3
Smoking	No	277	98.9
	Yes	3	1.1
Family income	<2000	14	5.0
	2000-4000	92	32.9
	4000-6000	78	27.9
	>6000	82	29.2
	Unknown	14	5.0
Meet expenses	No	8	2.9

	Sometimes	48	17.1
	Yes	115	41.1
	yes and more	105	37.5
	Unidentified	4	1.4
Total		280	100

Table (2): Components of fat and fiber barometer (FFB) among male and female medical students of Minia University, 2019-2020

		Male No. (%)	Female No. (%)	Total No. (%)	X² (P- value)
2 servings of fruits /week	never/ rare	9.0(7.5)	0 (6.2)	19 (6.8)	X ² 0.73 (0.94)
	1-2 day	31 (26.1)	1 (25.5)	72 (25.7)	
	3-5 day	59 (49.6)	7 (47.8)	136 (48.6)	
	6-7day	20 (16.8)	3 (20.5)	53 (18.9)	
Vegetables /day	Never	0.0 (0.0)	2.0 (1.2)	2.0 (0.7)	X ² 7.28 (0.098)
	less than one	10 (8.4)	18(11.2)	28 (10.0)	
	1-2 piece	37 (31.1)	54(33.5)	91 (32.5)	
	3-4 piece	37 (31.1)	60 (37.3)	97 (34.6)	
	more than 5	35 (29.4)	27(16.8)	62 (22.1)	
Usual Lean meat choice	never	5.0 (4.2)	4.0 (2.5)	9.0 (3.2)	X ² 5.09 (0.27)
	rare	12 (10.1)	12 (7.5)	24 (8.6)	
	sometimes	30 (25.2)	35 (21.7)	65 (23.2)	
	usually	32(26.9)	35 (21.7)	67 (23.9)	
	always	40 (33.6)	75 (46.6)	115 (41.1)	
Fast food/ week	Never/ rare	17 (14.3)	34 (21.1)	51 (18.2)	X ² 4.06 (0.38)
	1-2 day	45 (37.8)	60 (37.3)	105 (37.5)	
	3-5 day	48 (40.3)	54(33.5)	102(36.4)	
	6 or more	9.0 (7.6)	13 (8.1)	22 (7.9)	
Use added fat/ butter	never	3.0(2.5)	1.0(0.6)	4.0 (1.4)	Exact test 11.56 (0.031*)
	rare	1.0(0.8)	3.0(1.9)	4.0 (1.4)	
	sometimes	25(21.0)	16(9.9)	41 (14.6)	
	usually	45(37.8)	86(53.4)	131 (46.8)	
	always	45(37.8)	55(34.2)	100 (35.7)	
Brown rice preference	never	5.0 (4.2)	9.0 (5.6)	14 (5.0)	X ² 4.01 (0.40)
	rare	15 (12.6)	19 (11.8)	34 (12.1)	
	sometimes	43 (36.1)	42 (26.1)	85 (30.4)	
	usually	32 (26.9)	56 (34.8)	88 (31.4)	
	always	24 (20.2)	35 (21.7)	59 (21.1)	
Legumes /week	never/ rare	13 (11.0)	32 (19.9)	45 (16)	X ² 16.860 (0.002*)
	once/week	21(17.6)	53 (32.9)	74 (26.4)	
	2-3 day	60(50.4)	57 (35.4)	117 (41.8)	
	4 or more day	25(21.0)	19(11.8)	44 (15.7)	
Low fat dairy products	never	14 (11.8)	18 (11.2)	32 (11.4)	X ² 3.29 (0.51)
	rare	39 (32.8)	41 (25.5)	80 (28.6)	
	sometimes	42(35.3)	57 (35.4)	99 (35.4)	
	usually	16(13.4)	33 (20.5)	49 (17.5)	
	always	8.0(6.7)	12(7.5)	20 (7.1)	

Processed meat / week	never/ rare	57(48.7)	95 (59.0)	153 (54.7)	X^2 9.595 (0.048*)
	once/week	23(19.3)	35 (21.7)	58 (20.7)	
	2-3 days	30(25.2)	18 (11.2)	48 (17.1)	
	4 or more days	8.0(6.7)	13(8.1)	21 (7.5)	
Total FFB score (mean ± SD)		29.24± 4.07	29.21±3.73	29.23±3.87	<i>t</i> test 0.056 (0.95)

*statistically significant

Table (3): Dietary habits among male and female medical students of Minia University, 2019-2020

Dietary habits	Male No. (%)	Female No. (%)	Total No. (%)	X^2 (P- value)
Number of regular meals				
Two	41 (34.5)	56 (34.8)	97 (34.6)	1.5 (0.7)
Three	63 (52.8)	81 (50.3)	144 (51.5)	
>3	15 (19.7)	24 (14.9)	39 (13.9)	
Daily fixed meal time				
No	69 (58)	91 (56.5)	160 (57.1)	0.06 (0.9)
Yes	50 (42)	70 (43.5)	120 (42.9)	
Daily sweets or sugary beverage consumption				
No	56 (47.1)	105 (65.3)	161 (57.5)	9.23 (0.002*)
Yes	63 (52.9)	56(34.7)	119 (42.5)	
Snack in between regular meals				
No	50(42.1)	40 (24.8)	90 (32.1)	9.251 (0.002*)
Yes	69(57.9)	121 (75.2)	190 (67.9)	
Eating without feeling hungry				
No	76 (63.9)	117 (72.7)	193 (68.9)	2.47 (0.116)
Yes	43(36.1)	44 (27.3)	87 (31.1)	
Eating late at night				
No	35 (29.4)	59 (36.6)	94 (33.6)	1.60 (0.25)
Yes	84 (70.6)	102 (63.4)	186 (66.4)	
Eat breakfast every day				
No	20 (16.8)	17 (10.6)	37 (13.2)	2.93 (0.40)
Yes	99 (83.2)	144 (89.4)	(86.8)	
Compared to others, how fast do you eat?				
Slow	15 (12.5)	26 (16.3)	41 (14.6)	17.23 (<0.0001*)
Normal	58 (49.0)	107 (66.9)	166 (59.3)	
Fast/ very fast	46 (38.5)	27 (16.8)	73 (26.1)	
Total	119(100.0)	161(100.0)	280 (100.0)	

*statistically significant

Table (4): Anthropometric measurements of male and female medical students of Minia University, 2019-2020

Anthropometric measurements	Male Mean± SD	Females Mean± SD	Total Mean± SD	significance
Weight (kg)	78.19 ±15.72	62.82 ±12.97	69.35±16.09	8.95** <0.0001*
Height (m)	1.75 ±0.07	1.60 ±0.062	1.66±.097	17.71** <0.0001*
BMI	25.48 ±4.63	24.22 ±4.29	24.75±4.47	2.35** 0.019*
Waist circumference (cm)	90.76 ±12.17	78.84 ±10.19	83.91±12.53	8.89** <0.0001*
Abdominal obesity (N %)				
Absent	72 (60.5)	91 (56.5)	163 (58.2)	1.218***
Class 1	37 (31.1)	50 (31.1)	87 (31.1)	0.544
Class 2	10 (8.4)	20 (12.4)	30 (10.7)	
Total	119	161	280	

*statistically significant

** Significance was calculated using *t*-test

*** Significance was calculated using Chi square test

Discussion

In this study conducted among 280 medical students from Faculty of Medicine, we found that only 18.2% of students never/ rarely consumed fast-food and 18.9% of students consumed the recommended daily fruit consumption. Regarding BMI, there was a significant difference between males and females with male having the higher BMI and the prevalence of central obesity was 41.8% among the students.

Dietary habits

Regarding students' dietary habits, 18.9% of students (16.8% of males vs. 20.5% of females) in the current study consumed two servings of fruits daily and 56.7% (60.5% of males vs. 54.1% of females) consumed more than 3 pieces of vegetables every day which was adherent to the recommended dietary guidelines based on an average 2000 kcal diet which stated that the recommended daily intake is two cup equivalents of fruits and two and a half cup equivalents of vegetables. Recommended intake is often expressed as five servings of fruits and vegetables daily⁽¹³⁾ (table 2).

According to a study by Sabbour et al. in Egypt, 23.26 % of medical students had a consumption of five servings of fruits and vegetables per day⁽¹⁴⁾

In Sohag, Upper Egypt, adolescents had a rather low frequency of adequate eating of fruits and vegetables (21.7%)⁽¹⁵⁾.

Additionally, fruits were consumed daily by 31.4% of the sample of 2875 Egyptian university students, while salads and raw vegetables were consumed daily by 40.2% of the participants⁽¹⁶⁾. In Saudi Arabia, the majority of students (78%) eat less than the daily recommended amount of fruits and vegetables⁽¹⁶⁾.

In a different study of Saudi medical students, it was discovered that 20.4% of the participants ate vegetables every day whereas 14.3% just did so rarely. Additionally, only 20.4% of respondents ate fruit rarely, compared to 11.9% who did so daily⁽¹⁸⁾. 26.3% of Bahraini students, according to Musaiger et al.⁽¹⁹⁾, ate five servings of fruit and vegetables each day.

More than half of medical students in northern Greece reported eating fruits and vegetables at least three times per week, according to a study by *Chourdakis et al.*⁽²⁰⁾. In the meantime, a Malaysian survey found that 19% of university students consumed veggies more than three times per week⁽²¹⁾. In Brunei Darussalam, just 23.4% and 9.2% of university students regularly ate fruits and vegetables, respectively⁽²²⁾. Only 19.4% of adolescents in a study of eleven Eastern Mediterranean

nations reported eating fruit and vegetables at least five times each day⁽²³⁾.

Fruit and vegetable consumption has been consistently reported to be low among adolescents and young adults^(7,15,17). Some studies have explored students' Fruit and vegetable consumption based on recommended daily intake, while others only reported whether or not student consume any amount of Fruit and vegetable on daily basis. In either case, most studies have generally shown low consumption.

Only 18.2% of students never or rarely consumed fast food and 81.8% consumed fast food more than once /week (table2). Although this percentage was high but was nearly similar to a Malaysian study which revealed that 73.5% of medical students consumed fast food more than two times per week⁽⁷⁾.

The present study found a difference between males and females regarding legumes consumption/week where 21.0% of female students consumed legumes 4 or more days/week compared to 11.8% among male students (table2). This finding was similar to *Yahia et al.* who reported that females consumed more legumes in comparison to men, and in the same study men also tend to consume sweets and sugary beverages more than females⁽²⁴⁾ and that approximately like the finding of the present study where half of the male students consumed sweets or sugary beverage daily compared to 34.7% of females. In the present study, 51.5% usually had three meals/ day compared to 34.6% who usually skipped a meal and 13.9% of students usually have more than 3 meals (table 3). This result was comparable to one from a study of students in Malaysia, which revealed that the majority (52.5%) of students ate three meals a day, while 33.3% of students ate fewer meals and 14.2% ate more⁽²²⁾.

About 13.2% of students usually didn't have breakfast any day (table 3). Also, a survey of Saudi Arabian medical students revealed that 18.5% of students rarely ate breakfast⁽¹⁸⁾. 42.6% of Malaysian students had breakfast each day (22). 57.1% students didn't have fixed meal time in the current study.

Similar findings were made by Niyaz⁽²⁵⁾ who found that the majority of pupils (78.0%) did not eat consistently.

Daily consumption of snacks was a common habit among the participants of the present study (table3). More than two thirds of

students usually had snacked per day compared to 82.2% among Malaysian students who had a habit of snacking regularly⁽²²⁾. Current findings were higher compared to previous studies from various other countries where snacks consumption was found in 53% of Syrian⁽²⁶⁾, 53.2% of Lebanese⁽²⁷⁾ and 42.4% of Malaysian⁽⁷⁾ students consumed snacks regularly. According to *Alzahrani et al*, 26.5% ate snacks daily⁽¹⁸⁾. Females snacking habits was significantly higher than males ($P < 0.002$) in the current study.

Variations in eating habits among different studies may be due to cultural and socioeconomic characteristic of different samples. Relative good consumption of vegetables and fruits in the current study may be due to good nutrition knowledge among the medical students from their curriculum.

On the other hand, females showed healthier eating habits compared to males in terms of daily breakfast intake and daily fruits and vegetables intake. Legume, sweets and sugary beverage consumption patterns were relatively healthier among females compared to males. This might be influenced by cultural and advertising pressures promoting, for example, thinness as a criterion for beauty. So females were more conservative regarding their weight and shape. However, some faulty dietary habits for example fast food consumption, irregular meal time and skipping meals were prevalent among the studied students. This may be due to frequent outdoor eating as they spend a lot of time away from home or staying at university campuses.

Anthropometric measurements

The current study showed that the mean BMI among the studied students was 24.75 ± 4.47 and ranged from 15.78 to 43.94. Mean waist circumference (WC) was 83.9 ± 12.53 (90.76 ± 12.17 & 78.84 ± 10.19) for males and females respectively (table 4).

This was similar to students in Pharos University, mean BMI was 24.84 ± 4.35 ⁽²⁹⁾. This was also similar to a study done among Saudi students that found the mean BMI was 24.6 ± 5.2 ⁽³⁰⁾. Also, a study done among medical students in Cameron showed slightly similar results where the mean BMI and waist circumference were 23.13 ± 3.12 Kg/m² and 77.46 ± 8.12 cm respectively⁽³⁰⁾.

In this study, 40.3% of students were either overweight (27.1%) or obese (13.2%) (table4).

Similar to a study done at Pharos University which showed that 28.9% of the students were overweight and 11.8 % were obese ⁽³²⁾. And slightly similar to Saudi students where 21.8% of the students were overweight and 15.7% were obese ⁽²⁹⁾

The prevalence of overweight and obesity in the current study was higher than that found in a survey done in Egypt on eleven faculties where about 31.5% of students were either overweight/obese ⁽³³⁾. Other studies among university students from different populations showed a lower prevalence of overweight and obesity than the current study ^(22,30).

In the present study male students were significantly higher than females as regards to their mean BMI (25.48 ± 4.63 & 24.22 ± 4.29) for males and females respectively (table4). Overweight and obesity were found among 46.3% of males and 36% of females. Overweight and obesity were more common among males compared to females (30.3% and 16% vs. 24.8% and 11.2%) respectively (table 4). Similarly, male students in Egypt were more likely than female pupils to be obese (31). Additionally, a survey of university students in Lebanon revealed that male students were more likely than female students to be overweight and obese (37.5% and 12.5% vs. 13.6% and 3.2%, respectively) ⁽³²⁾

In contrast to the present finding; a survey among Egyptian faculties found that overweight and obesity were more among females ⁽³³⁾. Also the finding from other studies concerned with obesity prevalence in Egypt and from the STEPs survey indicated that in Egypt the prevalence of obesity is more than double among females as compared to males ^(34,35). The difference could be explained as those data include females till the age of 65 years and revealed that obesity among Egyptian females increases with age besides wealth, urban residency, unhealthy diet, and physical inactivity ⁽³⁵⁾. Also lower rate of obesity among female students in the current study can be due to dieting that is a common practice among young women nowadays.

Peltzer et al. also found that male obesity exceeds female obesity in Asia and North Africa eg: Egypt and Tunisia which may be somewhat explained by the significant social disadvantage of women in Asia and North Africa ⁽³⁶⁾. In contrast to Cameron where females also were more overweight or obese compared to male medical students ⁽⁷⁾.

The prevalence of central obesity, using the WHO classification according to waist circumference, in the current study was 41.8% with no significant difference between males (39.5%) and females (43.5%) (table4). This approximated the data from the Egyptian National Hypertension Project ⁽³⁷⁾ where central obesity was shown in 57.8% of adult females vs. 37% of adult males. Also, a significant number of females compared to males had abdominal obesity among medical students in Cameron ⁽³⁰⁾.

The observed difference in the percentage and distribution of obesity/overweight in the current study could be related to complex multifactorial influence related to different behavioral and genetic factors of the students. Physical inactivity and faulty eating habits may partially explain the increased prevalence of overweight and obesity in the current study.

Conclusion and recommendations:

Many medical students at Minia University skipped some meals, with the majority skipping breakfast. They also frequently ate fast-food, consumed little milk, and consumed few fruits and vegetables on a daily basis. Bad eating habits in addition to overweight and obesity that were prevalent among them put them at high risk for developing non-communicable disease, according to researches. These alarming findings among them, despite the nature of their study that qualify them with better knowledge regarding healthy lifestyle, make it necessary to make concerted efforts to encourage healthy eating practices among all university students. Thus an organized nutrition educational program should be applied for new students enrolled in the university. In addition, universities should minimize fast-food stores inside the university and encourage healthy food stores. Also, coordinated efforts between Community Medicine departments and The Supreme Counsel of Universities of should be done to integrate health education programs to promote healthy lifestyle such as eating habits, weight control and physical activity at students' curricula in all faculties especially for students in the first year of their university life

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