

Original Article

Association of Dietary Habits and Life Style on Body Mass Index among the Students of TMSS Medical College, Bangladesh

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Abstract

Background: Body Mass Index (BMI) is a commonly used indicator to assess nutritional status. Medical students often develop lifestyle and dietary habits during their study years, which can significantly stimulus their future health and professional responsibilities. This study aimed to assess the categories of BMI as well as to correlate the dietary habits and lifestyle with the categories of BMI of students of TMSS Medical College.

Materials and Methods: A cross-sectional descriptive study was conducted on 330 Bangladeshi and international students from 1st to 5th year at TMSS Medical College, Bogra from January 2023 to June 2024. Data were collected through anthropometric measurements (height, weight, BMI calculation) and structured questionnaires covering socio-demographic data, dietary habits, and psychosocial factors. BMI was categorized as underweight, normal, overweight, and obese. Chi-square tests were used to assess the association between BMI categories and dietary/lifestyle factors.

Results: Among participants, 59.10% had normal BMI, 10.64% were underweight, 23.32% overweight, and 7.00% obese. BMI distribution varied significantly by academic year, age, known disorders, and menstrual history ($P < 0.05$). No significant association was found between BMI and most dietary habits including skipping meals, fruit/vegetable intake, and milk consumption. However, a significant association was found between fast food consumption and BMI ($P = 0.002$).

Conclusion: While most students had normal BMI, a concerning proportion were overweight or obese. Fast food consumption showed a significant correlation with BMI. This highlights the need for dietary awareness, regular BMI screening, and health education programs among medical students to promote healthier lifestyles and reduce long-term health risks.

Keywords: Nutritional behavior, Physical activity, BMI, Medical students, Youth lifestyle

Introduction

Body Mass Index (BMI) is a simple yet effective anthropometric tool used globally to assess an individual's nutritional status and categorize them as underweight, normal weight, overweight, or obese based on their height and weight.¹ It serves as a key indicator in public health for evaluating the risk of various health conditions related to both undernutrition and overnutrition. Among young adults, especially medical students aged between 18 to 25 years, BMI is particularly important, as this stage of

life marks a critical period for the development of long-term health behaviors and lifestyle choices.²

Medical students, during their transition into adulthood, experience significant lifestyle changes due to academic demands, new social environments, and increased personal responsibilities. These factors often contribute to altered dietary patterns, meal skipping, increased consumption of fast food and snacks, and a sedentary lifestyle.³ Such habits not only affect their current health status but also increase the risk of

developing chronic non-communicable diseases such as obesity, diabetes, hypertension, cardiovascular disease, and certain types of cancer.^{4, 5}

Research suggests that poor eating behaviors including irregular meal timing, skipping breakfast, frequent snacking on unhealthy foods, and eating outside are strongly associated with abnormal BMI and overall poor health outcomes.^{6, 7} Moreover, academic stress has been identified as a key factor influencing students' food choices, often pushing them towards unhealthier diets during exams or stressful periods.⁸

Although various studies in Bangladesh have examined BMI patterns and gender-based differences in BMI, limited attention has been paid to the dietary habits and lifestyle factors influencing BMI, particularly among medical students. As future healthcare professionals, medical students' health behaviors carry significant implications not only for their own well-being but also for their potential role in promoting public health.

In this context, TMSS Medical College, Bogura. A prominent private medical institution in northern Bangladesh offers a relevant setting to explore these issues. Therefore, the present study aims to assess the BMI categories among medical students and to analyze the association between their dietary habits, lifestyle factors, and nutritional status.

Materials and Methods

Study Design and Duration

This was a cross-sectional study conducted from January 2023 to June 2024 at TMSS Medical College, Bogura, Bangladesh. Data collection took place in the Boys' and Girls' hostels and the Department of Anatomy.

Participants and Sampling

A total of 330 Bangladeshi and international undergraduate medical students were included in the study. The sample size was calculated using the standard formula with a population size of 600 and a

5% margin of error. A cluster sampling technique was applied for participant selection.

Data Collection Tools and Procedure

Data were collected through face-to-face interviews using a structured questionnaire after obtaining informed consent. The questionnaire included items on dietary habits and lifestyle patterns.

Anthropometric measurements were taken following standard protocols. Height was measured in centimeters using a stadiometer and converted to meters. Weight was measured in kilograms using a digital scale. Body Mass Index (BMI) was calculated as weight (kg) divided by height in meters squared (kg/m^2) and classified as follows:

- Underweight: $<18.5 \text{ kg/m}^2$
- Normal: $18.5\text{--}24.9 \text{ kg/m}^2$
- Overweight: $25\text{--}29.9 \text{ kg/m}^2$
- Obese: $\geq 30 \text{ kg/m}^2$ ⁹

To minimize diurnal variation, measurements were taken at a consistent time of day. Data analysis was performed at the site of data collection and in the Department of Anatomy.

Variables Measured

- **Dietary Habits:** Skipping meals, intake of fruits, vegetables, eggs, milk, snacks, fast food, soft drinks, and water.
- **Lifestyle Factors:** Physical activity, stress-related eating behavior.

Ethical Consideration

Participation was voluntary and informed consent was obtained from all participants. Confidentiality was ensured throughout the research process.

Results

In this research, regarding the categories of Body Mass Index (BMI) of the 330 medical students.

Table I: The prevalence of the total Body Mass Index (BMI) of Medical Students (N = 330)

BMI category	Number (n)	Percentage (%)
Underweight (<18.5)	35	10.64
Normal weight (18.5-24.9)	195	59.14
Overweight (25 – 29.9)	77	23.32
Obese (≥30)	23	07.00
Total	330	100

Table- I showing the prevalence of the categories of total Body Mass Index (BMI) of medical students. More than half 59.14 % students fall in normal weight BMI group, 10.64 % were underweight, 23.32% students were overweight and here 7.00% students were obese.

Table II: The prevalence of the Body Mass Index (BMI) of the first-year students (N = 80), second-year students (N = 70), third-year students (N = 60), fourth-year students

BMI Category	1 st Year (%)	2 nd Year (%)	3 rd Year (%)	4 th Year (%)	5 th Year (%)
Underweight (<18.5)	17.5	8.3	10.0	10.3	5.0
Normal weight (18.5 - 24.9)	61.3	45.8	58.3	51.7	80.0
Overweight (25 - 29.9)	20.0	33.3	23.3	25.9	13.3
Obese (≥30)	1.3	12.5	8.3	12.1	1.8
Total Students (N)	80	70	60	60	60

(N = 60), fifth-year students (N = 60)

Table- II showing the prevalence of the Body Mass Index (BMI) of the 1st, 2nd, 3rd, 4th and 5th year students. Among first-year students (N = 80), the majority 61.3% had a normal BMI, followed by 20% who were overweight, 17.5% underweight, and 1.3% obese. Among second-year students (N = 70), 45.8% were of normal weight, 33.3% were overweight, 8.3% were underweight, and 12.5% were obese. In the third year (N = 60), 58.3% of students were of normal weight, 23.3% were overweight, 10.0% were underweight, and 8.3% were obese. Among fourth-year students (N = 60), 51.7% were of normal weight, 25.9% were

overweight, 10.3% were underweight, and 12.1% were obese. In the fifth year (N = 60), a higher proportion 80.0% of students were of normal weight, followed by 13.3% overweight, 5.0% underweight, and 1.8% obese.

Table III: Dietary habits among first-year students (N = 80), second-year students (N = 70), third-year students (N = 60), fourth-year students (N = 60), fifth-year students (N = 60)

Characteristic	1 st Yr. (%)	2 nd Yr. (%)	3 rd Yr. (%)	4 th Yr. (%)	5 th Yr. (%)
Skip Breakfast (Yes)	11.3	19.4	25.0	31.0	31.7
Skip Lunch (Yes)	0.0	1.4	0.0	0.0	1.7
Skip Dinner (Yes)	12.5	29.2	15.0	13.8	28.3
Daily Fruit Intake (Yes)	11.3	9.7	15.0	17.2	26.7
Daily Vegetable Intake (Yes)	35.0	38.9	45.0	41.4	30.0
Daily Eggs Consumption	61.3	70.8	61.7	65.5	66.7
Daily Milk Consumption	11.3	12.5	16.7	8.6	13.3
Daily Soft Drinks	3.8	5.6	15.0	8.6	10.0
Daily Snack Consumption	46.3	56.9	68.3	74.1	58.3
Daily Fast Food	3.8	18.1	16.7	10.3	13.3
Water Intake (2L per day)	52.5	47.2	61.7	44.8	58.3
No Daily Exercise	86.3	54.2	61.7	56.9	63.3
Eat More When Stressed (Yes)	16.3	29.2	40.5	29.3	28.3
Prefer Homemade Food	85.0	81.9	75.0	84.5	65.0

Table- III showing the comparison of dietary habits among students from 1st year to 5th year. Regarding the dietary habits of 330 medical students of TMSS Medical College, it depicts that the study revealed notable trends in the dietary and lifestyle behaviors of students from 1st to 5th year. Breakfast skipping showed a consistent rise from 11.3% in the 1st year to 31.7% in the 5th year, while lunch skipping remained minimal across all years (0%–1.7%). Dinner skipping fluctuated, peaking at 29.2% in the 2nd year. Daily fruit intake improved over time, increasing from 11.3% to 26.7%, whereas vegetable intake peaked at 45% in the 3rd year before dropping to 30% by the 5th year. Egg consumption remained high throughout (61.3%–70.8%), while milk consumption stayed relatively low (8.6%–16.7%). Soft drink intake was generally low, with a peak of 15% in the 3rd year.

Snack consumption rose steadily, reaching 74.1% in the 4th year before decreasing slightly. Fast food consumption peaked in the 2nd year (18.1%) and then declined. Water intake (2L per day) varied without a clear trend, ranging between 44.8% and 61.7%. The proportion of students not engaging in daily exercise was highest in the 1st year (86.3%) and showed

inconsistent changes in later years. Emotional eating increased notably, with 40.5% of 3rd-year students reporting increased food intake during stress, though this declined slightly afterward. Preference for homemade food declined over the years, from 85% in the 1st year to 65% in the 5th year, suggesting a gradual shift toward convenience or outside food.

Table IV: Distribution of Body Mass Index (BMI) Categories Across Demographic and Lifestyle Variables (N = 330)

Variable	Category	Underweight	Normal	Overweight and Obese	Total	Chi-square and p-value
		n (%)	n (%)	n (%)	n (%)	
Age (Years)	19-20	13 (13.8)	55 (58.5)	26 (27.7)	94 (100)	9.06 (0.05) *
	21-23	19 (10.6)	98 (54.4)	63 (35.0)	180 (100)	
	24-25	03 (5.4)	42 (75.0)	11 (19.6)	56 (100)	
Sex	Male	13 (8.9)	90 (61.6)	43 (29.5)	146 (100)	1.07 (.58)
	Female	22 (12.0)	105 (57.1)	57 (31.0)	184 (100)	
Year of Study (MBBS)	First Year	14 (17.5)	49 (61.3)	17 (21.3)	80 (100)	26.6 (0.001) *
	Second Year	06 (08.3)	33 (45.8)	31 (45.8)	70 (100)	
	Third Year	06 (10.0)	35 (58.3)	19 (31.7)	60 (100)	
	Fourth Year	06 (10.3)	32 (51.7)	22 (37.9)	60 (100)	
	Fifth Year	03 (05.0)	48 (80.0)	09 (15.0)	60 (100)	
Economic Status	Low	00 (0.0)	00 (0.0)	01 (100)	01 (100)	10.26 (0.39)
	Medium	35 (10.9)	193 (60.1)	93 (29.0)	321 (100)	
	High	00 (0.0)	02 (25.0)	06 (75.0)	08 (100)	
Marital Status	Single	35 (10.7)	193 (58.8)	100 (30.5)	328 (100)	1.39 (0.35)
	Married	00 (0.0)	02 (100)	00 (0.0)	02 (100)	
Country	Bangladeshi	17 (8.8)	112 (58.0)	64 (33.2)	193 (100)	2.76 (0.25)
	International	18 (13.1)	83 (60.6)	36 (26.3)	137 (100)	
Daily Exercise Frequency	Yes	00 (0.0)	04 (44.4)	05 (55.6)	09 (100)	4.33 (0.36)
	No	25 (11.6)	129 (59.7)	62 (28.7)	216 (100)	
	Sometimes	10 (9.5)	62 (59.0)	33 (31.4)	105 (100)	
Having Known Disorders	Yes	03 (6.0)	19 (38.0)	28 (56.0)	50 (100)	18.46 (0.00) *
	No	32 (11.4)	176 (62.9)	72 (25.7)	280 (100)	
Total		35 (10.6)	195 (59.1)	100 (30.3)	330 (100)	

*Significant association at p-value < 0.05.

Table- IV showing the distribution of Body Mass Index (BMI) categories among 330 participants was analyzed across various demographic and lifestyle variables. Overall, 10.6% of participants were underweight, 59.1% had normal BMI, and 30.3% were categorized as overweight or obese. A statistically significant association was observed between age and BMI categories ($\chi^2 = 9.06$, $p = 0.05$). Participants aged 24–25 years had the highest proportion of normal BMI (75.0%), while those aged 21–23 years showed the highest prevalence of overweight and obesity (35.0%). Year of study also showed a significant association with BMI ($\chi^2 = 26.6$, $p = 0.001$). First-year students had the highest proportion of underweight individuals

(17.5%) and the lowest percentage of overweight/obese individuals (21.3%), whereas second-year students had the highest prevalence of overweight and obesity (45.8%). A strong association was found between having known disorders and BMI ($\chi^2 = 18.46$, $p = 0.00$). Among participants with known disorders, 56.0% were overweight or obese compared to only 25.7% among those without known disorders. No statistically significant associations were found between BMI and sex ($\chi^2 = 1.07$, $p = 0.58$), economic status ($\chi^2 = 10.26$, $p = 0.39$), marital status ($\chi^2 = 1.39$, $p = 0.35$), country ($\chi^2 = 2.76$, $p = 0.25$), or daily exercise frequency ($\chi^2 = 4.33$, $p = 0.36$).

Table V: Distribution of BMI Categories across Dietary and Lifestyle Variables with Statistical Significance (N=330)

Variable	Category	Underweight	Normal	Overweight/ Obese	Total	χ^2 (p-value)
		n (%)	n (%)	n (%)	n (%)	
Menstrual history	Regular	20 (12.8)	95 (60.9)	41 (26.3)	156 (100)	11.98 (0.002)*
	Irregular	1 (3.7)	10 (37.0)	16 (59.3)	27 (100)	
Skip breakfast	Yes	10 (13.3)	40 (53.3)	25 (33.3)	75 (100)	5.71 (0.22)
	No	17 (13.0)	81 (61.8)	33 (25.2)	131 (100)	
	Sometimes	8 (6.5)	74 (59.7)	42 (33.9)	124 (100)	
Skip lunch	Yes	0 (0.0)	0 (0.0)	2 (100)	2 (100)	6.43 (0.17)
	No	34 (11.3)	178 (59.3)	88 (29.3)	300 (100)	
	Sometimes	1 (3.6)	17 (60.7)	10 (35.7)	28 (100)	
Skip dinner	Yes	4 (6.2)	44 (67.7)	17 (26.2)	65 (100)	5.84 (0.21)
	No	20 (14.1)	75 (52.8)	47 (33.1)	142 (100)	
	Sometimes	11 (8.9)	76 (61.8)	36 (29.3)	123 (100)	
Fruits consumption	Yes	5 (9.8)	28 (54.9)	18 (35.3)	51 (100)	3.13 (0.54)
	No	10 (8.0)	80 (64.0)	35 (28.0)	125 (100)	
	Sometimes	20 (13.0)	87 (56.5)	47 (30.5)	154 (100)	

Variable	Category	Underweight	Normal	Overweight/ Obese	Total	χ^2 (p-value)
Vegetable's consumption	Yes	19 (15.2)	66 (52.8)	40 (32.0)	125 (100)	8.05 (0.09)
	No	3 (3.8)	54 (67.5)	23 (28.7)	80 (100)	
	Sometimes	13 (10.4)	75 (60.0)	37 (29.6)	125 (100)	
Egg consumption	Daily	22 (10.2)	125 (58.1)	68 (31.6)	215 (100)	7.17 (0.13)
	Once a week	4 (5.8)	47 (68.1)	18 (26.1)	69 (100)	
	Rarely	9 (19.6)	23 (50.0)	14 (30.4)	46 (100)	
Milk consumption	Daily	5 (12.2)	25 (61.0)	11 (26.8)	41 (100)	8.60 (0.07)
	Once a week	5 (6.1)	59 (72.0)	18 (22.0)	82 (100)	
	Rarely	25 (12.1)	111 (53.6)	71 (34.3)	207 (100)	
Soft drinks	Daily	1 (3.7)	19 (70.4)	7 (25.9)	27 (100)	7.47 (0.11)
	Once a week	14 (9.3)	97 (64.7)	39 (26.0)	150 (100)	
	Rarely	20 (13.1)	79 (51.6)	54 (35.3)	153 (100)	
Snacks consumption	Daily	20 (10.2)	118 (59.9)	59 (29.9)	197 (100)	1.45 (0.83)
	Once a week	10 (11.9)	51 (60.7)	23 (27.4)	84 (100)	
	Rarely	5 (10.2)	26 (53.1)	18 (36.7)	49 (100)	
Fast food consumption	Daily	3 (7.5)	25 (62.5)	12 (30.0)	40 (100)	16.80 (0.002)*
	Once a week	9 (5.4)	111 (66.1)	48 (28.6)	168 (100)	
	Rarely	23 (18.9)	59 (48.4)	40 (32.8)	122 (100)	
Water intake (L)	<1 Liter	2 (66.7)	1 (33.3)	0 (0.0)	3 (100)	14.86 (0.06)
	1 Liter	6 (12.8)	25 (53.2)	16 (34.0)	47 (100)	
	<2 Liter	0 (0.0)	5 (55.6)	4 (44.4)	9 (100)	
	2 Liter	20 (11.5)	100 (57.5)	54 (31.0)	174 (100)	
	>2 Liter	7 (7.2)	64 (66.0)	26 (26.8)	97 (100)	
Eat More when Feeling Stressed	Yes	07 (7.6)	54 (58.7)	31 (33.7)	92 (100)	6.29 (0.18)
	No	24 (12.6)	117 (61.6)	49 (25.8)	190 (100)	
	Sometimes	04 (8.3)	24 (50.0)	20 (41.7)	48 (100)	
Food Preference	Hostel Food	02 (14.3)	09 (64.3)	03 (21.4)	14 (100)	3.36 (0.76)
	Outside Food	02 (6.1)	18 (54.5)	13 (39.4)	33 (100)	
	Self-made Food	04 (17.4)	13 (56.5)	06 (26.1)	23 (100)	

*Significant association at p -value < 0.05.

Table: V showing the chi-square test indicated statistically significant relationship of the category of BMI with age ($p = 0.05$). In addition, this study found that, the P-values of the chi-square test were greater than 0.05 hence there was not conclusive evidence of a statistically significant relationship between skip breakfast ($P = 0.22$), lunch ($P = 0.17$) and dinner ($P = 0.21$) and category of BMI of the students. The study also showed no statistical relationship between fruits consumption ($P = 0.54$), vegetable consumption ($P = 0.09$), egg intake ($P = 0.13$), milk consumption ($P = 0.07$), soft drinks intake ($P = 0.11$), snacks

consumption ($P = 0.83$), water intake ($P = 0.06$), and the categories of BMI of the students. However, a significant relationship was found among 330 medical students between fast food consumption ($P = 0.002$) and the categories of BMI (Table- V).

Again, in distribution of BMI categories across demographic and lifestyle factors there were some statistically significant relationships between ages of students ($P = 0.05$), Year of the students ($P = .001$), having known disorders ($P = 0.00$), menstrual history in female students ($P = 0.002$) and the categories of BMI (Table- IV; V).

Table VI: Comparative scenario of height, weight and BMI Medical Students.

Years of the students	Age (Min - Max) Mean $\pm$ SD	Height (Min-Max) Mean $\pm$ SD	Weight (Min-Max) Mean $\pm$ SD	BMI (Min-Max) Mean $\pm$ SD
First year	19 - 22 20.00 $\pm$ 0.57	150 - 188 165.0 $\pm$ 8.86	40 - 86 60.10 $\pm$ 11.57	15.1 - 31.1 22.0 $\pm$ 3.57
Second year	20 - 22 20.67 $\pm$ 0.55	144 - 187 160.83 $\pm$ 9.08	38 - 141 65.07 $\pm$ 16.25	16.89 - 53.73 25.10 $\pm$ 5.66
Third year	21 - 22 22.0 $\pm$ 0.00	147 - 180 163.78 $\pm$ 7.764	42 - 105 62.55 $\pm$ 11.05	15.81 - 35.08 23.39 $\pm$ 4.23
Forth year	21 - 24 22.36 $\pm$ 0.613	147 - 184 163.64 $\pm$ 8.825	40 - 105 64.00 $\pm$ 12.41	16.65 - 33.39 23.95 $\pm$ 4.50
Fifth year	23 - 25 22.00 $\pm$ 0.487	140 - 180 163.63 $\pm$ 8.87	43 - 82 61.85 $\pm$ 9.891	17.93 - 31.25 23.00 $\pm$ 2.44

Table- VI showing the comparative scenario of height, weight and BMI of the medical students from 1st year to 5th year. Here, The mean BMI of 1st year students is 22.0, the mean BMI of 2nd year students is 25.0, the mean BMI of 3rd year students is 23.39, the mean BMI of 4th year students is 23.95 and the mean BMI of 5th year students is 23.00.(Table-VI)

Discussion

In present study, among the 330 students 94 students within (19-20) age group, 180 within (21-23) age group and 56 within (24-25) age group. Here,

regarding gender 184 students were female where their counterpart were 146. It is due to more female students admitted into medical college. This finding also agreed with some studies.^{8, 9} In present research, regarding daily exercise, 216 (65.45%) students never did exercise daily. Chowdhury (2014) found that 50.5% medical students do exercise rarely. Again, 92 (27.88%) students have a tendency to eat more when feeling stress and 190 (57.57%) students have no such a habit of eating. Regarding food preference, 78.80% students preferred homemade food whereas only 4.25% students liked hostel food.

Among the 330 medical students, 59.10% had normal BMI, 10.64% were underweight, 23.32% overweight, and 7.00% obese. Year-wise, the highest percentage of normal BMI was seen in 5th year students (80%), while overweight and obesity were more prevalent in 2nd and 4th years. The 1st year had the highest underweight rate (17.5%). These findings align with studies from Jordan, Iraq, Malaysia, Pakistan, and Saudi Arabia, where most medical students fell within the normal BMI range.^{6,9} However, similar research in Tamil Nadu showed a slightly higher rate of overweight and obesity.¹⁰ Despite signs of poor eating habits, many students believed their diet was healthy.⁷

Medical students living away from family often develop independent and unhealthy eating habits such as skipping breakfast and frequent snacking.¹¹ Though they are expected to have better dietary knowledge, many fail to apply it in practice.⁹

In this study, only 39.70% of students never skipped breakfast, while 22.77% skipped it daily. However, 90.90% never skipped lunch, and 43% never skipped dinner. Fruit consumption was low—only 15.5% ate fruits daily, and 46.7% consumed them occasionally. Vegetable intake was better, with 37.9% eating them daily. Most students (65.2%) consumed eggs daily, but milk intake was infrequent. Snacks were consumed daily by 58.33%, and 50.9% had fast food at least once a week. Water intake was mostly satisfactory, with many students drinking 2 liters daily.

These habits varied across academic years but showed a consistent trend of irregular meals and high snack consumption. Only a minority had three regular meals a day, which matches findings from other studies in Pakistan, Iran, Malaysia, and China.^{8,11,12} Studies have shown that skipping breakfast leads to unmet nutritional needs that cannot be compensated later in the day.¹²

Frequent consumption of junk food was common due to its availability around campus. Similar findings were reported in Bangladesh,⁸ Lebanon,¹³ and elsewhere.¹⁴ Dairy intake remained low, possibly due to lack of awareness about its importance⁹. Another study noted that most students were not fully aware of how food and lifestyle influence their health and BMI.⁶ In this study, no significant relationship was found between BMI and the skipping of breakfast ($P = 0.22$),

lunch ($P = 0.17$), or dinner ($P = 0.21$). Similarly, no statistical association was observed between BMI and intake of fruits ($P = 0.54$), vegetables ($P = 0.09$), eggs ($P = 0.13$), milk ($P = 0.07$), soft drinks ($P = 0.11$), snacks ($P = 0.83$), or water ($P = 0.06$). However, a significant association was found between BMI and fast-food consumption ($P = 0.002$).

BMI also showed significant associations with some demographic and lifestyle factors: age ($P = 0.05$), academic year ($P = 0.001$), known disorders ($P = 0.00$), and menstrual history in females ($P = 0.002$).

Although students skipped meals and consumed junk food, most had a normal BMI, similar to findings by Waweru & Marete (2016), who also reported no significant link between meal frequency and BMI, but a strong association with fast food intake. Several other studies also support the link between fast food and BMI.^{15, 11, 12}

However, not all findings are consistent—Mahmud & Taha (2017) found no association between BMI and eating habits among nursing students.

Fast food diets are often low in essential nutrients like iron, calcium, and vitamins A and C, contributing to poor health outcomes. Prolonged consumption may result in physical and cognitive issues such as fatigue, memory problems, emotional disturbances, gastritis, diabetes, and even increased cancer risk.^{16, 17}

Medical students often face academic stress, which contributes to the development of unhealthy eating habits.³ Additionally, modern technology has improved daily life but also increased sedentary behavior, as many students spend more time on screens than engaging in physical activity.¹⁸

In this study, over 80% of students across all academic years reported not engaging in regular exercise. About 70% did not eat more when feeling stressed, and most preferred homemade food. However, no significant associations were found between BMI categories and exercise ($P = 0.36$), stress-related eating ($P = 0.76$), or food preference ($P = 0.76$).

Conclusions

This study found that while most medical students had a normal BMI, a notable portion were overweight or obese. Dietary habits showed no significant

association with BMI, except for frequent fast-food consumption, which was statistically linked to higher BMI. These findings highlight the importance of healthy eating patterns and lifestyle choices. Promoting nutritional education and creating a supportive environment can encourage better habits, enhance academic performance, and prevent future health issues. Early lifestyle changes and regular screening for overweight and obesity are key to long-term health

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