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## Food habits and fast food preferences among medical students

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### Abstract

**Introduction:** Fast Food is an empty calorie food that is high in calorie and lacks in micronutrients. **Objectives** were to study the food habits and factors influencing fast food consumption among medical students; to study the relationship of fast food preferences with gender variation and BMI.

**Material and methods:** A cross-sectional study was carried out among 430 Medical Students in a Private University. Universal method of sampling was followed and data collection done by self-structured questionnaire. Height and weight was recorded and BMI was calculated accordingly.

**Results:** Majority of them (54.4%) mentioned they skip major meals. Though only 23% of them stated they prefer fast food, 184(42.8%) of them visited a fast food restaurant once or twice in a week.

**Conclusion:** The study demonstrated that medical students tend to have poor eating habits the primary reasons being easy access and taste factor.

**Keywords:** Fast food, Medical students

### 1. Introduction

The increasing urbanization occurring in both developing and developed world is causing changes in the diet towards high energy-dense foods and sedentary lifestyle [1]. Fast Food is an empty calorie food that is high in calorie and lacks in micronutrients such as vitamins, minerals, or amino acids, and fiber [2]. It is inseparable part of diet leading to obesity and associated problems [2]. Students make their own decisions when it comes to food based on availability and cost; lack of knowledge towards healthy food affects eating habits and nutritional status negatively [3]. The general assumption is that medical students eat healthy when compared to non-medical students but some studies have found otherwise [3] and knowledge about healthy lifestyle does not necessarily result into better practices [4]. Stress in medical students life and study load would be factors that negatively influence their diet [3]. Additionally, decreased levels of physical activity increases prevalence of obesity and diet related non-communicable diseases [5].

### 2. Objectives

1. To study the food habits and factors influencing fast food consumption among medical students
2. To study the relationship of fast food preferences with Gender variation and BMI among medical students

### 3. Material and Methods

Approval from Institutional Ethics Committee was obtained before starting the study and the permission from competent authority were obtained. A cross-sectional study was carried out Yenepoya Medical College situated in Derlakatte, Mangalore. All the students studying in 1st, 2nd, 3rd Phase MBBS who consented to participate in the study were included by census method. Four hundred and thirty medical students of all the three phases who consented were included in the study. The data was collected by using a pre-designed, validated self-administered questionnaire, based on a review of similar studies. Height and Weight were recorded as per standard guidelines and BMI was calculated accordingly. The formula used for calculating BMI was weight in kg, divided by square of height in meters. In this study, based on the WHO BMI cut-offs for the Asian population, a BMI<18.5 kg/m<sup>2</sup> was categorized as underweight, 18.6-22.9 kg/m<sup>2</sup> as the normal range, 23.0-27.4 kg/m<sup>2</sup> as pre-obese, 27.5-34.9 kg/m<sup>2</sup> as obese Class I, 35.0-39.9 kg/m<sup>2</sup> as obese Class II and ≥ 40 kg/m<sup>2</sup> as obese Class III [6]. Data was compiled in an Excel worksheet, Statistical Package for Social Sciences (SPSS)

version 16.0 was used to analyze the data. Descriptive statistics were reported as mean (SD) for continuous variables, frequencies (Percentage) for categorical variables. Chi square test was used to test the association between categorical variables. P Value less than 0.05 were considered statistically significant.

**4. Results**

Among the study participants 43% were males and 57% were females, with mean age 20.7+/-1.71 years. Nearly half of the subjects i.e., 203(47.2%) of the medical students belonged to pre obese and obese category with mean BMI of 31.9+/-1.83 kg/m<sup>2</sup>.

Only 135(31.4%) of the respondents followed three meal pattern and 234(54.4%) participants mentioned that they skip major meals. Though only 23% of them stated they prefer fast food, 184(42.8%) of them visited a fast food restaurant once or twice in a week and 43(10.0%) of them once every day. Nearly half of the respondents 213(49.5%) preferred to have soft drinks with fast food. (Table 1).

**Table 1:** Eating Habits and food Preferences of Medical students (n=430)

SL. NO	Variable	Frequency	Percent
1.	Meal Pattern	One meal	22.3
		Two Meals	29.8
		Three Meals	31.4
		Four Meals	16.5
2.	Skip Major Meals	Yes	54.4
		No	45.6
3.	Consumption of Snacks per day	1-2 times	68.8
		3 Or more	31.2
4.	Consumption of Fruits per week	Less than 3 times	64.7
		More than 3 times	35.3
5.	Consumption of vegetables per day	At least once	53.0
		Twice or more	47.0
6.	Consumption of Non veg item per week	Once	13.7
		Twice	17.2
		Thrice	25.3
		More than thrice	43.8
7	Food Preference	Healthy	18.6
		Home made	58.4
		Fast food	23.0
8	Typically eat in fastfood restaurant	Breakfast	8.1
		Lunch	44.7
		Snacks	28.1
		Dinner	19.1
9	Visit to fastfood restaurant in past one month	None	14.4
		One to two times per week	42.8
		Three to Four times per week	23.7
		Once every day	10.0
		Two or more times per day	9.1
10	Preference of soft drinks with fast food	Yes	49.5
		No	50.5

Though 108(25%) of the respondents are always aware of the nutritional information of the food they are consuming and 147(34.2%) read nutrient content on the pack before buying or consuming majority of them 228(53.0%) stated that nutritional information rarely influences choice regarding fast food. More than half of the respondents 229(53.3%) stated that weekly expenditure on fast food is 100-500 rupees and only 114(26.5%) strongly agree that fast food prices influence their choice of fast food.

On asking the reason for fast food preferences 177(41.2%) agreed it to be easy access and 190(44.2%) stated their choice is influenced by taste. Only 150(34.9%) of the respondents agreed that consumption of fast food depends on emotions and only few 99(23.0%) of the respondents stated that they would like to reduce fast food consumption (Table 2).

**Table 2:** Awareness and attitude towards fast food consumption (n=430)

Sl. No	Variable	Frequency	Percent
1	Aware about nutritional information and ingredient contents of food consumed	Never	14.0
		Sometimes	60.9
		Always	25.1
2.	Do you read nutrient content on the pack before buying or consuming	Yes	34.2
		No	65.8
3	Does nutritional information influence your choice regarding fastfood	Not at all	17.0
		Rarely	53.0
		Most of times	26.5
		Always	3.5
4	Weekly expenditure on fast food	Less than 100	24.7
		100-500	53.3
		>500	22.1
5	Reason for Fast food preferences	Pocket Friendly	18.8
		Easy access	41.2
		Lack of suitable options	29.5
		Influence by others	10.5
5	Fast food prices are influence fast food choices	Strongly agree	26.5
		Neutral	60.7
		Disagree	12.8
6	Taking Fast food depends on emotions	Agree	34.9
		Neutral	40.9
		Disagree	24.2
7	Factors influencing choice of fast food	Time	20.7
		Taste	44.2
		Changing life style	23.0
		Influence of lifestyle	12.1
8	Do you intend to change your consumption	No, I m happy	29.1
		Yes, I would like to eat more often	19.8
		Yes, I would like to reduce	23.0
		I haven't thought about it	28.1

It is observed that there is a statistically significant difference in the Fast food restaurant visits, food preferences and intentions to change fast food consumption among male and

female respondents with p values 0.005, 0.001 and 0.016 respectively (Table 3)

It is observed that there is a statistically significant difference in Fast food preferences and BMI with p value 0.0001

**Table 3:** Gender Variation in Fast food restaurant visits, food preferences and intentions to change fast food consumption

Sl. No	Variable	Gender		Pearson Chi- value	P Value	
		Male	Female			
1	Fastfood restaurant visits in past one month	None	18(29%)	44(71%)	14.657	0.005
		1-2 times per week	70(38%)	114(62%)		
		3-4 times per week	52(51%)	50(49%)		
		One time per day	22(51.2%)	21(48.8%)		
		2 or more times per day	23(59%)	16(41%)		
2	Do you intend to change your consumption	No, I am happy	61(48.8%)	64(51.2%)	10.356	0.016
		Yes, want to eat more often	43(50.6%)	42(49.4%)		
		Avoid eating junk food	43(43.4%)	56(56.6%)		
		Have not thought about it	38(31.4%)	83(68.6%)		
3	Food Preferences	Healthy	36(45%)	44(55%)	14.599	.001
		Home made	91(36.3%)	160(63.7%)		
		Fast food	58(58.6%)	41(41.4%)		

## 5. Discussion

Medical profession and university life are stressful and affecting the day to day routine and food choices. In this study results show that though only 23% of the respondents stated they prefer fast food, 184(42.8%) of them visited a fast food restaurant once or twice in a week and 43(10.0%) of them once every day. H. Schroder *et al.* stated that participants reporting the high frequency of fast food consumption (> once per week) showed a significantly higher risk (OR 3.30) of failing to meet the Dietary Requirement Intake and had higher risk of developing obesity [7]. In this study we noted that female students showed healthier eating habits compared to male students which was found similar to the study conducted by Yahia, N. *et al.* [8]. Nearly half of the respondents of this study 49.5% preferred to have soft drinks with fast food, the prevalence observed is low compared to the study conducted by Bipasha *et al.* which reported 96.4% [9]. In this study we observed the major factor influencing the food preferences was taste, were as in a study conducted by Bipasha *et al.* it was pleasure/habit followed by easy accesses and changing lifestyle [9]. We also observed in this study that 203(47.2%) of the medical students belonged to pre obese and obese category which was similar to the finding by T Shah that reported 34% of students had BMI>25, this is because students often select fast food due to its palatability, availability and convenience [10]. We noted statistically significant difference in BMI and Fast food preferences with p value 0.0001, H. Schroder *et al.* stated that BMI increased with the amount of fast food consumption [7]. In this study another important finding is that 53% of the respondents stated that the nutritional information of food rarely influenced their choice, which was similar to the finding reported by Ganasegaran *et al.* that most of students were well informed about the negative effects associated with fast food consumption, but they still continued these practices without considering their health complications [3].

## 6. Conclusion and Recommendations

The study demonstrated that medical students tend to have poor eating habits (Frequent visits to fast food restaurants, preferring soft drinks, skipping meals, etc.) Majority of them spent 100-500 rupees every week on fast food consumption and the reason for fast food consumption is Easy access and Taste factor. Approximately half of the respondents were in Pre obese or obese category according to BMI classification

for Asians. From the finding in the study we would like to recommend specific health education programs, dietary guidelines and effective public awareness campaigns could be initiated to address the unhealthy lifestyle of medical students and to improve their health. A combined initiative from families, universities, public health experts and the government is much needed to tackle this public health problem. University food outlets should be encouraged to provide a greater range of healthy food choices for the students.

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