

A cross sectional study on psycho-social factors influencing eating habits among students in a private medical college, Bhubaneswar, Odisha

Subhasri Subhadarsini¹ Lisa Sarangi² Subhasish Dwari³ Subhrajeet Dash¹

¹Intern, ²Professor, Dept. of Community Medicine Hi-Tech Medical College And Hospital, Bhubaneswar,

³Intern, IMS & Sum Hospital, Bhubaneswar

Corresponding Author: Dr Lisa Sarangi, Professor, Community Medicine, Hi Tech Medical College & Hospital, Bhubaneswar

Abstract

Background: Poor eating habits which include meal skipping, frequent snacking and fast food consumption along with substance abuse and physical inactivity have been rampant among young adults experiencing the transition into college life. Medical training is perhaps the toughest undergraduate program draining a student physically, mentally and emotionally. As future physicians, ignoring a healthy lifestyle are more likely to fail to establish health-promoting opportunities for their patients. **Objectives :** To find out the eating habits among the medical students studying in a medical college and to determine the psycho-social factors associated with the eating habits among these medical students. **Materials and Method:** A descriptive cross-sectional study was conducted among 156 medical students (both boys and girls) of a private medical college, Bhubaneswar for seven days using a questionnaire and compulsive eating scale (CES) was used to collect data. The data collected was analyzed statistically using the percentage and Chi-square test. **Result:** 51.28% admitted skipping breakfast. 32.05% consumed vegetables and legumes more than 3 times a week. Consumption of fast food and fried food was by 90.38% of the students. The majority of the females (54.3%) ate because of feeling bored which was statistically highly significant $p=0.0079$. Also, the majority of students (64.3%) were eating because of feeling lonely and bored ($p=0.00014$).

Conclusion: Nutritional education early in the MBBS Curriculum will bring about an improvement in their overall eating habits

Key Words: Eating habits, psycho-social factors, medical students

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I. Introduction

Nutrition, one of the most quintessential aspects of life, has always remained a neglected topic both in curricular and real life of the youth. Over the past decades, the secular trend in the developing nations has witnessed a rise of non-communicable diseases like diabetes, hypertension and decline of infectious diseases with improper nutrition being the epicentre of all[1]. Both overnutrition like obesity and undernutrition are equally perilous and today's "emerging adulthood" defined as 18-25 years of age faces the maximum brunt of these health hazards[2].

Poor eating habits which includes, meal skipping, frequent snacking and fast food consumption along with substance abuse and physical inactivity have been rampant among young adults experiencing the transition into college life[3][4]. Although college life is just a phase, eating habits whether healthy or unhealthy, acquired during this phase, can continue into adulthood[4]. Although stress and lack of time have been adjudged as the root cause by most of the students other than environmental and psycho-social factors have an important part to play[3,5,6,7]. The burgeoning and easy accessibility of shopping malls, convenience stores, fast food outlets and food delivery apps have made it easy for young adults to practice unhealthy eating habits[8]. Today, low calorific with high fibre diets, like fruits and vegetables, are costlier than junk foods[5].

Medical training is perhaps the toughest undergraduate program draining a student physically, mentally and emotionally. According to MCI regulations, each academic year of four and half years will consist of a minimum of 240 teaching days with a minimum of 08 hours each working day out of which 2 to 3 hours of rigorous clinical posting or practical[9]. WHO recommends that an adult between 18-64 years should do at least 150-300 minutes of moderate-intensity aerobic physical activity; or at least 75-150 minutes of vigorous-intensity aerobic physical activity throughout the week and should eat a minimum of five servings, or 4000 g, of

vegetables and fruits daily[10].Because of their tremendous workload, medical students often fail to meet either adequate dietary requirements or physical activity[11,12].

Medical students are expected to possess healthy eating habits because they have more medical knowledge regarding it and are expected to inspire their peers in terms of the application of healthy eating patterns and also healthy dietary habits among medical students are important because they are the future physicians, and students who personally ignore adopting a healthy lifestyle are more likely to fail to establish health-promoting opportunities for their patients[13].

OBJECTIVES

1. To find out the eating habits among the medical students studying in a medical college
2. To determine the psychosocial factors associated with the eating habits among these medical students

II. Material And Methods

A descriptive cross-sectional study was conducted among 156 medical students (both boys and girls) of a private medical college, Bhubaneswar for seven days. Inclusion criteria included those who agreed to be a part of the study and were present on the day of the study. Exclusion criteria included the final year students who had their university exams and those who could not be contacted with two consecutive visits. Permission was taken from the college authorities and concerned faculties of the first year to third year to conduct the study in the lecture theaters after the lectures got over. The objectives and methodology of the study were explained to the students by the principal researcher orally and those who agreed to participate in the study were given a pretested and predesigned questionnaire to be filled. An informed consent was taken, before start of the study, from the participants. Participants were assured of the confidentiality of their responses and that it would in no way affect their academic assessments in future.

The questionnaire consisted of three parts. The first part included questions on demographic data; such as age, gender, annual income of the parents and residence. The second part included questions on health-related habits; like cigarette or alcohol consumption, frequency of exercise along with eating habits and type of meals consumed such as frequency of meals, type of meal, vegetables and fruits consumption, daily water intake, consumption of fast food, etc. The third part included questions on psychological factors that influenced the dietary habits of respondents. The questions used in the third part were selected from the validated compulsive eating scale (CES) comprising of 6 questions like “eat because of feeling lonely”, “feel out of control when eating”, “eat so much until stomach hurts”, “eat because of feeling upset or nervous”, “eat because of feeling bored” and “go out with friends for over-stuffing yourself with food” “eat so much food-so fast that you don’t know that how much you ate or how it tasted”[14]. Data collected was imported into an Excel sheet and statistical analysis was performed using percentage, mean and chi-square test (level of significance $p < 0.05$)

III. Results And Analysis

Table 1: Socio demographic characteristics of respondents(n=156)

Characteristics	Number	Percentage
Gender		
Male	64	41.02
Female	92	58.97
Age (years)		
<22	98	62.82
≥22	58	37.18
Living arrangement		
Hosteller	108	69.23
Day scholar	48	30.77
Smoking		
Yes	12	7.69
Alcohol		
Yes	19	12.17
Regular exercise		
<3 days a week	19	12.18
≥3 days a week	67	42.9
Never	70	44.87

Table 1 shows that the female: male ratios 1.44:1. The majority (62.82%) belonged to less than 22 years of age. Mean Age was 21 (± 0.94) years. 69.23% were hostellers. As the final year students did not participate in the study, therefore the mean age was calculated on the basis of students studying in first three professional years. Hundred eight (69.23 %) students resided in hostels. Majority denied smoking (92.31%) and alcohol consumption (87.83%). Seventy students (44.87%) never did any form of regular exercise.

Table 2: Eating habits among respondents(n=156)

Characteristics	Number	Percentage
Atleast two regular meals		
Yes	133	85.25
No	23	14.74
Skipping breakfast		
Yes	80	51.28
No	76	48.71
Frequency of havingsnacks per week		
<3 times	22	14.10
≥3 times	134	85.89
Weekly consumption of fruits		
<3 times	142	91.02
≥3 times	14	8.97
Weekly consumption of vegetables and legumes		
<3 times	106	67.94
≥3 times	40	32.05
Weekly consumption of fried food		
<2 times	15	9.61
≥2 times	141	90.38
Consumption of fast food		
Often	132	84.61
Rarely	24	15.38
Major meals taken per day		
<3	10	6.41
=3	144	92.60
>3	2	1.28
Water intake (lt/day)		
<2	8	5.12
≥2	148	94.87
Milk intake daily		
<2 times	154	98.71
≥2 times	4	1.28
Eating company		
Alone	6	3.84
Family/ friends	150	96.15

Table 2 depicts 85.25% agreed that they consumed regular meals but 51.28% admitted skipping their breakfast. 32.05% consumed vegetables and legumes more than 3 times a week. Consumption of fast food and fried food was by 90.38% of the students. The majority of the students i.e. 94.87% had a sufficient amount of water intake (more than 2 lt./day). One hundred fifty-four students i.e. (98.71%) of the respondents agreed that daily milk intake was less than two times. Meals with their family and friends were taken by 96.15% of the students.

Table 3: Association between eating habits and psycho-social factors(n=156)

Psychosocial factors	Male		Female		Total		P value (chi square)
	No.	%	No.	%	No.	%	
Eat because of feeling lonely	26	40.6	48	52.2	74	47.4	0.16 ($\chi^2=2.019$)
Feel completely out of control when it comes to food	40	62.5	68	73.9	108	69.2	0.13 ($\chi^2=2.3$)
Eat so much until stomach hurts	42	65.6	61	66.3	103	66	0.94 ($\chi^2=0.008$)
Eat for over stuffing with food	47	73.4	67	72.8	114	73.1	0.95 ($\chi^2=0.007$)
Eat because of feeling bored	21	32.8	50	54.3	71	45.5	0.0079 ($\chi^2=7.06$)
Eat so fast that you are not aware of the taste of food	34	53.1	48	52.2	82	52.6	0.912 ($\chi^2=0.014$)

More females in comparison to males “eat because of feeling lonely” (52.2%vs40.6%), “feel completely out of control when it comes to food” (73.9%vs62.5%) &“eat until their stomach hurt” (66.3%vs65.6%). But the difference in the above variables between males and females was not statistically significant ($p > 0.05$). the majority of the females (54.3%) ate because of feeling bored in comparison to males (32.8%). This difference was found to be statistically highly significant ($\chi^2=7.06$, $df=1$, $p=0.0079$).

Table 4: Showing association between smoking and eat because of feeling lonely(n=156)

Smoking	"Eat because of feeling lonely"					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Yes	3	25	9	75	12	100
No	98	53.3	46	46.7	144	100
Total	101	78.3	95	121.7	156	100

$X^2=3.6$, $df=1$ and $p=0.05$ statistically just significant

There was a just statistically significant ($p=0.05$) association between smoking and eating because of feeling lonely in Table 4. Those who did not smoke and "eat because of feeling lonely" (53.3%) were higher in comparison to those who did not smoke and did not "eat because of feeling lonely" (46.7%).

Table 5: Showing association between residence and eat because of feeling lonely (n = 156)

Residence	" Eat because of feeling lonely"					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Hostellers	50	46.3	58	53.7	108	100
Day scholars	12	25	36	75	48	100
Total	62	71.3	94	128.7	156	100

$X^2=6.29$, $df=1$ and $p=0.01$, statistically highly significant.

The above table (Table 5) shows that those who resided in hostels ate more because of lonely feelings (46.3 %) when compared to the day scholars (25 %) and this difference was statistically highly significant ($p=0.01$).

Table 6: Showing association between eating because of feeling lonely and eating because of feeling bored

Eating because of feeling bored	Eating because of feeling lonely					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Yes	45	64.3	25	35.7	70	100
No	29	33.7	57	66.3	86	100
Total	74	98	82	102	156	100

$X^2= 14.46$, $p=0.00014$, $df= 1$, statistically highly significant

Majority (64.3%) of the students were eating because of feeling lonely as well as feeling bored. The table above (Table 6) shows a statistically highly significant ($p=0.00014$) association between eating because of feeling lonely and eating because of feeling bored (64.3 % vs 35.7 %)

IV. Discussion

A descriptive cross-sectional study was conducted among 156 medical students (both boys and girls) of private medical college, Bhubaneswar for seven days. This study showed that 85.25% agreed that they consumed regular meals. The female: male ratio was 1.44:1 with mean age as 21 years. There were 51.28 % who skipped their breakfast. The classes start at 8 A.M in the morning which could be a reason for the students skipping the breakfast because the availability of breakfast inside the campus is not a problem in our study area. In a study done in Ghana, it shows that skipping breakfast among medical students was 71.92% [15].

Again our study showed majority denied smoking (92.31%), alcohol consumption (87.83%) and 44.87% never did any form of regular exercise. Our college campus is a tobacco free zone. This could be a reason behind low consumption of tobacco or smoking. There could also be denial among participants, although the questionnaire was totally anonymous. While in another study done in Kuwait among college students only 50.0% ate a healthy diet and 46.3% got at least seven to nine hours of sleep. 38.7% suffered from obesity and 34.0% only exercised frequently [16]. In another study in Great Britain showed that fifteen per cent of the medical students were non- drinkers and among those who drank, high- risk levels of consumption were reported by 12% and 7% of men and women respectively [17]. In a recent study among medical students in Mumbai the prevalence of obesity was 42% [18]. The present study did not study obesity among medical students which needs to be probed in Eastern part of India, particularly in Odisha.

The present study showed that 91.02% and 67.94 % of students consume fruits and vegetables respectively less than three times per week. This could be due to the availability of fruit carts inside the college campus. In a study done in Malaysia, it showed that the majority consumed vegetables and legumes three or more times per week (81.8%) and almost half of them (51.5%) consumed fruits less than three times per week [3]. The Malaysia study [3] also showed, that the majority (78.8%) had fast food which is at par to our study which had a high consumption of fast food (84.61 %). In another study in Saudi Arabia, around 20.4% of the participants consumed vegetables daily, while 14.3% ate vegetables only rarely [13].

Like in our study (96.15 %), the study in Malaysia[3] showed that the students took their meals with family or friends daily (81.1%).

Many studies suggest that superior knowledge about healthy lifestyle does not necessarily result into better health practices [4,19].

In the present study, 51.28% admitted skipping breakfast which is almost at par with a study done at Kuwait University (48%) [16]. Various studies show skipping breakfast and infrequent daily meals were the most frequent unhealthy habits reported by the medical students [15,20,21]. Breakfast skipping was significantly related to fatigue and poor attention during long hours of clinical sessions. [15,21]

The present study also showed 85.89% consumed snacks more than three times per week while in a study done in Malaysia shows about 42.4% took snacks three or more times per week[3].

Several researchers have shown a high stress prevalence among medical students ranging between 30 to 60 percent across many countries [7]. Stress- induced eating was significantly more common among female medical students than males and was significantly associated with obesity and overweight[20]. Not only that a meta-regression showed the pooled prevalence of at risk for eating disorders among medical students was 10.5% [22]. This was also shown in the present study where majority students (64.3%) were eating because of feeling lonely as well as feeling bored and this showed a statistically highly significant($p=0.00014$) association. The hostellers were also feeling lonely and eating more in comparison to day scholars and the finding was statistically significant ($p = 0.01$).

V. Conclusion

Most of the students in this study, despite being medicos, had unhealthy eating habits. The unhealthy eating habits of the medical students is detrimental to their studies and long working hours. During the Foundation Course in First Professional MBBS course, Nutrition Counselling can be incorporated, taking the help of Dieticians, along with other sports activity. Nutritional education early in the Curriculum will bring about a positive improvement in their overall eating habits. Stress level during MBBS studies is very high. Yoga and meditation should be encouraged in them which will lead to an overall healthy lifestyle.

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