

Original Article

Eating habits and Nutritional status among the Bangladeshi Medical Students Depending upon BMI.

*Nasrin Sultana Chowdhury^a,

a. Assistant professor, Department of Community Medicine, East-West Medical College, Dhaka, Bangladesh

ARTICLE INFO

Article history:

Received 08 June 2013

Accepted 15 February 2014

Key words:

Eating habit,
life style Medical Students, Social
and psychological.

ABSTRACT

Background : Eating habit have been a major concern among undergraduate medical students as a determinant of health status. The aim of this study was to assess the pattern of eating habits and its associated with social and psychological factors among medical students in Dhaka, Dhaka, Bangladesh. **Material and Method :** A cross sectional descriptive type of study was conducted among 107 randomly selected. Medical student from east-west Medical College and Hospital Dhaka Bangladesh. Data collected by interviewing on socio-demography, anthropometry, eating habits and psychosocial factors. **Result :** Mean (\pm SD) of the respondents was 21.19 (\pm 1.9) and the age ranged from 17 to 26 years. Maximum respondents were 19 yrs (21.5%) more than half had regular breakfast and meal (70.1%) and 81.3% respectively). Majority (58.9%) consumed fruits one to twice per weak 50.5% had fast food once a week and 51.4% drank water 2 liters daily. 33.6% eat vegetable once or twice weak. **Conclusion :** Most of the students in this study had healthy eating habits. Social and psychological factors were important determinants of eating habit among medical students.

Introduction:

Poor eating habit is a major public health concern among young adult who experienced transition into university life¹, during which they are exposed to stress and lack of time^{2, 3}. Some common unhealthy eating patterns among young adults included meal skipping, eating away^{4,5} from home, Snacking and fast food consumption,

Environmental factors also contribute to adoption of unhealthy eating habits university students. The mushrooming of shopping malls, convenience stores and fast food outlets have created an alarming situation for young adults to practice unhealthy eating habits⁷. Students tend to make their own food choice.⁸ Based on cost of food and availability of fast food.⁹ They failed to meet the recommended intakes of fruits and vegetable.^{10 11} Students had frequent snacking habits¹² and higher frequency of fast food consumption.¹³

It was faunal that although medical students had sufficient knowledge regarding good dietary habits, they failed to apply this knowledge into

*Address of correspondence:

Dr. Nasrin Sultana Chowdhury

Assistant professor

Department of community Medicine

East-West Medical College and Hospital

Telephone : +8801732622323

E-mail : sharna2020@gmail.com

practice. ² stress of medical study load would be factors that negatively influence their diet. ¹⁴

Material & Methods :

The present cross sectional descriptive study was carried out in East-West Medical College, Dhaka, Bangladesh. The study population consist of 107 Medical student studying different year of that medical college. Data were colleted with structured pre-tested questionnaire. Prior to the study question fill-up every participant were explain the purpose of the study.

Result :

Following tables are showing the findings of this study

Table 1 : Socio demographic characteristics of the respondents (N= 107)

Characteristics	Number (N)	Percentage (%)
1. Gender		
Male	53	49.5
Female	54	50.5
2. Religion		
Islam	90	84.1
Hindu	16	15.0
Buddha	1	0.9
1. Parents income		
< 50,000	39	36.4
50,000-1,00,000	62	57.9
above 1,00,000	6	5.7
4. Age		
17	1	0.9
18	5	4.7
19	23	21.5
20	13	12.1
21	14	13.1
22	21	19.6
23	18	16.8
24	8	7.5
25	3	2.8
26	1	0.9

In the demographic profile of our study population (Table : 1) most of the participant (50.5%) were female compare to their counter part 84.1% were Islam and most of this respondent (57.9%) come from a family monthly income 50,000-1,00,000 Bangladeshi taka (BDT) and most of the participant (21.5%) were 19 yrs of age.

Table: 2 Distribution of BMI by men and women

BMI	Male (N)	Female (N)	Total (N)	(%)
6. under weight	2	2	4	3.7%
Normal	24	24	48	44.9%
18.5-24.99				
Pre-obese	18	22	40	37.4
25-29.99				
Obese-I	7	2	9	8.4
30-34.99				
Obese-II	1	1	2	1.9
35-39.99				
Obese-III	1	3	4	3.7
> 40				

The distribution of BMI showed highest frequency with in normal range (44.9%). The ratio of male and female were equal.

Table : 3 Eating habits among respondents (N-107)

Characteristics	N	Percentage (%)
7. Daily breakfast		
yes	75	70.1%
No	32	29.9%
8. Meal (Lunch/Dinner) daily		
Yes	87	81.3
Irregular	20	18.7
9. Frequency of daily meals		
less then 3 times	49	45.8
Three or more times	58	54.2
10. Consumption of Vegetable		
daily	28	26.2
Rarely in a weak	32	29.9
Once or twice per week	36	33.6
Frequently	11	10.3
11. Consumption of Fruits		
daily	15	14
rarely	29	27.1
once to twice per week	63	58.9
12. Consumption of Fast food		
daily	16	15
rarely	37	34.6
once a week	54	50.5
13. Type of food consumed		
Meat (protein)	12	11.2
Vegetable	13	12.1
Carbohydrate	82	76.6
14. Frequency of having snacks		
daily	42	39.3%
weekly	55	51.4%
More then 2 time/day	10	9.3%

15. Water in take			
2 liter	55	51.4	
more then 2 liter	52	48.6	
16. Exercise			
rarely	54	50.5	
No	38	14.0	
regularly	15	35.5	

Table :3, Showed the daily percentage of having breakfast and meal were 70.1% and 81.3% respectively. Again respondents having meal 30 or more times were 54.2%.

One the other hand % of consuming vegetable and fruits and fast food were 33.6% 58.9% and 50.8%. Type of carbohydrate consuming food were about 76.6% the respondent having snakes weekly is about 51.4% water in take about 2 liters 51.4 % respondents doing exercise rarely about 50.5%.

Table 4: Psychological factors affecting respondents eating habits among respondents n- 107

Psychological factors	Yes (%)	n	No (%)	n
Eat because of Feeling lonely	14 (13.1)	93	86.9	
Feel completely out of control when it comes to food	26 (24.3)	81	75.7	
Eat stomach until Stomach hurts	31 (29%)	76	71%	
Eat because of Feeling upset or nervous	21 (19.6)	86	80.4	
Eat because of feeling happy	83 (77.6)	24	22.4	

77.6% eat because of feeling happy

Discussion

Regarding gender maximum respondents are female (50.5%) than male (49%). It is due to more female student admission into this college. Regarding religion maximum respondents are Islam (84.1%). It is due to Islamic country. Regarding parents income of the respondent majority have income within 50000 – 100000 (57.9%) take/month. It is also consistent as it is a private medical college and so most students parent income are come from medium/high socio-economic condition. Regarding age maximum respondents are 19 years of age (21.5%). This is very common as it is the actual age of beginner medical students that is 1st and 2nd years of medical education.

Regarding of BMI maximum respondents are with in normal range (18.5 – 24.99) (44.9%). Here male and female number is equal (24).

This is also similar to other study shows (53.0%) are with in normal range ¹⁵.

Regular break fast consumption among medical students is important for sufficient energy intake to over come fatigue due to daily learning schedule ¹⁶. In this study (70.1%) respondents had break fast had breakfast daily. Other two study shows (75.6%) and (43.9%) of the subject eat breakfast every day ^{15 17}.

In this study 81.3% had regular meal. On the other hand a Chinese study in which 83.6% of university students consumed regular meals ¹⁸.

Other study shows that (57.6%) had regular meal ¹⁵. Another study reported that 61.4% of Lebanese university students had regular meals daily ¹⁹. Again Ruka's research showed that majority of the students (83.6%) eat three meals of the day regularly ¹⁸ (40.2%) shows regularly 3 times other study ¹⁵. In our study (54.2%) take meal thrice daily.

Fresh fruits and vegetables are known rich sources of dietary fibers minerals and vitamins. The majority of the respondents in the study consumed vegetable (33.6%) once or twice per week. Other study showed that the frequency of consumed vegetable was about (81.8%) frequently ¹⁵. This finding way high in comparison to previous studies from china (47.9%) ¹⁸ and Bahrain (26.3%) ²¹. How ever one study from Malaysia found that only 19% of university students consumed vegetable more then 3 times per week ⁹.

In this study 58.9% respondent eat fruits once to twice per week which a study shows (6.8%) eat fruit only once or twice a week ¹⁷. and 62.1% of the subject eat fruit every day ¹⁶.

The frequent consumption of snacks and light meals is recognizable aspect of teenager's food & behaviors. This study shows (51.4%) had weekly consumption of snacks.

Other Lebanon study showed that only (53.0%) of respondents had snacking consumed regularly ¹² other (42.4%) of respondents had snacking at least three times pen week ¹².

In this study (51.4%) had taken water 2 liter daily. On the Other hand other study shows water intake <2 liter (59.8%) and ≥ 2 liter (40.2%) ¹⁷.

50.5% do exercise rarely on the other hand (59.8%) intake water daily ¹⁵.

In terms of eating habit the typical university student diet is high in fat and low in fruits and vegetable. ²²

Students of ten select fast food due to it palatability availability and convenience ¹².

In this study (54%) taking fast food once a week other study shows (78.8%)¹⁵ consumption of fast food rarely. One study found only (21.2%) of the respondents consumed fast food often¹⁵. Chin and Nasir (2009) reported that only (4.7%) of respondents visited fast food restaurants frequently²³.

This study shows (12%) preformed meat (13.1%) vegetable and (82%) carbohydrate while other study shows 18.9% meat (5.3%) vegetable and Carbohydrate (15.2%)¹⁵.

Conclusion:-

In general most of the students in this study had healthy eating habits except fruit and vegetable consumption. Social and Psychological factors were important determinants of eating habits among medical students Nutritional education among medical students should be encouraged to promote healthier eating habits and life styles, as well as adherence to the healthier traditional food. It is recommended that the scope of future research should be broadened to include a larger representative sample size of medical students by including students from different medical colleges from all Bangladesh.

References :

1. Nelson MC, Story M, Larson NI, Neumarkszatiner D, Lytle LA: Emerging adulthood and college aged youth: A overlooked age for weight related behavior change. *Obes* 2008. 16(10): 2205 – 2211
2. Rubina A, Shoukat-S, Raza R, Shickh MM, Roshid Q, Siddique MS. Panju s. Reza H, Chaudhrys, Kadir M: Knowledge and practice of healthy life style and dietary habits in medical and non-medical students of karachi, Pakistan, *Jpak med assoc* 2009, 59(9) : 650 – 655.
3. Webb E, Ashton CH, Kelly P, Kamah F: An update on British medical students life styles *Med Educ* 1998, 32: 325-331
4. Savige GS, Ball K, Worsley A, Crawford D: food intake patterns among Australian adolescents. *Asia pac J Clin Nutr* 2007, 16:738-747
5. Shi Z, Lien N, Kumar BN, Holmboe-ottesen G: social-demographic differences in food habits patterns of school children and adolescents in Jiangsu province, China. *Eur J clin nutr* 2005, 59: 1439 – 1448
6. Dowda M, Ainsworth B, Addy C, Saunders R, Riner W: Environmental influences physical, activity and weight status in 8 to 16 year olds *Archives of pediatric and adolescent medicine* 2001, 155:711 – 717
7. King KA, Mohl K, Bernard AL, Vidourek RA : Does involvement in healthy eating among university students differ based on exercise status and reasons for exercise? *Californian Journal of Health promotion* 2007, 5(3) : 106-119.
8. Satalicz, Baric IC keser 1 : Diet quality in croatian university students : energy macro-nutrient and micro-nutrient intakes according to gender. *Int J food sci Nutr* 2007, 58(5) : 348-340.
9. Gan WY, Mohd NM, Zailah MS, Hazizi AS : Differences in eating behaviours, dietary intake and body weight status between male and female Malaysian university students. *Mal J Nutr* 2011, 17 (2):2013-228
10. May FM, Johari S, Ismail Y, Mahod R, Tie FH, Wan Ismail WMA, Break fast Skipping and its associated factors among under graduates in a Public university in Kuala Lumpur. *Mal J Nutr* 2009, 15 (2) :? 165 – 174
11. Huang TTK, Harries KJ, Lee RE, Nazir N, Born W, Kaur H: Assessing overweight, Obesity, diet and Physical activity in college students. *J Aon Coll Health* 2003, 52 (2) : 83-86
12. Yahia N, Achkar A, Abdallah A, Rizk S: Eating habits and obesity among Lebanese University students. *Nutr J* 2008, 7(32), doi 10. 1186/1475-2891-7-32 <http://www.nutritiobj.com/content/7/1/32>
13. Alizadeh M, Ghabilik : Health related life style among the Iranian medical students. *Res Biol sci* 2008, 3(1) : 4-9
14. Mikolajczyk R. El Ansari W, Maxwell A: Food consumption frequency and perceived stress and depressive symptoms among student in three European countries *Nutr J* 2009, 8(1) : 31
15. Kurubaran Ganasegeran. Sami AR- Al-Dubai, Ahmad M Qureshi, Al-Abed AA al-Abed, Rizal AM and Syed M Al Junid..... Social and Psychological factors affecting eating habits among university students in a Malaysian medical school.
16. Tanaka M, Mizuno K, Fukuda S, Shigiharay, Watanabe Y, Relationships between dietary habits and the prevalence of fatigue in medical students *Nutrition* 2008, 24:985-989
17. Ali Barzegei, Mohsen Ebrahimi, Mohammad Azizi and Kazem Ranjbar. A study of Nutrition. Knowledge, Attitudes and food habits of college students *World Applied Science Journal*.
18. Rie Amamoto Chun Jun Liu and Naotoke skin faku. *Nutritional journal* 2005, 4:4 doi :10.1186-4- of Chinese university

19. Najat yahia, Alice Achkar Abbass Abdallah and sandra Rizk Eating habits and obesily among Lebanese.
20. Musa iger AO, Hassan AS, Obeid O, The Paradox of nutrition related diseases in the Arab countries the need for action int J Environ res public health 2011; 8; '3637-3671.
21. Musa iger/ AO, Bader Z, Al-Roomi K, D souza R; Dietary and life style habits amongst adolescents in Bahrain. Food and nutrition research - 2011.
22. Galore SR, Walker C,
23. Chinys, Mohd NM; Eating behaviors among female adolescents tan kuantan district, panang, Malaysia Pab J Nutr 2009, 8 (4): 425-432