

Effect of Eating Habit of Tertiary Students

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Abstract University students other than been the future country developers, additionally speak to the most reasonable populace for instruction in the field of sound ways of life and dietary patterns. In spite of the fact that, dietary patterns are major determinate of wellbeing status, the dietary patterns of university understudy in Bangladesh has not been all around archived. A cross-sectional observational investigation was done on 257 university students from a private university in Bangladesh information were gathered. Pearson Chi-Square tests were finished. Measurable importance was come to at $p < 0.05$ (95% confidence level). Weight estimation was acquired. Dietary patterns, recurrence of nourishment admission, eating frames of mind were accounted for. Our information demonstrated that just 27% understudies were of typical weight. The general pervasiveness of overweight (stout comprehensive) was close about portion of the complete populace. Regarding supper utilization recurrence, understudies indicated genuinely great dietary patterns. Dietary patterns of the understudies demonstrated that the 56.42% eat thrice in a day. About 55.64% of understudies detailed having breakfast every day. Results demonstrate that university understudies would potentially profit by a sustenance and wellbeing advancement program to diminish the inclination of overweight and weight, and to improve students dietary patterns.

Keywords Eating habit, Effect, University Students

1. Introduction

Having a healthy diet plays an important role in the human life, it has many positive benefits such as, it can prevent someone from having heart diseases, cancer, diabetes, hypertension, dyslipidemia, peptic ulcer and so many diseases that can be caused through an unhealthy food habit or an unhealthy diet [1]. World Health Organization (WHO) supports to maximize fruits, vegetables, and fiber intake. They also support the fact that the consumption of salt and total fats should be minimized as they are not good for sound health [1]. Healthy eating practice is crucial part of human life as different health related issues and insufficient nutritional problems are caused due to unhealthy dieting practices like omitting meals, consuming food without sufficient nutrition value and improper timing of meals [2, 3 (a), (b)]. On the other hand, sustainable physical health and stable mental health of a person can be acquired through equilibrium diet and worth food consumption [4, 5].

University students can be a risk factor for heart problem and other health related problem through unhealthy nutritional practices [6]. They are threatening to the source of significant health problem the deficiency of dietary

option. University students require revamping a contemporary habitant through the shifting from secondary school to university [7-8 (a), (b)]. Family traditions such as eating meal jointly at the same time are changing day by day and it has the ultimate result for change lifestyle. The shifting from homemade healthy food to more convenience and long lasting fast food and indiscipline lifestyle are increasing globally such as obesity and other health related problem through unhealthy food consumption [9, 10 (a), (b)].

On the other hand university students specially female students are likelihood to misinterpret their weight level [11, 12]. The symptoms of diseases like Anorexia nervosa and other psychological problem are the result for appreciation of non-overweight and depreciate of overweight both have adverse association [13-15], and it may directly influence them to manage their weight [16, 17]. Anorexia nervosa is a common type of eating disorder diseases. People with anorexia have a common tendency to eat very little amount to manage very low body weight. They have a fear to looking fat. Although they are very thin they also think themselves as fat because of distorted body image. On the basis of their illusion they are very strict about what they eat and start fasting and exercise too much. Others may use different type types of pills like laxatives, diuretics (water pills) that may directly harm their body [18].

During the last few decades of 20th century Bangladesh has experienced a considerable progress in higher studies. The Government of the People republic of Bangladesh has taken initiative to establish at least one university of each of the older district by following the rules wherever there is a

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larger density of population that more universities are to be built, the more densely populated the area is. The main purpose of this is to provide world class education for everyone. There are 144 universities in our country, where 41 are public and 103 are private universities, according to university grand commission [19]. Mainly residential facilities are only available for public universities students (generally known as hall). Usually, Bangladeshi public university students take their meals at university canteen and they have very limited food option. In addition, without proper nutrition it may affect students physically and mentally and it is also adds to a poor academic result.

The main idea of this study is to identify the eating behavior and perception of food consumption. Nowadays, the society is facing the most critical health issues regarding lack of nutrition and overweight [20, 21]. Fast food consumptions are increasing day by day and that lead to the weight gain, fatness of body and also tends to increase body mass index (BMI) [22]. There are plenty of fast food restaurant at Dhaka city, home delivery is also available. Dingman et al, mentioned that availability may strength the consumption of fast food [22]. Stokton and Baber observed that university students are at a least bit worried about how fast food connected to the bad calories, harmful chemical and preservatives could harm them. They are not also concern about the harmfulness of hamburger [23].

It is a great concern among university students that unhealthy dieting behavior including not eating at home, taking snacks, skip to breakfast and frequent consumption of fast food could harm them could harm them [24, 25]. Environment has an important role of practicing the consumption of unhealthy eating habit among university students. The increasing amount of fast food restaurant, enjoyable food stores including shopping mall are responsible for that [26]. University students have the freedom to make their own choice of food [27]. In the absence of sufficient time and regularity, community support, prices of the products (cost), restricted budgets and easily access to unhealthy food [28, 31], students are also faced with the obstacle to consume sufficient fruits and vegetables [32]. These are all the important factors for students that directly influence their eating behavior [28, 31].

Usually university students are more young and knowledgeable than the other sample based on the whole population and that's why food perception pattern and related to health problem can be examined through their education [33]. Moreover, university students are more health conscious through various guidance and awareness program, that influenced them positively to eat more healthy food [34].

We believe that majority of the young adults like university students have some knowledge about healthy diet and nutrition but some kind of influential factors restricted them to follow this healthy diet plan. There is a small aspiration to show in this study about the dieting behavior

and factors that restrict university students to follow healthy diet.

This investigation planned to recognize dietary examples that exist inside a university population, to evaluate the nourishing profile of these examples, and to analyze socio-statistic and way of life factors supporting these examples. A few parts of their wellbeing and dietary status were likewise evaluated. In this way, the motivation behind this investigation was to recognize and to think about healthful learning, nourishment propensities, and body shape inclinations among university students in Bangladesh and at evaluating the examples of dietary pattern and its related variables.

2. Materials and Methods

2.1. Data Sources

A cross – sectional alongside a spellbinding measurements configuration was utilized for this poll to examine. An endorsement was taken from the university specialist to gather the information. An all out number of 257 understudies were chosen from a well reputed private university at Dhaka, in Bangladesh. The age group of the understudies are from 18 to 30. A standard have been connected to the understudies choice system, just those understudies were chosen who were right now concentrating in this university. There was utilized an advantageous measurable method to choose the example for the reason of effectively open and an activity was taken to urge all understudies to join this study. The motivation behind the examination was talked about plainly among all people whose were chosen in this investigation. A casual understanding was done among all take an interest this study not to unveil their data and it will be taken as a classified issue. Review was performed at the grounds when understudies have spare time generally more often than not at the bottle zone, The study survey comprises two sections, section 1 is containing statistic profile like age, sex and section 2 contain dietary pattern and conduct, impression of nourishment, BMI, illnesses through sustenance and so on. Without statistic addresses the majority of the review questions are Likert type proclamation. Among all Likert type some of them are five point scale, where (1, A few times each day, 2, Once a day, 3, A few times each week, 4, Less frequently, 5, Never) and others are understanding sort scale.

2.2. Statistical Methods

The IBM statistical package for the social science (SPSS) was used to analyze the data and version was 20.0. Descriptive statistics was used to analyze demographic data. Cross-tabulations were determined by χ^2 -test. The considered p value was <0.05 (95% confidence level). Mean score was calculated for all of the general perception of the respondent which was provided through questionnaire.

3. Results

3.1. Demographic Characteristics

Demographic results are explained only in percentage and frequencies in table 1. There were total 257 students were participate in this study where 93% (n=237) were male and 7% (n=19) were female. The age groups of the participants are from 18 to 30 years. Where majority of the students 85% are from 21 to 24 years. Only 8% are 18 to 20 years and 7% are 25 to 30 years. According to students BMI (Body Mass Index) perception 27% report that their weight was ideal. About half of the total participants mentioned that they were overweight BMI 25 to 40+ whereas 11% claimed that they were under weight (Table 1).

Table 1. Demographic statistics of the students according to the survey results

	Variables	Frequency (f)	Percent (%)
Sex	Male	238	93
	Female	19	7
Age group	Age group 18 to 20	20	8
	Age group 21 to 24	218	85
	Age group 25 to 30	19	7
BMI*	Less than 18.5 (Under weight)	27	11
	18.5 – 25 (Ideal weight)	70	27
	25 - 30 (Overweight)	15	6
	30 - 35 (Moderate obesity)	25	10
	35 – 40 (Obesity)	20	8
	More than 40 (Morbidly obese)	66	26
	Don't know BMI	34	13

*BMI formula

Below are the equations used for calculating BMI in the International System of Units (SI) and the US customary system (USC) using a 5'10", 160-pound individual as an example:

SC Units:

$$\text{BMI} = 703 \times \frac{\text{mass(lbs)}}{\text{height}^2(\text{in})} = 703 \times \frac{160}{70^2} = 22.96 \frac{\text{kg}}{\text{m}^2}$$

SI, Metric Units:

$$\text{BMI} = \frac{\text{mass(kg)}}{\text{height}^2(\text{m})} = \frac{72.57}{1.78^2} = 22.90 \frac{\text{kg}}{\text{m}^2}$$

3.2. Students Health Status According to Rated by Themselves

Students recommend each of oneself health rated subscales are explained in Table 2. According to this survey result 56 students (21.79%) rated their health as excellent,

Majority of the students 127(49.42%) rated their health as very good, 43(16.73%) students said that their health status are not so good or not so bad. 22(8.56%) students rated their health as poor and only 9(3.50%) rated their health condition very poor. There was no significant difference among men and women group, although the percentage of male (n=55, 23.11%) who rated their health was "excellent" was higher than that of female (n=1, 5.26%). Contrarily, the percentage of male (n=7, 2.94%) who rated their health was "very poor" was lower than that female (n=2, 10.53%).

Table 2. Students health status according to rated by themselves

Rating	Sex				Total		x ²
	Male		Female				
	(n = 238)		(n = 19)		(n = 257)		
	No.	%	No.	%	No.	%	
Excellent	55	23.11	1	5.26	56	21.79	11.17
Very good	120	50.42	7	36.84	127	49.42	
Fair	36	15.13	7	36.84	43	16.73	
poor	20	8.40	2	10.53	22	8.56	
Very poor	7	2.94	2	10.53	9	3.50	

3.3. Responses of the Students Including Their Eating Habit, Life Style and Food Preference

Table 3 shows that most of the students about 56.42% are eating at least three meals every day. (57.56 percent male as compared to 42.11 female). About 63.16% of female students reported eating breakfast daily compared to 55.04% male students. Majority of the students 62.26% recommend that lunch is their main meal in a day as compared to 63.45% male and 47.37% female. 86.38% said that their main meal made from Freshly home-cooked where only 10.89% take their main meal from restaurant. 76.05% male have not avoid some foods for health reasons as compared to 57.89% female. 59.92% students do not follow any kind of diet chart (61.34% male as compared 42.11% female). Only 18.68% students follow a diet chart. 40.47% report that they do not skip meal as compared to 42.44% male and 15.79% female. Majority of the students 80.94% take their breakfast from 7 a.m. to 10 a.m. morning.

3.4. Weekly Eating Habit of University Students

The weekly eating habit of university are displayed in table 4. The habit with the highest frequency was "Weekly fresh vegetables intake frequency" (M=2.52, SD=1.17). The second highest habit included eating Salty food (M=2.97, SD=1.47), Weekly fresh fruit intake (M=3.01, SD=1.11). The least frequent weekly habits was sweet food intake (M=3.21, SD=1.15) (Table 4).

Table 3. According to the responses of the students including their eating habit, life style and food preference

Area of evaluation	Sex				Total		x ²
	Male		Female				
	(n = 238)		(n = 19)		(n = 257)		
	No.	%	No.	%	No.	%	
How many times a day do you eat?							
1	7	2.94	1	5.26	8	3.11	9.67
2	45	18.91	5	26.32	50	19.46	
3	137	57.56	8	42.11	145	56.42	
4	28	11.76	4	21.05	32	12.45	
5	10	4.20	0	-	10	3.89	
6	4	1.68	0	-	4	1.56	
7	1	0.42	0	-	1	0.39	
8	5	2.10	0	-	5	1.95	
10	1	0.42	1	5.26	2	0.78	
I eat a good breakfast							
Yes	131	55.04	12	63.16	143	55.64	0.98
Sometimes	100	42.02	6	31.58	106	41.25	
No	7	2.94	1	5.26	8	3.11	
What meal would you consider to be your main meal of the day							
Breakfast	23	9.66	5	26.32	28	10.89	5.29
Lunch	151	63.45	9	47.37	160	62.26	
Dinner	63	26.47	5	26.32	68	26.46	
Others	1	0.42	0	0.00	1	0.39	
Continued							
What does your main meal consist of and how is it prepared							
Freshly home-cooked produce	205	86.13	17	89.47	222	86.38	0.58
Restaurant meal	26	10.92	2	10.53	28	10.89	
Pre-cooked, microwave or TV dinner	7	2.94	0	0.00	7	2.72	
Have you been avoiding some foods for health reasons?							
No	181	76.05	11	57.89	192	74.71	3.07
Yes	57	23.95	8	42.11	65	25.29	
Do you currently follow a special diet?							
Yes	42	17.65	6	31.58	48	18.68	3.15
No, but i used to be a diet	50	21.01	5	26.32	55	21.40	
No, I have been on a diet	146	61.34	8	42.11	154	59.92	
Do you skip any meals more than once a day?							
Breakfast	85	35.71	7	36.84	92	35.80	8.02
Lunch	31	13.03	5	26.32	36	14.01	
Dinner	21	8.82	4	21.05	25	9.73	
Usually, I do not skip meals	101	42.44	3	15.79	104	40.47	
Generally when you take breakfast							
7:00 a.m.	15	6.30	3	15.79	18	7.00	5.98
8:00 a.m.	46	19.33	3	15.79	49	19.07	
9:00 a.m.	47	19.75	1	5.26	48	18.68	
10:00 a.m.	85	35.71	8	42.11	93	36.19	
11:00 a.m.	21	8.82	2	10.53	23	8.95	
12:00 a.m.	20	8.40	1	5.26	21	8.17	
2:00 p.m.	4	1.68	1	5.26	5	1.95	

Table 4. Weekly eating habits of university students

Variables	Mean	SD
Weekly Sweet-food intake frequency	3.21	1.15
Weekly Salty-food intake frequency	2.97	1.47
Weekly Fresh fruit intake frequency	3.01	1.11
Weekly Fresh vegetables intake frequency	2.52	1.17

Note: (N=257). Item was rated on a 5-point Likert type scale ranging from 1 (More than once a day) to 5(Never). So lower means indicate higher levels of frequency.

Table 5. Recent suffering by diseases

Diseases	Sex				Total	
	Male		Female			
	(n = 238)		(n = 19)		(n = 257)	
	No.	%	No.	%	No.	%
Agitation	8	3.36	0	0.00	8	3.11
Allergy	94	39.50	14	73.68	108	42.02
Anxiety	7	2.94	2	10.53	9	3.50
Chest pain	70	29.41	4	21.05	74	28.79
Confusion	10	4.20	1	5.26	11	4.28
Diarrhea	5	2.10	2	10.53	7	2.72
Dizziness	59	24.79	9	47.37	68	26.46
Fainting	7	2.94	1	5.26	8	3.11
Headache	121	50.84	11	57.89	132	51.36
Hyper	20	8.40	1	5.26	21	8.17
Increased respiration	9	3.78	1	5.26	10	3.89
Insomnia or other sleep problem	61	25.63	6	31.58	67	26.07
Kidney problems	7	2.94	1	5.26	8	3.11
Loss or change of consciousness	12	5.04	0	0.00	12	4.67
Memory problem	30	12.61	2	10.53	32	12.45
Nausea	39	16.39	6	31.58	45	17.51
Nervousness	18	7.56	3	15.79	21	8.17
Restless	44	18.49	4	21.05	48	18.68
Ringing in the ears	19	7.98	3	15.79	22	8.56
Shortness of breath	25	10.50	1	5.26	26	10.12
Improved sports performance	13	5.46	1	5.26	14	5.45
Weight loss /control	22	9.24	6	31.58	28	10.89
Increased alertness	8	3.36	0	0.00	8	3.11
Relaxation	12	5.04	2	10.53	14	5.45
Improved nutrition /health/mood	18	7.56	1	5.26	19	7.39
Jaundice	3	1.26	0	0.00	3	1.17

3.5. Recent Suffering from Diseases

According to the students who participated in the survey the disease that they were affected by last time (according to table 5): Headache is the most common problem affecting 51.36% respondents among which 50.84% were male and 57.89% female. Following headache is Allergy affecting 42.02% among which there were 39.50% male and 73.68% female. Following Allergy is Chest pain affecting 28.79% among which were 29.41% male and 21.05% female. After Chest pain is dizziness affecting 26.46% in them there were 24.79% male and 47.37% female. After dizziness is Insomnia and other sleeping problem affecting 26.07% among which 25.63% male and 31.58% female.

4. Discussion

Eating habits and the preference of food consumption among university students are the two areas which are covered in this study. One of the good practices among the students is that majority of them ingest fresh vegetable weekly. Students were more aware by the intake of foods such as sweets. Regarding health benefits of dietary behavior, the study deduces that, many foods are avoided by the students for medical reasons and it has also been found that students take breakfast as one of the most influential day meal of the day and give it higher importance. As per findings of the study, the students give the most importance to their lunch which is homemade and freshly cooked and it shows that there is high awareness in students about their health and eating habits. The food prepared at the students' home makes them much healthier. Three meals are eaten by the majority of the students. A good practice among students is that no meals are skipped by them. The main problem which affects the university students is headache and allergy. Majority of the students rated their health as very good. According to body shape perception of university students the BMI of university students we found a moderate prevalence of obesity. Regarding the conditions of the weight only 27% of the students stated that their weight was normal. It is shown in the studies that the weight of many students tend to increase in their university years, firstly it starts with a weight loss [35], probably for the neglecting of the traditional Mediterranean diet [36], the change in lifestyle, the transition to a more sedentary lifestyle, more opportunities to eat and drink with friends, the attendance to cafés and fast-food restaurants and hormonal disorders related to the reduction of sleep [37-41].

However, there are certainly health issues in university students related to these conditions. It is therefore not possible to overestimate the importance of health promotion at the stage of diseases prevention, and similar health education program for university students should be implemented.

Disease prevention, and similar health education programs for university students should be implemented.

Nutrition knowledge had been identified as an additional factor that could explain poor eating habits among university students [42]. This study did not assess nutrition knowledge. However, a US study revealed that only 4% of a university student population had good nutritional knowledge [43]. Thus a limited nutrition knowledge could explain to some extent the unhealthy.

Dietary habits observed in this study. Nutrition knowledge had been identified as an additional factor that could explain poor eating habits among university students [42]. This study did not assess nutrition knowledge. However, a US study revealed that only 4% of a university student population had good nutritional knowledge [43]. Thus a limited nutrition knowledge could explain to some extent the unhealthy dietary habits observed in this study. The knowledge of nutrition was identified as an add-on factor that could explain poor eating habits among university students [41]. This study has not evaluated knowledge of nutrition. A US study revealed, that only 4% of a university student population had good nutritional knowledge [42]. A limited understanding of nutrition could thus explain the unhealthy and dangerous dietary habits observed in this study to some degree.

It has been found in the study that people who frequently skipped their breakfast frequently and had snacks four to five times in between meals were affected by obesity or sleepless problems. Throughout the evidence from a study it has been found that people who normally/frequently skip their breakfast they tend to help themselves with snacks throughout the day, which leads to a positive energy balance and being affected by weight gain [43]. Even though it has been found in another study that there is no relation between the breakfast intake and having over weight or obesity [44] and there is still debate on the topic that if there is any contribution to snacks to a higher BMI (Body Mass Index) [40].

Even though, the findings may not be representable to the university students population of Bangladesh.

In relevance to the study it has been found that the students who study in private institutions have a better socioeconomic background than the ones studying in state institutions, this is because of higher tuition fees in private institutions than in the state institutions. This could have heavily impacted the confounding effect of socioeconomic status to a certain level. Nutrition knowledge had been identified as an additional factor that could explain poor eating habits among university students [42]. This study did not assess nutrition knowledge. However, a US study revealed that only 4% of a university student population had good nutritional knowledge [43]. Thus a limited nutrition knowledge could explain to some extent the unhealthy dietary habits observed in this study. Nutrition knowledge had been identified as an additional factor that could explain poor eating habits among university students [42]. This study did not assess nutrition knowledge. However, a US study revealed that only 4% of a university

student population had good nutritional knowledge [43]. Thus a limited nutrition knowledge could explain to some extent the unhealthy dietary habits observed in this study.

These aspects seem to suggest that attending university, especially away from the family, may play a role in the onset of unhealthy lifestyle, though further studies taking in account also gender differences as well as living arrangements are required in order to assess if they can represent risk factors.

5. Conclusions

To the best of our insight, this investigation analyzing apparent determinants of eating conduct in university understudies and gathering thoughts and suggestions so as to encourage the advancement of powerful and customized intercession programs expecting to improve smart dieting practices in university understudies. About portion of university understudy members detailed that their BMI were from 25 to 40+ of overweight. Despite the fact that understudies appeared about nourishment consumption. Albeit numerous members demonstrated great dietary patterns and sufficient learning of nourishing necessities, the need was found to examine further about various variables that add to their dietary patterns and their insight. Singular customers should be increasingly mindful and taught about their individual dietary needs, and devise their dietary techniques for sustenance decision as indicated by their wellbeing. In this specific situation, the strong job of families, educators, and governments in making people, particularly the more youthful age, increasingly instructed about wellbeing and nourishment can have a critical effect in the improvement of network wellbeing around the world. There are arranged suppers in school and at home. Be that as it may, it is critical that there are normal sustenance eateries adjacent to the drive-through joints close to the university. It is additionally critical that people have a privilege of inclination. This inclination is critical if there are eateries with customary vegetable dishes alongside the drive-through joints giving decisions. Likewise, it is gainful to explore what wellbeing instruction practices can be put to help direct their dietary patterns and advance in general wellbeing.

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