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Original Research Article

Occurrence of common diseases due to habitual food habit or other habit among the students from different regions of Chattogram, Bangladesh

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ABSTRACT

Background: There are some common diseases found among the students of different areas in Bangladesh which are either communicable or non-communicable. Different infectious diseases occur due to lack of hygiene practice and non-infectious diseases are developed because of many irregular daily habits all over the world. Our aim was to evaluate the habit of practicing hygiene and other daily activities to observe their impacts on the health status among the students from different regions of Chattogram in Bangladesh.
Methods: With ethical approval, questionnaire forms of daily habits/activities were filled up by 750 students of different educational institutions. The data were analysed afterwards.
Results: Among the population of the study 89% (n=667) students were found to take regular bath; hand washing was regular among 32% (n=240) students, 54% (n=405) students were irregular in hand washing and the rests wash their hands rarely; on the other hand 41% (n=308) students consume street foods regularly; 38% (n=285) students wear eyeglasses due to weak sight; 23% (n=173) suffer from different skin diseases and 63% (n=473) students usually suffer from different gastro intestinal diseases.
Conclusions: Our results are not so frustrating, but also not so much good as majority of the students are fond of unhealthy street foods, don't wash hands regularly and more than half of the students suffer from GI tract diseases with other health problems. It could be recommended that some daily habits including avoiding street foods, intake of sufficient drinking water and hygiene practices should be improved more.

Keywords: Students, Hygiene practice, GI disorder, Water intake, Metabolism, Skin disease, Weakness of eyesight

INTRODUCTION

Bangladesh is a developing country of Asia. Though nowadays the health awareness has been increased more among the people of this country than the previous decades but prevalence of some common diseases is still present. The orientation of infectious diseases remains predominantly acute in the developing countries of the world1 and the young populations are particularly vulnerable.[1] Though lack of regular hand washing and bath cause many diseases but hand washing is still not well practiced in many areas.[2] There is a clear relationship between hygiene practices and several diseases like GI disorders, respiratory disorders, some common infections and illness related absenteeism.[3]

Gastrointestinal tract diseases like abdominal cramp, irritable bowel syndrome (IBS), nausea etc. are

commonly affecting approximately 10-25% of school going children.[4-6] Adults with IBS blame having diets containing high carbohydrates, fats, coffee, alcohol and hot spices though these diets are main culprits for abdominal cramp, irritable bowel syndrome (IBS), nausea etc.[7]

Because of hectic schedule, students are getting used to eat foods outside of home. They often eat spicy and delicious foods sold on the streets which are not always approved as safe and hygienic for them.[8] It has been estimated that more than two hundred different diseases are known to be transmitted by the foods and drinks.[9]

Among the university students of some Asian countries, the following prevalence of eating disorders were found: in China, 3.2-9.9% in females and 1.2-2% in males, Pakistan 17-22.75% altogether, Malaysia 13.7% in females and 5.6% in males, India nursing students 4%.[10-15] Students of underdeveloped and developing countries are more likely to have eating disorders. In Bangladesh 37.6% students were classified as being at risk for eating disorders.[16] Another study showed that the Filipino students were 10.9 times more likely to have eating disorders than the American counterparts.[17]

GI disorders can be improved by avoiding rich foods, outside street foods, fermentable carbohydrates and polyols in some adults who have functional GI disorders but the direct involvement of specific foods on causing GI disorders in children in some cases is unknown.[18,19]

Not only food but also consumption of pure and adequate drinking water plays major role in being healthy.[20] In spite of this, water intake among children and adolescents is low.[21,22] Another thing is consumption of impure and contaminated water leads to cause many water-borne diseases such as Diarrhea, Cholera, Typhoid and so on. Besides, many children are not adequately hydrated which adversely affect their bodily metabolic functions and cause many physical difficulties.[23] Disturbance in the metabolism can cause defects in skin, eyesight, abdominal functions and other bodily functions. In a previous study different skin disorders like acne vulgaris, eczema, superficial fungal infections, keratosis etc. were commonly found among primary and secondary school students of Hong Kong, China that may be due to insufficient water intake.[24] It was found that daily energy/calorie intake among the habitual water drinkers in the adult population was approximately 9% less than those who don't drink water.[25] Besides, insufficient water intake, stickiness to mobile phone, computer and television screens is also a causative agent of eye problem and using spectacles among the students are being observed so far.

Good nutritious diet including fruits and vegetables is basic need of every adolescent student for their growth, development and soundness.[26] Having some fruits and vegetables in a regular basis, consumption of nutritional foods and drinks regularly is essential to prevent chronic illnesses later on in life. Proper hygiene practices like regular bath, using soaps, hand-washing and also avoiding rich and spicy outdoor foods are mandatory for physical fitness.[3]

Objectives

The objectives of the study were to reveal the habit of hygiene practices, to find out the effects of practicing hygiene on the student health. Discovering the prevalence of common diseases among the Bangladeshi students. Finding out the relationship between daily habits and physical fitness.

METHODS

Experimental design and sampling

The cross-sectional study was carried out among primary, secondary, higher secondary and university students including Madrasah students from different areas of Chattogram in Bangladesh. A total number of 750 students within the ages of 11 to above 30 years willingly joined the study providing written consent. Regular and active students were included in this study and irregular students were excluded. The students were categorized or divided into 5 groups according to age ranges of 11-15, 16-20, 21-25, 26-30 and >30 years. The data collections were carried out through a standard Questionnaire format, which was relevant to the study for evaluating correct information.

Duration of the study

The total duration for performing data collection of the study took around six months from February 2019 to July 2019.

Data collection

The survey done in this study consisted of 10 parts and 47 questions. The questionnaire prepared based on gender ratio, age groups, taking regular bath, skin diseases, gastrointestinal diseases, use of spectacles, street food consumption, proper hand washing practices, scenario of drinking water among students and consumption of fruits and vegetables etc.

Data analysis

All the data were analyzed by Microsoft excel 2016, for the graphical, analytical and other representations.

RESULTS

Ratio of male and female students

Among the total population of the study 52% male students and 48% female students have been found where

the total amount of students was 750 altogether (Figure 1).

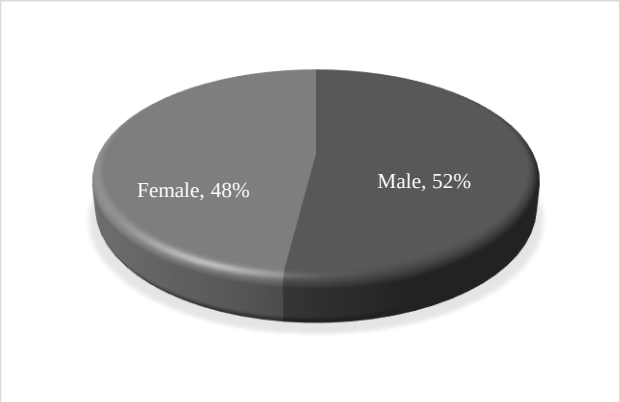

Figure 1: Ratio of male and female students among the population of the study.

Percentage of students in different age groups

In this study all the students have been categorized into different age groups. The age ranges were 11-15, 16-20, 21-25, 26-30 and >30 years respectively where 40% students were in 11-15 year's age group, 24% students were in 16-20 year's age group, 23% students were in 21-25 year's age group, 7% students were in 26-30 year's age group and 6% students were in >30 year's age group individually (Figure 2).

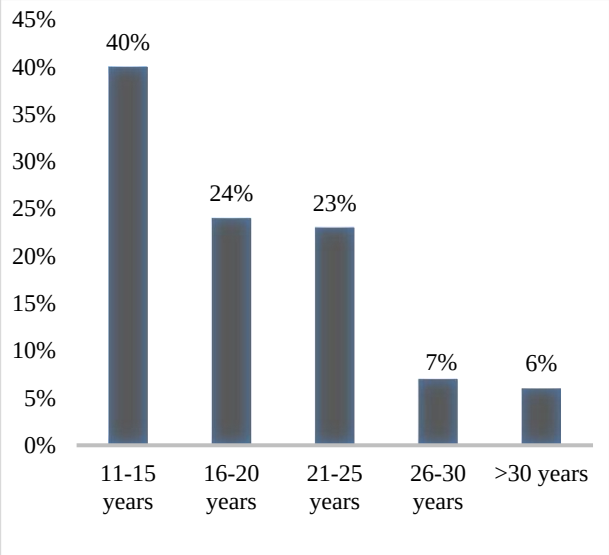

Figure 2: Percentages of students in different age groups.

Regular bath practice

The tendency of regular bath among 750 students found 89% where the rest of the students take irregular bath (Figure 3).

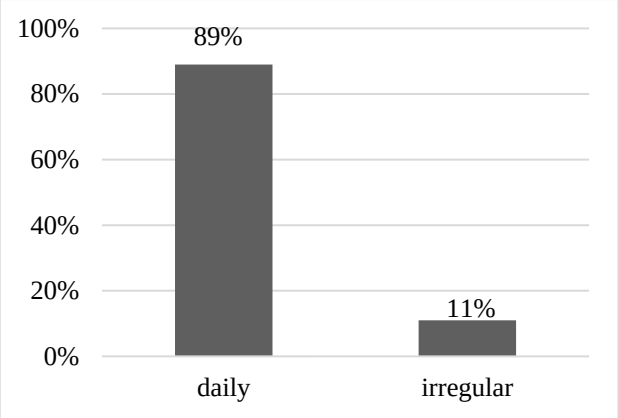

Figure 3: Percentages of students practicing regular bath.

Skin disease

In our study it has been found that 23% students have skin diseases where the rest of the students (77%) are free from skin diseases (Figure 4).

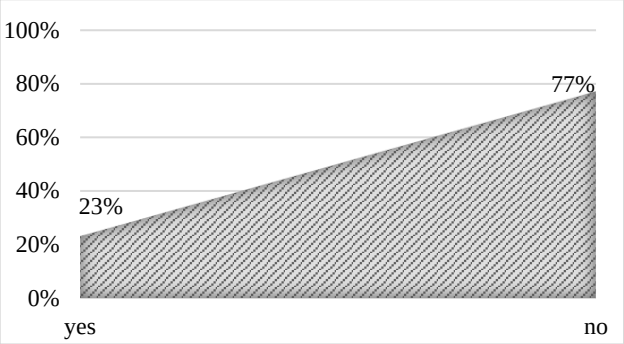

Figure 4: Percentage of skin disease among the student populations.

Gastrointestinal problem

In this study 63% students suffer from gastrointestinal diseases due to consumption of fast food or irregular food habit or due to lack of hygiene practice which is really a concern for student's health (Figure 5).

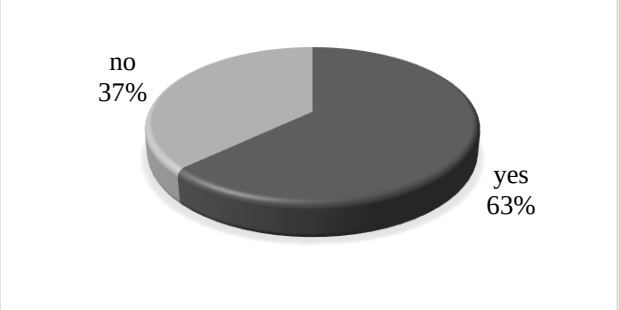

Figure 5: Percentage of students suffering from gastrointestinal disease.

Street food consumption

In this study about 41% students consume street foods regularly and 52 % consume sometimes where the rest amounts of students consume rarely (Figure 6).

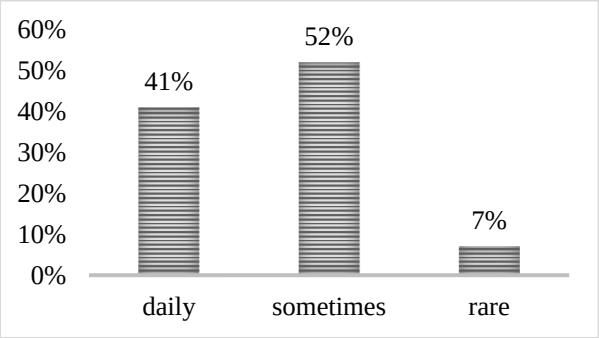

Figure 6: Percentages of students consuming street food.

Use of spectacles due to eye problems

In this study 38% students were found using spectacles due to different eye problems where maximum students (62%) don't use (Figure 7).

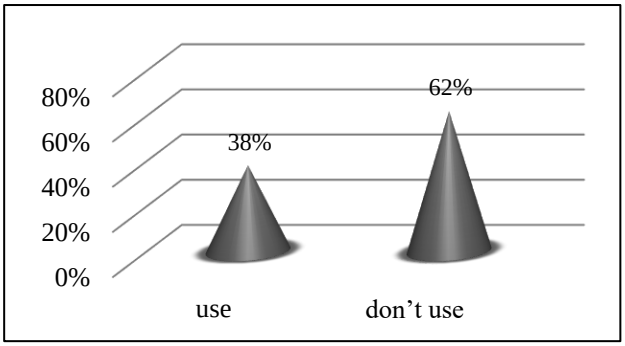

Figure 7: Percentage of students using spectacle due to eye problems.

Hand washing practice

In this study we found that 32% students wash their hands regularly, 54% students are irregular in hand washing and 14% students wash their hands rarely before and after eating (Figure 8).

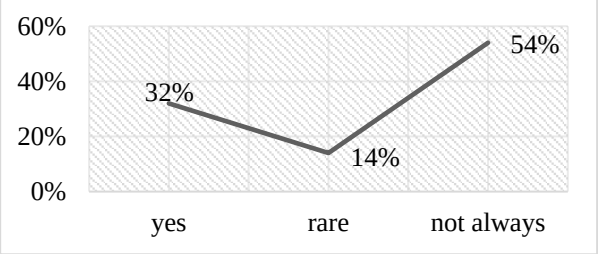

Figure 8: Percentage of students practicing regular hand wash.

Fruits and vegetables consumption

Among 750 students in this study, 58% students consume fruits and vegetables regularly where the rest of them don't (Figure 9).

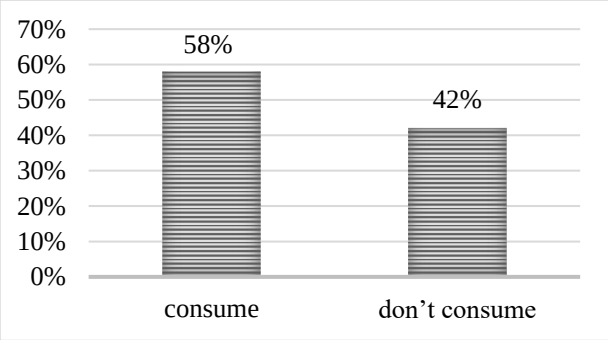

Figure 9: Percentage of students consuming fruits and vegetables.

Water intake daily

In this study we found that 35% students drink 2 liters water regularly, 38% drink less than 2 liter and 27% students drink more than 2 liters water in their daily habit of water intake (Figure 10).

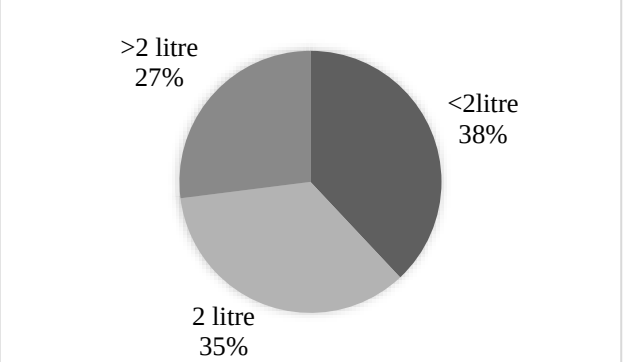

Figure 10: Percentages of students drinking water 2 liters, >2 liters or <2 liters per day.

DISCUSSION

Responded students were from different schools, colleges, madrasah and universities. All of them (750 students) answered all the questions willingly after ethical approval with written consent.

Basically, hygiene practices and maintaining a sound health are inter-related. Regular bath and proper hygiene practice are good signs for remaining healthy. We found that among the studied population 89% students take regular bath and rest of them are irregular where regular bath helps to maintain proper hygiene.

In many cases skin diseases are interrelated with proper sanitation and hygiene practices like regular bath and hand wash practice properly. In our study we found that 23% (173) students are suffering from skin diseases where a survey by Prime Asia University in Dhaka provided that 8% (91) students suffer from skin diseases.[27] Their study told that skin diseases are more prevalent than gastrointestinal diseases. Though our study result is a little bit different, because may be the previous study was conducted among university students where our study was conducted among the students of primary, secondary, madrasah, colleges and universities students. Another study covering the rural area of Bangladesh conducted on the female students provided that 1.4% students suffer from skin diseases where other study by Ali et al at rural areas on both male and female populations found that 9.7% people suffer from skin diseases though it is a finding of few decades back.[28,29] So, skin diseases are being found among students and also non students groups in Bangladeshi populations in previous studies including our study.

In this study we tried to evaluate the percentage of Gastrointestinal (GI) disease among the student groups and found that 63% students suffer from GI disorders which is really high in number and off course more than half where the survey by Prime Asia University in Dhaka provided that 3% (34) students suffer from gastrointestinal (GI) diseases.[27] Another study covering the rural area of Bangladesh among girl students provided that 3.8% of them suffer from GI diseases.[28] It is now a concerning issue. Point should be noted that their study was conducted on university students only but our study was conducted on the students of primary, secondary, madrasah, colleges and universities. So, variations or differences among both results are may be due to types of students. Public awareness should be developed in this regard. Parents should be notified to take care of their children's health. Students also must know about their own health status as health is wealth. A healthy student can cut a good figure in the examination while an unhealthy one cannot where students are the future boatmen of a nation.

Street foods are really harmful for our health. Different types of air-borne and water-borne diseases are found in street foods. Many life-threatening diseases can be occurred by consuming street foods. We should aware of this and spread the information among classes of students because they are the future of our nation. Our survey explored that 52% students eat street foods sometimes, 41% daily and 7% rarely where a single time consumption of street foods can cause many more diseases. Students usually consume street food in their Tiffin period, leisure period, gossiping time, entertaining and also traveling period. Few students feel bore to bring Tiffin from their home, on the other hand street foods are available, spicy, delicious and affordable to buy. The result we get from the research is not satisfactory, because we found that many students still consume unhealthy street foods. We must make them aware about the gruesomeness of street foods. Public awareness can be raised by advertising, arranging seminar, counseling the students and parents about the demerits of street foods. Government of Bangladesh is trying to ensure Tiffin facilities in every primary school which is really appreciable. It will be helpful to prevent some GI discomforts among the primary school students.

Eye problem is going to be more common in our country. This problem is usually found in students and old aged people. Our study provided that 38% students have impaired eye sight. They use spectacles for proper vision. The percentage we found from the survey is not small in number. These students probably don't consume enough vitamin 'A' containing fruits and vegetables or they have little interest to eat that type of fruits and vegetables. It also can be happened due to more addiction to smart phones, computers and internets. Now it is high time to make them conscious about eating foods containing β-carotene such as carrot, colorful pulses, fruits etc. as well as staying apart from being too much attached to electronic screens like TV, computers, mobile phone etc. that is important for protecting the eye sights from being impaired as the radiation of emitting lights from the electronic gadgets causing these eye sight problems.

The effectiveness of hand washing in preventing nosogenic infections was demonstrated by Semmelweis last 150 years ago.[30,31] Our study provided that 32% students wash their both hands with soap and clean water before taking food and also after defecation. The result is not so much satisfactory. Proper awareness should be taken in raising interest among the students of every school and college. A study from Colombia reported that only 33.6% of the samples usually wash their hands with soap and clean water after defecation. That study also concluded that there have several external factors included for hand washing and thereare availability and accessibility of clean water and secure hand-washing facilities and ample time. The sample of the study shared that forgetfulness, lack of time as well as laziness were the most common reasons for avoiding hand washing.[32] The practicing of hygienic habits for example hand washing have been noticed to minimize diarrhea morbidity and life-threatening diarrhea by 42% to 48%,28 and reducing the upper respiratory infections by 24%29 and the prevalence of dermatological infections by 23% to 43%.[33]

A study was conducted among the students of Delhi University. Among the students of Delhi University 26.44% students and 27.33% students usually eat vegetables and fruits respectively.[34-38] Our study provided that 58% students eat fruits and vegetables frequently where 42% don't eat regularly. But this 42% student is really a big number. University students are really busy with their studies and research works. They have less concentrationon healthy foods because of time shortage. But our study included school, colleges, madrasah and

university students. School and colleges' students mainly stay in their home with parents. They get enough facilities for maintaining healthy diet. May be the percentage of fruits and vegetables consumption is high among school and college going students. Another reason could be that the parents of school and college going students are more careful and conscious about feeding of fruits and vegetables to their children's. On the other hand, 42% students don't eat regular fruits and vegetables. May be the university and hostel resident students are very much careless about that regard where they stay apart from their home and parents regular care.

Our body's one of the fundamental elements is water. As we know a big portion of our total body contains water. Without water, bodily biochemical reactions and metabolism will be affected, organ cannot play proper function, body fluid maintenance will be hampered, proper circulatory function will not be maintained and damages of body will be occurred. A person needs to drink minimum 2-liter water per day for maintaining proper metabolism and healthy organs. We carried out a survey about it and we found that 35% students' intake 2 liter water every day and 27% student intake more than 2 liters water per day, rest of the student drinks water less than 2 liter per day. Different skin disorders, different GI disorders and some other health problems are very much closed to regular water intake. As we found skin disease (23%) and GI disorder (63%) among the studied students, may be many of them are belong to the 38% students who take less than 2 liters water daily.

CONCLUSION

Students are the future of the nation and the female students are the future mothers. So, maintenance of their physical fitness is a matter of great concern. For remaining fit, they must lead a hygienic life by taking regular bath, washing hands before eating and after defecation, eating nutritious foods, drinking adequate amount of clean water etc. Eradication of the common communicable and non-communicable diseases like different skin diseases, eye problems, GI tract disorders etc. must be ensured for the bright and healthy future of the students.

Frequency of the commonly occurred diseases was not so high among our respondents but still not out of danger or not out of concern. Despite of this, complete removal of the food and hygiene-based diseases need to be confirmed and should be eradicated within recent future and some daily habits including avoiding street foods, intake of sufficient drinking water, consumption of sufficient fruits and vegetables and hygiene practices should be improved more.

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Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee (Letter Reference No: UCTC/off-order/Eth-com/VII (II)/2019/007)

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