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Basic hygiene and sanitation practices among Bangladeshi university students

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ABSTRACT

This paper investigates basic hygiene and sanitation practices by students of the University of Dhaka. The objective of the study is to understand the nature of hygiene and sanitation practices aiming to find differences in the usual practices between resident and non-resident students. Gender-based implications are also taken into consideration in the study. The study was employed in mixed-method approaches. Data were collected following a combination of quantitative and qualitative approaches from both teachers and students. The research involved 280 inclusive students aging between 18 to 27 years (M = 21.15, SD = 1.41) for the quantitative study. Of the total, (54.6%) were male, and 45.4% were female. Qualitative data for this study was collected via phone call interviews. A total of twenty (20) persons were the responders of in-depth interviews. Findings show that 85.36% of the students wash their hands always before having their food; 91.79 % of students wash their hands after defecation & 85.71% of them always maintain regularity in taking a bath. Regularity in cutting is found 59.29% among students and wearing washed clothes is 71.79%. Sanitation practice section showed that 40.36% of students use shared toilets. The hygiene and sanitation practice differs significantly regarding variables sex, residence, family, and socio-economic status of the students. Female students and students staying at home are 1.992 and 3.745 times more likely to have good hygiene and sanitation practices than the male students and students residing at the hall, respectively. Among the students staying at home, students staying in the nuclear family are 3.968 times more likely to have good practices than the students saying in a joint family. The qualitative study reveals that the problem with collective sanitation and hygiene practice is more acute within the students residing in student dormitories. The study also offers a few effective short-term recommendations to improve the existing status of sanitation and hygiene practices within students. Since the standard of living has a direct impact on the well-being and, therefore, on the overall environment of an educational institution, researches of these kinds must be carried out on a regular basis. This study also opens scopes for further studies on a similar but different and larger population.

INTRODUCTION

Access to appropriate hygiene and sanitation is crucial to promote good health, human dignity as well as community resilience. Hygiene and sanitation practice can compare as key to a healthy life, but it is not only hand washing as most people think so, rather than it is more than that. In universities, we often hear things like enhancing quality education. Quality of life, of which sound health is an essential component, should be a top priority by ensuring safe hygiene and sanitation practices among students for better performance. In a guideline (WHO, 2009), it was emphasized that the important thing is achieving a balance between hygiene education and ensuring that environmental health conditions are enabling and acceptable. For effective health promotion education and the appropriate conditions, both are necessary. The challenges of safe water, sanitation, and hygiene are crucial because clean water, hygiene, and sustainable sanitation have a strong

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positive impact on health, education, and development (Fan and Azad, 2017).

In a study, it is observed that only 43% of students maintain proper hand hygiene, and less than 22% of students use soap during washing hands as well as there was variation between male and female students by considering their hygiene practice (Sultana et al., 2016).

In low and middle-income countries and developed countries' hygiene and sanitation, scenarios are different as low and middle-income countries face a considerable rate of infectious and diarrhoeal disease.

To stay healthy and infection-free, students of the university require adequate hygiene and sanitation. Male and female students, residents, and non-resident students need easy access to basic hygiene and sanitation in both residential and academic territories. Proper hygiene and sanitation practice of students will expose the condition to infectious diseases, including waterborne and water washed diseases, cholera, amoebiasis, shigellosis, salmonellosis (Hutton et al., 2007). Poor hygiene and sanitation practice among students of different gender, social class, residency at university, and students belonging to a different family (e.g., nuclear family, joint family) can be improved by observing their present scenario. The state of basic hygiene and sanitation practices may fluctuate for male and female students-background that need to the investigated.

Different scenarios may exist among students from different types of families, as well as residents and non-resident students of the University of Dhaka. Resident students get dining access, accommodation access, and access to WASH facilities. All of these facilities must require maintaining hygiene and sanitation facility and needs to be well maintained by considering male and female residence. The Academic and recreation spot also needs coverage with basic hygiene and sanitation facilities by considering both gender and residency factors.

Under the circumstances stated above, a need to explore basic sanitation and hygiene practices among students, even within a small population was felt extremely necessary. Following that, this paper particularly aims to examine the overall scenario of basic hygiene and sanitation practices of the students of the University of Dhaka. This study further seeks to find out the general demographic characteristics of students, family type, gender, and residence-based relation to basic hygiene and sanitation practice of students.

METHODOLOGY

The population of this study comprises all the students of the University of Dhaka. The exploratory study design was employed to study the state of basic hygiene and sanitation practices among the students of the University of Dhaka.

Sampling and data collection

A mixed-method approach was used for this study. Mixed method research involves using both quantitative and qualitative approaches to measure the general strength of the study (Creswell and Clark, 2017). Both qualitative and quantitative data were collected for this study.

The qualitative data for this study was collected via phone call interviews. A total of twenty (20) persons were the responders of in-depth interviews of whom seven resides in university halls or dormitories. Seven (07) students stay in students' mess or sublets, and the rest six (06) lives in a rented or owned apartment with their families. Seven (07) key informant interviews (KII) were conducted, among which two (02) students holding a post in hall student unions were interviewed. Furthermore, three (03) assistant house tutors are also the faculties of the University of Dhaka. Two (02) student mess owners were also key informants in this study.

The quantitative data were collected from respondents of Dhaka University (male and female students) through google form using a structured questionnaire by survey method. The google form was made using all the questions in the questionnaire made for this study. Then the link of the google form was sent to some randomly selected students of the University of Dhaka through social networking sites. Several weeks after the initial link was transmitted, a total of 280

filled google forms were received. The research involved 280 inclusive students aging between 18 to 27 years (M = 21.15, SD = 1.41). Of the total, significant respondents (54.6%) were male, and 45.4% were female. So, the students who responded to the google form were included in the study, and the rest of the students were excluded.

Measurement

Both quantitative and qualitative measurements were taken. For quantitative measurement, this study employed a cross-sectional descriptive study. In this study, the demographic section covers nine questions, hygiene practices section contains ten questions, sanitation practices section includes six questions while the hygiene items of the toilet comprise sixteen items. The questionnaire developed by previous studies (Anand and Prakash, 2018; UNICEF, 2017). For measuring hygiene and sanitation practice, thirty-two questions were asked. The questions having options 'always,' 'frequently,' 'sometimes,' and 'never' were marked 4,3,2, and 1 respectively. Furthermore, the questions having options 'Yes' and 'No' were marked 1 and 0, respectively.

Moreover, all other questions having other options except the options mentioned above were marked conveniently. Therefore, the maximum mark an individual can obtain was found 80. The hygiene and sanitation practice score was classified by taking cut-off value 60, which is equal to seventy-five percent of 80. The hygiene and sanitation practice score was classified as 'Good Practice' if the score is equal to or greater than 60, and if the score is less than 60 was classified as 'Bad Practice.'

The qualitative data was cleaned, organized, and analyzed manually. The data of 280 respondents' data were entered, cleaned, edited, and analyzed using the Statistical Package for Social Science (SPSS) version 25.0. The p-values <0.05 were considered as significant.

Ethical consideration

The study ensured the ethical issues that were involved, including the risks and benefits of the respondents. Before conducting data collection, each respondent was clearly informed about the purposes, type of information coverage, and confidentiality.

RESULTS AND DISCUSSION

General characteristics of the respondents

A total of 280 respondents participated in the study. The first session of the questionnaire contains questions about their sex, age, religion, types of family, studying year, faculty of department or institute, and the most living area of the student across the year (Table 1). Though the sample represents 55% (154 students) male and rests 45% (126 students) female, they are representative of the whole Dhaka University student population comprehending from different disciplines and academic years. The respondents had a mean age of 21.15 years (SD=1.42). The majority of respondents were aged 21-23 Years (65.71%), whereas the lowest age group was 24-27 years (3.57%). Among the respondents, (80%) were belong nuclear family and rested 20% joint family. Moreover, Institutes recorded highest (29.3%) students followed by Faculty of Social Science 27.1%, Faculty of Arts 16.1%, faculty of 9.3%, and the lowest was Faculty of Fine Arts 1.64%. In the study area, the highest (40.16%) students were currently studying in the second year, and the lowest (10.82%) were from Masters. From the respondents, the majority of 55.37% of students were living at home, whereas the rest of the students were living at university halls.

Table 1: Demographic profile of the respondents

SL	Demographic Information	N	%
01	*Sex of the Respondent*		
	Male	154	55
	Female	126	45
02	*Age of the Respondent*		
	18-20 Years	86	30.71
	21-23 Years	184	65.71
	24-27 Years	10	3.57
03	*The religion of the Respondents*		
	Muslim	244	87.14

	Hindu	25	8.93
	Buddhism	7	2.50
	Christian	1	0.4
	Others	3	1.1
04	*Types of family*		
	Nuclear Family	224	80
	Joint Family	56	20
05	*Studying year of the Respondents*		
	1st Year	78	27.86
	2nd Year	43	15.36
	3rd Year	86	30.71
	4th Year	62	22.14
	Masters	11	3.93
06	*Faculty of the Respondents*		
	Faculty of Arts	45	16.1
	Faculty of Business Studies	26	9.3
	Faculty of Biological Science	15	5.4
	Faculty of Earth and Environmental Sciences	7	2.5
	Faculty of Engineering and Technology	6	2.1
	Faculty of Fine Arts	3	1.1
	Faculty of Law	1	0.4
	Faculty of Pharmacy	3	1.1
	Faculty of Science	16	5.7
	Faculty of Social Sciences	76	27.1
	Institutes	82	29.3
07	*Current residence of the respondents*		
	Hall	123	43.93
	Home	155	55.37
08	*Residence Before University Admission*		
	Village	60	21.43
	City	154	55.00
	Sub-urban area	66	23.57
09	*Socio-economic Status of the Respondents*		
	Lower Class	90	32.1
	Middle Class	147	52.50
	Upper Class	43	15.4

Basis hygiene and sanitation practices

Hygiene practice

It was noticed that 85.36% of respondents washed their hand always before having food,followed by 91.79% of respondents washed their hand always after having foods, and 91.79% of respondents washed their hand after defecation (Table 2). The majority of the respondents (85.71%) reported that they always maintain about regularity in taking a bath, whereas only 3.21% mentioned they took a bath sometimes. Regarding wearing washed clothes, 71.79% of respondents stated always followed by 23.93% frequently, and 24.64% sometimes. Furthermore, the majority (45.36%) of the students responded always about maintaining regularity in cleaning their room, whereas 17.50% reported sometimes.

A study in a government school in Kolkata supports the findings as 69% of students always wash their hands before having food, followed by 18% students wash hands most of the times before having food, majority of the students (84.1%) always wash their hands after defecation (Meher and Nimonkar, 2018). Similarly, another study stated that 70% of students wash their hands before having meals, and 87.5% wash hands after defecation (Khatoon et al., 2017).

A study on college students in Kuwait's Body Hygiene' came with good appearance as it ranked second with an average of 4.34 (SD = 0.73) ranging from 1.67 to 5.00 (Al-Rifaai, et al, 2018).

A good number of students (71.79%) always wear washed clothes, followed by 23.93% frequently and 24.64% sometimes. This study is in accordance with the study of Al-Rifaai et a. (2018), who ranked 'Clothes Hygiene' ranked first with an average of 4.69 (SD= 0.56), ranging from 1.50 to 5.00.

This study represents maintaining regularity in cutting nails as finding says more than half of the students (59.29%) maintain regularity, 27.86% of students cut their nails frequently, and few students stated (11.07%) it sometimes. This result is consistent with the result of Khatoon's study as more than half of the students (62.0%) had knowledge that keeps their nails trimmed and clean shows good hygiene (Khatoon et al., 2017).

From the qualitative data, the study is extremely pivotal in understanding what the students do right and what they do wrong. It is to be noted that all the students, regardless of where they stay, have a very good sense of personal cleanliness and hygiene practices. All of them brush their teeth, cut their nails, takes a bath, and clean themselves regularly. Most of them have reported cleaning their rooms regularly as well. But, when it comes to using lavatory or bathroom (in halls and in many students' messes, there are separate spaces for different purposes) and habitual tendencies which define the sense of hygiene and sanitation, the difference is vivid.

It has been found that, in halls or student dormitories, people after using the restrooms leave them in such a condition that is extremely unexpected and undesirable. Often, the students do not feel like cleaning up the basin of the washroom and kitchen after using it. In places where kitchens are available, most of the days, it is found to be dirty and occupied with unwashed crookeries and dishes. When asked about the background of such practices, the responses from a few of the responders were very interesting. They suggest that students usually do not care about cleaning up because they believe that this public property and they have found these places to be dirty always. If one cleans up, then some other individual will make it dirty.

It was found that students do throw away foods or other things out of the window and litter their surroundings. When asked about using trashcans, the responders said the number of trash cans is not sufficient. In some of the halls, after the elected students' wing took over, the situation has got better. However, the practices of some have not changed. In new halls like Bijoy Ekattor or Sufia Kamal, overall environment and sanitation-hygiene practices were good at the initial stage, back in 2014-2016. With time, the condition has severely degraded in those halls too.

Table 2: Basic hygiene practices by the respondents from the University of Dhaka

SL	Basic Hygiene Practices	N	%
01	*Washing hands before having food*		
	Always	239	85.36
	Frequently	25	8.93
	Sometimes	16	5.71
02	*Washing hands after having foods*		
	Always	257	91.79
	Frequently	14	5.00
	Sometimes	8	2.86
	Never	1	0.36
03	*Washing hands after defecation*		
	Always	257	91.79
	Frequently	14	5.00
	Sometimes	9	3.21
04	*Using soap/handwash to wash your hands*		
	Always	192	68.57
	Frequently	64	22.86
	Sometimes	22	7.86
	Never	2	0.71
05	*Maintaining regularity in taking a bath*		
	Always	240	85.71
	Frequently	35	12.50

	Sometimes	3	1.07
	Never	2	0.71
06	*Wearing washed clothes*		
	Always	201	71.79
	Frequently	67	23.93
	Sometimes	11	3.93
	Never	1	0.36
07	*Brushing teeth twice a day*		
	Always	98	35.00
	Frequently	93	33.21
	Sometimes	69	24.64
	Never	20	7.14
08	*Maintaining regularity in cutting nails*		
	Always	166	59.29
	Frequently	78	27.86
	Sometimes	31	11.07
	Never	5	1.79
09	*Drinking Safe water*		
	Always	222	79.29
	Frequently	50	17.86
	Sometimes	8	2.86
10	*Maintaining regularity in cleaning your room*		
	Always	127	45.36
	Frequently	104	37.14
	Sometimes	49	17.50

Sanitation practice

From the study area, 57.50% of students use a personal toilet, followed by 40.36% sharing toilets and 1.79% public toilets (Table 3). It has seen that 42.86% of respondents always use individual toilets, whereas only 12.86% of respondents said never. Among the respondents, 52.50% stated always uses separate sandals for toilet followed by 21.79% sometimes, 15.36% frequently, and 10.36% never. Of the sampled respondents, 81.43% of students always use flash after defecation, whereas 5.36% stated sometimes. In regards to disposing of sanitary items, 75% of respondents stated pan followed by 21.43% commode, 2.5% do not care, and 1.07% outside. Kuberan et al., (2015) found one quarter (25%) of the participants did not have access to toilets inside the households rather than the majority (79%) of the participants had access to septic tank type of toilets. In a study in the rural setting of India found less than half (47%) of the participants discharged their waste in open drainage (Kuberan et al., 2015).

According to the qualitative data, the students living in students mess or sublets admitted that the quality of the washrooms or toilets in their places is not very praiseworthy but cleaner than the halls washrooms. Because in student mess only 5-10 people using a single washroom or two, people usually try to keep it clean as much as possible. In different students' mess, the students have to clean the washroom and their rooms by rotation. They also often hire helping hands to clean the aforementioned places.

Whereas students living within rented or owned apartments reported that their washrooms are washed regularly.

Table 3: The basic sanitation practices by the respondents from the University of Dhaka

SL	Basic Sanitation Practices	N	%
11	*Type of toilet used by family members*		
	Public toilet	5	1.79
	Personal toilet	161	57.50
	Open toilet	1	0.36
	Sharing toilet	113	40.36
12	*Using personal toilet*		
	Always	120	42.86
	Frequently	68	24.29
	Sometimes	56	20.00
	Never	36	12.86
13	*Using separate sandals for toilet*		
	Always	147	52.50
	Frequently	43	15.36
	Sometimes	61	21.79
	Never	29	10.36
14	*Using flash after defecation*		
	Always	228	81.43
	Frequently	29	10.36
	Sometimes	15	5.36
	Never	8	2.86
15	*Intervention in cleaning the toilet*		
	Daily	59	21.07
	Weekly	196	70.00
	Monthly	21	7.50
	Hardly	4	1.43
16	*Disposing sanitary items (Napkins, Tissues)*		
	Commode	60	21.43
	Bin	210	75.00
	Outside	3	1.07
	don't care	7	2.50

Basic hygiene items of toilet

Among the respondents, most of the respondents keep dental kit (84.64%) and trimmer (82.6%) for body hygiene in the toilet. Very few respondents, 17.5% and 19.29% keep the most important items of the toilet, soap, and handwash, respectively. More than half of the respondents have razor (55.72%), hand shower (57.5%) instead of vessel and towel (56.07%) in their toilet. The figure also shows more than one-third of the respondents (77.14%) keep the sanitary pad in the toilet. The majority of the respondents (65.36%) keep anti-septic items, while more than one-third of the respondents (76.07%) keep hair remover in their toilets. Few respondents have facewash (42.86%), toothbrush (39.4%), toothpaste (37.14%), mirror (25.36%), vessel (29.29%) and tissue (23.57%) in their toilet (Figure 1).

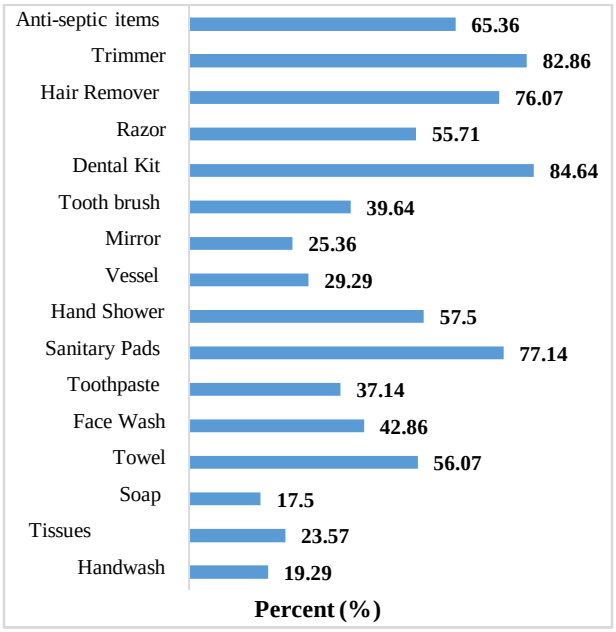

Figure 1: Basic hygiene items of toilet

Difference in hygiene and sanitation practices

Gender and type of residence

Among 280 students, there is a significant difference ($p<0.001$) in hygiene and sanitation practices regarding variable sex and residence (Table 4). The female students are 1.992 times more likely to have good hygiene and sanitation practices than male students. The students staying at home are 3.745 times more likely to have good hygiene and sanitation practices than students staying at the hall (Table 4).

Female students generally keep themselves cleaner and better in terms of their sanitation-hygiene practices than male students. The overall environment of their dormitories and halls are better than the men halls. In terms of cleaning the rooms, they do it regularly. Monitoring from the concerned authority regarding such practices is better in female halls. Although it has been reported that female students also have a problem with using washrooms and kitchens, but they are still doing better sanitation-hygiene practices than most of the male respondents. Female students living in students mess or rented apartments or with their families are also better in terms of cleanliness, safe sanitation, and hygiene practices than male students living in a similar type of residences.

In response to the menstrual hygiene of female students, it was observed that all the respondents from different female halls were happy with the sanitary pad disposals arrangement except for one hall. In all the halls, they had closed buckets for disposing of their used pads or towels. The study also found that female students often used sanitary napkins are found on the washroom floors, which is not very hygienic. Although students are suggested to do good practice by authorities or other students some of the students fail to understand the importance of safe hygiene practices related to the disposal of the sanitary pads and hence commit the same mistake again and again. However, this problem was not as severe in the female students' mess or sublets, and among the students residing in rented or owned apartments, the problem of such kind did not exist.

Table 4: Chi-Square test and odds ratio result for sex and residence.

Variable	Hygiene and Sanitation Practice		Odds ratio (95% CI)	Sig.
	Good n (214)	Bad n (66)		
Sex				
Female	109	17	2.992 (1.620, 5.525)	0.001*
Male	105	49		
Residence				
Home	137	18	4.745 (2.580, 8.727)	0.001*
Hall	77	48		

CI= Confidence interval.

Males had relatively poor hygiene practice compared to females. Among females, a majority (83.3%) of the females maintain good hygiene practice where this is only 76.1% for males, as well as 14.5% females and 39% males, follow moderated practice (Odonkor et al., 2019). However, in most of the studies in literature showed the statistically non-significant relationship between hygiene practice and respondents' gender (Sarkar, 2013; Gebreeyessus and Adem, 2018; Mangal et al., 2019; Sultana et al., 2016). The difference in the results from our study might be due to different hygienic settings at different locations.

The students who lived with family (51.6%) had higher practice levels of hand hygiene, and it was the lowest among those who lived (45.00%) without family (Sultana et al., 2016). This has a similarity with the present study.

Family type and socio-economic status

Among the students staying at home (155), fisher's exact test suggests that there exists a significant difference ($p<0.001$) in hygiene and sanitation practices regarding variable family type and socio-economic status for the students staying at home (Table 5).The odds ratio 4.968 says that the students staying in the nuclear family are 3.968 times more likely to have good hygiene and sanitation practices than the students staying in a joint family.

Table 5: Family type and socio-economic status for the students staying at home.

Variable	Hygiene and Sanitation Practice		Odds ratio (95% CI)	Sig.
	Good n (137)	Bad n (18)		
Family type				
Nuclear	118	10	4.968 (1.741,14.1)	0.004*
Joint	19	8		
Socio-economic status				
Lower	26	11	-	0.001*
Middle	77	7		
Higher	34	0		

CI= Confidence interval

Condition of student dormitories

Overcrowding accommodation

The residential halls are extremely crowded and congested. It was found that in a room with a size of 15/6 feet, eight (08) students are accommodated, whereas ideally, the number should be four (04). In the larger spaces, which can accommodate six (06) students at best, ten-twelve (10-12) students have been placed. The living condition for the newcomers is inhumane by any standard. Sixteen-twenty (16-20) and sometimes even more students live in a space that is supposed to be a space for six-eight (6-8).

In different students' mess, often due to the students' financial constraints and often due to the profit-making incentive of the owner, more students than ideal are placed in a single space, which makes it difficult for them to keep up the safe hygiene and sanitation practice. However, in students' messes and apartments where the space is not overpopulated, the practices are far better. The conclusion of the finding then is that when more students are forced to live in space than they ideally should, maintain safe hygiene and sanitation practices decreases substantially.

Disproportionate student-washrooms ratio

The lavatories and bathing spaces are enormously adequate in university halls compared to the number of students using those spaces. It was found from the study that, on an average for 32-50 students, four (04) lavatories and four (04) bathing spaces exist, which by any standard is not satisfactory. This often dismantles the overall hygiene and sanitation practices of the students. It was found that, in students mess or rented apartments, 7-10 students use a single lavatory and bathing space, which makes it unhygienic for those students and degrades the overall cleanliness of the washrooms.

Lack of regular cleaning

While interviewing, it was found that there is a lack of regular cleaning of the hall premises and washrooms. The cleaners in most of the halls come only once a day, which again is unsatisfactory by any standard. If 32-50 people have to use four washrooms only and clearer comes once a day, there is no way the washroom will remain clean. More importantly, often the cleaners miss their schedules for a day or two, making the overall condition of the halls and washrooms even worse. However, the responders from female halls informed that their halls are cleaned once a day in all six days. The cleaner does usually come during the weekend.

Lack of necessary cleaners

Irregular cleaning is responsible for an existing unhealthy environment. The student dormitories lack a sufficient number of cleaners. It is also hard for a cleaner to work in a particular block for the whole day and then again come back at night.

Improper monitoring and solving problem

There is a lack of monitoring form the concerned authority. Although in the female dormitories, the monitoring has been found to be better. From the complaint book where students can write about their problems, mostly structuralceiling fan not working, the window was broken, toilets flash not working, etc. The repair works take much time than it should, and often times the complaints remain unheard. A female student of Kabi Sufia Kamal Hall complained that they have four toilets per floor. However, two toilets are actually usable on our floor since commode in two of the toilets got broken for a long time.

Other problems

The overall environment of the residential halls is not encouraging enough for the students to keep their surroundings clean. The environment of the canteen or dining halls is mostly unhygienic. There are litters here and there. Often cats and dogs loiter around those places. Bugs and cockroaches are found in almost all student's beds. Students also suffer from mosquitoes as well. The halls have not been renovated for long. In some halls, the sewerage pipes or houses are outdated, and often the smell from the drains is unbearable.

In most of the students' mess, the owner is extremely sluggish about doing anything about the

poor infrastructure we live. If you complain, you will hear the most heard sentence once again from the owner- "leave the mess and try to find a better one".

Lack of awareness among students

There is a serious lack of awareness among most of the students about the holistic cleanliness of the places they stay in. There is a lack of common sense and awareness about maintaining basic washroom disciplines, although female students behave better.

RECOMMENDATION

- Awareness program should be taken in university halls
- Plans for establishing new accommodations must start immediately to ensure proper accommodation.
- The number of washrooms per floor should be increased. The old structures must be renovated and reorganized.
- The number of cleaners, along with the number of visits to the cleaners per day in a dormitory, must be increased.
- Proper monitoring, solving problems, and working quality should be ensured.
- A cleanliness competition among different halls can be arranged to encourage the idea of a clean campus.

CONCLUSION

The study clearly shows the problem with sanitation and hygiene is more acute in student dormitories than the students staying at home. Students might perceive to do the right hygiene and sanitation practices, but in reality, they might not. One of the reasons for such a varied response could also be, people do not want to state their bad habits publicly. There is a belief not only within the student even in general among the countrymen that it is all right not to use a public property with care. This is also true for the administrators who frequently fail to take adequate measures to ensure the quality environment in public spheres. This overwhelming narrative must be replaced by a better narrative, which suggests that just because a service is provided by the government, and subsidized does not mean it has to be sub-standard. The universities must create provisions for educating the students about better and safe hygiene and sanitation practices, which will allow them to reside in a place healthier inside or outside the campus.

CONFLICT OF INTEREST

The authors of the paper do not have any conflict of interest. The authors alone are responsible for the views expressed in this article.

REFERENCES

Anand D and Prakash S (2018). Assessment of the hygiene and sanitation practices of students of class VI to IX in urban government inter college at Allahabad district, India. International Journal of Community Medicine and Public Health, 5(9), 3870-5.

Al-Rifaai J, Haddad A and Qasem J (2018). Personal hygiene among college students in Kuwait: A Health promotion perspective. Journal of Education and Health Promotion7. pp. 92. doi-10.4103/jehp.jehp_158_17.

Creswell JW and Clark VLP (2017). Designing and Conducting Mixed Methods Research. Sage, Thousand Oaks, CA

Fan Q, Azad AK (2017). Towards a cleaner Bangladesh: Safe water, sanitation, and hygiene for all. End Poverty in South Asia. Retrieved From https://blogs.worldbank.org/endpovertyinsouthasia/towards-cleaner-bangladesh-safe-water-sanitation-and-hygiene-all.

Gebreeyessus GD and Adem DB (2018). Knowledge, Attitude, and Practice on Hygiene and Morbidity Status among Tertiary Students: The Case of Kotebe Metropolitan University, Addis Ababa, Ethiopia. Journal of environmental and public health, 2018. https://doi.org/10.1155/2018/2094621

Hutton G, Haller L and Bartram J (2007). Economic and health effects of increasing coverage of low-cost household drinking-water supply and sanitation interventions to countries off-track to meet MDG target 10. Public Health and the Environment. World Health Organization, Geneva.

Khatoon R, Sachan B, Khan MA and Srivastava J (2017). Impact of school health education program on personal hygiene among school

children of Lucknow district. Journal of Family Medicine and Primary Care, 6, 97.

Kuberan A, Singh AK, Kasav JB, Prasad S, Surapaneni KM, Upadhyay V and Joshi A (2015). Water and sanitation hygiene knowledge, attitude, and practices among household members living in rural setting of India. Journal of Natural Science, Biology, and Medicine, 6(Suppl 1), S69–S74. https://doi.org/10.4103/0976-9668.166090

Mangal N, Dilip L, Varghese K, Chauhan M (2019). A cross sectional study on personal hygiene among rural school students in southern Rajasthan. International Journal of Community Medicine and Public Health (Vol. 6). (pp. 2646). Doi-10.18203/2394-6040.ijcmph20192338.

Meher S and Nimonkar R (2018). Study of hygiene practices among school going children in a government school in Kolkata. International Journal of Community Medicine and Public Health, 5,3102-5. doi- 10.18203/2394-6040.ijcmph20182655

Odonkor ST, Kitcher J, Okyere M and Mahami T (2019). Self-Assessment of Hygiene Practices towards Predictive and Preventive Medicine Intervention: A Case Study of University Students in Ghana. BioMedical Research International, *2019*, 3868537.

Sarkar M (2013). Personal hygiene among primary school children living in a slum of Kolkata, India. Journal of preventive medicine and hygiene, 54(3): 153–158.

Sultana M, Mahumud RA, Sarker AR and Hossain SM (2016). Hand hygiene knowledge and practice among university students: Evidence from Private Universities of Bangladesh. Risk Management and Healthcare Policy, 9, 13. https://doi.org/10.2147/RMHP.S98311

UNICEF (2017). Water, Sanitation, and Hygiene Assessment at the Household Level in Gaza Strip. The United Nations Children's Fund. Available from: https://reliefweb.int/sites/reliefweb.int/files/resources/Gaza_WASH_HH_report_July2017_final.pdf.

WHO (World Health Organization) (2009). Water, Sanitation and Hygiene Standards for Schools in Low-cost Settings, ISBN 978 92 4 154779 6, (NLM classification: WA 675).