

# Consciousness and Practice of Personal Hygiene among the High School Students of a Rural Area in Chattogram

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## ABSTRACT

**Background:** Good health is a sign of a country's economic well-being. Personal hygiene should be maintained first and foremost for high accuracy in work, low disease suffering and disease prevention. Maintaining good hygiene is crucial because it can prevent many infectious diseases. Personal hygiene habits may have developed during childhood. Children in school are especially prone to disregarding basic personal hygiene. This study was conducted to assess the consciousness and practice of personal hygiene among the students of a rural high school in Chattogram.

**Materials and methods:** It was a descriptive type of cross-sectional study and data were collected from 314 students of Guman Mardan Pashkarhut High School in Hathazari Upazila, Chattogram from August to October 2023 by interviewer administrative questionnaire.

**Results:** Among the respondents, most of them 141(45%) were in the age group 11-12 years. About 207 (66%) were girls and 302(96%) were Muslims. Maximum 172 (54.8%) respondents were from class VII and class 8 and 36.5% were from lower middle class. About 241(77%) heard about the term personal hygiene and maximum students, 152(63.1%) heard it from school. Most of the students 241(77%) had idea on basic requirement of personal hygiene. It was found that maximum respondents 300 (96%) know about the importance of handwashing. Among all students, 73% brush twice daily, about 307(97.77%) take shower daily in summer and 302 (96%) practiced in winter, 293 (93.31%) used a towel of their own. During tiffin time, 211(67.20%) had taken home made food.

**Conclusion:** As most of the children neglect maintenance of personal hygiene, so their habit should be changed. It should be practiced from early childhood to lead a healthy, disease-free productive life.

**Key words:** Personal hygiene; Hygiene practice; Rural high school students.

## Introduction

The word "hygiene" comes from the Greek word "hygeia", which means "wellness, cleanliness and sanitation". It's also the name of a science that deals with improving and protecting health, also known as hygiene. Hygiene is important for having a healthy

lifestyle. Personal hygiene is the art of making sure you're living your best life. It's all about taking care of yourself and making sure you're healthy and happy.<sup>1</sup>

Even if children do not fully understand the links between illness and behaviour, in high school they can learn specific health-promoting behaviours. As a socialising institution, school plays an important role in the development of a healthy citizen. After being introduced to the knowledge of personal hygiene and lifestyle in school, when they mature, they will be in a better position as adults to maintain their own health as well as the health of their family.<sup>2</sup>

Many previous studies on hand hygiene found that children who wash their hands properly are less likely to report gastrointestinal and respiratory symptoms. According to previous research, hand washing with soap reduces morbidity from diarrheal diseases by 44% and respiratory infections by 23%. According to the World Health Organisation, 3.8 million children under the age of five die each year from acute diarrheal diseases and acute respiratory tract infections. Globally, 88% of diarrheal deaths are linked to the use of contaminated water, insufficient sanitation, and poor hygiene practices.<sup>3</sup>

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Schools are significant places in their lives because they provide an environment for the development of skills and intelligence, which can assist them in achieving their potential goals and developing as good human beings.<sup>4</sup>

Teaching children the value of good hygiene can help them develop habits that will benefit their health for the rest of their lives. Starting health hygiene habits at a young age will assist older children in transitioning to adult hygiene routines.<sup>5</sup>

Therefore, the purpose of this study was to evaluate the consciousness and habits of students in the 6th through 9th grades at Chattogram City's rural high school regarding personal hygiene.

**Materials and methods**

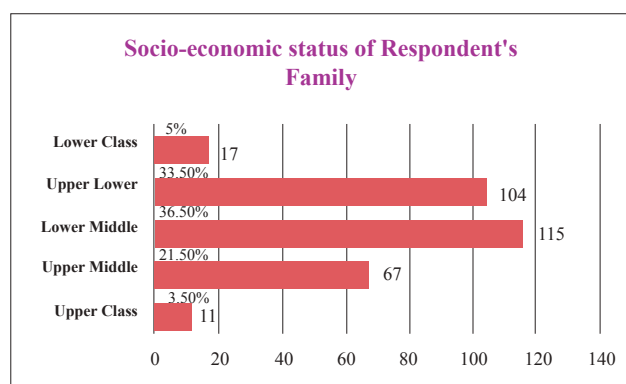
This study was a descriptive type of cross-sectional study which was conducted at “Guman Mardan Pashkarhut High School” in Hathazari Upzila, Chattogram from August 2023 to October 2023. The study population consisted of students who were in class six to class seven. Data collection method was interviewer administrative questionnaires and sample size were 314. Data were collected from the students at the school who were present there and gave consent to participate in the study. After introduction with the respondents, verbal consent was taken. Before data collection, it was assured that it would not violet their personal secrecy and privacy. Anyone, if desired, can withdraw their name from the study at any moment. After collection of data, it was checked for discrepancies and verified. These were compiled and tabulated according to the key variables. The result was analyzed by MS Excel 2007 according to study.

**Results**

This study comprises of 314 school going children, out of which 45% were in the age group of 13-14 years, 30% were in 11-12 years age group and remaining 25% children were above 15 years of age. Among the students 66% were girl. Equal percent i.e., 27.4% of the students were in class seven and class eight. Only 2.5% mother of the students were illiterate and 33% passed SSC (Secondary School Certificate) examination. In case of father's education 6.7% were illiterate whereas 33% passed SSC examination.

**Table I** Bio-socio-demographic distribution of respondents (n=314)

Attributes	Frequency	%
Age Group ( In Years)		
11-12	94	30
13-14	141	45
15-16	76	24
≥17	3	1
Gender		
Boys	107	34
Girls	207	66
Education Level of respondents		
Class Six	67	21.2
Class Seven	86	27.4
Class Eight	86	27.4
Class Nine	75	24
Education Level of Mother		
Illiterate	8	2.5
Primary/Equivalent	32	10.2
Secondary/Equivalent	92	29.3
SSC/Equivalent	105	33.4
HSC/Equivalent	67	21.3
Graduation/Equivalent	10	3.2
Masters/Equivalent	0	0
Education Level of Father		
Illiterate	21	6.7
Primary/Equivalent	35	11.2
Secondary/Equivalent	80	25.5
SSC/Equivalent	8	34.4
HSC/Equivalent	43	13.7
Graduation/Equivalent	14	4.5
Masters/Equivalent	13	4.14
Number of Family Members		
1-5	172	54.9
6-10	126	40.2
11-15	13	4.2
16-20	2	0.6
21-25	1	0.2



**Figure 1** Distribution of respondent’s Socio-economic status of (n=314)

Figure 1 shows that the maximum, 115(36.50%) of the respondents’ economic status were of the lower middle and only 11(3.50%) belonged to upper class status.

**Table II** Consciousness regarding personal Hygiene (n=314)

Attributes	Comment	Frequency	%
Acquaintance with the term personal hygiene (n=314)	Yes	241	77
	No	73	23
View on personal hygiene meaning. (n=241)	Cleanliness of one's body	111	46
	Overall Health	36	15
	Handwashing	4	1.6
	Eating Nutritious Food	6	2.4
	All of the above	84	35
Source of knowledge on personal hygiene (n=241)	School	152	63.1
	Parents	34	14.1
	Friends	17	7.1
	Books	28	11.6
	Internet	10	4.1
Idea about basic requirements to maintain personal hygiene. (n=314)	Yes	241	77
	No	73	23
Opinion on basic requirements to maintain personal hygiene (n= 241)	Soap	30	9.5
	Clean water	103	32.8
	Good environment	78	24.8
	Clean cloth	52	16.6
	Food	51	16.3
	Exercise	11.5	
Knowledge on importance of hand washing (n=314)	Yes	300	96
	No	14	04
Opinion on regular cleansing of hair (n=314)	Agree	264	85
	Disagree	50	15
Opinion on handwashing before meal (n=314)	Agree	297	94.58
	Disagree	17	5.41
Opinion on trimming nails regularly(n=314)	Agree	307	97.8
	Disagree	07	2.2
Inclusion of brushing and flossing teeth in personal hygiene (n=314)	Yes	287	91.4
	No	27	8.6
Opinion on sharing things with others (n=314)	Agree	166	52.9
	Disagree	148	47.1

Table II depicts that 77% of the respondent's acquaintance with the term 'personal hygiene'. 46% of them perceive hygiene as "cleanliness of one's body" while 2.5% of them view it as 'Eating Nutritious Food' whereas 15% perceive it as "Overall health". However, 35% of them think that hygiene includes all the above. School constituted the largest foundation of evidence about personal hygiene which is about 63% and from parents its about 14%. A good portion about 77% students have idea about basic requirements to maintain personal hygiene. Maximum (96%) respondents had knowledge on importance of hand washing whereas 85% students were agreeing that cleansing of hair regularly is important. Handwashing before meal is good for health that agreed by 94% respondents. 307(97.8%) respondents were agreed with trimming nails regularly and 287(91%) respondents thought that consistent brushing and flossing teeth was a part of personal hygiene whereas 27(9%) had different view. From Table-II it is observed that 166 (53%) of the students agreed on sharing their belongings with others while 148 (47%) of the students did not share things with others.

**Table III** Personal Hygiene Practices (n=314)

Attributes	Comments	Frequency	%
Brushing teeth	Once daily	68	21.7
	Twice daily	232	73.9
	Thrice daily	14	4.5
Taking shower	During summer	0	
	Daily	307	97
	Twice a week	7	3
	Once a week	0	0
	During winter	0	
Using own towel	Daily	302	96
	Twice a week	12	4
	Once a week	0	0
	Yes	293	93
Hand washing materials	No	21	7
	With soap	204	65
	With only water	70	22
Wearing shoes in toilet	Hand sanitizer	40	13
	Yes	272	87
	No	42	13
Using handkerchief during sneezing	Yes	299	96
	No	15	05
Washing hand and feet after school	Yes	291	93
	No	4	1.4
	Sometimes	19	5.6

Attributes	Comments	Frequency	%
Changing their cloth	During summer		
	Daily	314	100
	Twice a week	0	0
	Once a week	0	0
	During winter		
	Daily	302	96
	Twice a week	7	2.4
Once a week	5	1.6	
Food items during tiffin period	Homemade	211	67.2
	Vendor	1	0.3
	Fast Food	102	32.5

Most of the respondents 232 (73.88%) brush their teeth twice a day. During summer and winter near about 97% of the respondents take a shower on daily basis. 293 (93%) of total respondents had their own towel and 204 (65%) respondents prefer soap for washing their hands. Besides, 70 (22%) of them use only water. Hand sanitizer was chosen by 40 (13%) respondents. While sneezing and coughing, mostly 299 (95%) students used to cover their face but 15 (5%) do not cover their face. Most of the students wash their hands and feet after coming from school which was 291(93%). The number of the students who do not wash their hands and feet was only 4(1.40%). This denotes their concern for personal hygiene. All the respondents change their clothes daily in Summer. In winter, this number becomes 302. Here, 7 respondents change their clothes twice a week and 5 once in week during winter.

**Table IV** Socio-economic status and tooth brushing habit of the respondents (n=314)

Socio economic status	Habits of Tooth Brushing			
	Once	Twice	Thrice	Total
Lower Class	5 (29.5%) (7.4%)	10 (59%) (4.3%)	2 (11.5%) (14.3%)	17
Upper Lower Class	30 (28.9%) (44.1%)	70 (67.3%) (30.2%)	4 (3.8%) (28.6%)	104
Lower Middle Class	15 (13%) (22%)	97 (84.4%) (41.8%)	3 (2.6%) (21.4%)	115
Upper Middle Class	10 (14.9%) (14.7%)	53 (79.1%) (22.8%)	4 (6.0%) (28.6%)	67
Upper Class	8 (72.7%) (11.8%)	2 (18.1%) (0.9%)	1 (9.2%) (7.1%)	11
Total	68(21.56%)	232(73.88%)	14(4.46%)	314

It is disclosed from the table 17 respondents were of lower class, of which 10(59%) practiced brushing twice daily. Out of 104 upper lower-class respondents, 70(67.3%) practiced brushing twice daily. Among the 11 upper class respondents, 8(72.7%) had once brushed

daily. Out of 314 respondents, 232 respondents brushed twice daily. Among them, 97(41.8%) belonged to upper middle class. There were 14(4.46 %) respondents who had a habit of brushing teeth thrice daily, of them 4(28.6%) were of upper lower class and upper middle-class states.

**Table V** Gender and educational qualification of parents of the respondents (n=314)

Parents	Educational Qualification							
	Illiterate	Primary	Secondary	SSC	HSC	Graduation	Masters	Total
Father	21(6.69%) (72.41%)	35(11.15%) (52.24%)	80(25.48%) (46.51%)	108(34.39%) (50.70%)	43(13.69%) (39.09%)	4(4.46%) (58.33%)	13(4.14%) (100%)	314
Mother	8(2.5%) (27.59%)	32(10.19%) (47.76%)	92(29.3%) (53.49%)	105(33.44%) (49.30%)	67(21.34%) (60.90%)	10(3.18%) (41.66%)	0	314
Total	29	67	172	213	110	24	13	628

It is revealed from the table, among the fathers and mothers. SSC/ equivalent educated persons were highest 108(34.39%) and 105(33.44%). There were 29 illiterate parents, out of which 21(72.41%) were fathers and only 8(27.59%) were mothers. Masters and equivalent level educated parents were 13, all of them were fathers, no mother was of this level educated.

## Discussion

In this study, it is found that, 94(30%) of the respondents were between 11-12 years, 141(45%) were between 13-14 years, 76(24%) were between 15-16 years and 03(1%) were more than 17 years. Among the total students, it was found that majority of the students were female 207(66%) whereas in other study most of the respondents were male.<sup>6-9</sup> Among the students 67 (21.20%) were of class six, 86(27.40%) were of class VII, 86(27.40%) were of class VIII, 75(24%) were of class IX (Table-I).

According to educational qualification of parents only 6.7% father and 2.5% mothers were illiterate. Similar study done in Lahore, Pakistan was found 41.2% fathers and 20.17% mothers were illiterate.<sup>1</sup>

In terms of the number of family member, 172(54.80%) were in the range of 1-5 person in a family. A study done in Dhaka revealed similar findings, 53.7% were in <4 number of family members.<sup>6</sup> Considering the socioeconomic condition of the students, 67(21.50%) belonged to upper middle class, 115(36.50%) were of lower middle class, 104(33.50%) were of upper lower (Figure 1) which is dissimilar to study done in Bangalore where upper lower was class 56.9% and lower middle class 37.1 %.<sup>10</sup>

In this research work, it was found that 241(77%) had heard about the word "Personal Hygiene" and the remaining 73(23%) didn't heard (Table II). Out of 241

students who learned about personal hygiene, 111(46%) meant cleanliness by hygiene, 36(15%) thinks maintaining health, 6(2.40%) thinks intake of nutritious food, 4(1.60%) think hand washing and combination of all the given options of questionnaire were mentioned by 84(35%) (Table II). Similar study done by Mahajan P. et al. found that 100% of the students had heard about “personal hygiene” where 15% of them feels that personal hygiene means “cleanliness of the body” and 35% means “Handwashing”.<sup>11</sup>

Coming to the source of knowledge about personal hygiene, the main sources of information were from school (48.5%) followed by parents (11%) similar findings from Bangladesh and Jordan.<sup>12,13</sup> Though this study done in a rural area, 10(3%) utilized the internet to learn about personal hygiene. These findings clearly portrayed that the parents and school teacher plays an important role in students’ life because parents and teachers influence to transmit their awareness and practices about hygiene to the children.

In the present study, there was an impressive level of knowledge among children (77%) about the basic requirements of personal hygiene and most (96%) of them knows the importance of hand washing which is undoubtedly a great achievement (Table-II). In another study carried out in Erbil city (2012) among primary school children, 94% had an idea about the requirement of personal hygiene, and most of them 83% knew the importance of the hand washing.<sup>14</sup>

Majority (85%) respondents narrated that hair should be washed daily and maximum students (95%) gave a positive opinion on hand washing before meals and research findings are supported by the study conducted by Sarkar.<sup>9</sup>

Among all students, most of the respondents (97%) agreed to cut nails regularly is good practice and it shows good hygiene which is like study done in Nigeria.<sup>15</sup> About tooth cleaning habit a good percentage (92%) agreed and expressed brushing and flossing in regular basis is good and this finding quite similar with the study done by Sihra et al. where 95% students had knowledge about brushing teeth.<sup>8</sup> Opinion of the respondent’s knowledge about sharing belongings with others, among 314 students 148 (47%) respondents disagreed on sharing things which show that they were aware about their personal hygiene (TableII).

In the present study it was observed that 232(73.88%) brushed twice daily. It is also found that 68(21.66%) brush their teeth once daily and the rest of 4.46% clean teeth thrice daily. Well like present study Kenneth A Eaton et al. revealed that more than 75% of children brushed their teeth more than once per day.<sup>16</sup>

About shower habit, during summer, 307(97.77%) take shower daily and 7(2.23%) twice a week. During winter, 302(96.18%) take shower daily and 12(3.82%) twice a week. Contrast remarks were made by Chowdhury TN et al who stated that 82% of students bath daily during summers and during winter, only 26% of the respondents takes bath daily.<sup>17</sup>

An exploring use of personal towel, from the study out of 314 respondents, 293(93%) had a towel of their own and 7% of them had no personal towel and quietly same findings reported by Palliwal V et al. done in Rajasthan India.<sup>18</sup>

Regarding method of Hand washing, 204(65%) used soap, 70(22%) used water and 40(13%) used hand sanitizer. This is substantially lesser than Nepal where an average 79.9 % of students washed their hand with soap.<sup>7</sup> 272 (87%) of the students wore shoes in toilet. On the contrary, 42 (13%) of the students disagreed on wearing shoes. These findings disagree with Zafreen F et al. who reported only 56.2% respondents were found to wear shoes during use of toilet which is not a good practice.<sup>1</sup>

Among the respondents, 299 (95.22%) cover their face during sneezing and 15(4.78%) didn’t practice this habit. In this research work it was found that many respondents 291(93%) washes hands and feet after coming from school and 4(1.40%) didn’t wash. 19(5.6%) had irregularities about this habit. Among the students, all of them change clothes daily in the summer season. During winter, 302(96.18%) changed clothes daily. In Chowdhury TN study observed that 61% washes their hands and feet after coming from school and all the students change their clothes daily during summers whereas 56% of them change their clothes daily during winters.<sup>17</sup> Among the students, during tiffin time 211(67.20%) had taken home made food, others ate fast food 102(32.48%) and from vendors only 1(0.32%) purchased food.

Considering the association between socio-economic status and frequency of tooth brushing, Fisher’s exact test revealed significant difference ( $\chi^2 = 16.02$ ) at  $p < 0.05$  level. Out of 11 upper class respondents, only 03 brushed more than once, on the other hand, among 303 students of lower and middle classes, 60 students brushed once daily (Table IV).

It’s mention worthy that among the 314 fathers, 21 (6.69%) were illiterate and the remaining 293 (93.31%) were educated at different levels. But in case of mothers, there were only 8 (2.5%) had no education. Out of total 29 illiterates, 72.41% were fathers and 27.59% were mothers. Total 599 (95.38%) were educated among the parents there was notable differences in educational qualification of fathers and mothers ( $\chi^2 = 6.03$ ,  $p < 0.05$ ).

**Conclusion**

The study found that the school children in Peshkarhat have satisfactory personal hygiene practises and knowledge. Personal hygiene is not a singular behaviour, rather, it differs from person to person depending on a variety of circumstances. It will be advantageous to instill these values early in life through intervention programmes that increase school children's awareness of the value of personal hygiene through coordinated education measures by parents, teachers, and the media. The research findings lead us to believe that the nation's educational authorities can create and implement policies and guidelines that will allow for sufficient access to tools, materials and opportunities for maintaining personal hygiene at home and at school.

Kindergarten and early elementary school students should receive hygiene education from their schools in addition to the instruction given by parents and guardians. This will guarantee that all children learn at the appropriate age how to shield others and themselves from illness and other hygienic hazards. Encouraging and exhibiting hygienic practices on a regular basis in the classroom is an investment for the future health of school children, indirectly producing a health ambassador.

**Recommendations**

Mass media can play an important role in disseminating hygienic education to the rural people. There should be extensive health education programs about sanitation and personal hygiene. More research work should be done to assess the health program. Curriculum must contain the topic of personal hygiene for health sector and the bright future of the nation.

**Disclosure**

All the author declared no competing interest.

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