

Knowledge and Practicing Behavior Related to Personal Hygiene among the Secondary School Students of Mymensingh Sadar Upazilla, Bangladesh

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ABSTRACT

A descriptive type of cross sectional study was conducted on 132 students of class IX and X of Mymensingh sadar upazilla during early April to late June, 2007. This study was performed to assess and compare the level of knowledge and practicing behavior of urban and rural students in regards to hand washing, bathing, tooth brushing and taking care of nail and hair. All the students were interviewed with a semi-structured questionnaire and observed with an observational check list. The mean age of the students was 14.5±0.94 years. The knowledge of the students regarding tube well water for drinking was significantly higher in rural area (98.3%) compared to urban area. In addition, tube well water was stated as safe for bathing by 77.3% and safe for washing by 80.3% students. Hand washing before meal with soap and water was found almost similar among urban and rural students but hand washing with soap and water after defecation was found significantly better practiced in urban (97.2%) students. Practice regarding tooth paste use was higher in urban (80.6%) area and charcoal use (10.0%) was still found in rural areas. The mean frequency of tooth brushing was significantly higher in girls (1.8±0.5) compared to boys (1.6±0.5) and was significantly higher among urban (1.9±0.4) students. Most of the students were found trimming their nail once a week (74.2%) and cut their hair once a month (85.6%). Overall trend of knowledge and practice about personal hygiene is in positive direction but urban students and girls were more aware about personal hygiene than rural students.

Keywords: Knowledge, Practice, Behavior, Secondary school, Students, Personal hygiene

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Introduction

Personal hygiene is the science of healthy-living of an individual. The term personal hygiene includes all those personal factors, which influence the health and wellbeing of an individual. It comprises a broad range of day to day activities such as bathing, clothing, washing hands and toilet; care of nails, feet and teeth; spitting, coughing, sneezing, personal appearance and inculcation of clean habits. Training in personal hygiene should begin at a very early age and must be carried through school age. Snow *et al.* (2008) reported that children with proper hand washing practices are less likely to report gastrointestinal and respiratory symptoms. In addition, hand washing with soap has been reported to reduce diarrheal morbidity by 44% and respiratory infections by 23% (Curtis *et al.*, 2009). Therefore, it is clearly evident that the aim of personal hygiene is not only to promote the standards of personal cleanline-

ss within the setting of the condition where people live, but also to reduce the prevalence and incidence of communicable diseases.

Personal habits are discrete and independently modifiable. Individuals can voluntarily alter such behavior to maintain good personal hygiene. One of the main problems of Bangladesh is illiteracy. Forty four percent people of Bangladesh are reportedly illiterate (UNDP, 2011). It is unknown to them that simply practice of hand washing and provision of potable drinking water in adequate quantity can eliminate most water borne and water related diseases (Rashid *et al.*, 2004). Since about 90% of infections are carried to the body through the mouth with water, food, dirt etc., the importance of personal cleanliness and clean habits is obvious (Ghosh, 1969).

In Bangladesh, there are 18,756 secondary schools in which 17.191 million students are enrolled (BANBEIS, 2008). School as socializing institution for children and adolescents play a vital role in the development of healthy citizen. When the students are introduced with knowledge of personal hygiene and life style as they mature, they are in a better position as adult to maintain their own health

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and influence the health of the family. School health education program can play a vital role in changing health behavior of the people. Health management can easily be spread into the family, community through the school students. The present study was conducted among the secondary school students with a view to find out the status of personal hygiene among urban and rural students in terms of knowledge and practice and being intended to support a change of the role of the community from passive recipient to active participation in health development process by identifying their own problems.

Materials and Methods

This descriptive type of cross sectional study was conducted on the students of class IX and X in Police line high school (urban), Police line, Mymensingh city and in Kaunia high school (rural), Kaunia village, Sadar upazilla, Mymensingh, during the period from April to June, 2007. Total 132 students of the two secondary schools were selected purposively. A semi-structured questionnaire and observational checklist were used for collection of data (Supplemental material). A draft questionnaire was developed according to the objectives of this study. Prior to data collection the questionnaire was pretested and after that it was modified and finalized. Data were collected by face to face interviewing the students using the developed semi-structured questionnaire. Direct observation on physical appearance of the students were done and recorded in a checklist. All the collected data were checked, verified and edited and then analyzed (Chi square test) using statistical package for social science (SPSS version 11.5) with 95% level of confidence ($p < 0.05$).

Results

Among the 132 students enrolled in Police line high school (urban) and Kaunia high school (rural), 51.5 and 48.5% students belonged to class nine and class ten respec-

tively (Table 1). Based on gender 47.7% students were boys and 52.3% students were girls. The mean age was 14.5 ± 0.94 years (Table 4). The literacy rate of their parents *e.g.*, fathers and mothers were 81.8 and 69.7%, respectively. In urban and rural area 9.7 and 28.3% fathers of the students were illiterate, respectively (Table 2). Similarly regarding the mother's education, 19.4 and 43.3% were illiterate in urban and rural area, respectively (Table 2). Fathers and mothers illiteracy was significantly ($p < 0.05$) higher in rural area compared to urban areas' student.

Regarding the knowledge on the use of safe water, 93.2, 77.3 and 80.3% respondents mentioned tube well water as a source of safe water for drinking, bathing and washing, respectively (Table 2). Nearly eighty percent (79.5%) respondents mentioned that soap and water should be used for hand washing before meal, 90.9% stated that soap and water should be used to clean hand after defecation (Table 2). In respect of personal cleanliness 99.2% respondents washed their hand before taking meal, 97.7% took bath daily and 100% had habit of daily tooth brushing, 64.4% brush their teeth 2 times daily, 59.1% used tooth paste, 32.6% tooth powder, 4.5% charcoal and 3.8% meswak (Table 2 and 3). In the current study, the mean frequency of tooth brushing was 1.6 ± 0.5 in boys and 1.8 ± 0.5 in girls. The mean difference of tooth brushing was significantly ($p < 0.05$) higher in girls compared to boys. Similarly, the mean frequency of tooth brushing was also found significantly ($p < 0.05$) higher in urban compared to rural students (Table 4).

Table 1: Distribution of the respondents

	Urban		Rural		Total		P value
	n	%	n	%	n	%	
Class IX	36	50	32	53.3	68	51.5	
Class X	36	50	28	46.7	64	48.5	0.702
Total	72	100	60	100	132	100	

Table 2: Comparison between urban and rural secondary school in some selected variables

Variables	Urban (N=72)		Rural (N=60)		Total (Urban+Rural)	P Value
	n	%	n	%		
Socio demography						
Fathers education (illiterate)	7	9.7	17	28.3	18.2	0.005 ^s
Mothers education (illiterate)	14	19.4	26	43.3	30.3	0.003 ^s
Knowledge						
Tube well water (drinking)	64	88.9	59	98.3	93.2	0.039 ^s
Tube well water (bathing)	52	72.2	50	83.3	77.3	0.129 ^{ns}
Tube well water (washing)	58	80.6	48	80.0	80.3	0.752 ^{ns}
Tap water (drinking)	8	11.1	0	0.0	6.1	0.007 ^s
Tap water (bathing)	16	22.2	0	0.0	12.1	0.001 ^s
Tap water (washing)	12	16.7	0	0.0	9.1	0.001 ^s
Hand washing before meal						
Soap and water	58	80.6	47	78.3	79.5	0.752 ^{ns}
Only water	14	19.4	12	20.0	19.7	0.936 ^{ns}
Hand washing after defecation						
Soap and water	70	97.2	50	83.3	90.9	0.005 ^s
Soil and water	2	2.8	6	10.0	6.1	0.140 ^{ns}
Ashes and water	3	4.2	4	6.7	5.3	0.701 ^{ns}
Practice: tooth brushing						
Tooth paste	58	80.6	20	33.3	59.1	0.001 ^s
Tooth powder	13	18.1	30	50.0	32.6	0.001 ^s
Charcoal	0	0.0	6	10.0	4.5	0.007 ^s
Meswak	1	1.4	4	6.7	3.8	0.176 ^{ns}
Cleaning hair (Shampoo)	66	91.7	45	75.0	84.1	0.009 ^s

ns = Nonsignificant, s = Significant

Among the students 74.2 and 85.6% trim their nails once a week and cut their hair once a month, respectively (Table 5).

Discussion

The literacy rate and women education in Bangladesh is growing up gradually due to ongoing awareness among government and NGOs (Bangla, 2000) and the literacy rate of parents as found in this study is higher than that of national standard (55.9%) as reported by UNDP (2011). The participation of boys and girls in secondary education observed here is similar to the findings of Begum (2000), who conducted her study in Rotary School and Provati School in Khalishpur at Khulna and reported the participation of boys and girls as 46.4 and 53.6%, respectively with the mean age of 14.56 years.

In the present study, a trend in increase in the knowledge of the students regarding personal hygiene was observed. In addition, the knowledge of the students regarding the source of safe water for drinking, bathing and washing as documented in this study was found higher than the previous study reported by Begum (2000) in Rotary school and Provati School in Khalishpur at Khulna. This

Table 3: Distribution of respondents by their hand washing, bathing and tooth brushing

Habits	Respondents (n=132)	%
1. Hand washing (before taking meal and after defecation)		
Wash	131	99.2
Don't wash	1	0.8
2. Bath		
Daily	129	97.7
Not daily	3	2.3
3. Tooth brushing		
<i>Frequency</i>		
Once/day	41	31.1
Twice/day	85	64.4
Thrice/day	6	4.5
<i>Time</i>		
After rising from the bed at the morning	117	89.3
Before going to bed at night	83	63.4
After breakfast	16	12.2
After every meal	4	3.1

Table 4. Association of age, family members and frequency of tooth brushing

Parameters	Urban	Rural	P value	Boys	Girls	P value
	Mean±SD	Mean±SD		Mean±SD	Mean±SD	
Age	14.5±0.73	14.6±1.15	0.616 ^{ns}	14.7±0.96	14.3±0.90	0.031 ^s
Family members	5.2±1.40	6.3±1.50	0.001 ^s	5.3±1.4	6.1±1.60	0.007 ^s
Frequency of tooth brushing	1.9±0.40	1.7±0.60	0.001 ^s	1.6±0.5	1.8±0.50	0.041 ^s

ns = Not significant, s = Significant

may be due to increased awareness among people about personal hygiene and government initiatives through print and electronic media.

The knowledge and practicing behavior of the students regarding hand washing before taking meal and after defecation and use of soap and water for washing hand was found close to the finding of Yalcin *et al.* (2004) and Vivas *et al.* (2010) and higher than the findings of Begum (2000). Yalcin and colleagues (2004), in their study found that 99.2% of the adolescent students (first grade) use soap and water for washing hand before taking meal and after defecation. Vivas *et al.* (2010) reported in their study that most students washed their hands before meals (99.0%), but only 36.2% used soap, whereas Begum (2000) found that 33.93 and 77.68% students used soap and water for hand washing before taking meal and after defecation, respectively.

In the present study, more students (97.7%) were found to take bath daily compared to the earlier work of Rahman (2001), who performed a study regarding the practice of personal hygiene among school going and non-school going students in Voberchar Owagir Ali High School of Munsiganj district in 2001 and found 85.83% took bath daily. As stated earlier, this increased tendency of students to take bath daily in recent years could be related with the increased awareness among the parents about personal hygiene.

Table 5. Distribution of the respondents by frequency of nail trimming and hair cut (n=132)

Parameter	Interval	Respondents (n=132)	%
Nail trimming	Once a week	98	74.2
	At any time	31	23.5
	Fortnightly	3	2.3
Hair cutting	Once a month	113	85.6
	After every 2-month	17	12.9
	Once a week	2	1.5

Here, the frequency of tooth brushing was found higher (1.8±0.5) in girls compared to boys as reported by Al-Ansari (2007). He also reported twice-a-day tooth brushing frequency among female students and often much more compared to boys. A slightly less in tendency to trim the nail as a prerequisite for better personal hygiene was found among the students in the present study compared to those reported by Rahman (2001), who conducted his study in Vopberchar Owagir Ali High School of Munsiganj district and found that 93.33% students trimmed their nail once a week and 6.67% once a month. However, present study was carried out on a small population in a particular area. Hence, further in-depth study across the whole country involving more population may reflect the actual scenario.

Conclusion

An increase in the trend of knowledge and practice about personal hygiene was observed among the school students with some exceptions.

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