

Endline Survey: Establish and Manage an External Monitoring System in Dhaka City Covered by WASH Support for LIC Project



Prepared for



DWASA Focal Point for WASH LIC Project
&
Water & Environmental Sanitation Section
United Nations Children's Fund (UNICEF)
Bangladesh

Prepared by

Abul Barkat

Golam Mahiyuddin, Bazlur Rahman, Kazi A Mohib, Matiur Rahman



Human Development Research Centre

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Dhaka: September 2013

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¹ Professor, Department of Economics, University of Dhaka & Team Leader of the Study

² Senior Consultant, Human Development Research Centre

³ Monitoring & Evaluation Expert and Assignment Coordinator

⁴ Project Management Expert of this Study

⁵ Senior Consultant, Human Development Research Centre

SUMMARY TABLE OF FINDINGS

Topic	Indicator	Value in End-line	Value at Baseline	Change	
Background Characteristics	Mean age of the respondents in years	23.8 Years	23.7 Years		
	Male over female sex ratio	100:103	100:99		
	Marital status	Married	49.8%	51.2%	
		Unmarried	46.5%	44.1%	
	Household size	4.4	4.6		
	Female headed household	12%	16%		
	Economically active population (15-60 years)	39.1%	37.2%		
	Education	No education	46.5%	49.5%	
Primary		10.0%	11.0%		
Junior		14.0%	13.0%		
Economic characteristics	Average monthly net income	?	5027 Taka		
	Poverty status DCI method	Non poor	15.7%	20.9%	
		Absolute poor	84.3%	79.1%	
		Hardcore poor	61.4%	55.2%	
Water supply	Improved source of drinking water	100.0%	100.0%		
	Adequacy of water	99.3%	65.6%	33.7%	
	Ownership of water sources	Landlord/Local influential person	36.7%	61.5%	-24.8%
		NGO/Donor agency	39.6%	24.1%	15.5%
		WASH LIC project	-	39.6%	39.6%
	Quality of drinking water (Free from bacterial contamination)	83.7%	-		
	Treatment of drinking water before consumption	26.3%	23.0%	3.3%	
	Physical condition of the water points	Have concrete platform	51.1%	70.7%	-19.6%
		Attached drainage system	97.4%	83.6%	13.8%
		Platform in good condition	74.1%	66.8%	7.3%
	Time spend to collect drinking water	23.9 mins.	46.2 mins.	22.3 mins.	
	Time spend to collect drinking water as well as water for other domestic use	44.5 mins.	58.2 mins.	13.7 mins.	
	Experience barrier in water collection	13.5%	35.7%	22.2%	
Storage of drinking water	Cleaned container	91.2%	87.4%	3.8%	
	Cleaned and covered container	87.6%	82.2%	5.4%	
Hygiene and Sanitation	Adequate knowledge on hygiene and sanitation	99.1	88.7	10.4%	
	Major sources of knowledge	Health workers	23.2%	22.5%	
		Field agency	42.8%	7.8%	
		TV	7.8%	25.1%	
		NGO worker	11.0%	15.9%	
	Reported practice of washing both hands with soap (or ash) at 4 key critical times	Before eating	15.4	NA	
		Before feeding baby	10.7	NA	
		After defecation	77.3	NA	
After cleaning baby's bottom		57.7	NA		
Observed practice of washing both hands with soap (or ash) at 4 key critical times	Before eating	5.4%	1.5%	3.9%	
	Before feeding baby	5.0%	0.0%	5.0%	
	After defecation	37.3%	14.2%	23.1%	

	After cleaning baby's bottom	30.8%	14.9%	15.9%
	Knowledge on proper way to hand wash	21.9%	10.0%	11.9%
	Occurrence of diarrhea	11.5%	15.5%	-4.0%
Menstruation: Management & hygiene	Mean age at first menstruation	12.5 Yrs.	12.6 Yrs.	
	Aware about menstruation before menarche	47.9%	43.9%	4.0%
	Source of knowledge on menstruation			
	Mother	56.9%	62.9%	
	<i>Bhabi</i> /Sister	40.2%	39.2%	
	Friend	33.8%	30.1%	
	NGO worker	15.0%	12.5%	
	Menstrual hygiene practice			
	Use of old rag	67.4%	74.6%	-7.2%
	Use of new rag	13.3%	8.9%	4.4%
	Use of sanitary pad	17.6%	14.4%	3.2%
	Washing external genitals	95.5%	91.8%	3.7%
	Frequency of cleaning twice or more per day	95.5%	76.2%	19.3%
	Frequency of change of absorbent twice or more per day	63.3%	63.1%	0.2%
	Washing re-usable rag with soap and water	76.2%	76.2%	0%
	Drying the washed rag under sun	36.8%	30.5%	6.3%
	Ideal place of drying washed cloth under sun	59.5%	49.3%	10.2%
Disposal of menstrual absorbent				
Bury under the ground	23.1%	10.6%	12.5%	
Burn with other waste	5.5%	8.7%	-3.2%	
Throw randomly with other waste	69.5%	68.5%	1.0%	
In the latrine	1.7%	1.6%	0.1%	
Problem in keeping clean during periods				
Lack of privacy for changing rags	61.7%	63.5%	-7.3	
Lack of adequate water	10.2%	34.8%	-24.6	
Overcrowding at the place of washing rags	10.2%	13.5%	-3.3	
School sanitation	Knowledge of washing both hands with soap (or ash) at 7 key critical times			
	Before eating	75.0%	69.0%	6.0%
	Before feeding baby	56.0%	53.0%	3.0%
	After defecation	87.0%	80.0%	7.0%
	After cleaning baby's bottom	70.0%	69.0%	1.0%
	All above 5 aged family members should use sanitary latrine	48.0%	49.0%	-1.0%
	Drinking water should be taken from arsenic free tube-well	32.0%	28.0%	4.0%
	Drinking water jar should be kept covered	89.0%	82.0%	7.0%
	Reported practice of washing both hands with soap (or ash) at 3 key critical times			
	Before eating	51.0%	46.0%	5.0%
After defecation	87.0%	80.0%	7.0%	
Use sandal while go to latrine	100.0%	100.0%	-	
Student enrolment	% of school aged girls and boys of the school catchment areas:			
	Girls	29.1%	26.1%	3.0%
	Boys	24.1%	24.1%	-

Acknowledgement

Bangladesh is committed to achieve the Millennium Development Goals (MDGs) in the water-and-sanitation sector by 2015. Poor people of Bangladesh are the major victims of the poor sanitation and safe water condition in Bangladesh. About 30 % population of Greater Dhaka City live below upper poverty line and 11.3% live below lower poverty line. It indicates the gravity of the problem in Dhaka city. As such Bangladesh ,DFID and UNICEF have jointly planned to handle with the problem and undertaken a pilot project titled, "WASH support for Low Income Communities Project" to be implemented in five clusters of Greater Mirpur areas of Dhaka city corporation . The clusters are Balurmath slum, Vasantek slum, West Damalkot slum, Muslim camp and Rahmat camp. The intervention includes installation of water points, sanitation facilities and promoting safe water and sanitation knowledge of clientele population.

Human Development Research Centre (HDRC) extends its gratitude to UNICEF, DFID and DWASA for entrusting HDRC with the assignment titled "Establishing an External Monitoring System for WASH-LIC" under this Project. The accompanying End-line Survey – the first component of the assignment (having three components: Baseline Survey, Process Monitoring and End-line Survey) – has been successfully completed.

We are indebted to all concerned officials of UNICEF, DFID, DWASA, and Field Agencies for their dedicated support- without which successful completion of the survey could not have been possible.

We thank all the great and lovely souls at UNICEF-Bangladesh for their valuable input, constant care and cooperation, unstinted support, and constructive advice at all the stages of this research work. We are particularly grateful to Hrachya (Charlie) Sarghyan (Chief, Water & Environmental Sanitation Section), Hamidou Maiga (WASH Specialist, WESS), Shofiqul Alam (Urban Development Specialist, Water and Environmental Sanitation Section), Managing Director (DWASA focal point for WASH LIC Project), Monirul Alam (WASH Officer, WASH Section).

Above all, we will remain ever grateful to the respondents and participants of the survey- without whose profound cooperation, the implementation of the Study would have remained ineffective and impossible.

We are also grateful to our field staff who had worked relentlessly in the process of collecting data and information.

The in-house staff members of HDRC worked extremely hard at all the stages of the study. We thank all these uncomplaining souls of the HDRC Family.

Prof. Abul Barkat, Ph.D.
Team Leader for the Baseline Survey
&
Chief Advisor (Hon.), HDRC

Dhaka: September 30, 2013

Abbreviations

AWP	Annual Work Plan
DCI	Data Collection Instrument
DDR	Demographic Dependency Ratio
DFID	Department for International Development
DSK	Dushtha Shasthya Kendra
DTW	Deep Tube-well
DWASA	Dhaka Water Supply and Sewerage Authority
EMA	External Monitoring Agency
FGD	Focus Group Discussion
HDRC	Human Development Research Centre
HH	Household
IGA	Income Generating Activities
JMP	Joint Monitoring Programme
KII	Key Information Interview
LIC	Low-Income Communities
MDG	Millennium Development Goal
NDBUS	Nagar Daridra Basteebashir Unnayan Sangsha
NGO	Non-Government Organization
PPS	Probability Proportional to Size
PSTC	Population Service Training Centre
TW	Tube-well
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
UPPR	Urban Partnerships for Poverty Reduction Project
WASA	Water and Sewerage Authority
WASH	Water, Sanitation and Hygiene

Executive Summary

Background and methodology: WASH-LIC Project has been implemented in five areas of Mirpur greater area of Dhaka city which are inhabited mostly by people of lower echelon of the society. The residents largely belong to poor and near poor ranks of economic status. Great majority of the residents of three areas speak in Bengali and whole majority of other two areas speak in Urdu. Bengali speaking areas are: Vasantek, Dhamalkot and Balurmath while other two areas are Muslim camp and Rahmat camp. PSTC/NDBUS and DSK are the two interventions implementing agencies under the project. The immediate objectives of the project are to improve water supply system, sanitation facilities and sanitation knowledge of the local residents.

As the external monitoring agency, HDRC has conducted the Baseline Survey, 4 Process Monitoring Survey and the End-line Survey. The end-line survey has been successfully conducted and this is the end-line report.

A total of 1,400 households interviewed in five project clusters applying probability proportional to size approach. Households selected directly from household list of each cluster/area. Interview with 421 adolescent girls and 421 adolescent boys were also conducted FGD and KII have also been conducted for gathering qualitative information.

Study Findings

Household size: Household size in the project areas are (4.4) and quite similar to the national average (4.4). During baseline, the HH size was 4.6.

Household head status: Most of the households (88%) are headed by male members, and 12% households are headed by female members in the endline survey. In the baseline survey 84% and 16% of the households were headed by male and female respectively.

Age composition: Analysis of age structure shows that the population is comparatively young. In project households 72.9% of the population is below 35 years of age but in the baseline survey it was found that 69% of the population was below 35 years of age in project households which is slightly higher than (66%) in national level. The mean age of population is 23.8 years in the endline while in the baseline it was 23.7 years in the project households.

Dependency ratio: The proportion of economically active population (in the age bracket of 15-64 years) is 39.1% in surveyed households, and in the baseline survey it was 37.2% (in the bracket of 15-60 years).

Sex ratio: The sex ratio in surveyed HHs is 100.4 in the endline and in the baseline it was 99.1 where as the national sex ratio of Bangladesh is 100.3 (number of males per 100 females).

Status of occupation: The surveyed hhs have been involved in different types of occupations. A wide range of occupations (16) in survey area includes homemaking (20.3), labour (16.1%), salaried job (12.7%), rickshaw/van pulling (22%), small trading (3.6%), student (19.5%), children (17.2%), handicraft (8%), driving (1.6%). Around 19% of the population was homemaker, labour 11%, salaried job 12%, rickshaw/van pulling 3%, small trading 4%, student 15%, children 24%, handicraft 7% and driving 1.3% in the baseline survey.

Marital status: Marital status has been categorized as married, unmarried, separated, widowed/widower, and divorced/abandoned. The endline survey reveals that the population of unmarried people is 50%. Around 3% of the population is widowed and 0.3% is divorced, compared to 51.2% unmarried people, around 3.5% widowed and 0.2% divorced in the baseline survey.

As the external monitoring agency, HDRC has conducted the Baseline Survey, and Process Monitoring Survey.

Ownership status of homestead: As understood empirically, housing condition is one of the important pointers in the set of living standard indicators. Data furnished in this study clearly demonstrates that during the end line, 4.8% households have their own house compared to 3.9% households in the baseline. It indicates that over baseline households having own house increased by approximately 1.0% in the endline. On the other, in the endline, 36.2% households have rented house in contrast to 36.0% in the baseline implying that the increase of households living in rented houses is very insignificant (only 0.2%) as to mention here. At the same time, 17.4% households in the endline is found to possess house built on other government land where as it was about 1.0% in the baseline. Among different categories of houses built on by the respondents, there is a marked increase in the endline in this regard (16.4%).

The study reveals that 80.8% households are found to have only “one” dwelling room in the endline, a figure close to the baseline (80.1%) showing only 0.7% increase. On the other, 19.0% households had reported belonging “two” during the endline in comparison to 16.6% in the baseline, an increase of 2.4% in total. Again, in the endline 2.3% households possessed “three” dwelling rooms revealing a very trivial increase (only 0.3%) over baseline .

Ownership of land: Reportedly, on average, the total amount of land (homestead, agricultural, pond, garden, waste land and others) per household was only 1.8 decimal in the baseline compared to 1.1 decimal in the endline, a decrease by 0.7 decimal.

Moveable assets: Regarding assets, a large majority of households during both the survey mentioned about utensils (baseline 96.2%; endline 96.9% households); furniture (baseline 94%; endline 89.8% households); fan (baseline 87.8%; endline 87.5% households); mobile phone (baseline 85.1%; endline 84.8% households); colour TV (baseline 63.7%; endline 64.9 % households); gold ornament (baseline 69.0%; end line 53.0% households) as their most important domestic belongings. The corresponding data highlights that the percentages of households in the endline by belonging of assets like utensils and colour TV increased slightly comparatively over baseline where as in other cases it shows a decrease: furniture (4.2%); fan (0.3%); mobile phone (0.3%); gold ornaments (16.0%).

Income, savings and credit: Distribution of households by different income groups clearly exposes that of all 16.5% households in the baseline occupies the income bracket less than Tk. 5,000 compared to 17.6% households in the endline, an increase by 1.1% households over baseline. Moreover, 56.5% households fall in the income bracket Tk. 5001-10,000 followed by 18.2% households in the income bracket Tk. 10,001-15,000 in the baseline.

During the endline survey about 82.1% households saved less than Tk.5, 000 only, where as in the baseline 81.2% households saved the same amount of money. The increase in the percentage of households in this regard is niggling (0.9%). Reportedly, 97.6% households in

the baseline and 98.1% households in the endline gave loan to others amounting less than Tk. 5000 meaning only a slight increase (0.5%) in the percentage of households advancing this ceiling of loan. In contrast, less than Tk.5000 has been received as loan by 65.7% and 70.1% of all households in the baseline and endline respectively. This manifests that the percentage of households receiving loan in this ceiling did not increase much (4.4%).

Food consumption and food security: The baseline survey indicates that the calorie intake is 1791 kilo calorie per person per day compared to that of 1722 kilo calorie in the endline showed a decrease in the calorie intake which is really discouraging from the viewpoint of food consumption.

The study also examined the food security status of the households surveyed. They had been asked about their ability to afford 3 meals a day round the year. Reportedly, 76.8% and 77.5% households in the base and endline have expressed the affordability for 3 meals/day round the year (Figure 3.10). In terms of affordability this scenario is not at all encouraging for the households in the project areas.

Household's monthly expenditure: Data highlights that monthly total expenditure (food and non-food) of the household during the base line survey is Tk. 9032 compared to Tk. 9874 in the endline showing an increase of Tk.842 over the earlier period. However, per person monthly total (food and non-food) expenditure in the base line is Tk. 2029 and Tk. 2320 in the end line indicating an increase of Tk.291.

Poverty status: Using the DCI method, 79.1% of the households in the base and 84.3% in the end line are absolute poor. It shows that the percentages of absolute poor households have been increased in the endline. The survey clearly reflects that the incidence of hardcore poverty lies on 55.2% and 61.4% households respectively in the base and end line respectively which amounts to say that the situation in this regard is a bit discouraging.

Using CBN method it is estimated that 32.2% and 21.0% households respectively during the base and end line survey live below upper poverty line indicating a fall 112% households. Reportedly, 17.8% in base and in the end 9.9% households live below lower poverty line. Thus the percentage of households in the lower poverty line also decreased in the endline by about 8%.

Sources of water: The supply source of drinking and cooking water both at baseline and end-line is exclusively from improved sources (piped water and tube-well or boreholes). The primary source is piped water (82.7 percent at baseline and 78.3 percent at end-line), followed by water from deep tube-well (17.3 percent at baseline and 21.8 percent at end-line).

Adequacy of water: Compare to 65.6 percent households at baseline, percentage of households get adequate amount of water is increased to 99.3 percent of the households at end-line for drinking as well as domestic use round the year in the surveyed low income settlements of Dhaka City.

Ownership of water sources: The overall three-fifth (61.5%) of water sources at baseline were owned/installed by the landlord and/or local influential and a little less than one-fourth (24.1%) of the respondents by NGOs/International agencies. At end-line, water sources owned/installed by landlord and/or local influential is decreased to 36.7 percent and increased to one-fifth of the respondents installed by the local NGO or international agencies. Apart from these, 39.6 percent of the respondents collecting water from water sources installed by WASH LIC project.

Physical condition of water points: At the baseline 70.7 percent of the households collect water from the water points which have a cemented platform around the water points. The corresponding figure at end-line is decreased to 51.1 percent. However, platform attached to small drainage system is increased to 97.4 percent at end-line as compared to 83.6 percent at baseline. Physically, percentage of platform is in good condition is increased to 74.1 percent at present as compared to 66.8 percent at baseline.

Quality of drinking water: Reportedly, water source of 83.7 percent of the households is free from bacterial contamination; however, 7.6 percent households do not know the result of microbiological test of water. Comparable data at baseline is not available

Purification of water: Treatment of drinking water before consumption shows a little improvement at end-line (26.3%) than it was practiced at baseline (23.0) and boiling of water is the primary means to purify water before consumption both at baseline and at end-line.

Time spent for collection of water: The average time require for collecting drinking water (including queuing time) in all the surveyed slums/camps is declined to 26.9 minutes per day at end-line as compared to 46.2 minutes per day at baseline. Simultaneously, the average time spent to collect water for drinking as well as for other domestic use per day is declined to 44.5 minutes at end-line as compared to 58.2 minutes at baseline.

Barriers in water collection: Compare to 35.7 percent at baseline, households experience some kind of limitation in getting water is decreased to 13.5 percent at end-line. Limitation is generally happened in the morning (52.7% at baseline and 65.1% at end-line), and at night (48.0% at baseline and 39.2% at evening) largely due to overcrowding at baseline (69.0%) and at end-line (60.8%) and inadequate supply of time according to 49.8 percent of households at baseline and 28.6 percent at end-line.

Storage of drinking water: Currently, at end-line, containers found to be cleaned is raised to 91.2 percent as compared to 87.4 percent at baseline. Additionally, compare to 82.2 percent at baseline, surveyed households likely to store drinking water in a covered container is raised to 87.6 percent at end-line.

Inclusion of women, differently able person, old-aged and children in water point installation and use: In all the low income settlements, water points are largely installed without the any discussion with the women, disabled, elderly person and children as regard to advantage and disadvantage in using those both at baseline and end-line.

Knowledge on hygiene and sanitation behaviours: Aggregated overall knowledge coefficient of the surveyed respondents on sanitation and hygiene behaviours is increased to 0.92 at end-line as compared to 0.70 at baseline. Moreover, compare 88.7 percent at baseline, as high as 99.1 percent of the mothers/caregivers are adequately aware on sanitation and hygiene behaviours at end-line. Field agency (42.8%) and Government health workers (23.2%) are the prime sources of knowledge at end-line as compared to TV (25.1%) and Field Agencies (22.5%) at baseline.

Hand washing practice of the mother/care giver at critical times: In contrast to almost none at baseline, a few of mothers/caregivers wash both their hands with water and soap before eating, feeding children, before preparing food or distribution of food at end-line. Practice of washing both hands with soap (or ash) after daefecation is increased to 37.3 percent at end-line as compared to 14.2 percent at baseline. Similarly, percentage of washing both hands with water and soap (or ash) after cleaning the baby's bottom is raised to 30.8 percent than it was among the 11.5 percent at baseline. The percentage of mother/care givers wash their both

hands with soap (or ash) after cleaning faeces of the children is 31.9 percent as compared to 11.5 percent at baseline.

Knowledge on proper way to hand wash: Against to 10 percent at baseline, the mother/care givers who could demonstrate the proper way of hand washing their hands with soap and water is improved to 21.9 percent at end-line.

Occurrence of diarrhoea: Compare to 15.5 percent at baseline, overall occurrence of under-5 diarrhoeal diseases in preceding 3 months from the date of survey is 11.5 percent.

Increased scope of use of sanitary facilities: New community latrines have been established in the clusters that has increased the scope of using sanitary facilities. The queue to latrine will be now shorter.

Use of newly installed sanitation facilities: About 10-12 percent community households shall now use sanitary new latrines established under WASH-LIC Project.

Reduction in use of unscientific sanitation: Use of flush/pour flush to water bodies/ditches/ponds/ reduced to around 9% from 70% in the baseline.

Use pattern of latrine type: Majority households use community latrine (49.1% at baseline and 43.9% at end-line) followed by shared latrine (36.3% baseline and 36.2% at end-line) and then individual latrine (13.2%, at baseline and 15.2%) at end-line)

Availability of cleaning agent: Percentage of households are found to have arranged some kind of cleaning agent, in addition to water in their latrines is increased to 87.0 percent as compared to 74 percent at baseline.

Comfortability in use of latrine by female: Majority households reported that female can comfortably use the latrine. However, percentage female, who can use the latrine comfortably is slightly increased to 85.6 percent at end-line than it was 82.9 percent at baseline.

Privacy for women: Majority participants agreed (FGD) that in the clusters where they live is not a place to live with proper privacy for women. Here women are to go to latrine with a pot in hand for defecation in the presence of many male. Male and female are to wait in queue for the same purpose. This is shameful to them. Moreover the latrines are not totally well protective. At least the wall, roof and door should be so constructed that does not allow outsiders to see inside of latrine.(FGD finding).

Place of disposal of solid household waste: Compare to 42.8 percent at baseline, 37.2 percent of the households dispose the solid household waste hygienically in dustbin, barrel, underground pit, composting pit or in designated pot/packet at end-line

Place of disposal of liquid household waste: Currently, the household liquid waste of 46.4 percent households drains away to public drain as compared to 37.7 percent at baseline. Additionally, liquid waste of some 11.1 percent households flows away to soak pit at present as compared to merely 4.5 percent at baseline. Nonetheless, liquid waste 36.6 percent households drain to surrounding ditch at present as compared to more than half (55.5%) of the households at baseline.

Age at first menstruation: The average age at first menstruation (menarche) is almost identical at baseline and end-line accounting to 12.6 years and 12.5 years respectively. Percent at end-line aware

Knowledge on menstrual management: Compare to 43.8 percent at baseline, percentage of adolescent girls aware about menstruation before onset of menarche is raised to 47.9 percent at end-line. Similar to baseline (92.7%), the most familiar absorbent material known to adolescent girls is old rag or old piece of cloth at end-line (87.6%), followed by sanitary pad/napkin (81.0% at endline against 62.6% at baseline).

Source of information: Alike baseline, mother (62.6% at baseline and 56.9% at end-line), *bhavi* or elder sister (39.5% at baseline and 40.5% at end-line), friends (30.1% at baseline and 33.8% at end-line) and to some extent NGO workers (12.5% at baseline and 15.0% at end-line) are the primary sources of information at end-line regarding menstrual management.

Menstrual hygiene practice: Compare to 74.6 percent at baseline, percentage of adolescent girls use re-usable old rag during menstruation is decreased to 67.4 percent at end-line. Use of sanitary napkin/pad (17.6%) and new rag (13.3%) is somewhat raised at end-line as compared to baseline, amounting 14.4 percent and 8.9 percent respectively.

Cleaning and changing: Against to 76.2 percent at baseline, as high as 95.5 percent of the adolescent girls at end-line clean their genitals more than two times daily during the periods.

Drying and storing: Overall practice of drying the re-usable rag under sun is increased to 36.8 percent at end-line as compared to 30.5 percent at baseline. More than three-fifth (65.3%) of the adolescent girls at baseline and 77.8 percent at end-line store the re-usable cloth in a polythene or paper bag in between the menstrual period.

Disposal of menstrual absorbent: More than two-third of the surveyed adolescent girls at baseline (68.5%), as well as at end-line (69.5%) dispose their unused/unusable absorbent together with household solid waste. Other less reported place of disposal at baseline and end-line are buried/bury under soil, burned/burn with other household wastes and latrine.

Experiencing physical problem and problems in keeping clean during the period: Compare to 14.6 percent at baseline, as low as 1.4 percent of the girls experience headache together with pain in the waist and lower abdomen during the menstrual period at end-line. Beside physical problem, according to 63.5 percent of girls at baseline 61.7 percent at end-line, lack of privacy together with inadequate water (10.2% at baseline and 34.8% at end-line) was/is one of the prime factors hindered/hinder cleanliness during the period.

Restriction(s): Similar to baseline, focus group discussions at end-line also revealed some prejudices which are usually imposed on these adolescent girls during their menstruation. For instance, adolescent girls are forbidden to eat fish, meat and eggs or acidic/citrus fruit. Restricted mobility at midday and dusk as well as not to go some specific places.

Role played by the males: Both at baseline and at end-line, some of the respondents of FGDs deny the roles and responsibilities of the males during periods, while others, acknowledge the roles plays by the males by saying that they purchased/purchase sanitary pad, medicine, tissue paper as well as took/take to the service providers when necessary during the periods.

School enrolment: Majority of the school aged (6-10) children residing in the school catchment areas are not enrolled in the schools. It cannot be said that these children are not going to school, because there are few kindergarten schools in these areas. Enrolment of girls increased by (29.1-26.1) 3 percentage points while that of boys remained static around 24%.

Water supply system installed: Each of Dhamalkot Govt. Primary School and Bangladesh Freedom Fighters' High School has got one Rain Water Harvesting System and One DWASA Water Supply System with water purification arrangement. Certainly water supply system has been strengthened in these two schools. The supply system provides filtered water that looks clean, but it is not known whether the water is germ free.

Sanitation facilities installed: Four new latrines installed under WASH-LIC project in the Bangladesh Freedom Fighters' School at Vashantek and other three new latrines installed at Dhamalkot Govt. Primary School under the same project. Certainly provision of latrine increased in both the schools. But 6 out of 12 latrine of Dhamalkot Govt. Primary School and 5 out of 9 latrine of Bangladesh Freedom Fighters' School at Vashantek found under lock and key at the end-line survey. School teachers think the students make the latrine dirty and cleanliness of the latrine remain a problem. So, only the number that suffices the need is kept open.

Cleanliness maintenance: The latrine, school class rooms and school compound are maintained moderately clean, rather is not totally clean. However, the endline scenario was found to be better than that of baseline in respect of cleanliness maintenance in the class room and school surrounding areas for the Bangladesh Freedom Fighters' school at Vashantek.

Improvement in sanitation knowledge and practice: Indication of improvement in the Sanitation knowledge and practice by the students is there but, in true sense, any substantial change can not be not expected within a short period of 6-7 months. However, positive change occurred for most of the indicators to the range of 1 to 7 percentage points that shown in the summary table.