

**Baseline Study for Return on Investment (ROI) study on the
improvement of WASH situation of garment factory
workers in the factory and in their living place**



Submitted by

Human Development Research Centre

humane development through research and action

November, 2019

Abbreviations

BDT	Bangladeshi Taka
EPB	Export Promotion Bureau
FGD	Focus Group Discussions
FHM	Food Hygiene Management
HH	Household
HDRC	Human Development Research Centre
JMP	Joint Monitoring Programme
KII	Key Informant Interviews
MHM	Menstrual Hygiene Management
RMG	Readymade Garments (RMG)
ROI	Return on Investment
SDG	Sustainable Development Goal
TVC	Television Channel
USD	US Dollar
WASH	Water Sanitation and Hygiene

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Executive Summary

Background: The ready-made garments (RMG) makes a significant contribution to the national economy. Most workers reside in and around Narayanganj in low settlement areas or 'worker colonies' with lack reliable access to clean water, proper sanitation facilities, and drainage systems, leading to the risk of rapid spread of water-borne illness. WaterAid Bangladesh provided technical and financial support to Sajeda Foundation to implement a project in three selected garment factories. The workers in the target factories live in low income settlements scattered across Rupganj, Araishazar, and Sonargaon Upazilas of Narayanganj district. The technical support extended to increasing the access to WASH services in those areas. The present assignment is a baseline study of improving access to WASH for these three RMG factory workers as well as their household members.

Demographic Characteristics: About three-fourth of the respondents were aged between 20 and 34 years, irrespective of their sex. Majority of them were currently married (69%). About three-fifth of the respondents (77%) experienced to study secondary or higher level; education rate is comparatively higher in male workers than female workers.

Average monthly income of the surveyed responded was amounted 12,242 BDT. About 4 out of 5 of them (81.8%) had income between 7,000 and 16,000 BDT. Average monthly expenditure of the respondents or their households was amounted 10,357 BDT while expenditure on WASH and health services was 235 and 456 BDT respectively.

Return on Investment: A pathway has been mapped out for the ROI for achieving not only business value but also non-monetary changes through the intervention. The ROI study will follow four identified key direct quantifiable benefits as like as i) Reduced employee absence ii) Improved quality iii) Increased productivity iv) Reduced employee turnover. For this reason, a baseline survey has already been conducted for this WASH intervention at selected RMGs in order for assessment and understanding of the financial benefits after a certain timeframe.

From the factory information, it is observed that 0.02% of man-days was lost due to WASH related diseases and menstruation within last six months preceding the survey while 0.09% man-days was lost due to other diseases within the same time frame. Further, 0.41% man-days were lost due to other reasons personal causes. Overall, 99.5% of the man-days resulted in successful completion of office hours within this period.

On average a worker produced 247 pieces of goods per day within office hours while they produced 43 pieces of goods per day during overtime in the last 15 days preceding the survey. Overall, 4.04 percent of delivered pieces were rejected in 6 months preceding survey. The surveyed workers received an average monthly salary of 12,242 BDT per month while their average earning from overtime is 2,086 BDT.

According to the RMG factory authority, the rate of employee turnover is 3.6%. Currently, 17.6% of workers receive some types of health services from the factories while the average health expenditure per patient is 60 BDT only. According to the response of the workers, 16% workers have counted economic loss due to water borne losses. The overall loss accumulates to 1.6 million BDT. In addition, it should be highlighted here that average WASH expenditure per worker per day within the factory is 16.3 Tk.

The overall annual monetary loss is 376.5 million BDT (4.44 million US\$) of which 68.4 million BDT (0.81 million US\$) is WASH related disease and menstruation.

Access to water: Based on the criteria of newly developed SDG service level, all the household members have access to the facility of basic service level for drinking water as all are using improved

water sources. According to the opinion of a majority portion of the respondents (87.6%), water points remain functional and usable for nearly round the clock in the whole year. On the contrary, only 24.9% respondents reported to have followed all the procedures of water safety plan.

Access to sanitation: According to the newly set up SDG service level, only 10.6 percent households have access to basic service level; while 29.6 percent are using facilities of limited service level.

Access to handwashing facility: In terms of SDG service level categories, only 12.5 percent have the facility of basic service level for handwashing; while a few respondents (6.3%) are using the category of limited service level. Most importantly, only 18.8 percent of all respondents use a separate place for handwashing; while 66.6 percent of them have access to soap or liquid soap in handwashing place. According to their response, most of them (90.6%) have knowledge on handwashing with soap after defecation but only 57.4 percent of them were in real practice.

Menstrual Hygiene Management (MHM): According to the findings of baseline survey, majority (60.4 percent) of the women workers in reproductive age group use disposable sanitary napkin; while 35.3 percent like to use reusable cloths. Cleaning and drying issues are also important for safe hygiene management. In this regard, according to their response, 78.2 percent generally wash the reusable MHM cloths using soap or savlon and 14.5 percent wash with only water. With regard to drying practice, 26 percent do it in sun light; while 74 percent follow unhygienic hidden drying.

Food Hygiene Management: Most of the respondents (81.1%) do not follow all the essential steps of food hygiene management.

Disease Occurrence: Findings reveal that 41.1 percent household had at least one member suffered from any diseases within last one month. About 10 percent of them suffered from water borne diseases. Average treatment cost for each of the disease incidence was amounted 894 BDT; while additional financial loss incurred was estimated to be 661 BDT.

WASH at Factory: Findings reveal that almost all the respondent drink water from factory owned deep tube well at the factories (99.5%). About half of the respondents reported that cleanliness in latrines at the factories is 'good', which is followed by 'very good' (29.5%) and 'moderate' (19%). Handwashing facility was available in 92.3 percent factory latrines with soap and water being available in 94.9 percent of these facilities. However, handwashing practices among the respondents were not satisfactory as only 28.4 percent respondents reported that they wash their both hands with soap and water.

Menstrual Hygiene Management (MHM) at Factories: Among the RMG workers, more than half of them (56.7%) like to use sanitary napkin for MHM. One-third of them (33%) still use reusable cloth while 11.7 percent choose leftover garments generally known as "Garments Jhut". At time of working hours, majority of them (61.5%) dispose of their MHM materials in the flash toilet; while 30.8 percent bring it back home; even a fewer (7.7%) dispose it of in the drain.

Food Hygiene Management at factories: According to the reply of the RMG workers, 42.5 percent are used to visiting home for having lunch; while 39.4 percent usually bring cooked food from home and eat at factory dining. A few of the workers (16.6%) regularly have their lunch from the factory dining being a member of it. Most of the garment factory workers (88.4%) have responded that there are available shelf or rack for storage of cooked food at the factories. Half of the workers (50.3%) have the opportunity to store food in those places; while 19.3 percent can avail this opportunity subject to availability of space for this.

Chapter 1: Introduction and Methodology

1.1 Introduction

The Readymade Garment (RMG) sector in Bangladesh is quite successful with huge economic potentials. However, factories in the supply chain are under close scrutiny for compliance related to safety, security, environment and employment conditions. More than 80% workers of the RMG factories are female and live with several deprivations. Most of them live in different slum communities that mushroomed near the industrial hubs where water, sanitation and hygiene (WASH) facilities are very poor and limited. WASH deprivation is likely to have several implications on their health and wellbeing which in turn likely to affect individual productivity and consequently, the productivity of the factory.

Addressing WASH crisis among RMG workers in Narayanganj, a project is being implemented by Sajeda Foundation with technical and financial support from WaterAid. This three years project will be executed in three garments located at Rugganj, Araishazar and Sonargaon Upazilas of Narayanganj district to reduce WASH deprivation of garment workers at their living places and poor hygiene practice at working places. The project has also planned for improvement of WASH facility, promotion of hygiene awareness and practice in low income settlements areas mentioned before. As a part of the developed program design, the project will install water points, latrines and handwashing places in the community level including hygiene promotion, Menstrual Hygiene Management (MHM) and Food Hygiene Management (FHM) intervention at the factory level reaching about 19,000 ready-made garments (RMG) workers and their families at the community level. In addition, this project has initiatives to reduce groundwater extraction in the factories through ensuring the best use of rain water by constructing Rainwater Harvesting Systems for their production and other usages at factories.

1.2 Objectives of the Assignment

The main objective of the consultancy assignment is to help design and co-implement the research component of the project including baseline, end-line and calculation of return on investment of WASH interventions on factory production and RMG business with reference to 3 designated factories. More specifically, the consultant by undertaking the assignment, will address the following objectives:

- Identify and explain with facts and figures derived from baseline and end-line studies and other assessments, changes in WASH deprivation situation of the factory workers and their family members at community level.
- Articulate with clear quantitative measures the changes attained in four benefit parameters (absenteeism, productivity, quality and turnover) following the WASH interventions in community and factory level.
- Measure changes in awareness and hygiene practice of the workers at factory level, particularly handwashing and MHM behavior.
- Calculate using an acknowledged methodology the return on investment of WASH interventions at community and factory level.

1.3 Methodology

The study design was a combination of quantitative and qualitative techniques. Data was primarily collected through garment worker’s survey for quantitative survey. Qualitative techniques included Focus Group Discussions (FGD) and Key Informant Interviews (KII). Besides, structured observations (water point, latrine, handwashing facilities, and food hygiene management) took place at factories. Observations regarding handwashing behavior took place at factories during the lunch break. Diary method was used for recording performance of garment workers.

Survey Design

The key purpose of the baseline survey is to measure the primary condition of the WASH facilities not only at factory but also at the community. The sample was determined using standard statistical formula, assuming 95% confidence interval, 5% level of precision, and adjusted with 2 for design effect and probable non-response. The estimated sample size was 800. However, a total of 160 male (20%) and 640 female (80%) garment workers were surveyed in 3 study factories and used for analysis, as suggested by WaterAid. On the other hand, structured observation has been approached at the 3 factories for assessing the existing status of WASH like water points, latrines, handwashing facilities, and food hygiene management. Observations regarding handwashing behavior took place at restaurant near factories during the lunch break.

$n = \frac{Z^2 PQ}{d^2} \times deff$
n = Estimated Sample Size, P = proportion of target indicator, Q = 1-P, Z= Standard normal variate value at 95% confidence level (1.96≈2.0), e = Precision level, deff = Design effect

Lastly, as a part of qualitative survey, 6 Focus Group Discussions (3 with men and 3 with women group) were also conducted at the time of survey. Key Informant Interviews will be performed with Factory Manager. Performance of the each garment workers was recorded using diary method for 2 weeks of interval.

1.4 Data Analysis

For this baseline study report preparation, basic descriptive statistics (frequency, cross table, mean, median, ratio etc.) was measured on some specific WASH indicators to depict the primary condition of the WASH facilities at factory and in the community. Content analysis will be performed from qualitative information to add validity to baseline findings. Findings from quantitative data and qualitative information findings will be synthesized.

1.5 Challenges and Limitations

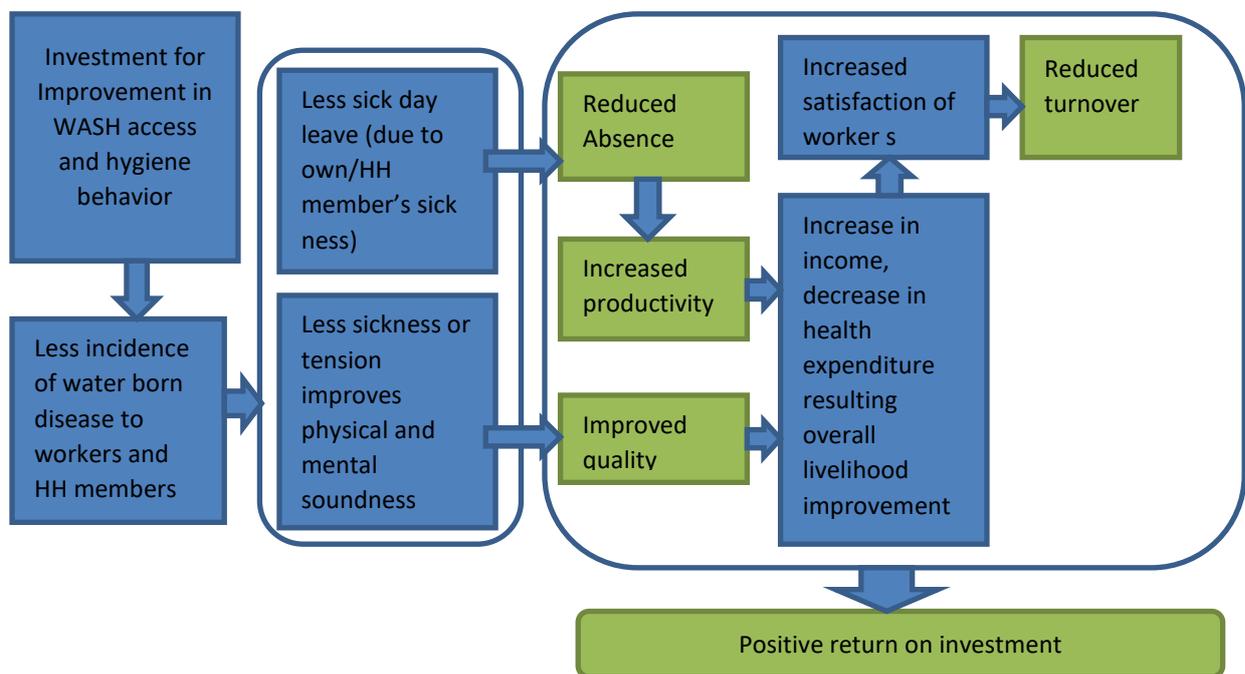
- The distribution of male and female sample was suggested 20:80 by the client, however the actual scenario is different as discussed with garment authorities, which generated selection bias in the sample.
- Locating sample respondents was difficult as garment workers frequently move from one place to another place.
- To interview female respondents was difficult during Ramadan as they were highly busy with their household works after whole day work at factory. Hence, field survey required more time than expected.
- For time constraint, key Informant Interview and handwashing observation at factories has not been possible to conduct yet.

Chapter 2: Findings and Analysis on Return on Investment (RoI)

2.1 Identification of ROI indicators for Measurement for this Intervention

As it has already been mapped out a pathway for achieving the expected benefits from the intervention, now the step is to determine what benefits to measure and how to measure them, which will create an opportunity for assessing whether and to what degree, there has been a change because of this WASH intervention. As it is not possible to measure all benefits always, so it is important to identify and priorities which benefits should be measured on the basis of the intervention, designed pathway including the business benefits. Therefore, as like as the benefits, it is also important to keep track records of input, output from baseline operation in order to assess core business value as well as direct and indirect benefits. The impact pathway designed for this intervention has presented inputs, outputs and benefits in a linear sequence. However, it should be mentioned here that benefits are not always independent of each other and one activity can lead to more than one change.

The ROI is expected to follow the following pathway:



2.2 Associated Indicators for measuring business value

Now, it has been decided which business benefits this intervention is interested in and therefore data need to be gathered for which indicators. But an in-depth understanding is highly required in order to design a method to quantify these benefits or turn into value. To assess how much the WASH intervention has led to a change in these indicators, it needs to establish a point of comparison or baseline. And so it has been developed through a survey by engaging the RMG workers along with their household members and the RMG authorities. The following business benefits and associated indicators have been established.

Table 2.1: Major indicators for measuring ROI

Indicator	Baseline status
Work days lost due to disease (workers in 1 month preceding the survey)	0.5 days per person per month
Monetary loss* due to WASH related disease and menstruation (monthly)	0.7 million BDT
Monetary loss* due to other disease (monthly)	2.8 million BDT
Monetary loss* due to other reason (monthly)	4.3 million BDT
% of man-days with completed office hours (monthly)	99.5%
Work hours lost (monthly)	3.8%
% of delivered pieces rejected (monthly)	4.04%
Monetary loss due to delivered pieces rejected (WASH disease, monthly)	3.7 million BDT
Monetary loss due to delivered pieces rejected (monthly)	18.6 million BDT
Average salary received monthly (month preceding the survey)	12,242 BDT
Average overtime received (month preceding the survey)	2,086 BDT
Staff turnover (monthly)	3.6%
Monetary loss* due to staff turnover (monthly)	5.4 million BDT
% worker availing some types of health services from factory	17.6%
Average health expenditure for workers availing health services	Tk. 60 per patient
Monetary loss to provide health services to workers (monthly)	0.2 million BDT
% of workers with economic loss due to water born disease	16%
Amount of economic loss (workers)	1.6 million BDT
Amount of economic loss (annual)	6.4 million BDT
Average number of pieces delivered during office hours (monthly)	247 per person per day
Average number of pieces delivered during overtime in (monthly)	43 per person per day
Average WASH expenditure by factory	Tk 16.3 per person per day
Overall monetary loss due to WASH related disease and menstruation (annual)	68.4 million BDT
ROI indicator based monetary loss (annual)	375.6 million BDT
<ul style="list-style-type: none"> % of workers have access to safe (priority contamination free) drinking to water (According to SDG service level definition) 	Basic service: 31.3%
<ul style="list-style-type: none"> % of workers have access to improved sanitation (According to SDG service level definition) 	Basic sanitation: 10.6% Unimproved: 89.4%
<ul style="list-style-type: none"> % workers have knowledge about handwashing at critical occasions 	After defecation: 90.6% After cleaning child's bottom: 11.0% Before eating: 77.9% Before cooking: 17.6% Before feeding children: 3.3%
<ul style="list-style-type: none"> % of workers wash hands properly (both hands with soap) during lunch (based on observation) 	1.6%
<ul style="list-style-type: none"> % of female workers wash hands properly (both hands with soap) during lunch (based on observation) 	0.9%
<ul style="list-style-type: none"> % of male workers wash hands properly (both hands with soap) during lunch (based on observation) 	2.3%
<ul style="list-style-type: none"> % women of reproductive age opined that the latrine are comfortable for changing MHM materials 	93%

Indicator	Baseline status
• % women are using disposable sanitary napkin	56.7%
• % of women who disposes off properly in a bin (at factory)	0.0%
• % workers are properly cleaning and drying reusable MHM materials	31.5%
• % of female workers taking early leave/day off due to menstrual cycle	0.6%
• % workers store their cooked food in hygienic place (web, dust and flies free place) and covers with lid	66.4%

**Monetary loss has been assessed based on the revenue generated by the factories compared to the proportion of work days lost. (Combined average revenue (monthly): 1,035.3 million BDT; Combined average monthly working man-days (monthly): 2.1 million man days; combined average number of staff (monthly): 14,848).*

2.3 Analysis and Measurement of Business Benefits

As baseline survey has already been conducted for this WASH intervention at selected RMGs, so, after a certain timeframe, it will need to analyze the data to assess and understand the financial benefits. It should be mentioned here that the focus and consideration for the next assessment will include not only the direct business benefits but also indirect business benefits and non-quantitative changes to evaluate and communicate the wider effect on people and communities.

In this situation, this study will focus on ROI as a measure of financial value and efficiency of investment – ‘for every \$ spent, how many \$s are generated/lost? It is a commonly used indicator since it is simple and can be applied to different situations. This essentially involves two steps:¹

1. Calculate the total costs and total benefits over the given period
2. Calculate the ratio of costs to benefits
(Divide the total benefits over the given period by the total costs to get ROI)

Analysis Method

The analysis of this section is complex one and is based on several assumptions. The assumptions led to the apportionment of monetary values. Data was collected from factories (i.e., staff turnover, expenses for health and hygiene, absence (sickness, other), production and rejection of produced goods, overall revenue) for selected indicators. Also data was collected through household survey. The household survey included diary based data collection for selected indicators for 2 weeks (i.e., absence and reason of absence, production, rejection). Survey data provided necessary evidence of apportionment of WASH related disease and menstruation issues. The monetary loss has been assessed based on the revenue generated by the factories. The assessed monetary losses are assessed through apportionment of different ROI indicators.

¹ Strengthening the business case for water, sanitation and hygiene: how to measure value for your business, Guide endorsed by WASH4Work initiative and partners.

Illustration: Estimating the monetary loss

Indicator: Staff turn over

Assume,

	Factory-1	Factory-2	Factory-3
Staff turnover rate (monthly)	ST_{r1}	ST_{r2}	ST_{r3}
Number of staff (monthly)	S_1	S_2	S_3
Revenue (monthly)	R_1	R_2	R_3
The unit cost for staff replacement (cost for new hire+ Training)	H_1	H_2	H_3
Cost of staff replacement	R_1	R_2	R_3

The actual staff turnover for Factory-1 (monthly): $ST_1 = (S_1 \times ST_{r1} \%)$

The actual staff turnover for Factory-2 (monthly): $ST_2 = (S_2 \times ST_{r2} \%)$

The actual staff turnover for Factory-3 (monthly): $ST_3 = (S_3 \times ST_{r3} \%)$

The cost of staff replacement for Factory-1: $R_1 = ST_1 \times H_1$

The cost of staff replacement for Factory-2: $R_1 = ST_2 \times H_2$

The cost of staff replacement for Factory-3: $R_1 = ST_3 \times H_3$

Total cost of staff replacement (monthly): $R_{monthly} = R_1 + R_2 + R_3$

Total cost of staff replacement (annual): $R_{annual} = R_{monthly} \times 12$

Indicator: Absence due to health issues (including WASH related disease and menstruation) and other reasons

Assume,

	Factory-1	Factory-2	Factory-3
Number of worker (monthly)	W_1	W_2	W_3
Number of work days (monthly)	M_1	M_2	M_3
Revenue (monthly)	RV_1	RV_2	RV_3

Total man-days for Factory-1 (monthly): $MD_1 = W_1 \times M_1$

Total man-days for Factory-2 (monthly): $MD_2 = W_2 \times M_2$

Total man-days for Factory-3 (monthly): $MD_3 = W_3 \times M_3$

Total man-days combining three factories (monthly): $MD = MD_1 + MD_2 + MD_3$

Total workers combining three factories (monthly): $W = W_1 + W_2 + W_3$

Total revenue combining three factories (monthly): $RV = RV_1 + RV_2 + RV_3$

Available statistic (Source: Survey among workers in intervention factories):

1. 0.5 days per person (worker) per month is lost due to absence
2. 20% of overall absent days is due to WASH related disease and menstruation issue

Man-day loss due to absence (monthly): $Loss_{absence} = W \times 0.5$

Man-day loss due to WASH related disease and menstruation (monthly): $Loss_{WASH} = Loss_{absence} \times 0.2$

Share of man days lost due to WASH related disease and menstruation (monthly)= $Loss_{WASH} / MD$

Loss due to WASH related disease and menstruation (monthly): $W_{monthly} = RV \times (Loss_{WASH} / MD)$

Loss due to WASH related disease and menstruation (annual): $W_{annual} = W_{monthly} \times 12$

Indicator: Rejection of delivered pieces

Assume,

	Factory-1	Factory-2	Factory-3
Number of production (monthly)	P_1	P_2	P_3
Number of rejection (monthly)	RJ_1	RJ_2	RJ_3
Revenue (monthly)	RV_1	RV_2	RV_3

Rejection ratio in factory-1 (monthly): $NR_1 = RJ_1 / P_1$

Rejection ratio in factory-2 (monthly): $NR_2 = RJ_2 / P_2$

Rejection ratio in factory-3 (monthly): $NR_3 = RJ_3 / P_3$

Monetary loss due to rejection in factory-1 (monthly): $RD_1 = RV_1 \times NR_1$

Monetary loss due to rejection in factory-2 (monthly): $RD_2 = RV_2 \times NR_2$

Monetary loss due to rejection in factory-3 (monthly): $RD_3 = RV_3 \times NR_3$

Total monthly monetary loss due to rejection (monthly): $RD_{monthly} = RD_1 + RD_2 + RD_3$

Total monthly monetary loss due to rejection (annual): $RD_{annual} = RD_{monthly} \times 12$

Indicator: Expenses for seeking health care for sick workers

Assume,

	Factory-1	Factory-2	Factory-3
Expenses for seeking health care for sick workers	HE_1	HE_2	HE_3

Expenses for seeking health care for sick workers (monthly): $HE_{monthly} = HE_1 + HE_2 + HE_3$

Expenses for seeking health care for sick workers (annual): $HE_{annual} = HE_{monthly} \times 12$

Table 2.2: Estimation for monetary loss (in BDT)

ROI Assessment Indicators	Factory-1	Factory-2	Factory-3	Total
Total Workers	5,107	860	8,881	14,848
Working days (monthly)	24	25	25	-
Total working man-days (in 6 months)	4,381,663	537,625	7,833,189	12,752,477
Total absence (%)				0.50*
Monetary loss due to total sickness				3,581,739
Monetary loss due WASH and Menstruation				716,348
Monetary loss Other Sickness				2,865,391
Monetary loss (other issues of absence)	2,486,465	112,739	1,719,690	4,318,893
Unit cost of replacement (monthly)	15,100	8,000	5,222	10,081
Staff turnover (%)	4.9	4.9	2.7	3.6
Monetary loss due to staff turn over	3,775,000	336,000	1,255,217	5,366,217
Sick worker receiving treatment (% of all workers)				17.6
Burden on clinic (expenses per sick worker, BDT)	9590	114	30	60.47

ROI Assessment Indicators	Factory-1	Factory-2	Factory-3	Total
Worker sought health services for sickness (%)	0.1	29.2	26.7	17.9
Expenses for seeking health care only for sick workers (monthly)	59,135	28,600	71,050	158,785
Expenses for seeking health care only for sick workers (annual)	709,624	343,200	852,600	1,905,424
Number of production (monthly)	1,697,291	80,279,016	1,653,304	83,629,611
Rejection (monthly, %)	1.13	4.16	2.1	4.04
Unit cost of rejection (BDT)	289.61	1.01	2800.4	-
Monetary loss due to rejection of delivered pieces (monthly, BDT)	5,554,584	3,365,638	9,721,426	18,641,647
Revenue (monthly, in million BDT)	491.6	80.9	462.9	1,035.4
Revenue (monthly, in million USD)	5.8	0.95	5.5	12.2

**per worker per month*

Identified indicators for ROI

As per the ToR, the identified four key direct quantifiable benefits will be followed by this ROI study are given as below:

- Reduced employee absence
- Improved quality
- Increased productivity
- Reduced staff turnover

2.4 Existing Situation of ROI Indicators

Reduced employee absence

Here absence means RMG workers time off from work and this may be due to acute or chronic illness, stress, harassment, menstruation (with lack of appropriate provisions), disengagement or family demands, among other reasons. Frequent absence might have a negative effect on the RMG factories due to the direct costs of staff replacement and lost productivity.

It is observed that 0.5 man-days per person per month was lost due to different absences of which 20% occurred due to WASH related diseases and menstruation within the last six months preceding the survey.

Increased productivity

In this study productivity is defined as the number of items produced in a factory or number of orders processed. Further, productivity might be affected by the workers' health, wellbeing while lower productivity has a negative effect on the RMG factory because of lower production rates resulting lower profits and loss.

The baseline survey depicted that on average a worker produced 247 pieces of goods per day while they produce 43 pieces of goods per person per day during overtime in the last 15 days preceding the survey.

Improved quality

Improved quality includes so many sectors where they can improve –as like as increase of production, reduction of rejection rate, reduction of waste materials, increase of monthly salary, increase of overtime etc.

According to the information provided by the factories, 4.04% of delivered pieces have been rejected. Further, right now they receive monthly salary on an average 12,242 Tk. Per month while their average income from overtime is 2,086 Tk.

Reduced Staff Turnover

Staff turnover indicates the number of staff leaving who need to be replaced and it may have a negative impact not only on factory production but also loss of skilled and trained workers and as a result the factory cost for new recruitment might increase.

According to the RMG authority, the rate of staff turnover is 3.6%. Currently, 17.6% of workers receive some types of health services from the factories while the average health expenditure for per patient is 60 Tk. only. According to the response of the workers, 16% workers have counted economic loss due to water borne losses. This loss accumulates to 1.6 million BDT. In addition it should be highlighted here that average WASH expenditure for per worker per day within the factory is 13.3 Tk.

Overall Monetary Loss

The overall annual monetary loss is 376.5 million BDT (4.44 million US\$²) of which 68.4 million BDT (0.81 million US\$) is WASH related disease and menstruation. The estimates are available in Table 2.1 and 2.2 of this chapter.

2.5 Baseline findings for ROI indicators

Though all the household members have access to the basic service level of drinking water but only 24.9 percent of them follow the proper steps of water safety plan (WSP), which can lead them to suffer water borne diseases.

On the other hand, a greater part of the household members (59.7%) have no improved sanitation facilities and according to their opinion, the physical and environmental condition of their available latrines is not hygienic. Such kind of poor sanitation management might push them to any ill health condition.

In addition, 81.3 percent of the households have no handwashing facility while the response for handwashing knowledge with soap about proper time or occasions includes after defecation (90.6%), after rinsing child's excreta (11%), before eating (77.9%), before cooking (17.6%), and before feeding child (3.3%). But the main problem is that the trend of handwashing practice with soap is observed lower among the members as like as after defecation (57.4%), after rinsing child excreta (4.8%), before eating (13.5%), before cooking (35.3%) and before feeding child (5%).

Now it is important to take a look at the frequency of diseases occurrence among the household members. According to the findings, 61 percent of them suffer from fever while 10 percent of them suffer from direct waterborne diseases like jaundice, typhoid, dysentery, diarrhea, malaria, anemia,

² 1 US\$ = 84.75 BDT as on 11 November 2019. Source: Bangladesh Bank Website (Retrieved from: <https://www.bb.org.bd/econdata/exchangerate.php>)

ringworm, scabies, and trachoma and skin diseases. It is assumed that ratio of diseases occurrence among the household level might be the impact of poor sanitation, handwashing facility and practices.

Still, about 40% of reproductive women use reusable cloth but a few of them (14.2%) do not wash these materials in a hygienic way and 74 percent of them get these materials by hidden drying without sundry. Further, most of them (72.4%) dispose their used MHM materials with the household produced garbage. This situation may affect their physical and mental health. On the other hand, about 43 percent RMG workers use reusable cloth or garments leftover cloth known as "Garment Jhut" which might threat them to be affected by any unhygienic diseases. The main problem here that there is no bin available in the female toilets for disposing off these used MHM materials.

According to our observational findings, only 2.3 percent male workers washed their both hades with soap and water while this practice was observed among only 0.9 percent female workers. On the other hand, 9.2 percent male workers which is comparatively higher than the percentage of female (6.04%), were in practice of washing one hand with soap. Lastly, as high as 88.5 percent male and 92.7 percent female workers were used to washing hands with only water just before having lunch. So they are in threat of being suffered from any unhygienic related diseases.

According to the response of the household members, most of them (97.8%) have separate or shared cooking places and 74 percent of them cooked food for them. But the main problem is that most of them are not used to following handwashing and cleaning practices just before or after every occasion of cooking activities. Here, it is to mention that only 18.9 percent of the household members are used to maintain handwashing and cleaning process according to their process.

Chapter 3: Demographic, Socio-Economic, and WASH Findings

This chapter has been designed with the findings of the baseline survey conducted for discovering the primary condition of the WASH facilities available not only at factory but also at the community. Eventually, the organization of findings is based on some specific topics concerned with demographic characteristics, access to water, access to sanitation, access to hygiene, menstrual hygiene management including the food hygiene management etc.

3.1 Respondents Characteristics/Background of Information

Age-sex Composition

About three-fourth of our surveyed respondents were aged between 20 and 34 years irrespective of their sex, which indicates an active young age group. It is to mention here that other than the teenage garment workers, the age distribution of male and female respondents are similar. Percentage of female teens (14.1%) are three times higher than the male teens (4.4%). (Annex Table 52)

Marital Status

The figure 2.1 depicts that majority of our surveyed respondents (69%) are currently married while this percentage was higher for female (71.9%) than for male (57.5%). On the other hand, 23 percent of the respondents are still unmarried which is two times higher within the male respondents (41.9%) than female (18.3%). (Annex Table 53)

Education and literacy

The Table 3.1 reveals that only 27.6% of the respondents experienced to study secondary or higher level and 34.8% of our surveyed respondents have experienced reading up to secondary level but did not. It is also observable that education rate is comparatively higher in male workers than female workers. 7.6% of the female respondents and 1.9% male are illiterate/can read and write only.

Table 3.1: Educational Status of the surveyed respondents

Literacy status/education	Female	Male	All
Illiterate/can sign only/do not read in school	5.6	1.9	4.9
Can read and write only	2.0	0.0	1.6
Up to primary	14.8	9.4	13.8
Primary passed	19.5	9.4	17.5
Up to Secondary	37.3	24.4	34.8
Secondary passed	13.9	23.1	15.8
Higher secondary passed or above	6.7	29.4	11.3
Others	0.0	2.5	0.5
n	640	160	800

Living Place

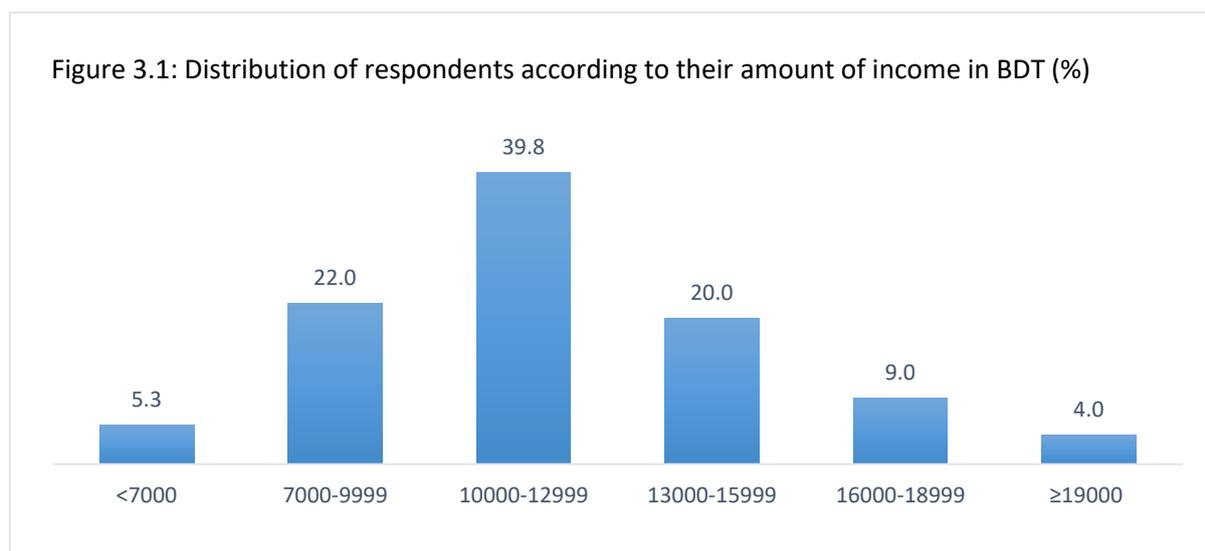
This study explores condition of respondent's living place. Findings reveal that most of the garment workers (93.9%) live in rented house (Annex Table 54). Majority of the living houses are semi-pucca i.e. either the roof or the walls but not both of the houses is made of pucca materials like bricks, cement, or concrete (38.1%), which is followed by tin houses (32.8%). About 28.8% of the houses are made of pucca materials (Annex Table 55).

Highest proportion of the garments worker live with their spouse (67.8%) this is higher among female garment workers (78.1%) compared to males (27.5%). Majority of the male garment workers lived with some other people in rented mess (43.7%). About 12.7 percent respondents lived with their relatives and 7.4 percent alone in a room. (Annex Table 56)

Income

Figure 3.1 presents findings related to respondent's income. Average monthly income of the surveyed responded was amounted 12,242 BDT. About 4 out of 5 respondent's income was between 7,000 and 16000 BDT (81.8%) with highest respondents between 10,000 and 13,000 BDT (39.8%).

Average monthly income of the respondents: 12,242 BDT



Expenditure

Average monthly expenditure of the respondents or their households was amounted 10,357 BDT, where food expenditure was 5,155 BDT and non-food expenditure was 5,203 BDT. Average monthly WASH expenditure was estimated as 235 BDT with highest expenditure on hygiene, 210 BDT. Expenditure on health service was amounted 456 BDT.

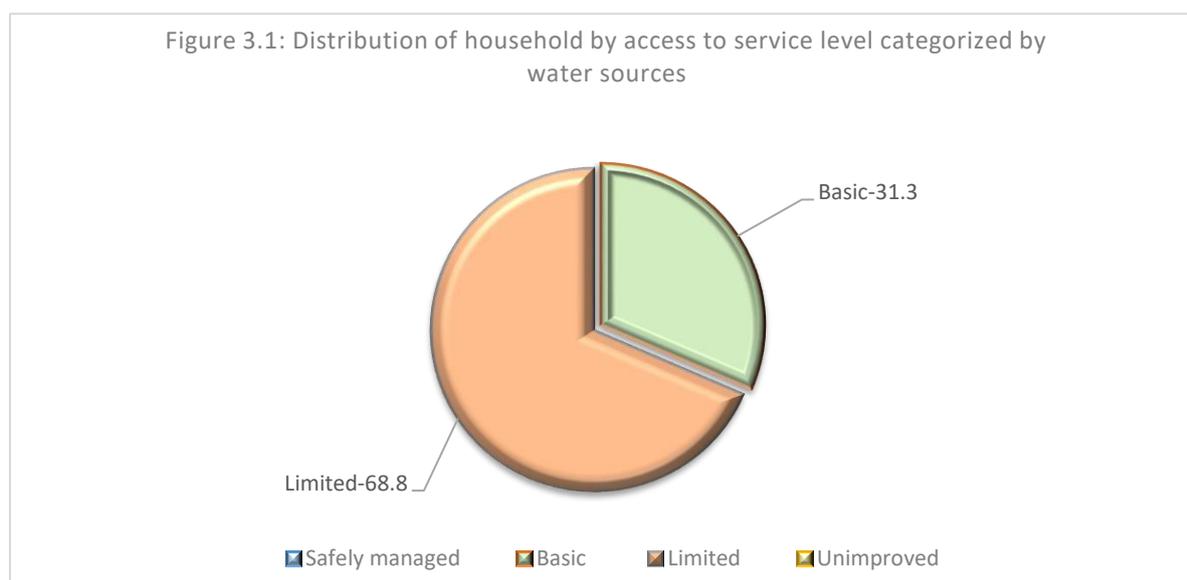
Table 3.2 Household average monthly expenditure (in BDT)

Indicators	Expenditure (BDT)
Average monthly expenditure	10357
Food expenditure	5155
Non-food expenditure	5203
WASH expenditure	235
Water	19
Sanitation	6
Hygiene	210
Expenditure on Health service	456
n	800

3.2 Access to Water

Access to Water at Household Level

Access of garment workers at household level to drinking water has been measured in terms of updated JMP ladders on the criteria of new global SDG³ indicator. At the household level, there is no unimproved water sources. The basic service for drinking water sources level includes 31.3% household members while rest of them (68.8%) are in the category of limited service level. It is to mention here that observational findings on physical and environmental condition (as like as Table 3.4) of the water sources were also criteria at the time of categorization basic service level. Further, all the water points are available within their premises. The survey did not perform water quality testing and no reliable information was identified from respondents on water quality testing.



Most of the households (86.4%) collect available water managed by the water lifting motors and 7.5% of the households have piped water supply. According to the observation, most of the water sources (87.6%) are functional and usable for nearly round the clock (average hours for availability of water in a day: 23.7) throughout the year. (Annex Table 5 and 6). Most of the water taps (67.5%) used by the household members are categorized as fair and 15.4% of the taps are categorized as bad. So, these water taps used at the community level need renovation for safe use. (Annex Table 9)

³ Updated JMP ladders of water sources based on SDG

Safely managed: Drinking water from an improved water source that is located on premises, available when needed and free from faecal and priority chemical contamination.

Basic: Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing.

Limited: Drinking water from an improved source for which collection time exceeds 30 minutes for a round trip, including queuing. Improved drinking water sources are those which that are potentially capable of delivering safe water by nature of their design and construction include piped water, boreholes or tube wells, protected dug wells, protected springs, and packaged or delivered water.

Unimproved Drinking Water: Drinking water from sources that are not capable of delivering safe water by their design and construction include unprotected dug well, unprotected spring and surface water (directly from river, dam, lake, pond, stream, canal or irrigation canal)

Table 3.3: Distribution of household by main drinking water sources

Types of water sources	Percentage
Water through motors	86.4
Pipeline/supply water into room without reservoir	0.8
Pipeline/supply water into room with reservoir	6.7
Tube well	6.1
N	800

According to the table 3.4, most of the water taps (44.6%) are in an un-cleaned environment with visibility of flies while there are improper drainage system with accumulated water and garbage connected to 35.2% water taps. The water accumulation problem and any kind of crack are observed within 27.6 and 25.8 percent water tap platforms respectively.

Table 3.4: Observational findings on the physical condition of water Tap as water source by factory based household

Indicators	Response
Un-cleaned environment/ condition /abode of flies and mosquitoes	44.6
Crack, broken part or accumulated garbage in the drain which is connected to the water tap platform	35.2
Water accumulation in the surrounding area of water tap platform	27.6
any crack in the water tap platform	25.8
water tap fixed with a concert	69.2
pipe of the water tap exposed	44.1
meter connection to the water tap	6.0
N	751

Water Safety Plan (WSP)

According to survey findings, most of the respondents (75.5%) store drinking water in a high place while 72.0% cover the water pot at time of water storage. Only 24.9% respondents maintain all the procedures of water safety plan. (Annex Table 57)

Very few, some 6.6% respondents reported purifying their drinking water through boiling (4.1%) and filtering (2.5%). (Annex Table 7 and 8)

Dissemination of knowledge among the workers on water safety plan and water purification methods can be effective to bring positive changes.

<i>FGD Findings</i>
According to the FGD findings, Most of respondents do not feel the necessity to treat the water as they think that ground water is always good for drinking. Generally, the owner of the house take necessary steps for maintenance of this water source. A few of them have also informed that they are rarely in shortage of water especially when the power supply is not available. At that time they collect water from other sources located nearer their house. According to most of them, they need not to pay for water separately and this cost is included within monthly house rent. Lastly, according to their knowledge, water testing has never been conducted.

Access to Water at Factories

Table 3.5 reveal that almost all the respondent drink water from factory owned deep tube well at the factories (99.5%). However, majority of them doesn't know that water is purified at most of these water points through UltraViolet Water Disinfection System and opined that water doesn't need to purify (61.8%) [Annex Table 36].

Table 3.5: Proportion of water points for drinking water at factories

Types of water sources	Percent
Factory owned deep tubewell through pipeline	99.5
Tube well water	0.5
n	800

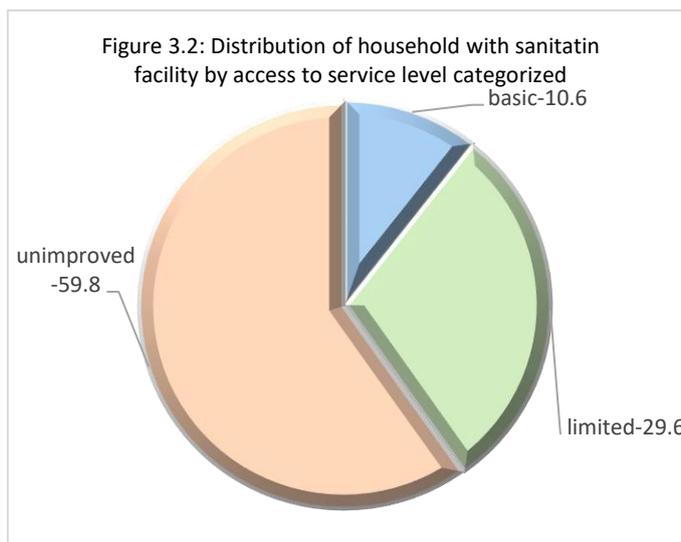
The target garments have improved water sources and water is preserved in a huge reservoir from where water is supplied through pipe and tap within the factories. All the garments are aware for purifying their drinking water either through water purifier or through attachment of the ultraviolet water purification with the water supply pipeline. *According to KIIs, there are separate staffs responsible for uninterrupted water management, supply and treatment within the factories for ensuring safe drinking water for the workers as well as other staff.*

<i>Observational Findings</i>
<p>All the garments have improved water sources and safely managed. All the factories have water sources like deep tube-wells or motor water of their own. This water is supplied through tap inside the factories. It has been seen that water tap(s) for drinking water are present in each floor of all the three garments observed. The water taps were wall mounted and marked as "pure drinking water". The quantity of water taps however, not unique and varied from 1-3 in number across the garments. In some places this water supply is connected to the water filters from where workers can collect water for drinking. A wash basin fixed to the wall under each of the water tap has also been noticed. Supplied water was purified in each garment by means of ultra violet ray emitting machine. Each and every garment workers were found to collect water from the taps in her/his own bottle. The results of water analysis reports from ICDDR,B were found hanged serially beside the drinking water tap in some garments. It indicated periodical analysis of the supplied drinking water were undertaken by the observed garments for faecal coliform and priority chemicals (arsenic and iron). Apart from these, several (ranged from 18-20) water taps together with a platform covered by glazed tiles were also seen in the dining room for the worker of all the garments.</p>

3.3 Sanitation Facilities

Sanitation Facility at Household Level

Similar to drinking water, access of the garment workers to sanitation has been measured in terms of updated JMP ladders on the criteria of new global SDG⁴ indicator. More than half (59.8%) of the garment workers still use unimproved sanitation facilities. Only 10.6 percent household have access to the basic service level of sanitation as they use improved latrines without sharing with others. The remaining 29.6% have been classified as having limited service as they have facility for improved latrines but share with other families. None of these sanitation facilities meet the criteria for a safely managed facility.



The overall condition of the latrines are not satisfactory. As many as 69.3% reported that bad smell emits from the latrine while 36.4% reported availability of insects in the latrines and pipeline connection with ditch/canal/pond/river separately. Lastly some 33 percent have told that excreta has come outside and spread out. (Annex Table 58)

As it is observable that there is no significant association between income or expenditure and handwashing knowledge and practice irrespective of sex and further investigation also suggests that there is no association between income, expenditure and disease occurrence.

According to this observational findings, the condition of sanitation facility available at household level is not fully hygienic though improved sanitation facility is available there. It is inspected and found that the latrines are not properly maintained or cleaned. Most of the latrines observed, need renovation.

<i>FGD Findings</i>
According to the FGD findings, there are no single sex based latrines at household level and these are not suitable for use of physically challenged persons, children and older people. Average 8-10 persons share one latrine though a few of them have answered that they have separate latrine for their own household members. There are no separate sandal, dustbin, handwashing agents or place available either within or nearer the latrines. In most situation, they normally bring soap from their room to use for handwashing after defecation. Generally, the owner of the house is responsible for latrine maintenance.

Sanitation Facilities at Factories

⁴ Updated JMP ladders of sanitation services based on SDG

Safely managed: Use of improved facilities that are not shared with other households and where excreta are safely disposed of or transported and treated offsite

Basic: Use of improved facilities that are not shared with other households

Limited: Use of improved facilities shared between two or more households. Improved sanitation facilities are those designed to hygienically separate excreta from human contact include flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs **Unimproved:** Use of pit latrines without a slab or platform, hanging latrines or bucket latrines

Open defecation: Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other open spaces, or with solid waste.

It is observed that single sex latrines are available in every RMG. Table 3.6 indicates the approximate number of workers and the number of single sex latrines available at RMGs. As aggregate, there is a latrine available for every 17 male while a latrine available for every 26 female.

Table 3.6: Distribution of RMGs by number of workers and number of latrines by sex

RMGs	Workers			Latrines		
	Male	Female	Total	Male	Female	Total
RMG-1	2790	6210	9000	257	154	411
RMG-2	2490	3580	6070	123	158	352
RMG-3	1130	120	1250	7	69	76
All	6410	9910	16320	387	381	839

Majority of the respondents reported that cleanliness is 'good' in about half of the latrines at factories (51.5%), which is followed by 'very good' (29.5%) and 'moderate' (19%). However, almost all of them (99%) reported that latrines are cleaned daily. (Annex Table 37 and 38).

Figure 3.3 indicates that most of the workers reported having necessary commodities for latrine use such as sandals/slippers, running water, hand washing facility and commodities for hand washing.

However, handwashing practice among the respondents were not satisfactory. While 1.5 percent of the respondents reported that they do not wash hand after using latrine, about one-fourth (25.1%) reported they wash hand only with water. About 44.9 percent wash one hand with soap and water. Only slightly more than one-fourth of them (28.4%) reported that they wash their both hands with soap and water. (Annex Table 59)

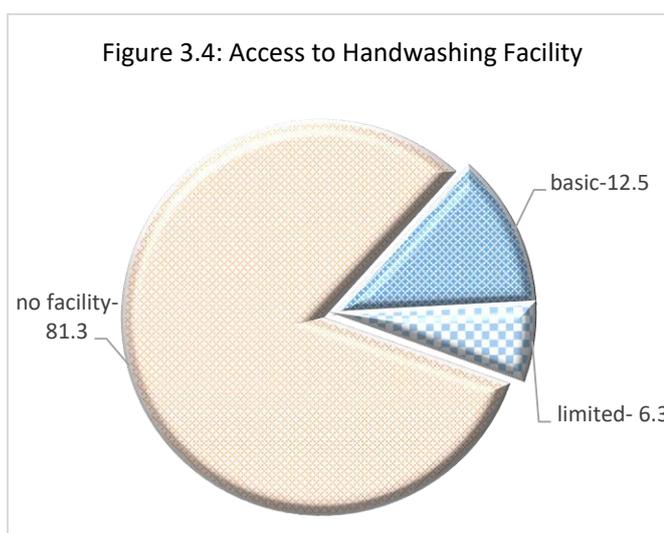
According to the opinion of KII, paid responsible support staff are available to clean the toilets regularly and they clean the toilets almost every day or thrice in a week. Further, there are handwashing places with available agents like soap or liquid soap which are purchased every month.

<i>Observational Findings</i>
According the observational findings, the latrines are cleaned daily in all RMGs. Handwashing places are available adjacent to the latrines though handwashing agents were not available within a few handwashing places at time of observation. Further, these latrines are more or less equipped with much light and air ventilation facility. There are bins without cover for dumping any dusts within the latrines.

3.4 Hygiene Facility, Knowledge and practice

At household level

SDGs⁵ have developed its indicators on the basis of availability of hand washing facilities with soap and water with a top priority in all settings. The Figure 3.4 shows that for handwashing, 12.5% respondents have the facility of basic service level as they have available water and soap within their articulated handwashing places. On the other hand, limited service level includes only 6.3% respondents as they have handwashing places without soap and water. It should be noted here that most of the respondents (81.3%) have no facility as they have neither any articulated places nor water and soap for handwashing.



According to the observation and response of the respondents, 18.8% have separate handwashing place. Among them 51.3% have facility for hand washing with basin and tapped water while other 47.1% have placed water bucket in the handwashing place. (Annex Table 60)

Most of the respondents (90.6%) have knowledge on washing hand with soap after defecation. As high as 77.9% respondents had knowledge on handwashing with soap before eating. But response regarding knowledge about handwashing at some important times or occasions like after rinsing child's excreta (11.0%), before cooking (17.6%), Before feeding child (3.3%) is significantly low among the respondents. (Table 3.7)

Table 3.7: Distribution of respondents by Handwashing knowledge about proper times/occasions (Multiple Response)

Proper times/Occasions	Response (%)
After defecation	90.6
After rinsing child's excreta	11.0
Before eating	77.9
Before cooking	17.6
Before feeding child	3.3
N	800

Data suggest that there is no significant association between education and handwashing knowledge or practice irrespective of sex. This is also true for income level (Annex Table 61 and 62). It might be assumed that that availability and adequate opportunity of handwashing places along with water and soaps, awareness build up, dissemination of knowledge regarding the consequence of unhygienic handwashing practice and effectiveness of handwashing practice may play an active role to increase the handwashing practice among the workers and their household members.

⁵ Updated JMP ladders of handwashing based on SDG

Basic: Availability of a hand washing facility on premises with soap and water

Limited: Availability of a hand washing facility on premises without soap and water

No Facility: No hand washing facility on premises

Respondents are aware of different consequences of unhygienic practices. Diarrhea/dysentery is commonly known to the majority of the respondents (74.8%) while other consequences are known to few. At least 3 or more consequences is reported by only 10.8% respondents. (Annex Table 64)

Observational Findings
At household level, most of them have no specific handwashing place. Some of them bring soap from room and use at necessary occasions at the water tap. In addition, many of them keep bucket or drum of water and soap just before their room for many purposeful activities like handwashing.

Handwashing Behavior at Factories

It is so difficult to capture the handwashing behavior of RMG workers at their working time just through asking them regarding this. And therefore, handwashing observation of the workers at lunch time at factory dining places was considered as an effective way to capture the vivid picture of their handwashing behavior like knowledge and practice.

Table 3.8: Observational findings on proportion of RMG workers with Handwashing practice before having lunch by sex

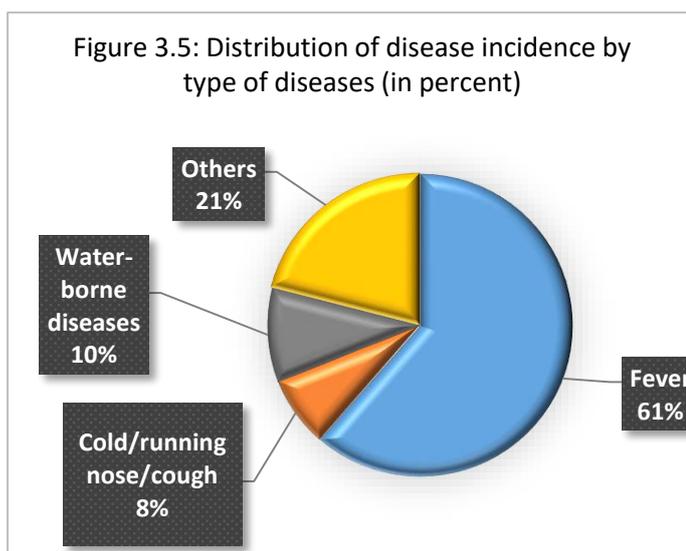
Workers	Male				Female			
	RMG-1	RMG-2	RMG-3	Total	RMG-1	RMG-2	RMG-3	Total
Both Hands with soap	3.1	3.9	0	2.3	1.3	1.3	0	0.9
One hand with soap	13.2	10.5	4	9.2	12	5.3	2	6.4
With only Water	83.7	85.6	96	88.5	82.9	93.4	98	92.7

According to observation, only 2.3% male workers washed their both hands with soap and water while this practice was observed among only 0.9% female workers. Another 9.2% male workers which is comparatively higher than the percentage of female (6.4%), were in practice of washing one hand with soap.

According to our findings, there were two types of handwashing agents like soap and detergent mixed water kept in bottles. In some basins, soaps were not available though there was opportunity to use the soap of other basins. It was also observed that the number of basins is not adequate comparing to the number of workers who are used to having lunch at dining place at a time. In the hurried situation of having lunch, workers were not aware for handwashing with soap properly. There were also available dustbins at the dining places.

3.5 Disease Occurrence

Findings reveal that 41.1% household had at least one member suffered from any diseases within last one month. A total of 381 disease incidence was found among these households. Distribution of these disease incidence by the type of diseases are depicted in figure 3.5. From the figure it is seen that fever (61%) and cold (21%) are mostly reported disease by the respondent's household members in last one month. About 10 % of them suffered from water borne diseases such as jaundice, typhoid, dysentery, diarrhea, malaria etc.



On average, household members suffered for 5.2 days from each disease incidence while average number of working days lost was 1.3 days. Further, average treatment cost for each of the disease incidence was amounted as 894 BDT while financial loss incurred was estimated as 661 BDT.

HH with atleast one member suffered from any diseases within last 1 months: 41.1%

3.6 Menstrual Hygiene Management (MHM)

Menstrual Hygiene Management at Household Level

As many as 60.4% of workers of reproductive age reported using disposable sanitary napkin while other 35.3% are currently using reusable materials like cloth. On the other hand, a few of them 3.7% are in practice of using left over garments known as “garment Jhut”. (Table 3.9)

Table 3.9: Distribution of the reproductive women by Use of MHM materials

MHM materials	Response (%)	N
Reusable (example old cloth etc.)	35.3	220
Sanitary napkin	60.4	375
Tissue	0.6	4
Garments jut	3.7	23
N	100.0	622

The data suggest that there is a significant relation between education and use of sanitary napkin but that is not highly distinguishable. On the other hand, no significant effect of income level upon the use of sanitary napkin was identified. Awareness build up regarding hygienic practice of MHM materials and management of available MHM materials will help to increase the use of sanitary napkin. (Annex Table 65 and 66)

As many as 78.2% of the respondents generally wash the reusable MHM cloths using soap or savlon and 14.5% wash these with only water. 26% dry the cloth by sun and remaining 74% get it by hidden drying. Most of our surveyed respondents (72.4%) dispose the used MHM materials with the household produced garbage and 15.9 % and 9.6 % dispose such materials in dust bean and latrines respectively. (Annex Table 67)

Menstrual Hygiene Management at Factory Level

According to the response of surveyed RMG workers, 56.7% use disposable sanitary napkin but 33% still use reusable cloths. Further, 11.7% use the leftover cloths mostly known as “Garments Jhut”. For disposal of MHM materials, there are no specific places or bin available in the factories. But most of the workers dispose their used MHM materials in the flush of toilet but some other 30.8 % like to bring these materials at home keeping in their bag as we assume that a portion of the worker use reusable cloth for MHM. (Annex Table 68)

Most of the RMG workers (93%) have opined that latrines are enough comfortable for changing MHM materials. As high as 96.3% also have replied that they get MHM materials from their factories but only 43.7% have claimed that they need to pay for this. Rest of them do not know whether they pay for this as cost is embedded with their salary. (Annex Table 46).

According to the response of RMG authorities, two out of three provide necessary MHM materials like sanitary napkin from their organizations at a cost of vendors’ price which is charged from workers’ monthly salary. But the third garment still is not in position for providing this sanitary napkin because of lower number of female workers.

3.7 Food Hygiene Management (FHM)

Food Hygiene Management (FHM) at Household Level

Table 3.10 reveal that most of the respondents (97.8%) have responded that they have separate cooking places but 87.4% of them have to share their cooking places with other household members. About three-fourth (74.9%) of our surveyed respondents are self-responsible (as most of the respondents are female) for cooking at household level while other 12.5% have replied that family members either mother or wife or sister is responsible for performing this job. In addition, a few of our respondents (5.9%) currently living in a mess are used to cooking themselves and other mess members in turn.

Table 3.10: Distribution of respondents by availability of cooking place at household level

Indicators	Response (%)	N
Availability of cooking place	97.8	782
Sharing cooking place with others	87.4	699
Responsible person for cooking		
Self	74.9	599
Self and mess member in turn	5.9	47
House maid	4.9	39
Manage from hotel	1.9	15
Family (Mother/wife/Sister)	12.5	100

Nearly half of the respondents (51.4%) wash hands before start cooking and after the use of kitchen utensils. wash raw food items (78.9%) and utensils (69.8%) is a common practice before cooking. However, only 35% wash hands before serving the cooked food. only 18.9% followin all the steps of food hygiene practices. (Annex Table 69)

During FGDs with female, most of them told that they wash their hands at some situations with soap but they cannot follow handwashing practice with soap at every occasion as they are to perform so many household activities after their official working duties. In addition, they have articulated that before cooking they get their both food items and cooking materials cleaned with water which is commonly available.

According to Table 3.11, 58.8% of the respondents have opportunity to store the cooked food on high and secured places. As many as 41.3% still store their cooked food on the ground while 29.3% keep these food in the shelf closed with door but 10.1% are using the door-less shelf for this job. Some 17.4% have facility of refrigerator/Fridge for storing cooked food.

Most of the household have shelf for storing cooked food. But it should be mentioned here that considerably a huge portion of the household members are used to storing their cooked food on the ground or open place which may not be hygienic. Further, it should also be considered that how the HH members are cleaning the food shelf and keep it safe and hygiene for food storing.

Table 3.11: Proportion of the respondents by places for storing cooked food

Types of food storage places	Response (%)	N
Food stored in a high and secured place	58.8	470
Places for storing cooked food		
Refrigerator/Fridge	17.4	139
Food shelf with door	29.3	239
Food shelf without door	10.1	77
On the ground	41.3	330
Not applicable	1.5	12
Others	0.4	3
N	100	800

According to the findings from discussion with female, some of them generally store their cooked food in plastic food shelf and use dining table at time of having meal. On the other hand, some do not have any food shelf and store their cooked food on the floor or high place with lid.

Observational Findings
At the household level, there is a particular place equipped with so many gas stoves for cooking and this place has a tin-shed roof but no wall. Further, there is no facility for keeping cooking materials in this place. So everyone keep their cooking materials in their own living room. Further, the cooking place is cleaned regularly by the responsible paid cleaner. The cooking place is observed more or less clean.

Food Hygiene Management (FHM) at Factory Level

Among surveyed workers, 42.5% go home to have lunch while 39.4% bring cooked food from home and have lunch at factory dining. Responses suggest that 58.6 % have knowledge on storing the cooked food. Most of them (81.9%) have reported that they store their cooked food after getting it cool and 15.4 % have replied that they keep the hot food. (Annex Table 71 and 72)

According to the response of KII with RMG authorities, all of them have specific dining places for both the male and female workers and this place have the facility of handwashing with available soap and water, tiny cabinets for storage of cooked food and sitting capacity with table and chair.

Observational Findings
There are specific dining places for the worker for having lunch. Within the big two RMGs the sitting capacity of the dining place is not well enough for the total workers for having lunch at a time. Therefore, so many workers were seen to have lunch just setting on the floor. This place has so many water tap attached with concrete wall for washing hands and dining utensils. It is to note that there are so many small cabinets for use of workers to store necessary items like cooked food and any other materials. Generally, workers keep their cooked food here with a plate under lock and

key. But the number of these cabinets is not adequate considering the number of workers. And so many of them keep their cooked food with them. The dining place has so many dustbins to dump the waste. After having lunch, workers were observed to wash their dining utensil with soap. On the other hand, some especially women do not wash their used utensil for dining after lunch. Rather than this they clean their utensils with left over cloth known as garments 'Jhut' and bring home for cleaning just keeping in their hand bag. It is highly mentionable that they seem so hurry to have lunch in order to manage some times to take rest after lunch. This is why they are uninterested or unresponsive to follow all the hygienic procedures.

Chapter 4: Findings and Remark

The survey has revealed some important field of findings where the project should pay an active attention in order to enhance the facility and access of the RMG workers as well as the household members to the WASH. Further, the project should aim at increasing the awareness level of RMG workers and household members with promotion of behavioral change especially on handwashing and sanitation practice at critical times and occasions. Some findings captured survey has been placed below:

- Though all the members have access to improved water sources, but the overall physical and environmental condition of water tap is not as good as hygienic.
- A majority portion of the members are not used to following all the steps of water safety plan.
- Still a majority portion of the members do not have improved sanitation facility at household level.
- Most of the respondents do not have any management of separate handwashing places and agents at household level
- Though the finding shows that they have a considerable level of knowledge regarding the times and occasions of handwashing but most of them are not in practice.
- A considerable part of the members use reusable cloths for MHM but they do not either know or follow the proper ways of cleaning and drying these in a hygienic way.
- Most of the respondents are not aware for maintaining the proper food hygiene management though many of them sometimes follow some of the steps.
- At factory level, the main problem among the workers is that they are not in practice for handwashing after defecation or before eating.

ANNEX: DATA TABLES

Annex Tables

Respondent's characteristics/Background of Information

Annex Table 1: Average Income level of the surveyed workers by factories

Income range	RMG-1	RMG-2	RMG-3	All
Less than 6,999	2.6	4.8	8.6	5.3
7000-9999	18.5	33.3	24.9	22.0
10000-12999	48.5	19.0	31.5	39.8
13000-15999	19.5	31.0	19.3	20.0
16000-18999	7.1	11.9	11.0	9.0
19000-21999	2.1		3.0	2.4
More than 22,000	1.7		1.8	1.6
Average Income	12143.4	11809.5	12419.8	12242.3
Median	11510.0	12200.0	11400.0	11500.0
n	421	42	337	800

Annex Table 2: Household average monthly expenditure according to the items of expenditure by factories (in BDT)

Items of expenditure	RMG-1	RMG-2	RMG-3	All
Food	5020.0	4676.8	5382.6	5154.7
Education	669.4	930.2	419.3	577.7
House rent	2439.5	2045.2	2381.8	2394.5
Electricity	83.8	138.1	87.0	88.0
Gas/Fuel	43.9	77.4	14.5	33.3
Garbage disposal	16.7	55.8	17.1	18.9
Transportation	302.3	268.3	244.4	276.2
Health service	534.0	438.5	361.1	456.2
WASH Expenditure	238.2	301.6	223.6	235.4
Others (clothes, entertainment etc.)	1060.0	1495.2	1154.0	1122.4
Total expenditure	10407.8	10427.1	10285.4	10357.3
n	421	42	337	800

Annex Table 3: Monthly average WASH expenditure household by factories (in BDT)

WASH sectors	RMG-1	RMG-2	RMG-3	All
Water	16.2	66.7	17.6	19.4
Sanitation	1.2	0.0	12.6	5.9
Hygiene	220.9	234.9	193.3	210.0
Total WASH expenditure	238.2	301.6	223.6	235.4
n	421	42	337	800

Annex Table 4: Distribution of respondents by facility of main water sources by factory based household areas

Indicators	RMG-1	RMG-2	RMG-3	All
Food				
Tube well	9.5	7.1	1.8	6.1
Water lift through motors	86.0	83.3	87.2	86.4
Pipeline into room/ supply water into house without reservoir	.7		.9	.8
Pipeline into room/ supply water into house with reservoir	3.8	9.5	10.1	6.8
Cooking, Cleaning				
Tube well	9.5	7.1	1.8	6.1
Water lift through motors	86.0	83.3	87.2	86.4
Pipeline into room/ supply water into house without reservoir	.7		.9	.8
Pipeline into room/ supply water into house with reservoir	3.8	9.5	10.1	6.8
Other household work				
Tube well	9.5	7.1	1.8	6.1
Water lift through motors	86.0	83.3	87.2	86.4
Pipeline into room/ supply water into house without reservoir	.7		.9	.8
Pipeline into room/ supply water into house with reservoir	3.8	9.5	10.1	6.8
N	421	42	337	800

Annex Table 5: Proportion of the respondents by functionality status of water sources and availability of water

Indicators	RMG-1	RMG-2	RMG-3	All
Functionality	86.0	83.3	90.2	87.6
N	421	42	337	800
Availability of water source (Month average)	12	12	12	12
Availability of water (Hours average)	23.9	23.6	23.5	23.7
N	421	42	337	800

Annex Table 6: Responsible individuals/organization for installation of water sources by factories wise household areas

Individual/Organizations	RMG-1	RMG-2	RMG-3	All
Self	8.1	7.1	4.5	6.5
Owner of house	90.0	92.9	95.0	92.3
Pourashova/Municipality	0.7	0	0	0.4
WaterAid	0.5	0	0	0.3
Other	0.7	0	0.6	0.6
N	421	42	337	800

Annex Table 7: Water testing status on the basis of household opinion by factory household areas

Indicators	RMG-1	RMG-2	RMG-3	All
Water testing conducted	4.0	0	1.2	2.6
N	421	42	337	800
Types of water testing				
Arsenic concentration	76.5	0	75.0	76.2
Iron contamination	17.6	0	0	14.3
Faecal coliform	0	0	25.0	4.8
Others	5.9	0	0	4.8
N	17	0	4	21

Annex Table 8: Proportion of respondents by status of water Purification practiced by members of factory household

Indicators	RMG-1	RMG-2	RMG-3	All
% of HH members who purify water (yes)	4.8	9.5	8.6	6.6
N	421	42	337	800
Types of water treatment				
By boiling	85.0	50.0	48.3	62.3
Through the clothes with stones	0		3.4	1.9
By filtering	15.0	50.0	48.3	35.8
N	20	4	29	53

Annex Table 9: Categorization of overall condition of the water tap platforms and drainage system by factory based household areas

Indicators	RMG-1	RMG-2	RMG-3	All
Overall condition of the water tap platform				
Good	15.9	23.8	17.8	17.1
Fair	68.2	66.7	66.8	67.5
Bad	15.9	9.5	15.4	15.4
Overall condition of the platform of water tap connected to drainage system				
Good	14.7	9.5	18.1	15.9
Fair	66.7	76.2	62.0	65.3
Bad	18.5	14.3	19.9	18.9
N	421	42	337	800

Annex Table 10: Proportion of the HH members by types of sanitation facility available in the household level of the factories

Types of latrines	RMG-1	RMG-2	RMG-3	All
Improved Latrines	41.3	64.3	35.9	40.3
Flush to sewerage system through pipe (1)	1.2	0	2.1	1.5
Flush to septic tank (2)	24.7	33.3	22.8	24.4
Flush to septic hole/latrine (3)	11.6	28.6	8.9	11.4
Pit latrine with slab (7)	3.8	2.4	2.1	3.0
Unimproved Latrines	58.7	35.7	64.1	59.8
Flush to other place	31.8	9.5	10.1	21.5
Flush but don't know where disposed	5.0	0	3.9	4.3
Flush to drainage system	20.9	26.2	50.1	33.5
Other	1.0	0	0	.5
N	421	42	337	800

Annex Table 11: Proportion respondents by status of sharing latrines by factory based household

Indicators	RMG-1	RMG-2	RMG-3	All
Latrine shared by other HH members (yes)	76.2	69.0	90.8	82.0
N	421	42	337	800
Average number of people shares this latrines	16.4	11.8	20.7	18.2
Median	15.0	9.0	20.0	16.0
N	321	29	306	656

Annex Table 12: Distribution latrines in terms of ownership and financing organizations by factory based household

Indicators	RMG-1	RMG-2	RMG-3	All
Ownership of latrines				
Own	7.4	4.8	2.4	5.1
Owner of the house	92.4	95.2	97.0	94.5
Joint ownership	0.2	0	0.6	0.4
Financing organization for installment of latrines				
Self	7.8	7.1	2.1	5.4
Owner of the house	91.4	92.9	97.0	93.9
Paurashava	0.5	0	0.9	0.6
NGO	0.2	0	0	0.1
N	421	42	337	800

Annex Table 13: Distribution of the respondents by location of the latrines within the household by factories

Indicators	RMG-1	RMG-2	RMG-3	All
Inside the room	13.1	21.4	8.9	11.8
Adjacent to the room	34.4	47.6	24.6	31.0
In the courtyard	50.1	31.0	65.0	55.4
Outside the courtyard	2.4	0	1.5	1.9
N	421	42	337	800

Annex Table 14: Distribution respondents by connection of latrine pipelines by factory household

Indicators	RMG-1	RMG-2	RMG-3	All
To open space (river/canal/pond)	39.7	14.3	18.4	29.4
To septic hole/specific hole	38.0	61.9	33.5	37.4
To swerage system through pipe	1.4	2.4	2.7	2.0
To a drain	18.8	21.4	44.2	29.6
Don't know	2.1	0	1.2	1.6
N	421	42	337	800

Annex Table 15: Proportion of the respondents by availability of handwashing agents and running water within the latrines by factory household

Indicators	RMG-1	RMG-2	RMG-3	All
Availability of handwashing agents	27.3	40.5	21.7	25.6
Availability of water within latrines	78.6	81.0	78.3	78.6
N	421	42	337	800

Annex Table 16: Proportion of the categorized latrines in terms of cleanliness based on the opinion of respondents

Categories	RMG-1	RMG-2	RMG-3	All
Very good	28.3	40.5	29.7	29.5
Good	52.7	42.9	51.0	51.5
Moderate	19.0	16.7	19.3	19.0
Bad	0.0	0.0	0.0	0.0
Very bad	0.0	0.0	0.0	0.0
n	421	42	337	800

Annex Table 17: knowledge about time/occasions of Handwashing by the factory household

Indicators	RMG-1	RMG-2	RMG-3	All
Yes	97.4	90.5	97.9	97.3
No	2.6	9.5	2.1	2.8
N	421	42	337	800

Annex Table 18: Handwashing knowledge about proper times/occasions among the household members

Occasions	RMG-1	RMG-2	RMG-3	All
After defecation	91.2	76.2	91.7	90.6
After rinsing child's excreta	11.9	11.9	9.8	11.0
Before eating	76.2	85.7	78.9	77.9
Before cooking	19.0	21.4	15.4	17.6
Before feeding child	4.0	2.4	2.4	3.3
N	421	42	337	800

Annex Table 19: Trend of handwashing practice at proper times/occasions among the household members

Occasions	RMG-1	RMG-2	RMG-3	All
After defecation	54.6	47.6	62.0	57.4
After rinsing child's excreta	4.3	2.4	5.6	4.8
Before eating	12.6	4.8	15.7	13.5
Before cooking	37.3	35.7	32.6	35.3
Before feeding child	3.3	2.4	7.4	5.0
N	421	42	337	800

Annex Table 20: Availability of handwashing places and agents within the factory household

Indicators	RMG-1	RMG-2	RMG-3	All
Availability of separate handwashing places	20.9	33.3	14.2	18.8
N	421	42	337	800
Condition of Handwashing place				
Basin with tap	55.7	64.3	39.6	51.3
With water from bucket	42.0	35.7	60.4	47.3
With water from pitcher/pot etc.	2.3			1.3
N	88	14	48	150
Types of handwashing agents				
Nothing	34.1	35.7	31.3	33.3
Soap	65.9	64.3	64.6	65.3
Liquid soap			4.2	1.3
N	88	14	48	150

Annex Table 21: Status of Knowledge within the respondents regarding the consequence of unhygienic practice by factory household

Indicators	RMG-1	RMG-2	RMG-3	All
Diarrhea/dysentery	72.9	81.0	76.3	74.8
Spread out of water borne disease	24.9	16.7	22.8	23.6
Spread out of germs of diseases thorough flies or mosquito	24.9	19.0	17.8	21.6
Epidemic of disease	7.1	9.5	8.3	7.8
Financial loss due to medical treatment if fallen ill	2.1	2.4	3.0	2.5
Work day loss if fallen ill	2.6	2.4	3.3	2.9
Environment of the area polluted	22.8	26.2	18.7	21.3
Bad smell spreads all around	25.2	28.6	21.4	23.8
Don't know	10.5	9.5	7.7	9.3
N	421	42	337	800

Annex Table 22: Proportion of different types of water pot used for safe water collection by factory household

Types of Pots	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Vessel/jar	17.3	73.0	11.9	5.0	11.3	38.0	14.5	116.0
Bottle	16.6	70.0	16.7	7.0	24.0	81.0	19.8	158.0
Jug	66.0	278.0	71.4	30.0	64.4	217.0	65.6	525.0
Others					0.3	1.0	0.1	1.0
N	100.0	421	100.0	42	100.0	337	100.0	800

Annex Table 23: Proportion of respondents who follow the procedures of Water safety plan properly

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Water pot is cleaned during water collection	54.4	229	45.2	19	62.3	210	57.3	458
Water pot is covered during water collection	54.6	230	35.7	15	54.0	182	53.4	427
Water pot is covered during water transportation	46.2	194	33.3	14	49.0	165	46.7	373
Water pot is covered during water preservation	73.4	309	54.8	23	72.4	244	72.0	576
Water preservation at high place	77.4	326	54.8	23	75.7	255	75.5	604
Water glass/mug is cleaned during drinking or serving water	47.5	200	26.2	11	49.9	168	47.4	379
All steps followed	22.6	95	11.9	5	29.4	99	24.9	199
N	100.0	421	100.0	42	100.0	337	100.0	800

Annex Table 24: Observational findings regarding the practice of pouring water from the preserving container

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
While pouring water into glass fingers dipped into water	20.4	86.0	26.2	11.0	22.0	74.0	21.4	171.0
While pouring water into glass fingers didn't dip into water	63.4	267.0	47.6	20.0	58.5	197.0	60.5	484.0
Took water by dipping fingers into water	8.6	36.0	14.3	6.0	4.2	14.0	7.0	56.0
Took water by not dipping fingers into water	7.6	32.0	11.9	5.0	13.4	45.0	10.3	82.0
Not applicable					0.3	1.0	0.1	1.0
Others					1.8	6.0	0.8	6.0
N	100.0	421	100.0	42	100.0	337	100.0	800

Annex Table 25: Distribution of household with at least one members suffered from any diseases during the last 1 months by factories (in percent)

Disease occurrence	RMG-1	RMG-2	RMG-3	All
% of HH with atleast one member suffered from any diseases within last 1 months	44.7	57.1	34.7	41.1
n	421	42	337	800

Annex Table 26: Distribution of disease incidence by type of disease (in percent)

Types of diseases	RMG-1	RMG-2	RMG-3	All
Hepatitis A	0.9	0.0	0.8	0.8
Jaundice	1.0	0.0	1.6	1.0
Typhoid	0.0	0.0	0.8	0.3
Dysentery	1.4	0.0	0.0	0.8
Diarrhea	0.9	11.5	3.8	2.6
Bloating	0.5	3.8	0.0	0.5
Allergic reactions	0.5	7.7	2.3	1.6
Malaria	0.9	0.0	0.0	0.5
Anemia	0.0	0.0	2.3	0.8
Scabies	1.8	0.0	1.5	1.6
Ringworm	0.5	0.0	0.0	0.3
Trachoma	0.0	3.8	1.5	0.8
Fever	66.7	38.5	57.1	61.4
Cold/running nose/cough	5.4	7.7	11.3	7.6
Pneumonia	0.5	0.0	0.0	0.3
Skin disease	1.4	3.8	0.8	1.3
Ear disease	1.4	3.8	1.5	1.6
Tooth ailment	2.3	0.0	1.5	1.8
Mums/tonsillitis	0.9	0.0	0.0	0.5
Gout/rheumatism	0.9	0.0	0.8	0.8
Pain for mentration	6.3	3.8	4.5	5.5
Sexual disease	0.9	0.0	0.8	0.8
Nasal polyps	0.5	0.0	0.0	0.3
Pox	0.9	0.0	0.0	0.5
Hand pain	0.5	3.8	3.8	1.8
Weakness	1.8	7.7	0.8	1.8
Heart problem	0.5	0.0	0.0	0.3
Asthma	0.0	0.0	0.8	0.3

Blood pressure	0.0	3.8	1.5	0.8
Surgical operation	0.5	0.0	0.8	0.5
Pregnancy problem	0.9	0.0	0.0	0.5
n	222	26	133	381

Annex Table 27: Number of working days, treatment expenditure and financial loss because of suffering of diseases by factories

Indicators	RMG-1	RMG-2	RMG-3	All
Average number of days suffered from disease	5.02	3.69	5.65	5.15
Average number of working days lost due to suffering diseases	896.49	816.50	904.46	893.81
Average amount of money spent for treatment of diseases	1.57	0.88	1.02	1.33
Average amount of money incurred for diseases	659.14	562.31	684.71	661.46

Annex Table 28: Proportion of household by availability and sharing status of cooking places including responsible person for cooking

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Availability of cooking place A	97.6	411	92.9	39	98.5	332	97.8	782
Sharing cooking place with others C	84.3	355	83.3	35	91.7	309	87.4	699
Responsible person for cooking								
Self	72.7	306	66.7	28	78.6	265	74.9	599
Mess member	.2	1			.6	2	.4	3
Self and mess member in turn	6.9	29	2.4	1	4.2	14	5.5	44
House maid	2.9	12	16.7	7	5.9	20	4.9	39
Manage from hotel	1.4	6	2.4	1	2.4	8	1.9	15
Family (Mother/wife/Sister)	15.9	67	11.9	5	8.3	28	12.5	100
N	100.0	421	100.0	42	100.0	337	100.0	800

Annex Table 29: Proportion of respondents having hygienic practices at time of performing cooking activities

Indicators		RMG-1		RMG-2		RMG-3		All	
		%	N	%	N	%	N	%	N
Utensils cleaned before cooking	Yes	73.9	311	41.5	17	68.2	230	69.8	558
	No	23.8	100	56.1	23	27.0	91	26.8	214
	Don't know	2.4	10	2.4	1	4.5	15	3.3	26
	NA					.3	1	.1	1
handwashing practice with water and soap before and after using kitchen utensils	Yes	50.2	211	29.3	12	55.5	187	51.4	410
	No	43.3	182	53.7	22	35.9	121	40.7	325
	Don't know	6.4	27	17.1	7	8.3	28	7.8	62
	NA					.3	1	.1	1
food items cleaned properly before cookig	Yes	82.9	349	57.1	24	76.6	258	78.9	631
	No	14.0	59	40.5	17	19.0	64	17.5	140
	Don't know	3.1	13	2.4	1	4.2	14	3.5	28
	NA					.3	1	.1	1
wash your hands just before serving cooked food	Yes	37.3	157	9.8	4	35.3	119	35.0	280
	No	56.5	238	73.2	30	57.9	195	57.9	463
	Don't know	6.2	26	17.1	7	6.8	23	7.0	56

Indicators		RMG-1		RMG-2		RMG-3		All	
		%	N	%	N	%	N	%	N
	NA								
wash hands before smashing or making paste of any food varieties	Yes	33.0	139	12.2	5	30.9	104	31.0	248
	No	61.0	257	70.7	29	61.1	206	61.6	492
	Don't know	5.9	25	17.1	7	8.0	27	7.4	59
	NA								
All steps maintaied	Yes	19.2	81	2.4	1	20.5	69	18.9	151
	No	80.8	340	97.6	41	79.5	268	81.1	649
food items stored in a hygienic (free of dust, web etc) place during cleaning and cooking	Yes	64.8	273	57.1	24	69.4	234	66.4	531
	No	33.3	140	40.5	17	27.3	92	31.1	249
	Don't know	1.9	8	2.4	1	3.3	11	2.5	20
	NA								
N		100.0	421	100.0	42	100.0	337	100.0	800

Annex Table 30: Overall condition of the cooking places through observation by factory household

Indicators	RMG-1	RMG-2	RMG-3	All
No waste and dust in the kitchen	58.4	33.3	50.1	53.6
There is dust and waste lying around kitchen	34.2	50.0	45.7	39.9
Insects or cockroach are visible	5.9	14.3	3.3	5.3
Not applicable	1.4	2.4	.9	1.3
N	421	42	337	800

Annex Table 31: Places for storing cooked food used by factory household

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Food stored in a high and secured place	63.7	268	61.9	26	59.3	200	61.8	494
Places for storing cooked food								
Refrigerator/Fridge	14.3	60	23.8	10	20.5	69	17.4	139
Food shelf with door	28.3	119	31.0	13	30.6	103	29.4	235
Food shelf without door	10.9	46	7.1	3	8.3	28	9.6	77
On the ground	43.0	181	33.3	14	40.1	135	41.3	330
On the floor and shelf	.5	2					.3	2
On the table	.5	2					.3	2
Not applicable	2.1	9	2.4	1	.6	2	1.5	12
Others	.5	2	2.4	1			.4	3
N	100.0	421	100.0	42	100.0	337	100.0	800

Annex Table 32: Practice for storing the cooked food in the fridge/refrigerator among the factory household

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Keep the hot food	10.0	6			10.1	7	9.4	13
Keep the food after cooling or having normal temperature	85.0	51	90.0	9	81.2	56	83.5	116
Store the hot food keeping the lid open	5.0	3	10.0	1	8.7	6	7.2	10
N	100.0	60	100.0	10	100.0	69	100.0	139

Table 33: Proportion of reproductive women by use of MHM materials at the factory level household

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Reusable (example old cloth etc.)	54.4	178	26.5	9	12.6	33	35.4	220
Sanitary napkin	38.2	125	73.5	25	86.2	225	60.3	375
Tissue	1.2	4					0.6	4
Garments jut	6.1	20			1.1	3	3.7	23
n	100.0	327	100.0	34	100.0	261	100.0	622

Table 34: Cleaning and drying practice of the Reusable MHM materials among the members of factory households

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Cleaning of Reusable MHM Materials								
Wash with water and soap/savlon	75.8	135	77.8	7	90.9	30	78.2	172
WASH with water only	16.3	29	11.1	1	6.1	2	14.5	32
Nothing	4.5	8	0	0	0	0	3.7	8
Don't know	3.4	6	11.1	1	3.0	1	3.6	8
n	100.0	178	100.0	9	100.0	33	100.0	220
Drying of Reusable MHM Materials								
Sundry	25.6	42	37.5	3	25.0	8	26.0	53
Hidden drying	74.4	122	62.5	5	75.0	24	74	151
n	100.0	164	100.0	8	100.0	32	100.0	204

Annex Table 35: Use of MHM materials among the reproductive women by factory household

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Reusable (example old cloth etc.)	54.4	178	26.5	9	12.6	33	35.3	220
Sanitary napkin	38.2	125	73.5	25	85.9	225	60.2	375
Tissue	1.2	4					.6	4
Garments jut	6.1	20			1.1	3	3.7	23
Not applicable					.4	1	.2	1
N	100.0	327	100.0	34	100.0	262	100.0	623

Annex Table 36: Changing duration and Disposal of MHM Materials

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Changing duration of MHM materials								
Within 6 hours	52.9	173	67.6	23	52.7	138	53.6	334
More than six hours	47.1	154	32.4	11	47.3	124	46.4	289
N	100.0	327	100.0	34	100.0	262	100.0	623
Disposal of MHM Materials								
With HH garbage	70.0	229	58.8	20	77.1	202	72.4	451
Latrine	10.1	33	5.9	2	9.5	25	9.6	60
Dust bean	15.9	52	35.3	12	13.4	35	15.9	99
Sewerage								
Open space	4.0	13					2.1	13
Don't know								
N	100.0	327	100.0	34	100.0	262	100.0	623

Annex Table 37: Proportion of water points for drinking water at factories

Types of water sources	RMG-1	RMG-2	RMG-3	All
Factory owned deep tubewell through pipeline	100	92.9	99.8	99.6
Tube well water	0.0	7.1	0.3	0.5
n	421	42	337	800

Annex Table 38: Water purification or treatment system available at factories

Water purification system	RMG-1	RMG-2	RMG-3	All
Through UltraViolet Water Disinfection System	15.0	28.6	10.7	13.9
Through Water filter	7.6	50.0	18.4	14.4
No need to purify water	63.7	19.0	64.7	61.8
Water is not purified	13.8	2.4	6.2	10.0
n	421	42	337	800

Annex Table 39: Proportion of the categorized latrines in terms of cleanliness based on the opinion of respondents

Categories	RMG-1	RMG-2	RMG-3	All
Very good	28.3	40.5	29.7	29.5
Good	52.7	42.9	51.0	51.5
Moderate	19.0	16.7	19.3	19.0
Bad	0.0	0.0	0.0	0.0
Very bad	0.0	0.0	0.0	0.0
n	421	42	337	800

Annex Table 40: Weekly Frequency of cleaning the latrines at factory level

Frequency of times	RMG-1	RMG-2	RMG-3	All
Everyday	99.3	97.6	98.8	99.0
Twice in a week	0.7	2.4	0.9	0.9
Three times in a week	0.0	0.0	0.3	0.1
Four times in a week	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0
n	421	42	337	800

Annex Table 41: Availability of slipper/sandal, water, handwashing place and agents and practices by factory respondents

Indicators	RMG-1	RMG-2	RMG-3	All
Availability of slipper/sandals	89.8	69.0	84.0	86.3
Use of slippers/sandals in latrines	88.1	78.6	92.6	89.5
Availability of water	98.8	100.0	98.8	98.9
Availability of handwashing facility	90.3	90.5	95.0	92.3
n	421	42	337	800
Availability of soap and water in the handwashing places	95.8	94.7	93.8	94.9
n	380	38	320	738
Trend of handwashing practice after using latrines				
Don't wash	0.0	4.8	3.0	1.5
Only water	26.8	40.5	21.1	25.1
One hand with soap and water	44.7	38.1	46.0	44.9
Both hands with soap and water	28.5	16.7	29.7	28.4
Other	0.0	0.0	0.3	0.1
n	421	42	337	800

Annex Table 42: Proportion of respondents with regular menstruation by factories

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Yes	89.0	300	94.1	32	92.6	249	90.8	581
No	7.4	25	5.9	2	5.6	15	6.6	42
Yes, but now is pregnant	1.2	4			.7	2	.9	6
No, however she is pregnant	.3	1					.2	1
Not applicable (Age 50)					.4	1	.2	1
Not response	2.1	7			.7	2	1.4	9
N	100.0	337	100.0	34	100.0	269	100.0	640

Annex Table 43: Use trend of MHM materials at time of working hours among the workers by factories

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Cotton	0.3	1			0.8	2	0.5	3
Tissue paper	2.1	7			1.5	4	1.7	11
Clothes/old clothes	48.2	159	32.4	11	14.3	38	33.0	208
Sanitary napkin (Pad)	35.8	118	64.7	22	81.6	217	56.7	357
Just panty	1.8	6			3.4	9	2.4	15
Presently does not continue the ministrations (Go to next section)	0.6	2	2.9	1	1.5	4	1.1	7
Leftover cloths	21.2	70	5.9	2	0.8	2	11.7	74
N	100.0	330	100.0	34	100.0	266	100.0	630

Annex Table 44: Availability of specific place for disposal of MHM materials at factories

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Yes	96.7	319	94.1	32	100.0	266	97.9	617
No	3.3	11	5.9	2			2.1	13
N	100.0	330	100.0	34	100.0	266	100.0	630
Other ways followed in case of unavailable specific place for MHM disposal								
Throw in dustbin								
Throw in drain	9.1	1					7.7	1
Throw in toilet	63.6	7	50.0	1			61.5	8
Throw anywhere								
Bring at home in bag	27.3	3	50.0	1			30.8	4
N	100.0	11	100.0	2			100.0	13

Annex Table 45: Steps taken in case of need to change the used MHM materials at factories

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Washed in factory and bring home	8.8	29	8.8	3	10.2	27	9.4	59
Bring it home without washing	8.2	27	14.7	5	7.9	21	8.4	53
Dispose of	74.8	247	67.6	23	75.9	202	74.9	472
Do nothing	4.5	15	2.9	1	4.5	12	4.4	28
No to change it	3.6	12	5.9	2	.4	1	2.4	15
Not applicable					1.1	3	.5	3
N	100.0	330	100.0	34	100.0	266	100.0	630

Annex Table 46: Availability and facility for changing MHM materials at factories

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Latrines are enough comfortable for changing MHM materials	90.9	300	91.2	31	95.9	255	93.0	586
Availability of MHM materials at factories	93.3	308	100.0	34	99.6	265	96.3	607
Payment for MHM materials	8.8	29	41.2	14	87.2	232	43.7	275
Types of MHM materials available at factories								
Cotton	0.6	2			0.8	2	0.7	4
Tissue paper	0.6	2					0.3	2
Clothes/old clothes	12.7	39	5.9	2	5.7	15	9.2	56
Sanitary napkin (Pad)	7.1	22	44.1	15	85.3	226	43.3	263
Leftover cloths (Garments Jhut)	78.9	243	50.0	17	8.3	22	46.5	282
N	100.0	308	100.0	34	100.0	265	100.0	607

Annex Table 47: Proportion of the respondents who use different places for having lunch at working hours at factories

Indicators	RMG-1		RMG-2		RMG-3		All	
	%	N	%	N	%	N	%	N
Factory dining	8.3	35	40.5	17	24.0	81	16.6	133
Go home and have lunch	58.0	244	23.8	10	25.5	86	42.5	340
Nearby restaurant/hotel	1.0	4			2.1	7	1.4	11
Bring home made food and use factory dining	32.5	137	35.7	15	48.4	163	39.4	315
Others	.2	1					.1	1
N	100.0	421	100.0	42	100.0	337	100.0	800

Annex Table 48: Availability and facility of dining places at factories

Indicators	RMG-1	RMG-2	RMG-3	All
Availability of separate dining place at factories	95.0	97.6	98.5	96.6
N	421	42	337	800
Availability of handwashing places at factories	97.4	100.0	98.8	98.1
N	421	42	337	800
Place management for having lunch in case of unavailable separate dining place				
No specific place, Anywhere of the factory	4.8	100.0	60.0	18.5
At my desk	4.8		40.0	11.1
Do not have lunch at factory	90.5			70.4
N	21	1	5	27

Annex Table 49: Availability of shelf or rack for storing food and opportunity for storing cooked food at factories

Indicators	RMG-1	RMG-2	RMG-3	All
Availability of shelf or rack for food storage	89.8	78.6	87.8	88.4
N	421	42	337	800
Opportunity for food storage for the workers				
Always	46.1	28.6	58.2	50.3
Sometimes, if there is enough place for storage	17.1	40.5	19.3	19.3
Never	4.3	2.4	1.5	3.0
Others	.7		3.0	1.6
Not applicable	31.8	28.6	18.1	25.9
N	421	42	337	800

Annex Table 50: Knowledge about the procedure of storing cooked food in food shelf

Indicators	RMG-1	RMG-2	RMG-3	All
Knowledge on food storing	57.2	61.9	59.9	58.6
N	421	42	337	800
Steps followed for food storage				
Keep the hot food	14.9	7.7	16.8	15.4
Keep the food after cooling or having normal temperature	81.3	88.5	81.7	81.9
Store the hot food keeping the lid open	2.9		1.5	2.1
Other	0.8	3.8		0.6
N	242	26	202	469

Annex Table 51: Cleanliness of food shelf or storage place and reasons of un-cleaned conditioned

Indicators	RMG-1	RMG-2	RMG-3	All
Rack/shelf or storage place is clean	88.8	88.1	91.7	90.0
N	421	42	337	800
Reasons behind the un-cleaned condition				
Shelf/rack is full of dust and dirt	10.6	20.0	17.9	13.8
Shelf/rack has crack/broken	10.6		14.3	11.3
Insects are available in Shelf/rack	46.8	60.0	46.4	47.5
These are not cleaned regularly	31.9	20.0	17.9	26.3
Other			3.6	1.3
N	47	5	28	80

Annex Table 52: Age-sex distribution of the surveyed respondents

Age	Female	Male	All
15-19	14.1	4.4	12.1
20-24	32.2	32.5	32.3
25-29	29.2	29.4	29.3
30-34	15.0	16.9	15.4
35-39	7.7	10.0	8.1
40+	2.0	6.9	2.9
n	640	160	800

Annex Table 53: Distribution of respondents according to their marital status by age

Marital Status	Male	Female	All
Unmarried	41.9	18.3	23.0
Currently married	57.5	71.9	69.0
Widow/widower	0.0	3.4	2.8
Divorced	0.6	4.1	3.4
Separated	0.0	2.3	1.9

Annex Table 54: Distribution of respondents according to their dwelling ownership

Status	Percentage
Rented	93.9
Own	6.0
Others	0.1

Annex Table 55: Distribution of respondent's dwelling according to housing structure

Status	Percentage
Pucca	28.8
Semi-pucca	38.1
Tin house	32.8
Others	0.3

Annex Table 56: Distribution of type of respondent's living places (sharing of living place)

Status of sharing living places	Female	Male	All
Alone in a room	8.4	3.1	7.4
With so many members in a room	4.7	23.1	8.4
With some other people in rented mess	3.3	43.8	11.4
Husband and wife	34.8	11.9	30.3
Husband and wife with other family members	43.3	15.6	37.8
With relatives	4.8	1.9	4.3
Others	0.9	0.6	0.9

Annex Table 57: Proportion of respondents who follow the procedures of Water safety plan properly

Indicators/Steps	Response (%)	N
Water pot is cleaned during water collection	57.3	458
Water pot is covered during water collection	53.4	427
Water pot is covered during water transportation	46.7	373
Water pot is covered during water preservation	72.0	576
Water preservation at high place	75.5	604
Water glass/mug is cleaned during drinking or serving water	47.4	379
All steps followed	24.9	199
N	100.0	800

Annex Table 58: Overall condition of latrines based on physical observation and response

Indicators	Percentage
Excreta has come outside and spread out	33.0
Insects can enter into latrine pit	36.4
Bad smell emits from latrine	69.3
Latrine pipe stays in open space connected to ditch/canal/pond/river	36.4
N	800

Annex Table 59: Trend of handwashing practice of the respondents after using latrines

Indicators	Percentage
Don't wash	1.5
Only water	25.1
One hand with soap and water	44.9
Both hands with soap and water	28.4
Other	0.1

Annex Table 60: Distribution of respondents by availability of handwashing places and agents

Availability of handwashing Place and agents	Response (%)
Availability of separate handwashing places	18.8
N	800
Availability and types of Handwashing place	
Basin with tap	51.3
With water from bucket	47.3
With water from pitcher/pot etc.	1.3
N	150
Available handwashing agents	
Nothing	33.3
Soap	65.3
Liquid soap	1.3
N	150

Annex Table 61: Proportion of respondents who have handwashing knowledge by sex and their educational level

Occasions	Illiterate/can sign only/do not read in school	Can read and write only	Below primary	Primary passed or above	Chi-square test (p=-value)
Handwashing knowledge of female					
After defecation	94.4	0	84.3	89.3	0.173
After rinsing child's excreta	11.1	0	10.2	10.5	0.987
Before eating	88.9	0	76.9	73.4	0.102
Before cooking	36.1	0	18.5	17.9	0.027
Before feeding child	0	0	2.8	3.4	0.508
Handwashing knowledge of male					
After defecation	100.0	100.0	100.0	97.8	0.922
After rinsing child's excreta	0.0	13.3	50.0	12.3	0.151
Before eating	100.0	100.0	100.0	88.4	0.418
Before cooking	0.0	20.0	25.0	10.9	0.543
Before feeding child	0.0	13.3	0.0	2.9	0.224

Annex Table 62: Proportion of respondents who follow handwashing practice by sex and their income level

Occasions	Less than 7000	7000-9999	10000-12999	13000-15999	16000 or more	Chi-square test (p=-value)
Handwashing practices of female						
After defecation	78.4	54.2	55.6	48.7	32.1	0.000
After washing children defecation	27.3	7	22.7	6.5	20.5	0.043
Before eating	8.1	13.8	12.3	17.4	13.6	0.603
Before cooking	5.4	3.3	7.5	8.5	12.3	0.131
Before feeding baby	27.3	11.4	14.3	13	20.9	0.556
Handwashing practices of male						
After defecation	80	91.3	74.2	74.4	78.3	0.529
After washing children defecation	0	50	0	100	33.3	0.022
Before eating	20	8.7	18.2	7	18.2	0.439
Before cooking	0	0	3.1	7	0	0.444
Before feeding baby	0	66.7	18.2	40	25	0.405

Annex Table 63: Distribution of respondents by handwashing practice at proper times/occasions (Multiple Response)

Proper times/Occasions	Response (%)
After defecation	57.4
After rinsing child's excreta	4.8
Before eating	13.5
Before cooking	35.3
Before feeding child	5.0
N	800

Annex Table 64: Distribution of respondents by Knowledge regarding the consequence of unhygienic practice

Types of Consequences	Response (%)
Diarrhea/dysentery	74.8
Spread out of water borne disease	23.6
Spread out of germs of diseases thorough flies or mosquito	21.6
Epidemic of disease	7.8

Financial loss due to medical treatment if fallen ill	2.5
Work day loss if fallen ill	2.9
Environment of the area polluted	21.3
Bad smell spreads all around	23.8
Don't know	9.3
N	800

Annex Table 65: Proportion of female workers who use sanitary napkin by their educational background

Use sanitary napkin	Illiterate/can sign only/no school	Primary	In secondary	Chi-square test
Yes	47.2	43.9	60.2	0.004
No	52.8	56.1	39.8	

Annex Table 66: Proportion of respondents who use sanitary napkin by their income level

Use sanitary napkin (pad)	< 7000	7000-9999	10000-12999	13000-15999	≥16000	Chi-square test (P-value)
Yes	52.8	59.5	54.4	57.5	58.8	0.846
No	47.2	40.5	45.6	42.5	41.2	

Annex Table 67: Distribution of respondents by cleaning, drying, and disposal practice of the used reusable MHM materials

Cleaning and drying of MHM Materials	%	N
Cleaning of Reusable MHM Materials		
Wash with water and soap/savlon	78.2	172
WASH with water only	14.5	32
Nothing	3.7	8
Don't know	3.6	8
N	100	220
Drying of Reusable MHM Materials		
Sundry	26	53
Hidden drying	74	151
N	100	204
Disposal of MHM materials		
With HH garbage	72.4	148
Dust bean	15.9	32
Latrine	9.6	20
Open space	2.1	4
N	100	204

Annex Table 68: Use of MHM materials at time of working hours at factories and disposal of MHM materials

Menstrual Hygiene Management at Factory Level	Response (%)	N
Use of MHM materials		
Reusable Clothes/old clothes	33.0	208
Sanitary napkin (Pad)	56.7	357
Just panty	2.4	15
Leftover cloths	11.7	74
Other	2.2	14
Presently no ministratation	1.1	7
N	100	630
Disposal of MHM materials		
Throw in drain	7.7	48

Menstrual Hygiene Management at Factory Level	Response (%)	N
Throw in toilet	61.5	383
Bring home in a bag	30.8	192
N	100	623

Annex Table 69: Proportion of respondents by hygienic practices at time of performing cooking activities

Indicators	Yes		No		Do not Know		Not Applicable	
	%	N	%	N	%	N	%	N
Utensils cleaned before cooking	69.8	558	26.8	214	3.3	26	0.1	1
Handwashing practice with water and soap before and after using kitchen utensils	51.4	410	40.7	325	7.8	62	0.1	1
Food items cleaned properly before cookig	78.9	631	17.5	140	3.5	28	0.1	1
Wash your hands just before serving cooked food	35	280	57.9	463	7	56	0	0
Wash hands before smashing or making paste of any food varieties	31	248	61.6	492	7.4	59	0	0
All the process maintained by respondents								
All the procedures followed properly	18.9	151	81.1	649	0	0	0	0

Annex Table 70: Overall condition of the cooking places through observation

Indicators	Response (%)
No waste and dust in the kitchen	53.6
There is dust and waste lying around kitchen	39.9
Insects or cockroach are visible	5.3
Not applicable	1.3
N	800

Annex Table 71: Proportion of the RMG workers by management of places for having lunch

Attributes	%	N
Factory dining	16.6	133
Go home and have lunch	42.5	340
Nearby restaurant/hotel	1.4	11
Bring home made food and use factory dining	39.4	315
Others	.1	1
N	100.0	800

Annex Table 72: Proportion of the RMG workers by knowledge and how they are storing their cooked food at factories

Knowledge on food storing	Response (%)
Knowledge on food storing	58.6
N	800
Steps followed for food storage	
Keep the hot food	15.4
Keep the food after cooling or having normal temperature	81.9
Store the hot food keeping the lid open	2.1
Other	0.6
N	469

Annex Table 73: Proportion of RMG workers by availability of shelf or rack and opportunity for storing cooked food at factories

Availability of Shelf/rack and opportunity for storing food	Response (%)
Availability of shelf or rack for food storage	88.4
N	800
Opportunity for food storage	
Always	50.3
Sometimes, if there is enough place for storage	19.3
Never	3
Others	1.6
Not applicable	25.9
N	800