2014

# Hygiene Practice and Health Status of the Rural Women: A Study of a Village in the Northern Region of Bangladesh

Al-Mamun, Md. Abdullah

University of Rajshahi

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A Thesis submitted to the University of Rajshahi for the Degree of Master of Philosophy


**Submitted by:**

**Md. Abdullah Al-Mamun**
Session: 2007-08
Roll No.:07822
Department of Sociology
University of Rajshahi



Department of Sociology
University of Rajshahi
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2014

*Dedicated to:*

*My parents-*

*For whom I belong in the ground of exploring the beauty-*

***Dr. Md. Abdul Gafur***

*and*

***Monowara Begum***

# Declaration

I do hereby declare that the thesis entitled "Hygiene Practice and Health Status of the Rural Women: A Study of a Village in the Northern Region of Bangladesh" submitted to the Department of Sociology, University of Rajshahi, Bangladesh under the Supervision of Professor Dr. AKM Shafiul Islam, Department of Sociology, Rajshahi University for the degree of Master of Philosophy in Sociology. This is a new work made new intervention in the field for exploring the root causes and effects of the research problem. No part of it, in any form, has been submitted to any University or Institute for any degree or diploma.

Date: June 18, 2014

**Md. Abdullah Al-Mamun**
Session: 2007-08
Roll No.:07822
Department of Sociology
University of Rajshahi

# Certificate

It is a great pleasure for me to certify that the dissertation entitled, "Hygiene Practice and Health Status of the Rural Women: A Study of a Village in the Northern Region of Bangladesh" has been prepared by Md. Abdullah Al-Mamun. It is an original work and an addition to the field knowledge. To the best of my knowledge, no other person was in any form associated with completion of this study. I have gone through the draft and final version of the dissertation thoroughly and found it satisfactory for submission to the Department of Sociology, University of Rajshahi, in fulfillment of the requirements for the Master of Philosophy in Sociology.

.....

**(Dr. AKM Shafiul Islam)**
Professor
Department of Sociology
University of Rajshahi

# Acknowledgements

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Lastly, I acknowledge my family members, relatives for giving all out support to do my research work behind the other functions.

Keeping all sorts of support, encouragement and inputs, I tried to do the best one I think.

**Md. Abdullah Al-Mamun**

# Abstract

A common awareness on Sanitation, Health and Hygiene is examined a very disappointing situation among the rural women of the selected households. Illiteracy and un-consciousness, some in cases ignorance and poverty are the remarkable causes for these circumstances. Local culture and traditional movement for cases found as significant root causes for existing low Water, Sanitation and downbeat health promotion and practice.

The research study has applied to find out the facts of lacks, gaps, causes and effects to meet the proper hygienic situation; chiefly the rural household women those who are directly connected with food processing, distribution and other vital domestic tasks as well.

This study is taken place in Kauafanda village of Gojghonta union under Gongachara sub-district (Upazila) of Rangpur district. A total 100 households are selected for this study where the housewives are considered as the key respondents.

The study raveled the remarkable findings as follows:

◊ Among the households, 80% are dependents on the agriculture direct or indirectly. This is commonly a below poverty line area and their concentration is centered to only be alive containing the basic needs than health and sanitation. This is a disaster prone revering area where most of the households are affected by river erosion by Tista.

◊ The respondents conception on safe water and Hygienic latrine, these consequences over health and environment is found very low and substandard. Their health status is stating at low level where health consciousness, treatment tendency is covered some traditional moods, believes and cultures found touched with local orthodox. As a result, they became looser in financial aspects which effected over all their livelihoods.

◊ In the questions of Hygiene promotion, Hand washing after different critical times treated as very important to keep the hygiene promotion habits continue. The respondent households are covered negligence and ignorance habits of hand washing and other sector of Hygiene as well. Food Hygiene, Environmental hygiene is also got lack of awareness and education on proper practices found. The main sensitive factor of women is the Menstrual Hygiene which reflects a narrow and unsatisfactory scenario in this study. Women are still using the rags, managing those in dark and dirty places. They are facing different respiratory track infectious diseases all the time, Loosing work forces and other interventions of life, declining financial strength.

The study is a symbol of rural women as well as the rural living standard of Health and Hygiene, though the women are the actors here, but this is generally habituated conditions of the rural villagers. Sanitation movement and Health status improvement is obviously difficult with exists of this scenario. The study has given some recommendations in different parts of its discussion.

# Contents

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# ABBREVIATIONS:

| | | |
|---|---|---|
| UN | : | United Nations |
| SHN | : | School Health & Nutrition |
| NGOF | : | NGO Forum |
| WHO | : | World Health Organization |
| UNICEF | : | United Nations International Children Fund |
| ANC | : | Anti Natal Care |
| PNC | : | Post Natal Care |
| MDG | : | Millennium Development Goals |
| GoB | : | Government of Bangladesh |
| SACOSAN | : | South Asian Conference on Sanitation |
| CDC | : | Centre for Disease Control and Prevention |
| WatSan | : | Water & Sanitation |
| WASH | : | Water, Sanitation & Hygiene |

# Chapter-1

## 1.1 Introduction

The Sanitation and hygiene both issues are interrelated. These affect largely consequent over human health. Sources of all diseases attack to human body are centered mostly to hygiene and Sanitation conditions of a personal to nation and the world as well. Knowledge, attitudes and practices and these consequences - all of these treated as health status of every human or group.

1Health is a common theme in most cultures. In fact, all communities have their concepts of health, as part of their culture. Among definitions still used, probably the oldest is that health is the "absence of disease". Historically, the right to health was one of the last to be proclaimed in the constitutions of most countries of the world. At the international level, Universal Declaration of Human Rights established a breakthrough in 1948, by stating in Article 25: "Everyone has the right to a standard of living adequate for the health and wellbeing of himself and his family....." The preamble to the WHO constitution also affirms that it is one of the fundamental rights of every human being to enjoy "The highest attainable standard of health".

[2]Sanitation has international attention in recent times. In September 2000 the United Nations General Assembly endorsed 8 (eight) Millennium Development Goals (MDG). Two of these goals are directly linked with sanitation-reduction in child mortality and ensuring environmental sustainability. Targets for achieving these goals are to reduce by two-thirds the under-five mortality rate within 2015 and to improve the lives of at least 100 million slum dwellers by 2020 through access to better sanitation. Two years later, in September 2002, the World Summit on Sustainable Development (WSSD) voiced a stronger concern for promoting sanitation. In the Implementation Plan of WSSD,

[1] Preventive and Social Medicine,1997
[2] National Sanitation Strategy, Bangladesh 2005

nations agreed to pursue a specific sanitation target: halving the figure of 2.4 billion people who do not have access to basic sanitation facilities by 2015.

Hygiene practice is a part and parcel of Sanitation as we know in terms Sanitation means – Safe water, Hygienic latrine and Personal Hygienic behavior as well as environmental hygienic situation. Without one of these three elements, there would not be maintained proper Sanitation. Also, nobody would be under sanitation if these three elements not being maintained in personal life. Besides, Hygiene practice is most important elements of sanitation. It plays always a significant role for sanitation. Women are mostly related with hygienic behavior, particularly with domestic hygiene. It is more absolute especially in the context of South Asia and in Bangladesh as well. For this sense, women control a large are of causes for health effect and impact.
A new paradigm shift and revolutionary thinking are needed to change the attitude and behavior of those who are entrenched in traditional hygienic practices and knowledge. Considering the reality, a research study need to apply for finding out the lacking, causes and effects to meet the proper hygienic situation; particularly the women those who are directly related to the causes and effects of health situation of own, other family members and general people as well.

## Historical background of Sanitation long way movement in Bangladesh:

Bangladesh, part of the former Bengal presidency of British India was a land of dreaded diseases like cholera, plague, pox, malaria etc. Thousands of people die from these diseases and village after village was desolate. The colonial army was not free from these problems either. A significant number of defense personnel used to succumb to these diseases. This situation compelled the colonial master to send a royal commission in 1860 and a plague commission in 1896 to investigate the problem. Both commissions observed the public

health system to be dismal and recommended the establishment of a proper public health institution. Subsequently, the public health department was established in 1904 although its service remained mostly limited to the armed forces and bureaucrats. Only after the end of British rule did the health of the common people receive some attention from the ruling elite. In the early 1950s, rural sanitation became part of public health (Quazi & Pramanik, 2004).

During the colonial period, sanitation policies were deeply influenced by the revolt of 1857 and its aftermath, the plague epidemic beginning in 1896.When the Royal Commission into the Sanitary State of the Army in India linked health with sanitation, the colonial administration responded physically separating the army and British officials from the indigenous city by building new cantonments and residential enclaves where the lessons of the sanitary revolution were applied(p-59, Environment & Urbanization v:23 April 2011).
This need to provide new sanitary arrangements brought about the development of local government across the sub-continent during the 1870s that had the power to collect taxes to finance sanitation services and public works (p-59, Environment & Urbanization v: 23 April 2011).
To address the problem of insanitary housing and congestion, improvement trusts were established in Bombay (1898) and Calcutta (1912) under the direct control of colonial authorities.
After 1947, through political role behind the screen, a middle class (besides landlords, rich peasant's coalition) is built significantly in the sub-continent. But they were unable to improve the welfare of the disadvantaged and marginalized populations.

The middle class had suffered from the poor provision of adequate sanitation has not become an electoral priority nor led to the growth of popular movements seeking sanitary reform that would give equitable access to all people. When outbreaks of communicable diseases such as cholera or typhoid occur in slums or resettlement colonies, governments very quickly put in place

control measures, particularly when there is extensive media reporting. But the endemic communicable diseases such as dysentery, diarrhea, tuberculosis and malaria, which impose such a health burden on the urban poor, have been largely ignored because they require long term planning, funding and implementation of effective maintenance and monitoring systems (p-61, Environment & Urbanization v:23 April 2011).

[3]Since then rural sanitation has seen little improvement due to hundreds of project interventions by public, private, NGO and donor actors.

DPHE, under the Ministry of Local Government, Rural Development and Co-operatives (MLGRD) was created in 1953 to promote public health through ensuring provision of drinking water. In 1954, it was also entrusted with the task of ensuring provision of sanitation. Subsequently, DPHE has taken numerous initiatives in sanitation sector. However, its endeavors during the first three decades were inconsistent in nature. Development initiatives that were undertaken during this phase were discontinued after a certain period without any new scheme to continue the process. Moreover, the nature of these initiatives was applied research and the main purpose was the demonstration of low cost technologies. These development initiatives were either financed by the WHO or UNICEF. The supply driven approach was one of the main features of these development initiatives. Slabs with pans were distributed free of cost for household based latrine. During 1975-1982 DPHE implemented Village Sanitation Programme (VSP). During this phase the shift in the intervention approach from total subsidies to partial subsidies was indicated when a pilot project was undertaken to assess people's willingness to pay.

The 1980-90 had been declared as the International Drinking Water Supply and Sanitation decade (IDWSS) and had raised worldwide concern and commitment on the water and sanitation (WatSan) sector. Different foreign and national development agencies had expressed willingness to fund WatSan initiatives in the developing countries. Subsequently, In Bangladesh, a large

[3] Quazi & Pramanik,2004 (Sanitation Movement in Bangladesh and the Role of the Private sector)

number of local organizations were activated in the WatSan sector. The active participation of NGOs made a qualitative change in the sanitation intervention approach.

In addition to the NGOs, the public sector also took advantage of the favorable environment created by the declaration of IDWSS and widened its WatSan endeavors.

By 1985, there was growing recognition that water alone cannot improve health and that adequate sanitation and hygiene practices are also indispensable components of sector interventions. However, in 1986, there were hardware-software integrated program had been introduced in sanitation sector. Apart from the NGO sector another new actor, namely the private sector, made its silent entrance in the arena of rural sanitation. The 1980-90 phase of the sanitation movement was transitional in the sense that while previously, the public sector, with financial assistance from donors, played a solitary role, during this phase two other sectors – namely the NGO and private sectors, also made their entrance.

During the phase of 1991-2003, an emergence of an effective private sector and the active participation of the NGO, public and donor sectors have been occurred.

This phase called imperative in many senses. Sanitation has received much needed focus while in the preceding period under the WatSan program the issue of sanitation used to get marginalized by the water concerns. This became evident from the fact that during the period of 1980-1990, sanitation coverage increased from 1% to 5%19 while water supply increased from 37% to 90.Moreover, much emphasis was given to social mobilization for behavioral change, adoption of a demand driven approach, provision of multiple low-cost sanitary latrine technology options, formation of a water and sanitation policy, attention for the issues of gender sensitivity and community participation, and the promotion of private sector involvement by the state and non government agencies. A gradual shift in the role of the public sector from service provider to facilitator was also emphasized.

The incorporation of social mobilization activities is seen as the richest ingredient in the sanitation movement in Bangladesh. However, many development activists became disturbed by some of the strategies and techniques such as the Child-to-Child technique, use of teachers, the formation of student brigades, etc. They accept the effectiveness of these techniques as means for positive behavioral change, but at the same time they have become worried about overall social development. Because they were worried thinking to engagement of students and teachers in social mobilization activities effectively because, teachers are poorly paid in the country and the students are over burdened by long school time.

Despite this criticism, social mobilization projects have very encouraging impacts. Project evaluations and independent surveys reveal tremendous improvement particularly in sanitary latrine coverage and, to a lesser extent, in the hygiene behavior in the project intervention area. Between 1990 and 2000, sanitary latrine coverage increased from 5% to 41% in rural areas. Sanitary latrine converge reached its highest level (44%) in 1996 due to extensive SocMob activities during the mid-1990s.

However, it is important to note that the sudden rise in sanitary coverage in 1993 was primarily the outcome of the decision to redefine the term sanitary latrine in 1992.While it was not previously true, the re- designation of the pit latrine as a sanitary latrine occurred as it was the understanding that shifting people from open defecation to some form of latrine needed to be given priority. Redefining the term sanitary latrine restricts any flat comparison on the sanitary latrine coverage of the 1990s with previous decades. Because data on the sanitary latrine coverage in the preceding periods did not include pit latrine coverage, after a redefinition of the term sanitary latrine, pit latrine coverage was included. 1 Prior to 1993 the definition of sanitary latrine was restricted into the following features:

· Effectively isolates faeces from the environment

· Control Odor

· Control insect

· Assure at least minimum level of convenience and privacy

As the pit latrine does not control odor and insects, it was considered an unhygienic technology. It is referred to as Kaccha Latrine and the home made latrine in documents dating from that time. The ring-slab latrine (water sealed direct pit latrine) was considered to be the lowest acceptable standard of sanitary latrine. However, in 1992 UNICEF and GoB re-designated the pit latrine as the lowest acceptable standard of sanitary latrine. The second lowest type was the pit latrine with a pit cover and the ring slab latrine (water sealed direct pit latrine) moved up the list to the 'improved' position of third from the bottom (Quazi & Pramanik, 2004).

But, it is observed that, people haven't kept the force of sanitation coverage for a long time and trend of hygienic latrine use is declined. Besides, natural disasters destroyed thousands of hygienic latrines which hadn't been repaired in time or no more. All such types of findings brought over the country.

After the UN General Assembly on Millennium Development Goals (MDG) in September, 2000 and the World Summit on Sustainable Development (WSSD) in 2002, government of Bangladesh conducted a nationwide baseline survey in 2003 to assess the sanitation coverage in the country. The survey covered all rural and urban households. The survey revealed an appallingly poor sanitation scenario in the country. Only 33% of the households were found to have hygienic latrines, while 25% have unhygienic ones. About 55 million people (42% households) do not use any form of latrine. A brief summary of the survey results is appended below.

Households with hygienic, unhygienic or no latrine:

Table - 1

Statistical findings of National Sanitation Survey, 2003

| Area/Region | Number of households | Households with hygienic latrines (%) | Households with unhygienic latrines (%) | Households with no latrines (%) |
|---|---|---|---|---|
| National | 21394093 | 33 | 25 | 42 |
| Rural | 18326332 | 29 | 24 | 47 |
| Urban | 3067761 | 60 | 28 | 13 |

(Source: National Sanitation Strategy, 2005)

Based on this survey result, Government of Bangladesh declared a mission titled "Sanitation for all by 2010 which is a commitment to reach the two MDG targets. DPHE and other government authorities, NGO and private sectors had implemented different Software programs and provided hardware supports to achieve the target within the declared time. But, as per UNICEF & WHO report in 2010 said, 47% people of the country is out of sanitation facilities and therefore, the government target (sanitation for all by 2010) may not be achieved at the end of 2010 (Prothom Alo 26 April, 2010 a Bangladeshi daily news paper, Quoted the source; Progress on Sanitation and Drinking water: Update, 2010, UNICEF & WHO). This report revealed that, 7% people of the country use open defecation, 15% use un-improved latrine, and 25% use shared latrine. The news paper quoted an opinion of a DPHE officer that, the present government (2013) has a mission of achieving the target that sanitation for all by 2013 and they are working to meet this mission. In this news paper report, the public health specialist of Bangladesh Mr. Khairul Islam opinioned, "There is no body to follow-up the matter that, whether the people of rural area use sanitary latrine properly or not and the latrines are broken or not. As a result, proper maintenance is not being done and people don't feel over the matter, so, there is no qualitative result of sanitation; as a result, communicable diseases like diarrohea are not being reduced".

## Context of South Asia:

[4]South Asia consists of Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka. These countries are home to well over one fifth of the world's population, making South Asia both the most populous and most densely populated geographical region in the world. The region has 40 per cent of the poorest people in the world and its relatively young population is one of the least literate and the most malnourished in the world (Sardeg, 2009). Conflicts, terrorist attacks and political instability are common, including wars between the region's two nuclear-armed states, Pakistan and India.

The climate of this vast region varies considerably from tropical monsoon in the south to temperate in the north. Southern parts are mostly hot in summer and receive rain during the monsoon periods, while the northern plains are also hot in summer, but cooler in winter. The climate in the mountainous north also varies with low temperatures and snowfall in the winters in the foothills but extreme cold and heavy snowfall on the higher altitudes of the Himalayan ranges. In common with other 'developing' regions much of the rural area of South Asia is remote and the transport infrastructure under-developed; where it is provided it is often poorly maintained. This makes rural development work challenging across all sectors and most notably in the WASH sector.

[5]Bhutan is a small country in South Asia. Over the past 35 years, Bhutan has not been able to reach a number of milestones in relation to water and sanitation. Though, in 2007, The Bhutan Living Standards Survey -National Statistics Bureau, Dec. 2007 shows, 96% of the population has access to improved sanitation (99% in urban areas and 95% in rural areas), and access to an improved water source is 99.5% in urban areas and 88% in rural areas, but, the JMP report of UNICEF-WHO, 2003 (data collected in 2011) said that,45%

4 A.J. Peal [United Kingdom] Hygiene promotion in South Asia; progress, challenges and emerging issues; South Asia Hygiene practice workshop, Dhaka-2010

5 John Collett, SAHPW, 2010

Botanies use improved sanitation (urban 74%, rural 29%), 26% use unimproved and 3% use open defecation. However, the case of Bhutan shows that this has not been enough to achieve sustainable hygiene behaviour change to ultimately impact in health. The under-fives mortality rate decreased from 162 per 1000 live births in 1984 to 61.5 per 1,000 live births in 2008 (MoH, 2009), which is, however, still among the highest in South Asia. Bhutan still needs to improve its rate of progress to reach its MDG target of 32 per 1,000 live births by 2015 (reducing the under-fives mortality rate by two thirds between 1990 and 2015).

As per JMP report, 2013 of UNICEF-WHO, Ninety one percent of urban households and 87 % of rural households have access to a source of improved drinking water and 35% have access to improved sanitation facilities in Nepal. Besides, 43% population still use open defecation.[6] Nepal has made a significant progress in reducing the child mortality rate (162 in 1990 to 61 per 1,000 live births in 2006) as per NDHS, 2006; however, basic indicators of better health such as hygiene and sanitation are still in a critical state in Nepal. Among WASH associated diseases, skin diseases, ARI and diarrhoeal diseases are the top three leading preventable diseases reported in Nepal. ARI and diarrhoeal diseases remain the leading causes of child deaths (10,500 diarrhoeal deaths among <5 yrs children per year, WAN 2009) in Nepal.

[7]In Pakistan, Water and sanitation-related diseases are still responsible for some 60% of child deaths (Pakistan Country Paper SACOSAN III, 2009). JMP report, 2013 of UNICEF-WHO said, 47% population of Pakistan use improved sanitation facilities, 6% and 24% use unimproved shared and unimproved sanitation respectively while 23% still use open defecation.

[8]In Afghanistan, Under five (<5 years) mortality rate is high over the world. One out of four children in Afghanistan dies before her or his fifth birthday (the 2015 MDG target is 31 per 1,000 – one in 32!) and that it is has the unenviable reputation of being having the highest under five mortality rate of any country in

[6] Gautam,Adhikari, Rajbhandari,Jones, SAHPW,2010
[7] Mohammad Riaz, Farooq Khan, 2010
[8] A.J.Peal; Hygiene promotion in South Asia; progress, challenges and emerging issues-2010

the world. According to a joint UNICEF/WHO (2009) report, more than 80,000 children under five died as a result of diarrhoea in Afghanistan in 2007. High diarrhoea prevalence resulting from poor hygiene practices as well as lack of access to sanitation facilities and clean water impact heavily on children's survival and development. In the city of Kabul, estimated population of 4-5 million there are only 35 public toilets. As per Progress on Sanitation and Drinking water, 2013 update report by UNICEF-WHO, 0nly 28% population use improved sanitation facilities, 45% unimproved (11% shared) 16% use open defecation.

Maldives sanitation coverage is presently 98% while 2% rural people use unimproved shared latrine (JMP, UNICEF-WHO, 2013) and made progress in child mortality rates. Since 1990 UNICEF report that under-five mortality in the Maldives has reduced from 111 (deaths per 1,000 children) to just 28, while in Sri Lanka, (sanitation coverage presently 91%; JMP, UNICEF-WHO, 2013) it has been halved from 29 to 15. The adult mortality rates in both countries and the percentage of deaths due to diarrhoea (as reported by the WHO) are also the lowest in the region.

[9]India's population of 1.17 billion (estimate for July, 2009) is approximately one-sixth of the world's population. But, most of the states of India are not in a satisfactory sanitation and hygiene coverage. India's total sanitation coverage is 35% national improved, 9% population use unimproved and 9% use unimproved shared sanitation. The alarming is that, still 50% population of India use open defecation (JMP report; UNICEF-WHO, 2013).

At the end of 2013, UNICEF & WHO has published the "Progress on Sanitation and Drinking water, Update-2013". The report said, in 2011, almost two thirds (64%) of the world population relied on improved sanitation facilities. The report said, by the end of 2011, there were 2.5 billion people who lacked access to an improved sanitation facility. Of

these, 761 million use public or shared sanitation facilities and another 693 million use facilities that do not meet minimum standards of hygiene

[9] Maria Fernandes,2010

(unimproved sanitation facilities). The remaining 1 billion (15% of the world population) still practice open defecation. The majority (71%) of those without sanitation live in rural areas, where 90% of all open defecation takes place.

The report shows the open defecation scenario of South Asia where Bangladesh has developed remarkably and only 4% (As per this report, 32% was in 1990) people defecate in open, which comparatively better than Pakistan (23%), Nepal (43%), and India (50%). But this report said that, 14% rural people use unimproved sanitation and 26% people use unimproved shared sanitation in Bangladesh. This is also alarming data for the country because, the pre-condition of total sanitation coverage is every people will use improved and individual latrine in every household. It is essential for sustained WASH behavior and practice. On the other hand, 83% people use improved water sources while 16% use unimproved and 1% use surface water for drinking purpose. Both the area is the key factors for health status and different diseases of human body. Hygiene is common with sanitation along with water. Knowledge and awareness on different WASH born and other diseases, food and calorie are also the indicators of health status. This research has taken its interventions to these areas while rural women role in these areas has been focused largely.

## The Research Problem:

It is very clear that hygiene practice is an essential fact to achieve the goal of proper sanitation as well as good human health and favorable environment. But, level of knowledge on hygiene and health of the people, a particularly in rural area is very low.

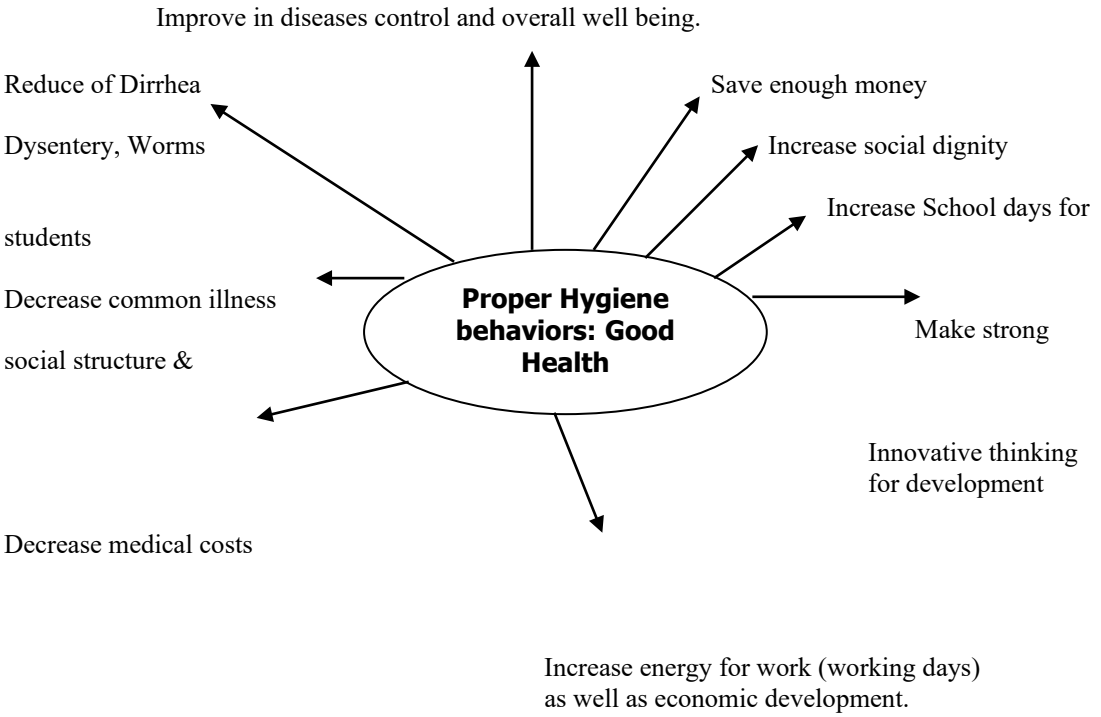
As a result, different cases are occurring:

- Diarrhoeal diseases are increasing.
- Diarrhoea, Cholera, Typhoid, Jaundice, intestinal worms, trachoma even Filiarasis are increasing and from these, women and children are suffering most.

- Vaginal infections, RTI (Respiratory Track Infection), STD (Sexual Transited Diseases) are contaminating from the lack of hygienic practice in regular life of women.

Figure: 1

Some issues are co-related on the context of the research problem:




WHO revealed that, 2.2 million deaths in developing countries are caused each year by food and water-borne diseases (WHO, 2011); Over 50,000 children die from diarrhoreal diseases every year in Bangladesh (Shabnam 2010).

The figure 01 indicates clearly that, the mentioned issues are co-related on the context of WASH (Water, Sanitation and Hygiene) related activities which has a strong effect on health and definitely these have a clear impact over society. For which human productivity is losing, economical and social status is going down. As a result, sustainable development is hampering. Therefore, the issue is a social problem is selected for this research study.

It has been identified that, women in Bangladesh are still in back behind than men in several of social, economical and political aspects. Women has no sufficient education, very few women has reached at the leading or vital

positions in different aspects of making policies, decisions. If we see the family pattern, no doubt, women play very significant role at domestic level those which are not clearly recognized. Among various tasks, Women are connected with the work related to Water, Sanitation and Hygiene issues. They are engaged in cooking and they have to maintain a large chain of work for this purpose every day. Besides, women are engaged in food preparation and presentation, washing of cloths, child nursing (cleaning bottoms, feeding), taking care of cattle, poultries (especially in rural areas) and other such types of works at household level. It is true that, women have to do everything, for behavioral change, the role of women is the key change agents particularly at the domestic level. But there is a major gap in their knowledge, attitude and practices about hygiene. Different studies said, In spite of having the knowledge, the rural women are still continuing their traditional practices (VSSS; DPHE-UNICEF, 1995). In another study, rural women were found to wash their hands more than twelve times a day, but they did not do it in a proper way and they dry their hands with dirty clothes (Hoque & Ahmed, DPHE-UNICEF, 1995).

This deviation focused in proper hygiene practices, cooking of food, preparation, preservation and presentation with hygienic way. They don't know how to feeding and cleaning bottoms of child, maintain household garbage's in health friendly ways, maintain other hygiene practices.

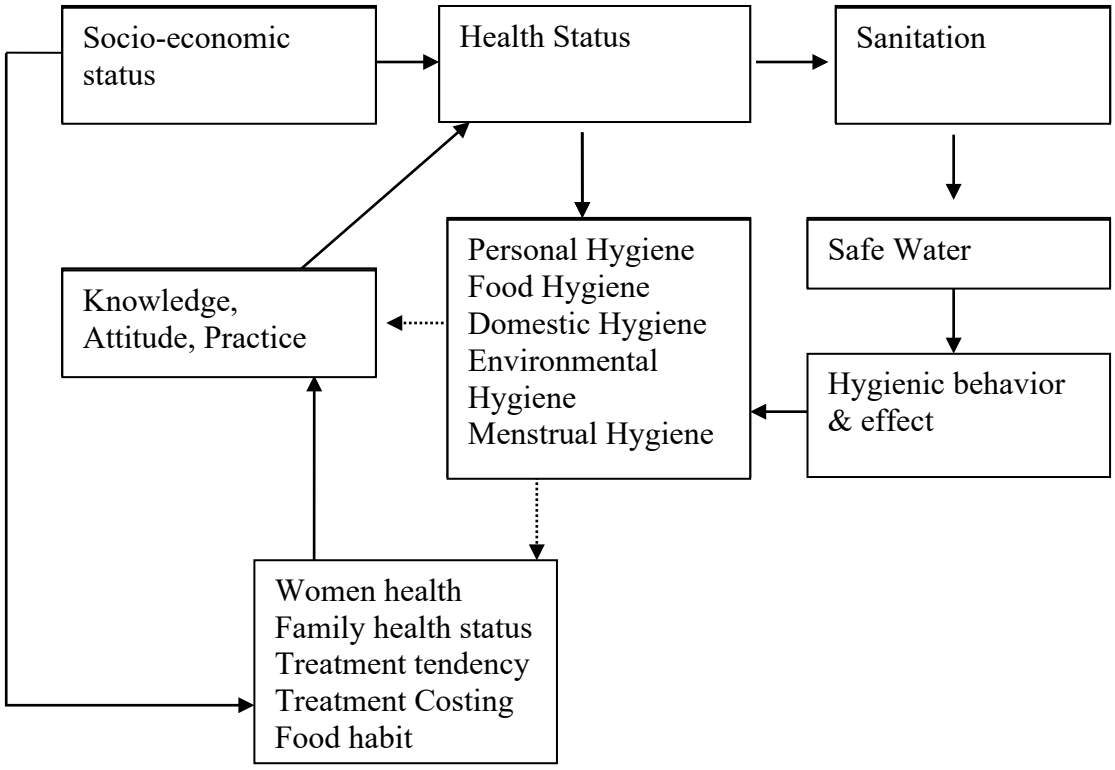
Women are generally exists with menstruation. During menstrual period, they don't know how they maintain this with hygienic way. Women have a common relation with water for drinking and cooking purposes, but they don't know about safe water and its sources. As the others, women also don't have sufficient knowledge about safe water and its sources, hygienic latrine, use of defecation in hygienic way, use slipper and wash hands properly during and after defecation. They haven't idea about consequences of unsafe water and use of unhygienic latrines. They are not well-knowledgeable about different water born diseases, and effects of unhygienic latrine use. They have a very little idea about the treatment points and places. Women have very poor idea about the

balanced food and calorie is essential for human health. They are not well known about the treatment and follow-up cases during and after pregnancy. These are the problems which seem as obstacles to improve public health situation. And the women are the key actors who play significant roles have wider effects on the health situation of other members of household also the society most.

The research will find out what the real scenario of Sanitation and hygiene practices at rural household level leaded by the rural women. It will explore problems and causes towards proper hygienic behavior, which has a correlation and impact on common health status of the respective household and the community as well.

**Figure: 2**

**Analytical Framework:**



**Definition of key concepts:**

**Safe Water:** Drinking water should be safe, agreeable and wholesome; such a 'Supply' may be termed "acceptable" or "potable". Safe and Wholesome water is that which is (a) free from pathogenic agents and harmful chemical substances, (b) pleasant to the taste, and (c) usable for domestic purposes (Community medicine and public health).

After this discussion, it is clear to make definition of safe water that, the water which not further harmful to human body in any means that is Safe Water.

Safe Water is an urgent and part & parcel element of sanitation as well as health. Without safe water nothing can be thinking about under living of sanitation or good and diseases free health. The health of a person in every urban and rural area largely depends on a water supply that is adequate in quantity and safe in quality. In the developing and under developed countries much of the ill health is due to lack of safe drinking water. The incidence of water born diseases, such as cholera, typhoid fever, dysentery and diarrhoeal diseases can be drastically reduced by providing safe drinking water to the people. One of the essential elements of primary health care is adequate supply of safe water and basic sanitation for the community (Community medicine and public health).

Although some little progress has been made in the water supply system, there still remains much to be done before the entire population can be provided with safe water supply. About 400 million children in the world today struggling to survive without safe water (Paul Edwards-WES-UNICEF, in Water day seminar, nrc newsletter, NGOF,June 2006).

**Sanitation:**

'Sanitation' is the most significant concept to predict and measure the health and hygiene status of human life. To be sanitation friendly and to maintain proper sanitation practices, the world has been trying in many ways providing it's every effort. In spite of this force, the world is still unsafe from different

causes of ill-health and death due to open defecation and lack of proper sanitation.

The World Health Organization states that:

"Sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and feces. Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in households and across communities. The word 'sanitation' also refers to the maintenance of hygienic conditions, through services such as garbage collection and wastewater disposal.

The term "sanitation" can be applied to a specific aspect, concept, location or strategy, such as:

**Improved sanitation** - refers to the management of human faeces at the household level.

On-site sanitation - the collection and treatment of waste is done where it is deposited. Examples are the use of pit latrines, septic tanks, and Imhoff tanks.

**Food sanitation** - refers to the hygienic measures for ensuring food safety.

**Environmental sanitation** - the control of environmental factors that form links in disease transmission. Subsets of this category are solid waste management, water and wastewater treatment, industrial waste treatment and noise and pollution control.

**Ecological sanitation** - an approach that tries to emulate nature through the recycling of nutrients and water from human and animal wastes in a hygienically safe manner.

**Basic Sanitation:** In Bangladesh we are introduced with a concept means Basic Sanitation-which means the minimum arrangement of defecation in the certain place which is hygienic.

**Total Sanitation:** In Bangladesh and the sub-continent, we are mostly known with a concept that "Total Sanitation". It is a condition where every household to have individual water seal latrine, safe waste disposal arrangement, good fencing, good arrangement for hand washing after defecation, use slipper properly during defecation. These pre-condition have to maintain every members of a household and every household in a locality. It can refer as "100% Sanitation" also.

**Hygienic Latrine:**

Hygienic latrine is the most significant element of sanitation as well as hygiene. Without hygienic latrine, nobody can expect proper sanitation or proper hygiene has been implemented. The linkage between sanitation and health leads to an understanding that the primary focus of sanitation should be on the environmental transmission routes of excreta related diseases. Based on this understanding, the Bangladesh National Sanitation Strategy-2005 defined Hygienic latrine as –

-Confinement of feces away from the environment

- Sealing of the passage between the squat hole and the pit to effectively block the pathways for flies and other insect vectors thereby breaking the cycle of disease transmission, and

- Venting out of foul gases generated in the pit through a properly positioned vent pipe to keep the latrine odor free and encourage continual use of the hygienic latrine.

**Hygiene:**

At the outset it is important to be clear about exactly what we mean by the term "hygiene".

Hygiene translates literally as 'healthful'. The term however come to mean 'the practice to keeping oneself and one's surrounding clean, especially to prevent illness or the spread of disease.'

Hygiene has recently been emphasized as the 'most economically sustainable prevention strategy' (Stanwell-Smith 2003), and also as a cost-effective intervention for child survival in developing countries at only a fraction of the cost of water supply and sanitation according to Larsen (2003).

In reality, all of the following contribute in some measure to reducing the burden of infectious diseases circulating in the community:

- Hand hygiene and personal hygiene;
- Menstrual hygiene;
- Food hygiene (cooking, storing, preventing cross contamination);
- Ensuring safe water at "point of use";
- Respiratory hygiene;
- Safe disposal of faeces (both human and animal);
- General hygiene (laundry, surfaces, toilets, baths, sinks); and
- Disposal of solid waste, control of wastewater and rainwater.

Amongst the various diseases caused by poor hygiene practice diarrhoeal disease is the most deadly, especially for children (Prüss-Üstün et al, 2008) and consequently the WASH sector's primary focus is on reducing its spread.

**Hygiene Practice/Promotion:**

Hygiene practice/promotion can be defined as activities aimed at encouraging behaviors among men, women and children which will help to break the chain of disease transmission associated with water and sanitation.

Diarrhoea, intestinal worms, typhoid, cholera and trachoma are some of the common infectious diseases related to poor water, sanitation and hygiene (WASH). They cause serious illnesses and death. About 4 billion cases of diarrhoea cause 1.8 million deaths per year; over 90 per cent among them (1.6 million) are children under five. Repeated episodes of diarrhoea make children more vulnerable to other diseases and malnutrition. Improved access to safe drinking water and sanitation facilities play an important role in safeguarding the health of people. But targeted and consistent hygiene practices yield the greatest health benefits.

The goal of hygiene promotion is to help the internally displaced persons (IDPs) learn about and develop good hygiene practices to prevent diseases and develop positive attitudes towards good health practices.

Good hygiene and sanitation practices are closely linked and there is an increasing body of evidence that confirms that hygiene behaviour change is an essential part of achieving the health impacts associated with improved water supply and sanitation. Indeed, investments to improve sanitation and hygiene in developing countries produce substantial health gains and have been shown to yield important economic benefits (Hutton et al, 2007). Thus hygiene promotion not only has the potential to increase the health impact of WASH programmes (Water, Sanitation and Hygiene), but also increase sanitation coverage.

**Personal Hygiene:**

Personal Hygienic behavior depends on the following interventions-

- Hand washing after defecation , before preparing food and eating
- Frequent washing of the face and hands both for children and adult
- Daily bathing and washing
- Washing of cloths and bed cloth
- Drying of cloths in the sun and open air.
- Cleaning of teeth and cutting nails.

**Domestic Hygiene:**

Domestic Hygiene is another significant area of hygiene behavior. It depends on the following involvement-

- Cleaning of water containers
- Keep floor, household and kitchen clean
- Keep utensils, cookeries clean
- Control flies
- Safe disposal of domestic waste water and solid waste.

**5 domains of hygiene behavior:**

Hygiene behavior depends on the following five domains-

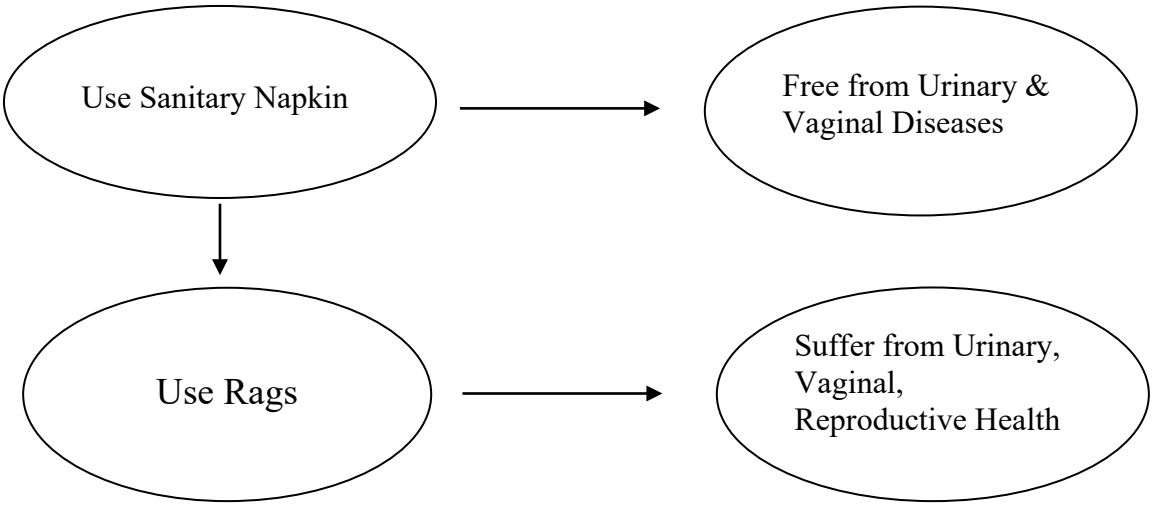
- Disposal of human feces
- Use and protection of water sources
- Water and personal hygiene
- Food hygiene
- Domestic and environmental hygiene

**Menstrual hygiene:**

Menstrual hygiene is centered to Hygiene behavior as well as Hygiene management by the women & adolescent girls during the menstruation period. The menstrual hygiene is most essential for well being of Reproductive health, Urinary and Vaginal diseases.

Figure: 3

Effect chain of Menstrual hygiene management




Menstrual Hygiene is a significant issue of Hygiene and Sanitation discussion and women hygiene as well. But, this issue is still been ignored in relation to discussion and taking in consideration by different concerns. In various platforms yet there is a lack of wider understanding of the problems of poor menstrual behaviors and the need for improved management of menstrual hygiene.

Menstruation is a normal, natural process that occurs in all healthy adolescent girls and adult women who haven't reached menopause. Girls begin to menstruate between eight and twelve years. In the life of a woman, she has to manage 3000 days of menstruation. For her basic schooling period ranging from grade IV to X the number of such days is 450 (Nahar and Ahmed 2006).

A key priority for women and girls is to have the necessary knowledge, facilities and cultural environment to manage menstruation hygienically, and with dignity (WaterAid 2010). Yet the importance of menstrual hygiene management is mostly neglected. In developing countries like Bangladesh, menstrual hygiene and management is not prime concern in the sector of reproductive health and water, sanitation and hygiene.

**Health:**

The widely accepted definition of health is that given by WHO (1948) in the preamble of its constitutions: “Health is a state of complete physical, mental and social wellbeing and not merely an absence of disease or infirmity”.

In recent years, this statement has been amplified to include the ability to lead a “Socially and Economically productive life”.

**Indicators of Health:**

Indicators are required not only to measure the health status of a community, but also to compare the health status of one country with that of another. Our understanding of health therefore cannot be in terms of a single indicator, it must be conceived in terms of a profile, employing many indicators; which may be classified as:

(1) Mortality indicators.
(2) Morbidity indicators.
(3) Disability rates.
(4) Nutritional status indicators.
(5) Health care delivery indicators.
(6) Utilization rates.
(7) Indicators of Social and Mental health.
(8) Environmental indicators.
(9) Socio-economic indicators.
(10) Health policy indicators.
(11) Indicators of Quality of life.
(12) Others indicators.

**Dimension of Health** :

There are three specific dimensions of Health:

(A) Physical Dimension: Physical dimension means, “perfect functioning of the body”.

The sign of physical health in an individual are “ A good complexion, a clean skin, bright eyes, lustrous hair with a body well clothed with firm flesh, A sweet breath, sound sleep, regular activity to bowels and bladder and smooth, easy, coordinated bodily movement.

(B) Mental Dimension: Mental health is defined as “A state of balance between the individual and the surrounding word, a state of harmony between oneself and others, a coexistence between the realities of the self and that of other people and that of the environment.”

(C) Social Dimension: Social well-being implies harmony and integration within the individual, between each individual and other member of society and between individuals and the world in which they live. It has been defined as the “quantity and quality of an individual’s interpersonal ties and the extent of involvement with the community.”

## 1.2 Objective of the Study

**(A) Main Research Question-**

- Find out the Relationship between Hygiene and Health situation among the households in the selected areas.

**(B) Related Objectives-**

- Find out the socio-economic conditions of the selected households in the area.
- Explore the health status of the members of selected households in the study area.
- Identify problems and causes to smoothly maintain hygiene practice at rural household level.

## 1.3 Rational of the Study:

> Find out the causes and effects of lack of Health and hygiene behavior at household level as well as in the society.

> Explore what are the Lacks of access to unhygienic situation as well as environmental sanitation affects women the society most.

> This method will enable to introduce a vast and major strategy and programme will enable people to improve their health through correct hygienic practices, which eventually will lead to increased for appropriate sanitation facilities.

## The subject of the research is a Social Problem:

Hygiene and Sanitation-both the issues have a common effect on human health, therefore, Sanitation and Hygiene are correlated with health. Sanitation and hygienic behavior mostly centered to household level, where women is the key actors especially in the context of Bangladesh. So, women are deeply concern with water, sanitation and hygienic behavior. But, Diarrhoea, intestinal worms, typhoid, cholera and trachoma are very common water born diseases are affecting the society every year. Among other causes, household level is the key which is cause mostly for such types of occurring. Obviously, women are the respective actors with the causes. So, it is a social problem. Women hygienic practices have an effect on the family, where a health status is visual. So, an in-depth study is needed to explore the causes of rural household level where women are playing significant role, the causes and lacking are to explore on the way of proper hygiene, sanitation and good health as well. It is an empirical study which has a sociological focus is clearly evident.

It is true that, Bangladesh is a poor country where society is still patriarchal. Women have to maintain every domestic level responsibility including water, sanitation and hygiene related tasks. though Bangladesh have reached expected sanitation coverage, but, the country has to drive a long way to reach the proper hygienic practice from individual to greater society which yet to do a large coverage and has a very narrow situation. For this reason, 50000 children still die every year only for Diarrhoea. Intestinal worms, typhoid, cholera and trachoma are some of the common infectious diseases related to poor water, sanitation and hygiene (WASH) are still happening in Bangladesh. They cause serious illnesses and death. So, among thousands of problems on the progress of the country, this is the mostly vital at which every government has an additional attention.

In spite of a remarkable progress in water and sanitation in Bangladesh, it is true that people of the country is increasing every year in this small country. Most of the people are illiterate or unaware about health and Water, sanitation and hygiene. Now, low cost latrines are visible in the rural area; but, it is a

question about proper or total use of the latrines in full hygienic way. Besides, it is a matter of exploring to other hygienic behavior. Women behavior especially can be focused through this study.

## 1.4 Review of Literature

Sanitation and Hygiene is the key issue of human health status. So, these have taken in consideration of different studies over the world. This part of the study presents a brief resume of research related to the study of the Health, Hygiene, Sanitation issues over the world, the Asia and this sub-continent and also within the country level. It is noted here that, the recent conducted studies and some news papers published news; articles are given main concern in a wider manner to keep the issues updating trends mostly.

Fode Abou CAMARA (2009), Senegal, Ghana said in his article on "Ecological Sanitation (ECOSAN): A New Sanitation approach in Senegal" given emphasis to Ecosan latrine use. Through this type of latrine, use the urine diverting dry toilets as well as the sanitized products as agricultural fertilizer and soil conditioner. He said, farmers of Senegal have accepted this technology which is eco-friendly.

The publication "Environment & Urbanization" (2011) has given emphasis on health and hygiene, sanitation related discussion over the south Asia and rest of the world. This issue discussed health, hygiene status of important cities and urban slums, conditions of urban health and social inequalities, role of different stakeholders to improve the conditions including government authority. This discussed the India-Bangladesh sanitation-hygiene historical backgrounds including colonial periods.

Helal Mohiuddin & Md. Ayub Ali (2005) wrote, To cover total sanitation, Community Led Total Sanitation (CLTS) is important through which sanitation movement will get strength at union level. They discussed different stakes and

groups roles to enrich the approach towards total sanitation coverage. The book describes different strategies to upholding the approaches appropriately.

The publication on Water for Development (A publication of world water day-2002) said about water, water quality, water scarcity etc. Different writers wrote about safe water and its essentiality in rural and urban areas, wastage of safe water, water crisis in slum area, arsenic contamination, salinity of water in coastal area. The publication discussed on availability of water in school, use water in hygienic way.

A Civil Society submission to the GoB (2003)-This is a participatory process for the development of the A National Strategy for economic growth, poverty reduction and social development. Before preparation of PRSP, this paper recommended some WASH related initiatives to the strategy paper. This given emphasis to Hygiene promotion leaded by strong local government, community led total sanitation, infrastructure development for ensuring sustainability. The paper focused gender awareness on WatSan issues and recommended to additional emphasis to preventative health care approaches in the full PRSP.

National Sanitation Strategy, 2005 discussed the linkage of the strategy with the MDG targets normatively. Discussed national sanitation goal nationwide baseline survey in 2003, important terms and definition of 100% sanitation, hygienic latrine, hygiene promotion, Guiding principles of the strategy. It discussed on national policy for safe water supply and sanitation, 1998, linkage between sanitation and poverty, lessons learned on the way of sanitation movement in Bangladesh.

NRC news letter Issue no: 17 (2011) given emphasis on the IV SACOSAN (South Asian Conference on Sanitation) of Colombo, Srilanka where delegates opinioned, South Asia loses at least 5.8 per cent of its regional GDP due to poor sanitation. They reported, since the last SACOSAN in 2008, about 750000

South Asian children have died of diarrhea. This issue has discussed why so many developing countries are doing so badly in providing all their citizens with good sanitation.

NRC news letter Issue no: 14 (2009) discussed in depth the Water crisis of Asia which if not addressed urgently, will cause food shortages and sharply higher prices in the not to distant future. This issue significantly discussed that to face water crisis challenges; Bangladesh needs aids to support small scale water services. It also discussed about Diarrhoea that kills more children than AIDS, malaria and measles combined. It also talked about the importance of hand washing.

Nationwide baseline survey Report, (2004)-This is a nationwide baseline survey report of sanitation where hygienic, unhygienic, and no latrine owned household are counted. From this report, a common sanitation scenario can be getting. This is a district and sub-district (Upazila) based statistics. From this book, a concept of the sanitation issue is built related to the study.

Baseline Survey Report under NCSNP Project (2007) -This is a sanitation data source of 350 unions of 104 upazila under 45 districts of Bangladesh where the NCSNP project is implemented. The Report indicates updating data after the national baseline of sanitation (2003). This helps to get clear idea about the trend of sanitation coverage at community level. Besides, this shows data of water sources and hygienic behavior, these consequences, water born and other diseases occurred as base status of WASH is indicates people trend towards sanitation and indicates their health status.

Meet the press on Urban Water Challenge in observance of World Water Day-2011: This publication contains the key note paper of world water day-2011, speeches of guests, open discussion, news paper clipping relating to water scarcity. In the key note paper, the writer quoted that, 5 million people join the urban population in the developing country each month. As a result, in Africa and Asia, the urban population will double between 200 and 2030. But, still around the world 827.6 million people live in informal settlements, often

lacking adequate drinking water and sanitation facilities, among them 27% of the urban population.

WatSan (2005)- This is a special publication of NGO Forum, a national development organization of Bangladesh. The issue has given emphasis to water crisis and challenges on the way of sanitation development of Bangladesh. This given importance on water as a human rights issue and given an updated sanitation status from 2003 to 2005 of Bangladesh.

Progotir pothey Vol-2 (2006)- This is a multiple indicator cluster survey distributed data from different aspects. In its 'Environment' part, it furnished data on water, sanitation and hygiene issues where district base updated water sources and household latrines data is distributed. Data on sanitary means disposal, disposal of child faeces, hand washing etc. are taken place about of hygienic data distribution.

Sustaining the Success-(2008)-Different areas have been taken place in this publication with the view of sustainability. The organization worked village approach for two years towards total sanitation coverage. the publication is a follow-up study after phasing out from the villages, explored the sustainability of community knowledge, management of hardware, software activities, community monitoring & evaluations for sustainability of total sanitation coverage.

Baseline Survey Report on WatSan (2005)- This is a baseline survey of water, sanitation and hygiene status and related knowledge, practices of Nasirnagar of Brahminbaria district, Bangladesh where NGO forum has implemented the School health and Nutrition program. the report reflects data of whole the upazila community people.

Sanitation Coash (2007)- This book consist of MDG, SACOSAN-Dhaka and Islamabad declaration respectively of 2003 and 2006. This narratively discussed National safe water supply and sanitation policy of Bangladesh, 1998; Pro-poor strategy for water and sanitation sector in Bangladesh, 2005; National sanitation strategy, 2005. This has discussed over structural issues of

sanitation activities. All of these discussions help to the study providing related information.

Community Medicine and Public Health (2004)-This book is for medical students which discussed over community health focusing causes and disease for water, sanitation, hygiene. The book also discussed about female health significance on women and child vaccination, pre and post maternity care health.

**Papers presented in South ASIA HYGIENE PRACTITIONERS' WORKSHOP Dhaka, Bangladesh, February 2010:**

In this workshop, many of research papers relating to Water, Sanitation and Hygiene have been presented from different individuals from over the world particularly from South Asia. Considering the significance, the research has reviewed those papers. This section of review of literature is discussed over all those papers presented in South Asia Hygiene Practitioners' Workshop, Dhaka.

Maria Fernandes, (India) presented a paper on "Freedom of Mobility" (Experiences from villages in the states of Madhya Pradesh & Chhattisgarh India). The paper mainly prepared focusing to menstrual hygiene. The paper discussed about this as causes of restrict women mobility especially in the India where menstrual hygiene management materials are absent largely. The paper has given preference over awareness on menstrual hygiene tools, its accessibility and availability, also given importance to create linked to entrepreneurship for availability of those materials.

John Collett, SNV (Bhutan) presented a paper on "Thirty-five years of searching for answers to Rural Sanitation and Hygiene in Bhutan (draft)". In this paper the writer mentioned that though Bhutan has achieved 95% sanitation coverage during last 35 years of the country which is highest in the

region and the government considered the issue as a key factor in achieving the national goal, child mortality (61.5 per 1,000 live births in 2008; MoH, 2009) and mortality is still among the highest in Bhutan among the other South Asian countries. This paper illustrates that although great progress has been made in community participation, tap and toilet construction coverage, and health education and promotion, still more needs to be done to achieve the desired effective use, hygiene behaviour change and ultimately the expected health and socio-economic impacts.

Md. Iqbal Ahmed & Rozena Begum, (Bangladesh) presented a study paper on "Hand Washing Practice in ASEH Project Area: A Study for Impact Monitoring". This paper has highlighted its study that, the status and benefits of hand washing with cleaning agents at five critical times. It said that, people who did not wash their hands properly are affected more by waterborne diseases. This is a follow-up evaluation study which revealed that for improving hand washing practices in five critical times, Incidence of diseases, duration of sickness and workdays lost for waterborne diseases decreased. It has a positive impact, that reducing waterborne diseases, decreasing lost workdays, increasing disposable income, and decreasing medical expenditure due to proper hand washing practice with appropriate cleaning agents.

Kumar Jyoti Nath, Barenyo Chowdhury, Anish Sengupta [India] Study on Perception and Practice of Hygiene and impact on health in India

The central theme of the research paper is to assess the awareness level of health and hygienic practices and its health impacts in urban and rural areas in the five select states of India - Assam, Bihar and Jharkhand, Orissa & West Bengal. The paper has revealed the correlation of hygiene and the disease burden of a few selected water and sanitation related communicable diseases like cholera, diarrhea, typhoid, hepatitis, etc. The writers said in their study, they discovered some basic socio-economic factors like religion, education and level of economic status which play a pivotal role in conditioning the

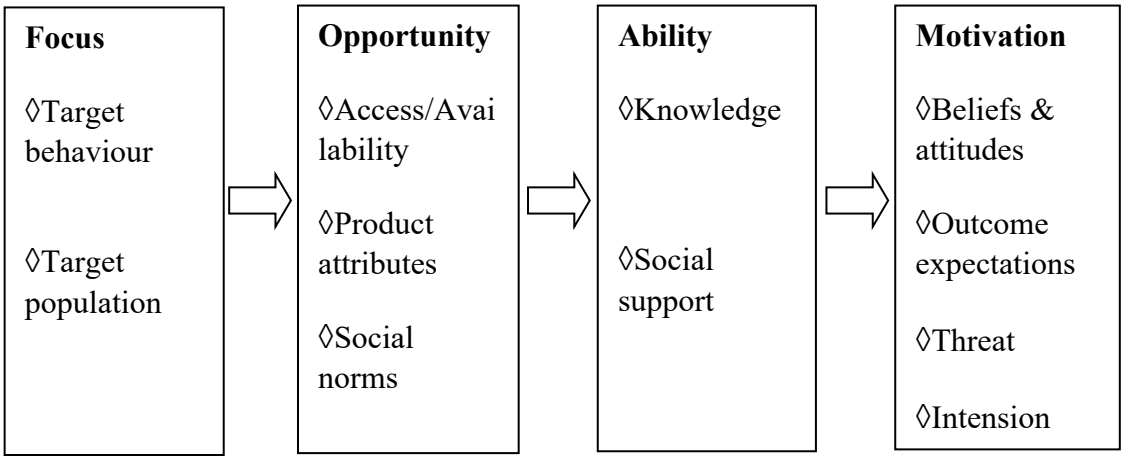
perception and practice of hygiene. This study measures the level of awareness on health and hygiene issues of the community and its implementation in the hygiene practices. The paper directed that, Perception of the community on health and hygiene issues has a strong influence on practice of hygiene and both together along with provision of sanitation facilities have significant impact on reducing burden of communicable diseases.

Nga Kim Nguyen (Vietnam) Designing Evidence-based Communications Programs
to Promote Handwashing with Soap in Vietnam
This is a study of a project of Vietnam comprehensive behavior change communications program to promote hand washing with soap among women aged 15-49 and schoolchildren aged 6-10 throughout Vietnam implemented since 2006. This study examined that for hygiene behavioral change among women and children, there is a vast necessarily for development of communications materials considering the existing behavior patterns. they described a behavior change frame work named FOAM Frame work which is for help of analyzing the determinants or factors than can facilitate the hand washing behavior such as access to soap, beliefs regarding the cause of diarrhea, or knowledge of the link between HWWS and diarrhea, etc. FOAM stands for:

Focus: who is target audiences and what is the behavior we want them to adopt? Opportunity: is the target audience able to carry out the behavior? Ability: is the target audience capable of carrying out the behavior? Motivation: Does the target audience want to carry out the behavior

Figure: 4

FOAM Frame work

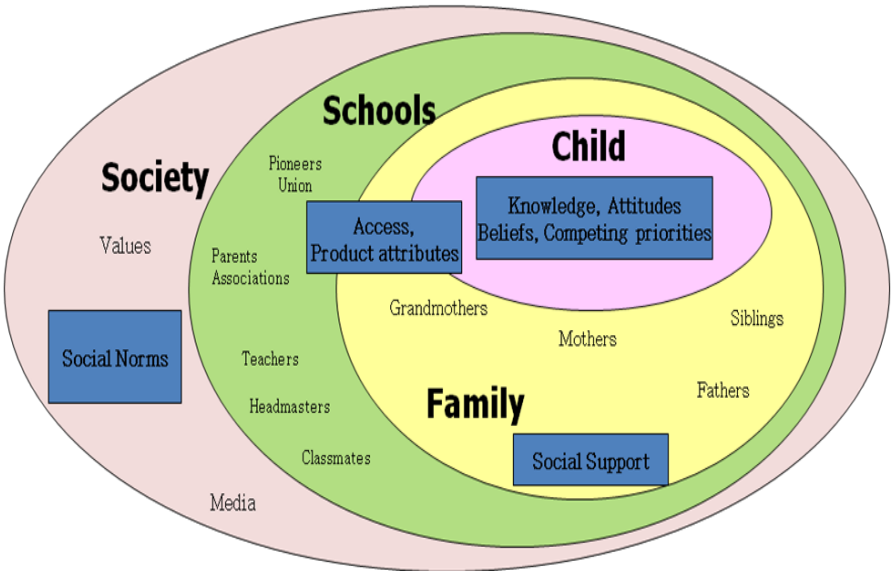



**Developing a Behavior change framework:**

The Sociological Model is recognizes the influence of relationships between an individual and their environment, including within the family, at school and in society. This is the FOAMEM (Foam Ecological Model) where several behavioral determinants were selected to be addressed in the communication campaign.

Figure: 5

FOAMEM Frame work



Ayub Qutub, Fauzia Butt, Erum Bashir, Sobia Shabbir (Pakistan) wrote a research paper titled “Who is Responsible for Soap in Pakistani School Toilets?”. In the paper they said, since children are more receptive to new ideas than adults, they can be influenced to cultivate the habits of good personal hygiene and environmental sanitation within schools during their formative years. Schools can help raise the profile of hygiene and sanitation and trigger improvements in the environmental health conditions of communities. Children can be effective change agents for healthy behavioural practices such as washing hands, using the latrine and cleaning up after using it. Moreover, children who adopt good hygiene practices at a young age are likely to grow-up to be conscientious parents and pass on their knowledge, skills and practices to their children and society. The researchers raveled their experiences after analyzing the school sanitation and hygiene practices in several schools in Pakistan.

Mohammad Riaz, Farooq Khan (Pakistan) written article titled “Beyond Traditional KAP Surveys-Need for Addressing Other Determinants of Behavioral Change For More Effective Hygiene Promotion”. This paper is an assessment of such donor funded project implemented in Pakistan related to WASH behavioral changes. This paper also observed that children are ready recipient for new learning and behavioral change not only at the individual, class room and school level but also for the broader community as well. This recommended that, messages of Hygiene behavior change to be disseminated through different communication channels. These difference channels should take into account differences in literacy, access to information and culture.

Laboni Shabnam (Bangladesh) has conducted post implementation study of two project related to hand washing in five critical times implemented through NGO, titled “THE PRACTICE OF HANDWASHING.....”. She made her experiences that, the number of people who are washing hands with soap/ash are increasing. This should keep continue and sustained through different government and non-governmental initiatives.

A.J. Peal (United Kingdom) initiated a paper on “Hygiene promotion in South Asia; progress, challenges and emerging issues”. The author presented this paper in the workshop to confront the issue of hygiene in South Asia. This paper indicates the overview hygiene scenario of South Asia, its health conditions etc. The paper identified some challenges in hygiene sub-sector in South Asia like Political will, Political instability, Institutional arrangements, financial transparency, Cultural differences and context, Natural Disasters etc. The paper has given emphasis on menstrual hygiene an important, but neglected issues to be addressed. The paper described how to scaling up the hygiene approaches and described that- cost effectiveness, linkage to education, linkage to water supply, linkage to government, linkage to religious institutions, menstrual hygiene management, converting knowledge into practice, participatory monitoring etc.

Lisa Danquah (United Kingdom) presented paper on “Measuring hand washing behavior: methodological and validity issues”. This is a study paper of SHEWA-B project implemented in Bangladesh through join initiatives of GoB and UNICEF. The study conducted for measuring hand washing in five critical times among the households of the project area. The paper said, In general, the hand washing demonstration results compared with those obtained from structured observation identified that a higher percentage of women washed hands with other materials, particularly soap. Overall, soap was used in approximately 4% of structured observation events equating to 141 female caregivers that regularly used soap and only 37 regularly using ash for hand washing for all exposures. The researcher concluded that, the use of a mixed methodology approach is useful in understanding and validating methods to improve the methods and interpretation of measures to assess hand washing behavior in low income settings.

UNICEF-WHO JMP report (2013): This reports given statistics over Asia and rest of the world on Water, Sanitation and Hygiene promotion status. The

report said, Open defecation rate in developing countries is decreasing which is 31 (1990) to 18 (2011) where 465 million people of rural areas use unimproved water sources for drinking purpose over the world. The report presented data of sanitation status for South Asia as below.

Table - 2

Sanitation status of South Asia: Use of Un-Improved sanitation and Open defecation

| Sl. | Country | Population (%) | |
|---|---|---|---|
| | | Use Un-improved sanitation | Use open defecation |
| 01 | Afghanistan | 45 | 16 |
| 02 | Bangladesh | 14 | 4 |
| 03 | Bhutan | 26 | 3 |
| 04 | India | 6 | 50 |
| 05 | Maldives | 0 | 0 |
| 06 | Nepal | 6 | 43 |
| 07 | Pakistan | 24 | 23 |
| 08 | Srilanka | 1 | 1 |

Source: UNICEF-WHO JMP report 2013

GLAAS Report (2013): This is a qualitative report of UNICEF-WHO revealed that world becoming under water crisis while sanitation and hygiene problems are existing.

Wash Hard to reach strategy of Bangladesh: The government of Bangladesh has passed hard to reach strategy for better WatSan facilities in coastal, hilly, isolated char and draught area. This directed guidelines for smooth functioning the issue in the concern area.

Hygiene promotion strategy of Bangladesh: This strategy strongly given emphasis for human behaviour in propoer hygienic way.

Annual Report – 2005 (NGO Forum for DWSS): The Report should be connected with the research by providing the hygiene promotional data as we expect as updating status.

Muhammad Hasan Immam (1998) wrote the book on Social Research: Concept, Process and Methods which is a pathway especially for newly introduced researchers. The book described clearly about concept, variable, conceptual framework, sampling, questionnaire and its error probability of data collection etc. very well. The study is benefitted in various ways with this book.

Murshid Al Hassan (2005) wrote the book on Social Research: Method Process Analysis which is played most significant role for conceptualization, identifying variables, applying methods etc. This has also provided direction for required method of sampling. The research has taken conceptual knowledge from this.

Many studies have been conducted on Sanitation, Hygiene and health in the country of Bangladesh, South Asia and over the world. In the country studies, Many of them recommended different ways to overcome the problems to cover total sanitation and hygiene promotion. These are implement is a big challenge, but there should have a strategy to touch the vision in a line way.

# Chapter: 2
# Methodology

## 2.1 Methodological Consideration:

To realize the problem at the micro stage and bring out the real scenario from the existing level, the methodology is considered and provided. This is a very much crucial and social problems which required exact method for exploring the vulnerabilities lying with the community in the study area.

The purpose of the study significantly focused that to explore the existing causes of present hygiene, health practices and conditions, these consequences and social impacts for which the vulnerabilities are covering over the factors. Considering the research objectives, I strongly dependents on interview with observation and FGD (Focus Group Discussion) method. These two methods are widely effective to cover the whole area of interest of the research investigations.

Interview is an effective method through which facts can explore in-depth through conversation with the respondents. Besides, it can measure the variables keeping through observation during interview time physically and through spot checking also. This helps to observe the other atmosphere like physical conditions of the facts and body languages of the respondents which helps to discover the underlying causes of different areas of the concern questions. This method covers the area of knowledge, perceptions, habit and practices of the village women mostly and the other family members on water, sanitation and hygienic behavior. The interviewers can observe the household grounds and the surrounding areas to measure the personal, food, and environmental hygiene, cleanness and keep in safe the water sources and collected water, hygienic operation and management of latrines and its using trends.

Focus Group Discussion (FGD) is another principal method where the participants informed regarding some areas about which they feel shame to answer during interview or given data seems less trusty. Through this method, the collector can measure and verify data while this is a participatory and discussion process where data brings out after long and depth discussion and logical conversation also.

**2.2 Objectivity issue of the study:**

Interviewing is an appropriate technique to study the events what occurs. To gain such information, I have applied the qualitative interview method using an open and close ended both questionnaire. I have interviewed a total 100 women respondent those who are the housewives in the selected area. I tried to keep bias-free interview and observation at the spots.

Qualitative Interviewing is an adventure in learning about teaching in different countries, their cultural views, their problems and solutions, and how their practices are similar and different than our own. The way we interview depends on what we want to know. It is a process of finding out what others feel and think about their worlds. The result is to understand the major points of their message and how it compares [similar & different] to your own situation. Not only do you need to be a good conversationalist, but also a good listener. [Rubin, Herbert & Rubin, (1995)].

Through Focus Group Discussion, People meet to share their impressions and changes of thinking or behavior regarding a product or an institution. The technique is used this study to bring the real opinion on issues from the participants using an un-structured checklist.

I applied the physical observation method like a complete observer while the observation is held during the interview time. It happened as *spot checking* for the hygiene behaviors and practices. Observation methods are useful to researchers in a variety of ways. They provide researchers with ways to check for nonverbal expression of feelings, determine who interacts with whom,

grasp how participants communicate with each other, and check for how much time is spent on various activities (SCHMUCK, 1997).

**2.3 Selection of Respondents:** The housewives are been selected from each household as respondent. The Kauafanda village has total 312 household (as per district statistics, 2011 and the Union Council records).

The data collectors group provides code numbers for each household at first, then 100 households are selected through systematic sampling keeping 10 intervals between two samples. It was a question of exploring that how the village women manage WASH issues at household level as women are largely connected with such type of tasks at household level. Therefore, the habits and practices, causes and effects and impacts over health and social facts also are existed as research questions.

**2.6 Field Work:** Field work is very important for every research. This task was very systematic for this study. Various techniques and procedures were used for data collection, such as:

- Transact work
- Interview
- Observation and participation
- Focus Group Discussion (FGD)
- Discussion with villagers and related personnel
- Noting

**Time Schedule:**

Field work, related preparatory work, pre-communication began in November 2009 and finished on 25 July of 2010

**Staff/Data collection team:**

There was a 4 members of data collectors group divided into two, each group consist of 2 members. The groups conducted interview, participation observation and spot checking and Focus Group Discussion sessions.

Among the data collectors, two were the students from degree (Pass) level, one was development worker and one was a college teacher. Besides, I, myself was involved in collecting data, FGD session conduction and cross-checking activities for spot observation at household and surrounding areas.

The data collection team members were been selected based on their knowledge, learning and experiences on research procedures and related tasks. I have arranged an orientation course on data collection process and methods for them. They have participated actively in the two days long orientation where the following sessions took part significantly in in-depth discussion through a participatory manner:

Objectives of the study, concepts and variables are used in the study, method and process, role and responsibilities of the data collectors, their motive, movement and behavior at the village level with the community. They have been oriented about what are the objectives to reach the expected stage of the study. What is transact work, questionnaires issues, sequences of the questionnaire, how to fill-up the questionnaire keeping of the objectivity with avoiding the errors, how to take note besides the questionnaire for additional information. They are oriented, what and how they should start, how to interview the respondents, what should they do behave with the respondents and with all concern in the community, how to participate with the community and the household level etc. for successful observation.

**Task Schedule:**

**Transact work:** This is a task like move from one corner to another corner in the selected area to obtain a common idea of the location and the locality. The data collectors groups moved over the area and the selected village before starting the data collection.

**Interviewing:**

We have conducted interview with all respondents through an informal and cordial atmosphere. We have created a friendly and familiar discussion atmosphere before starting the formal discussion so that they can easily answered keeping the informative and unhesitating attitude. We tried to make easy the questions and use local language for their better understanding for response.

**Observation:** I have applied the observation method to explore the WASH habits customize. Observation has taken place at household level where used latrines and surrounding areas, water sources and its platform conditions, availability and storage of water in and outside of used latrines, using evident of soap/ash and slipper during and after defecation etc. The observation has taken part also in the kitchen or the cooking place to find out the existing practices for preservation of food and drinking water from different insects and other dirty elements, cleanness of the place of food preparation, distribution and receiving. During conduction the observation, the data collection teams have done the necessary discussions with the respondents and other family members of the respective households relating to the said concerns.

**FGD:** A focus group discussion (FGD) is a good way to gather people together from similar backgrounds or experiences to discuss a specific topic of interest. The group of participants is guided by a moderator (or group facilitator) who introduces topics for discussion and helps the group to participate in a lively and natural discussion amongst themselves.

In the study, one FGD has been conducted among 20 fertile aged women who have given some sensitive information related to women in wash and in operation of menstrual hygiene most. The research has 54 women those who are under reproductive aged given different information about WatSan during the interview at household level. Besides, 20 persons from them are selected

for FGD where more sensitive information is collected from them. A check list is used in the FGD for data collection.

**Discussion:** I, along with my data collection team have discussed with other members of the selected families, local people and different stakeholders of the area. All the discussions were mostly about the WatSan situation, existing hygiene practices, and problems, causes, effects & impacts and barriers on the way of wash promotion in the community. We have tried to discover through the discussion that how the existing habits and the obstacles of the wash promotion have created effects and impacts over their health and livelihoods.

**Noting:**

We have noted down all the circumstances of the respondents, issues or events which are not under the checklist or questionnaire, we have noted down such as the motive, body languages and trends on the matter of discussion with them.

**Checking, Sharing and Discussion with the staff:** We had a regular task as a routine during the field work that, we have discussed each other every day about different experiences on that day and shared if any think rose as problem or advantage for the data collection. We also did checking regularly the error, checking noting, checking filled up questionnaires and any kind of exceptional situation.

**Major Variables used in the study are analyzed by different techniques:**

**Concern to demographic issues:** Income status, age, education, Occupation status of the respondents.

**Concern to Health and Hygiene issues:** Hygiene habits and practices, Health status, Food habit, Sanitation status, Diseases trends, Treatment trends and conditions, treatment cost.

**Data Computing:** All the data of the study have preserved in the MS-Excel data sheet through several files and folders. Mistakes of data and information were corrected directly from questionnaire, checklist and the respondents by re-checking by the team members. The data is shows focusing necessary information maintaining the sequences of the objectives of the study and the logic of the facts.

**Data Analysis:** The data is analyzed using MS-Excel which takes place for statistical presentation; graphs are used with necessary data. As per the presentation, it is explained and the consequences and results are discussed in an analytical frame work keeping the objectives of the study.

**Limitations:**

◊ The sample size of the study is 100 households which not representation the whole Bangladesh or the whole such vulnerable geographic location. However, the respondents and the area reflect the whole condition of similar characteristic issues of the country and this region as well. I strongly believe that the major findings of this study represents the major such vulnerability in WASH sector of the country.

◊ The data were obtained through subjective reporting by the respondents in many area of interest of the research like the critical behaviors of hygiene. I have tried to make those in dummy presentation, but there were a large possibility for artificial showing in place of the real. However, I tried to take data through accidental present at the spot to see that what actually been happening, besides, evident are been observed critically in all the households and attitudes, motives are observed critically during the FGD. So, I can say that the data is actually giving the original status of the facts.

◊ The respondents area is a religion and social orthodox like the other part of the country. So, they felt shame to give different sensitive information on issues like menstrual hygiene, defecation during the interview. Though, I have

tried to obtain the particular and genuine information through comprehensive conversation and in FGD; and I confident that the data is keeping as real.

**Description of the Study area:**

The study area is particularly named "Kauafanda village" of Gojghonta union under Gongachara sub-district (Upazila) of Rangpur district.

## Topography:

The area is a land of river erosion. This situated at the northern boundary of Rangpur district and very near to the river of Tista. These households were been affected by river erosion long days ago in the nearest Laxmitari (nearest Union) area before 10-15+ years and they had sifted in this place where the Tista embankment is gone across the northern part of the selected village. This location is 17 KM far from Rangpur district town, 7 Kilometer far from sub-district head quarter and Upazila hospital, 2 kilometer from Union Parishad premises (the rooted local government body). Many newly erosion affected households are adding every year in this locality.

The village is affect by flood for heavy rain. The village has remarkable amounts of agriculture land. The climate of the village is favorable where the temperature is average maximum 41.8 degree and minimum 10.5 degree Celsius. Annual rainfall is 2102 millimeter (district statistics 2010). The climate is medium temperature considering humidity and moderate rainfall. Generally it is situated high level than the water level of nearest river of Tista.

This is a common occupation area where about 80% people are dependent on agriculture direct or indirectly (see the graph 6 of chapter 3).

**WASH conditions in the area:**

This is a low land and shallow water table area.

Table: 3

Data of Nationwide Baseline survey on Sanitation-2003: Gongachara Upazila

| **Sl.** | **Particulars** | **(%)** |
|---|---|---|
| 1 | Percentage of Household with Hygienic latrine in Rangpur district | 17 % |
| 2 | Household with Latrine in Gongachara Upazila | 22 % |
| 3 | Household with Hygienic Latrine in Gongachara Upazila | 17.12 % |
| 4 | Household with Un-hygienic Latrine in Gongachara Upazila | 5.73 % |
| 5 | Household with no Latrine in Gongachara Upazila | 77.15 % |

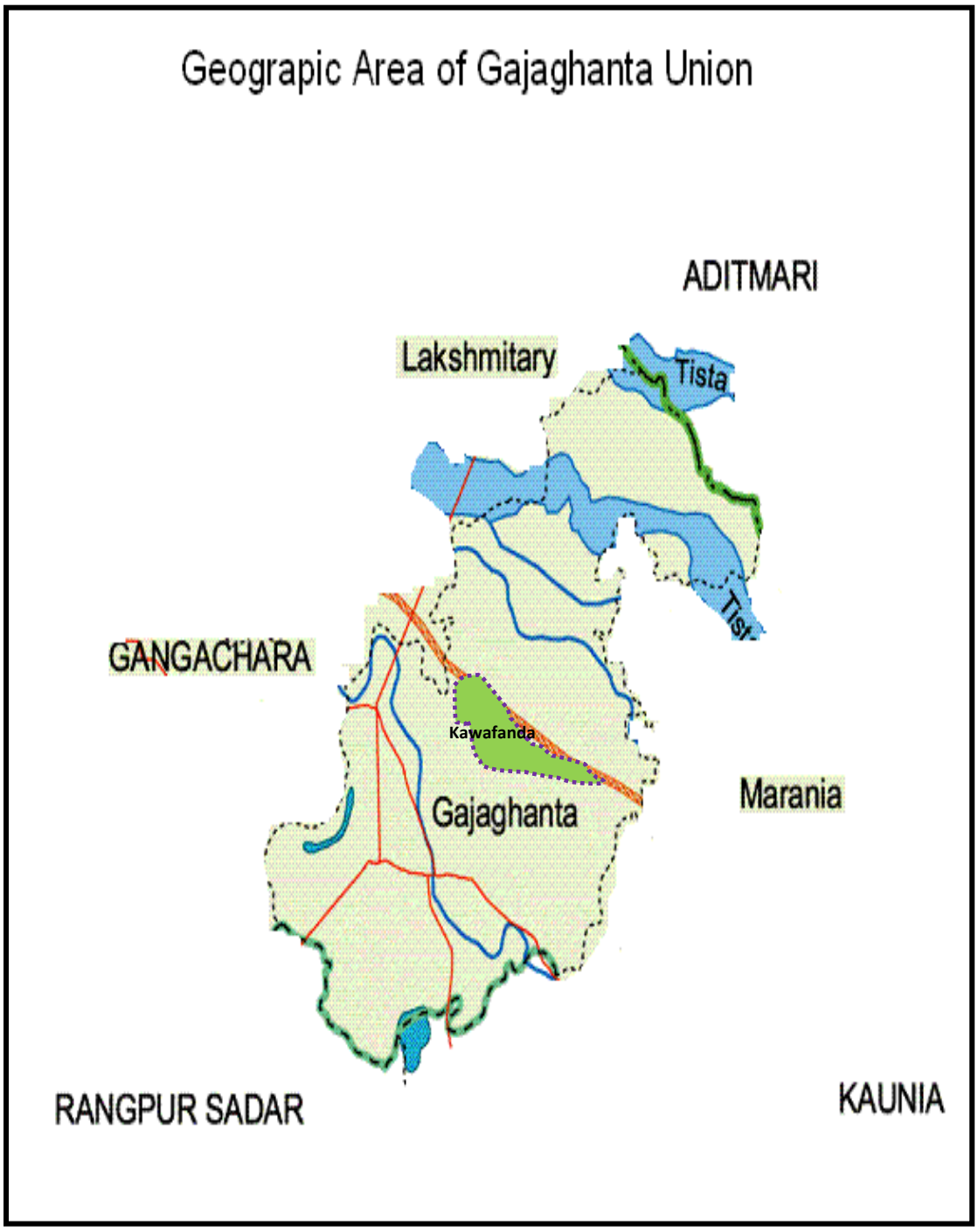
** Total Household surveyed: 51146 (total household of the Upazila)

(Source: Report on Nationwide Baseline survey on Sanitation; DPHE, UNICEF, WHO-2003)

The Union situation of WATSAN as per 2008 is- total household of Union is 7163; out of them, hygienic latrine is 2409, 2995 household has no latrine and 759 has unhygienic latrine (DCPUK progress report 2008)

The area WASH situation (Table: 3) is not so satisfactory as the other part of the country.

## Map of the Research Area



# Chapter- 3

# Socio-Economic Conditions of the households

Socio-economic status is a combined measure of an individual's or family's economic and social position relative to others, based on education, income and occupation.

When analyzing a family's SES (Socio-Economic Status), the education and occupation and combined income also of the household owners (husband & wife both) are examined. Additionally, the members those who are engaged in earning money of the households are considered as the source of family income of the selected households. The numbers of member of the selected households are examined in this study for explaining the behavior trends and role by them in light with hygienic behavior and health habits.

### 3.1 Information of Family members of the selected households:

To measure the health status and the water, sanitation and hygienic situation of a community, it is essential to find out how many numbers of the people are exist there. The research has explored the number of family members of the selected households in the study.

**Table - 3.1**
**Information about Family members of the selected Households**

| Sex/Description | Number of Persons |
|---|---|
| Male | 181 |
| Female | 163 |
| Child (both male & Female) under the age of 18 | 73 |
| Families with children at the age 0-5 years | 54 |

**The families those who have the under 5 years Children: 54

The membership status of the selected households' shows above that about 4.17% members is existing with each household including children. It is a

mentionable figure to measure the health and hygiene issues of a household where all the members act regularly in their daily tasks keeping certain habit. Besides, 54 households have under five aged children and the children are mostly focused in measuring some area of sanitation, health and hygienic behavior.

### 3.2 Educational status of the selected households:

Education is the significant indicator of socio-economic condition. It affects over occupation, income etc. variables.

Many studies have found that a higher level of educational attainment is a strong predictor of access to economic and healthcare resources.

The educational status of the study area is (As per BBS, 2011, Literacy rate in 2011 of Gongachara is 43%) not at the satisfactory stage especially the selected households' respondents. Here is the status shown

Table - 3.2

Educational status of the respondents

| **Level of Education** | **Number of respondents** | **%** |
|---|---|---|
| Not able to put sign | 22 | 22% |
| Only able to sign | 42 | 42% |
| Up to class I-V level | 19 | 19% |
| Up to class VI-X level | 14 | 14% |
| UP to SSC | 3 | 3% |
| Up to HSC to above | 0 | 0% |
| Total | 100 | |

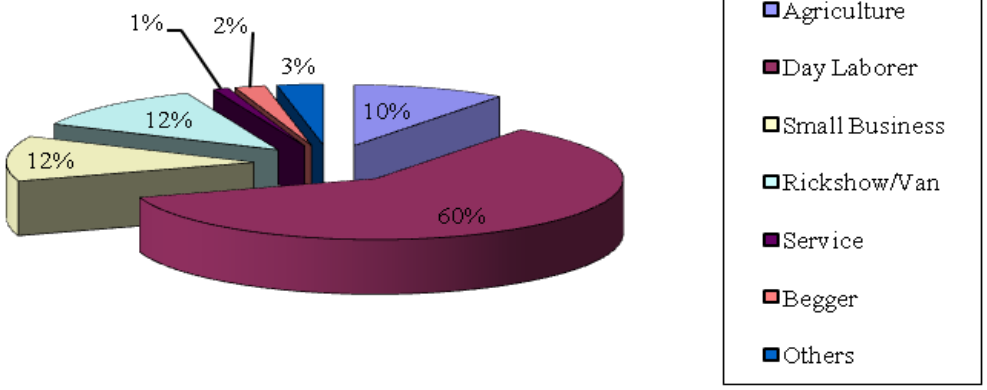
(Table: 3.2) where the respondent's, educational status is focused at a glance. The education up to higher secondary (HSC) and graduation level shows zero percent while it is very much essential for keeping up the living standard, job

requirement and livelihood pattern as well. The matter is mostly supportive to keep the health and hygiene related education and practice also. Besides, satisfactory level education may create a consciousness on every issues relating to health and every wing of livelihood. Considering the sense, it is mostly unsatisfactory status in the study where 64 respondents have no any space of academic education/learning at minimum level that is why amongst them 22 have no signing knowledge and 42 persons can only put sign.

### 3.3 Occupation & income of the selected households:

Occupation and Income is two major indicators to measure socio-economic conditions of any community or selected people. These can refer the other factors of the livelihood remarkably (food and WASH habits likely).

Figure : 6 Households' Occupation




Respondents have reported that (Figure-6) their family income is dependents on various occupations like Agriculture (10%)*[1], Day Laborer (60%), Small Business (12%), Rickshaw/Van Puller (12%), Service (1%), Begger (2%) and others (3%-Fishing, seasonal any work in the nearest Rangpur town or in the locality). They (the respondents) are not directly engaged in earning to their

[1] * Agriculture means the family has sufficient cultivated own land, they hire labors and fully depends on the agriculture whole the year.

families. They are assisting their families in different ways such work field during the harvesting time of rice from the field as labor.

The graph shows that, 10% households have some own land (between 100-160 decimal) for cultivation. The other 60% is day laborer who is majorly engaged in agro-based field in the local, surrounding and other areas.

The occupation scenario is giving an idea about the economy of this area, which very narrow. With exist this narrow economy situation everybody can't think any conscious job like sanitation (which is most essential of their healthy living) than arrangement of food or such work.

**Information of Numbers of earning persons who are engaged in income activities from households:**

Income refers to wages, salaries, profit, rents and any flow of earnings received.

We have seen the occupation status where most of the respondents are only housewives and they have no role to direct income of the households. They have a very little role during the rice harvesting season where they help the men sometimes. Otherwise, they are mainly engaged in domestic work like food preparation, distribution, cooking etc.

The study has discovered the information that, how many persons are earning for each of the family other than the respondents women. The information on the economic status and income trend can easily be gazed to triangulation the health, hygiene, sanitation habits and nutrition cost.

Table - 3.3

Distribution the data about earning persons of the Households

| Answer type | Percentage of households (%) |
|---|---|
| Only One | 89 |
| More than One | 07 |
| More than two | 04 |
| Total | 100 |

The above table indicates only one person is the principal income earner of the major number (89%) of the selected households. This data gives the narrow economic conditions of the area because of the all costs (including the WASH cost) are depends on only ones income.

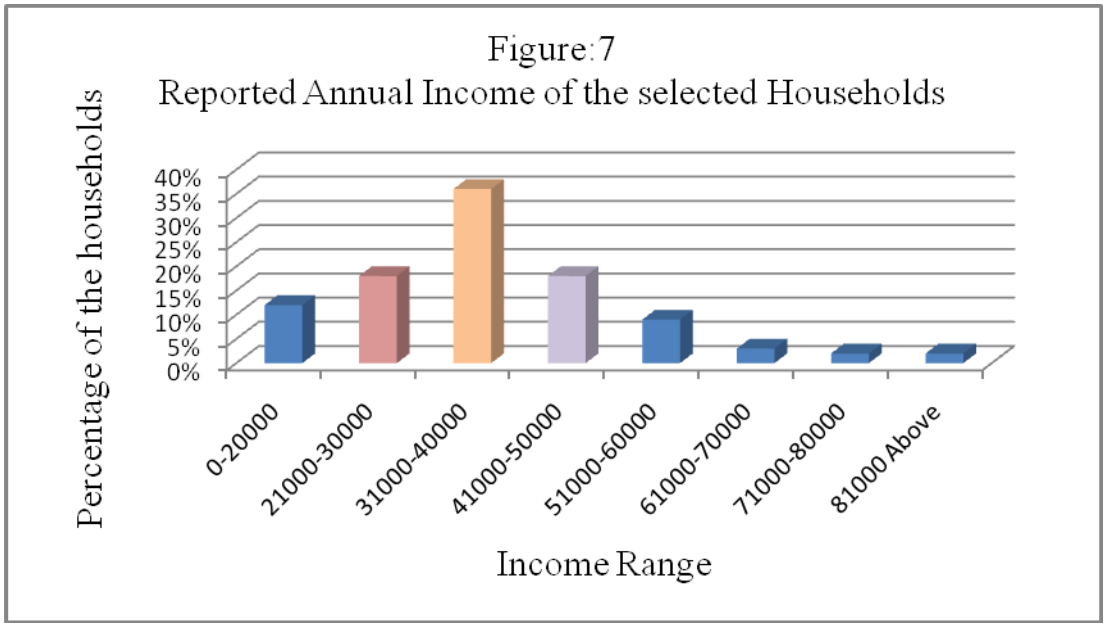
**Tentative annual income:** Income is a significant indicator of the socio-economic condition. It can influence over the other factors linked with the issue of livelihood which is depends remarkably for its development also.

Table - 3.4

Distribution of data about reported annual income of the Households

| Income (between) in Taka | % |
|---|---|
| 0-20000 | 12 |
| 21000-30000 | 18 |
| 31000-40000 | 36 |
| 41000-50000 | 18 |
| 51000-60000 | 9 |
| 61000-70000 | 3 |
| 71000-80000 | 2 |
| 81000 Above | 2 |
| Total | 100 |

The table (3.4) shows the tentative annual income of the selected families what they have reported. It is the common scenario of the area where day laboring is the main way of income and 80% families are dependents on the agriculture direct or indirectly. For this reason it is mostly significant that the area commonly living below poverty line and their concentration is centered to only be alive containing the basic needs like food and shelter than on the other issues like health and sanitation.




The Figure 7 shows, the respondents reported their annual income on households basis where most of the families (36%) annual income are between Tk.30000-40000 range and beyond that others 30% families are exits in below 30000 taka income in a year. it is very disappointing scenario that the socio-economical condition of the selected households are fully narrow level in the area. The villagers of this area living hand to mouth while every year they faces different natural crisis like river erosion and flood.

### 3.4 Information about the natural Disaster of this hardcore poor prone area:

The area is mainly situated beside the Tista River. It is shown that the total numbers of the respondent's households are the sufferer of Tista river erosion. The area has been suffered from flood and river erosion during the research

period. As per Bangladesh methodological department and district statistics 2011, the area has suffered from 2008-2011 every year which is exception in Rangpur district. Most of the families have been affected more and more times by the river erosion. Most of the households have no more land except household premises. As the other part of the northern area, they have to go to another part of the country for earning money for living daily life. So it has been justified that, they have no any strong economic structure, neither in family, nor in the area.

Following the definition of hard core poor given by the Government of Bangladesh [2]If the household has no land, pavements dwellers/homeless, the main earning person or the head of family is a day laborer, owning less than 50 decimal of agriculture land or residing in a rented premise lesser than 200 square feet and having no fixed source of income, household headed by disabled or females or old (65+ years) persons.

The all respondent's families are exit with the definition and considering all the features, it can say that the area is hardcore poor.

As per the definition, 96% of the selected family is goes under hardcore poor category. Here is a more data given as per their assessment that is they have any surplus money exist after the costing every month- they also reported that 2% of them those who are doing agriculture and have little amount of land are able to save a little amount of money in every month after having income and expenditure.

**Table - 3.5**

**Status of the households-Hard core poor family**

| Status | % |
|---|---|
| Hard core poor family | 96 |
| None hard core poor family | 4 |

[2] Pro-poor Strategy for Water and Sanitation sector in Bangladesh, 2005

Bangladesh government has given additional focus on the definition to find out the actual figure of this economic status people while it is needed to make the Pro-poor strategy of water and sanitation sector.

**If the households are been affected by any natural calamities or disasters in last five years:**

The river Tista is taken over this area and very nearest to the village. Tista is originated from Nepal-India and the bordering area is about 30 KM far from the study area. During the rainy season and for flood for surprising water from neighboring countries, the area is a common victim of flood. After the rainy season, the Tista takes its motive towards breaking the lands and river erosion is also a common incidence in this area. [3]During 2008 to 2011, flood and river erosion was a common phenomenon in this area and this is only one in the Rangpur district. Though the river embankment road is gone over the village to protect the rest area and the selected village is inside the embankment area, but a common effect heats the village every year. It was an indicator of standard (5 years) in the study to find out if the families of the selected area are been affected by any kind of natural calamities or disasters. Though most of them reported that they have an affection by little calamities like *heavy rain or small cyclone (locally called 'Hurka')* but it has been observed that most of them are migrated here from the nearest area/union Laksmitari what is largely been abolished in the belly of tista river. From tista affection, 50% households are here those who are the victim from tista for several event/spell (more than one or two times).

[3] Bangladesh methodological department and District statistics 2011

**Summary:**

The Socio-economic conditions of the selected households are not as satisfactory level as they play synergistic role to improve WASH promotional behavior and habit also. about 4.17% members is existing with each household including children. It is a mentionable figure to measure the health and hygiene issues of a household and 54 households have under five aged children who are a vital player to measure WASH status.

It is mostly unsatisfactory education status in the selected households where 64 respondents have no any space of academic education/learning at minimum level,22 persons have no signing knowledge and 42 persons can only put sign. This is a disappointing to keep up health and hygiene related education and practice also.

It is remarkably noted that, day laboring is the main way of income and 80% families are dependents on the agriculture direct or indirectly. The area commonly living below poverty line and their concentration is centered to only be alive containing the basic needs than health and sanitation.

This is a disaster prone revering area where most of the households are affected by river erosion by Tista.

# Chapter: 4

# The health status of the members of selected households

Health and Hygiene are integrated things and these two concepts move together relating to human health which is most important in human life. So, if we try to explore the human health status, then we have to discover the existing health conditions and trend of hygiene behavior of the respective area. But, hygiene is largely depends on 'Sanitation' which contains a multi-dimensional issues in which, 'Hygiene' is inbuilt. Considering these thinking, the research has explored the knowledge of the respondents on safe water, hygienic latrine and personnel as well as total hygienic behavior. Knowledge on the common health wings/indicators are generally furnishes an impact on health status. From that sense the study has generated the scope of exploring the depth of knowledge on the same.

It is true that, concept on the related things is very much important. If anyone can be conceptualized about the issues or things then, he/she will be able to keep the knowledge to apply the issue in to practice. Besides, He/she can create an atmosphere in the surrounding area about the concept, make conceptualize the other persons and there will be a common atmosphere regarding objective of the issues or things. Therefore, it is observed that, concept and knowledge are the vital indicators to show the existing status of the concern issue. To explore Health and Hygiene status, we have to explore the matter also. The research has wondered at first the conceptual status of the respondents on Sanitation. That means-Safe water, Hygienic latrine and Hygiene issues- these three elements are a must to ensure total sanitation. Total sanitation is pre-condition to sustain for a long time for keeping the sustained satisfactory health condition in any community.

In this chapter, the research has given priority on concept, knowledge, practices of Sanitation elements in an expanded manner. Besides, Physical observation and spot checking results has been explained along with statistical data of the

research participants is elaborated this chapter. All of these reflect the health status of the respondents and the selected area as well.

## 4.1 Knowledge on Safe Water of the respondents

[1]By 2030, nearly half of the world's people will be living in areas of acute water shortage, said a report released by more than two dozen UN bodies in March 2009. Most of North Africa and the Middle East had already reached the limits of their water resources, it said.

More than 80% of population of Bangladesh, India, and Pakistan sub-continent live in rural areas, but only a small portion of them has access to safe water. The international water and sanitation decade (1980-1990 firstly and 2005-2015 the 2nd) are being observed (Community medicine and public health) the objective of the decades is to supply every citizen of a country safe water with adequate quantity within his/her easy reach. But, still the objective is to full fill in this region.

**Sources of Water and Different water options:** The many sources of water and water options are exist:

(1) Rain water, snow

(2) Surface water, e.g., streams, canals, rivers, tanks, ponds, lake, impounding reservoirs and sea

(3) Ground water, e.g., wells and springs.

Rain water: In some countries where other sources of safe water are limited rain is the main source of drinking water. Rain water is soft water and is suitable for drinking, cooking, washing and bathing.

River water: Among surface water, River is the common source of water supply. In Bangladesh and India many towns derive their water supply from river. The river water is fairly pure at its source, but during its course it becomes more or less polluted from sewage, manure from the fields, industrial

[1] nrc news letter June 2010, NGO Forum

effluents and refuse from factories. River water is unsafe for drinking purposes and should, therefore, be purified before drinking.

Tanks: In certain areas where sub-soil water is brackish, tanks are used to store drinking water obtained from river or rain. Tanks are important sources of water supply in villages. By different ways tanks are subjected to unlimited possibilities of contamination and are highly dangerous as a source of drinking water. But, unfortunately, the tank water is drunk without being boiled, disinfected or having undergone treatment of any kind which is responsible for an innumerable number of cases of sickness and death particularly because of storage, oxidation and other agencies are not sufficient to render the water safe.

Wells: Wells are artificial holes or pits dug into the earth. It is an important source of water supply. In the village of Bangladesh, there are different types of wells.

There are two kind of wells- Shallow well and deep well.

Shallow well: It taps water from above the first impermeable soil stratum. This water is open to surface pollution.

Deep well: It taps water from below the first impermeable stratum. This water is good for drinking, and is free from pollution; it is safe but 'hard' it provides a source of constant supply.

Tube wells: Tube wells provide a rapid means of obtaining ground water and are comparatively more sanitary than dug wells. This consist of lengths of iron tubing driven into the ground up to the desired length.

Tube wells are bacteriological safe source of drinking water. The tube wells consist of pipes sunk into the water-bearing strum and fitted with a strainer at the bottom and a hand pump at the top. An ideal tube well should have a water tight concrete platform with a drain all around. At least 50 feet (15 meter) areas round the tube well should be kept free from pollution with liquid and solid wastes. Deep tube wells are used for municipal water supply and for irrigation purposes.

Impounding reservoirs: These are artificial lakes, where surface water is stored. The area draining into the reservoir is called catchment area. Water quality is fairly good. However, there is possibility of contamination from human beings and animal excreta. So, the water needs purification because using for drinking purposes (Community medicine and public health-2004).

[2]WHO Water supply and Sanitation program given the definition of access to improved drinking water supply as: 'Improved water supply technologies' are household connection, public standpipe, borehole, protected well, protected spring, rainwater collection, Spring.

"Not improved" are: unprotected well, unprotected spring, vendor-provided water, bottled water (based on concerns about the quantity of supplied water, not concerns over the water quality), and tanker truck-provided water.

It is assumed that if the user has access to an "improved source" then such source would be likely to provide 20 liters per capita per day at a distance no further than 1000 metres. This hypothesis is being tested through National Health Surveys that are being conducted by WHO in 70 countries.

**Context of Bangladesh:** [3]Although Bangladesh is a river since country, but people have been sufferings for safe water sources for a long time. To overcome the problem hand pump tube well was introduced for the community water supply in 1928. Since then.., millions of tube wells particularly shallow suction hand pump had been sunk in rural areas of Bangladesh.

In Bangladesh, three types of tube wells (hand pumps) are in operation:

(i) Shallow tube well-used in places where the water table lies within the suction limits (7-8 meters);

(ii) Deep set tube well (Tara pump)- where water table lies beyond the suction limit; and

[2] Communication of 25 March 2003 from the WHO Water, Sanitation and Health Programme.

[3] SHN project baseline report, NGOF, 2005

(iii) Deep tube well is one in which the water level lies within suction limit, but the total depth of the tube well exceeds 250 feet (approximately 75 meters) (Community medicine and public health).

In addition to these tube wells options, the people of the study area are using a shallow tube well called 'Mini Tube well'. It is looking as same the normal (as the identity of company as number-6 tube well) tube well, but smaller than the normal size. It is comparatively cheaper in prize and the poor villagers are using it easily.

It is needed to shortly discuss about Arsenic in the discussion of Water context as because it is acutely related to safe water issue. As per WHO, Bangladesh standard level is 0.05 milligram arsenic per liter water. Presently 61 districts ground water is identified as with over limit of this standard of arsenic in Bangladesh (Information booklet-NGOF, 2011).

In 1993, Arsenic is detected in Bangladesh for the first time in Chapainawabganj district in ground water and it has created scarcity of safe water. Presently, about 2 crore people (13% of total population) are living the extreme risk of arsenic (Information booklet-NGOF, 2011). To mitigate the problem and to increase the access to safe water in the arsenic affected areas, several programs are being implemented by the GO, national and international NGOs. Different types of safe water technologies were developed based on the geo-hydrological situation to provided safe and adequate water and tried to make affordable and user friendly for the people. The invention of alternative options like Arsenic Airon Removal Plant (AIRP), Dug well and Pond Sand Filer (PSF) are the result of this effort (SHN project baseline report, NGOF, 2005).

Water scarcity is almost related to the natural disasters which is a part and parcel of the climate of Bangladesh. Bangladesh has recently faced two large natural disasters (Cyclone) Cyclone Sidr (in November 2007) and Cyclone Aila (in May 2009) those which is hated in the southern part of the country.

When Aila hit, locals say the embankments were breached within about 10 minutes; causing wide spread flooding that has still not receded. Most of the ponds they used for drinking water became inundated with saltwater (nrc news letter, NGOF June 2010). These two disasters have destroyed thousands of shallow tube well in the affected some areas where fresh drinking water is available.

To take arsenic free and salt free water, the people, mostly of the southern part of Bangladesh use the Arsenic Airon Removal Plant (AIRP), Pond Sant Filer (PSF) and Rain Water Harvesting System (RWHS).

AIRP is consisting of three chambers where several plates (consisting of brick chips and sand) for filtering the water. It is being used for purification of Arsenic and Irony ground water for drinking and cooking purpose.

PSF is being used for filtering the pond water. The filter work by passing pond water through four chambers: two filled with brick chips and two filled with sand. Each chamber removes progressively smaller particles until safe drinking water comes out of a tap attached to the filter. In Shyamnagar sub-district in Satkhira, south-west Bangladesh, about 2000 households rely on the three Pond Sand Filters (nrc news letter, NGOF June 2010).

RWHS is being used because of Arsenic contamination and salinization of groundwater. Generally 3200 liter tank uses for harvesting the rain water during the rainy season and the water being used the full dry season only for drinking purposed (nrc news letter, NGOF June 2010).

Our neighboring country India is using the RWHS in Karnataka, New Delhi and Chennai. Recently, the Himachal Pradesh Government is following the example of the said three provinces by fabrication of rainwater-harvesting structure as compulsory in all new buildings within the municipal council limits to check wastage of rainwater (IRC source Bulletin, nrc news letter-NGOF, 2006).

In Bangladesh Khulna, Satkhira, Norail, Chuadanga, Jessore, Jhinedha, Meherpur, Comilla are the remarkable area where these alternative technologies are using.

The community people need to know what safe water is. If they conceptualized the meaning of safe water and its effects to human health, then they can properly apply their knowledge in practices and they can be innovative to collect the safe water.

The study has tried to find out the knowledge of the respondent about 'Safe water'.

The study brought out that 40 % of the respondents know the correct meaning of safe water, 25% given incorrect answer and 35% have no idea about safe water (Table 4.6).

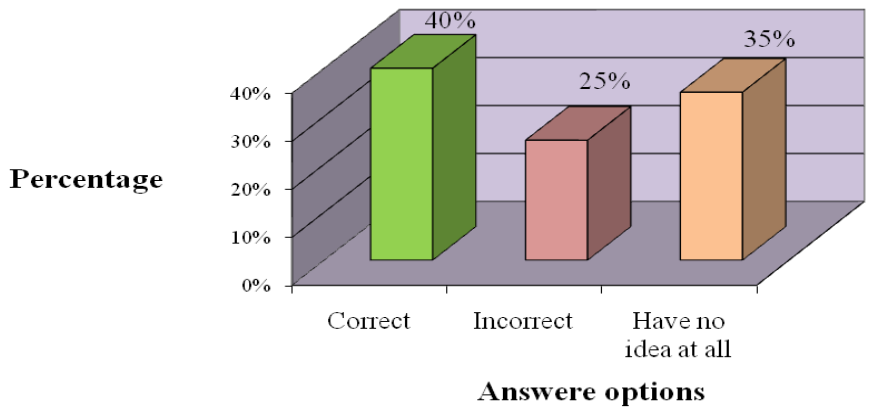
Table – 4.6

**Knowledge on safe water of the respondents**

| Answer (fq) | % |
|---|---|
| Correct | 40% |
| Incorrect | 25% |
| Have no idea at all | 35% |

It has been observed that after raising the question that "What do you know about safe water"? –The respondent's body languages have shown and faces indicated totally 'un-known' respond mostly. Most of them have answered incorrect and a remarkable numbers answered with the words just "Don't know". Besides, they reported that they haven't received any information or messages on safe water for which they could be able to answer correctly.

Figure: 8 Knowledge on Safe Water of the respondents




The graph 8 indicates the Percentage distribution of knowledge of Respondents about safe water.

It is very disappointing that only 40% respondents are been able to give the correct answer on safe water. In this question, there was open ended answer opportunity and the respondents have independently given their answers. After consideration all the answers, it is a result that 40% have given correct answers against this vital point. Water is a common element of living and safe water is the center element to keep better living health status, but the respondents of the study are in dark relating the knowledge on safe water.

## Consequences of Using unsafe water:

Access to clean, safe, freshwater is recognized universally as one of the most basic and vital needs of humanity. Water is essential to human health and it cannot be separated from notions of human rights. The health of millions of people is already jeopardized by shortages and pollution of freshwater supplies, particularly in poor developing nations. There are other huge water related issues critically affecting food security, environment and agriculture. Consequently, a severe reduction in water resources can damage a nation's economy and food supply. Therefore, shortages of clean freshwater can

potentially have far-reaching security implications (WatSan bulletin, 2009; NGO Forum).

[4]More than 97% of the world's water is salt water in the oceans and seas, leaving less than 3% as freshwater, much of which is contained in the polar ice-caps, glaciers, deep aquifers or soil moisture. Thus only about 1% of the world's freshwater is readily available for human consumption. Furthermore, the distribution of water throughout the world is not equitable for a variety of geographical and economic reasons. A continuing per capita decline of freshwater availability in the next 50 years could very well lead to terrible insecurity.

Inadequate access to water resources causes an increase in water-born diseases and a decrease in public sanitation which has a long-term negative effect on population throughout Asia and Bangladesh obviously, weakening public health situation.

[5]The world Health Organization (WHO) has estimated that 2.2 million deaths in developing countries are caused each year by food and water-borne diseases (Sandra Hoffimann of the US Department of Agriculture).

[6]In a village of Ethiopia had no water supply and a woman named Darou Nuri has given birth a baby without access to clean water. Darou and her new born baby were vulnerable to potentially fatal infections in the next.

[7]In Peshawar, Pakistan more than 65% of the patients reportedly suffered from stomach-related problems, gastroenterological complications caused by drinking contaminated water- reports Daily Times.

For better hygienic situation and for the interest of good & favorable health it is must to know what diseases occur due to use unsafe water.

[4] WatSan bulletin, 2009; NGO Forum

[5] nrc news letter June 2011,NGO Forum

[6] WaterAid E-news;nrc newsletter-NGOF-2006

[7] April,2006; IRC source Bulletine, nrc news letter-NGOF, June 2011

The respondents are mostly direct involve in many ways of their domestic-work and using water and it is necessary to use of safe water in their daily domestic work in many ways such as taking food, cooking, food distribution, wash of vegetables & fruits, finally for drinking water.

The study tried to find out their knowledge about safe water and their knowledge regarding the consequences of using unsafe water. For this type of questions, the respondents gave multiple answers.

The question was-"Do you know what diseases occur due to use of unsafe water". It was a close ended question with multiple Answers. There were six answers options, additionally one option is 'other' than the selected six and the last option is 'Have no idea'; that means the respondents had to take any options one or more of answers and finally, if she unable to answered, then she chosen the last option 'Have no idea'.

Here is a table consists of percentage of answers by the respondents

Table – 4.7

Knowledge about diseases consequent for use of unsafe water
(Reported by the respondents as multiple answer)

| **Answer** | **%** |
|---|---|
| Diarrohea | 77 |
| Dysentery | 60 |
| Skin Diseases | 4 |
| Worm | 21 |
| Typhoid | 25 |
| Jaundice | 16 |
| Others | 2 |
| Have no idea at all | 22 |

The study result shows that 78% multiple answers received among which 76% is correct and 22% respondents answered as 'have no idea' on the issue or about the answer options. Amongst the respondents' answers, highest 77%

answer mentioned diarrhea and lowest 4% mentioned skin diseases to be caused by drinking unsafe water. 2% answered out of the options as 'other' that is - fever and leprosy, which is incorrect. 22% housewives have no idea and they gave no correct/incorrect answer in this regard. They answered simply "don't know". It is very risky indicator where a major number of respondents (22%) don't know or have no idea about the consequences of drinking unsafe water.

Here is a correlation exists between education and knowledge. The study revealed that the 22% respondents of the selected ones who are not able to put even sign only. They have no education/academic backdrop. It may be a result of illiteracy of the respondents for which they were not able to give answer.

Even though the large number of respondents have clear idea about major disaeases, but they are not in practice in their habit. It is reflected in the diseases trends in the area which has a vast discussion later in this chapter (table 4.25 & 4.26 data from Gojoghonta FWC about diarrhoea, dycentry, joundice...)

## 4.2 Information on use of Water Sources: For Drinking and Cooking purposes

[8]About 884 million people in the world do not have access to safe water. In Pakistan, Pakistan Council of Research in Water Resources (PCRWR), a government body said after completion of a five-year study that, 250,000 children die in the country each year as a result of diarrhoeal disease originating from impure water. India is sitting on 89.95 billion rupees (USD 2 billion) of unused foreign aid for water supply and sanitation, according to a report by the government auditor.

[9]Access to safe water is measured by the number of people who have reasonable means of getting an adequate amount of water that is safe for drinking, washing and essential household activities, expressed as a percentage

[8] nrc news letter June 2011, NGO Forum

[9] Baseline survey of SHN project NGOF, July 2005

of total population. It reflects the health of a country people and countries capacity to collect, clean and distribute water to consumers.

Table – 4.8

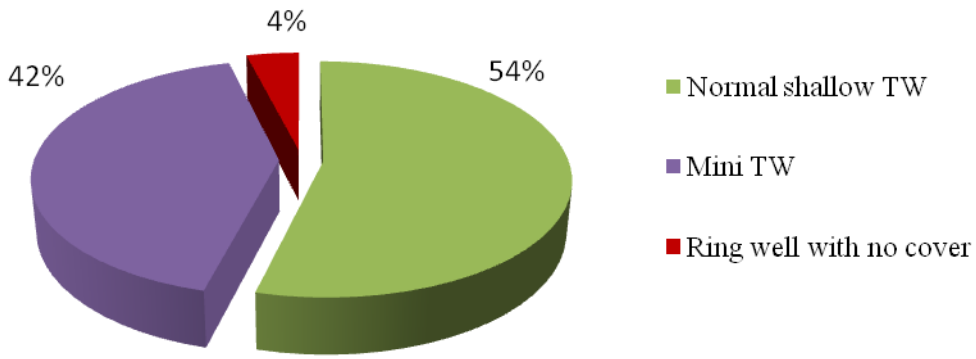
Using trend of safe water sources for Drinking and Cooking purposes

| Water Sources | % of user families |
|---|---|
| Normal shallow Tube well | 54 |
| Mini Tube well | 42 |
| Ring well with no cover | 4 |
| Total | 100 |

The study area is a shallow water table area. Here is many water sources used for drinking and cooking purposes. The study discovered that, normal shallow tube well in different sizes (Normal size, mini size) is mainly used among the selected households. Besides, Ring well is used by some households (4%) which is good sign to seem the tendency.

Figure: 9

Water sources use for Drinking and Cooking purpose




Here is the disappointing information that the ring well (4%) is not being used with cover. It is questionable that without cover, the water of ring well is how safe for human health. The water of this well may be riddled with different dirty thinks, insect etc. If we consider this using condition, actually 96% family

is using water of shallow tube well which primarily means as safe water sources.

**Water sources use by the selected households (for washing vegetables, fruits and other domestic purposes)**

It is well known to everyone that different water born diseases are occur for taking dirty water, lack of proper maintenance and preservation of water sources and water respectively. Most of the water born diseases are:

(a) Bacterial-cholera and other diarrhoeal diseases, typhoid or paratyphoid fever;

(b) Viral-viral hepatitis, poliomyelitis, Rota virus diarrhoea

(c) Protozoal - amoebiasis, giardiasis;

(d) Helminthic-ascariasis, enterobiasis, trichuriasis etc..

(e) Leptospirosis.

(Source: Community medicine and public health)

To avoid these diseases, people should use pure drinking water in not only drinking purpose, also for washing vegetables, fruits and other domestic purposes like dish washing, bathing etc.

Sanitation coverage will be filled up while it covers its different elements in fully clean and hygienic way. Water for use in washing vegetables and fruits are the key elements those which need to handle very sensitively and those could be the large factors of serious illness and spreading of diseases. As a result, human health would face severe difficulties in the long run.

In this study, it is found that the selected house wives are trending to use shallow tube-well water mostly for drinking purpose than the other needs.

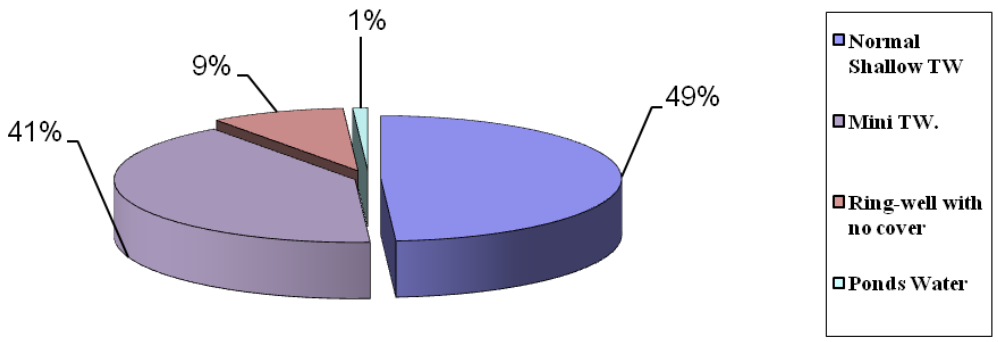
Table – 4.9

Water sources use by the selected families for washing vegetables, fruits and other domestic purposes

| Use of water sources | Percentage |
|---|---|
| No. 6 TW. | 49% |
| Mini TW. | 41% |
| Ring-well with no cover | 9% |
| Ponds Water | 1% |

On the other hand, the graph 9 shows that 49% Households are using No.6 Tube well (that is normal shallow tube well). 41% are using Mini Tube well (another kind of small shallow tube well), 9% using Ring-well with no cover and 1% using ponds water for full filling their needs of washing vegetables, fruits, washing dishes, bathing and such type of other domestic purposes in daily life.

**Figure: 10**
**Use of Water Sources for washing vegetables, fruits and other Domestic purposes**




Here is a mental set up of the village women and they have a tendency found that if they drink tube well water then they would be fresh and diseases free and they will not face any problem like water born diseases. On the other hand, they are using cover less ring wells water and ponds water for washing vegetables and dishes, washing fruits, own body etc while they trust that these

are not directly linked with inside of body and they will not face any physical obstacles, for these domestic purposes, they are likely less interested to take water from safe sources like tube well. Those user families have no own tube well or safe water source and they bring water from others sources like neighbors tube well or joint owning by other families. Besides, they have a little bit distance from own household premises to the water points. it is another cause of no using the tube well water for washing vegetables, dishes, fruits and washing purposes. [10]This is similar to a information provided by *NGO Forum for Public health* that, As per government, the safe water options need to be within 50 miter distance of household courtyard, but, severally the women of Bangladesh need to walk 0.5 km to 1 km distance of safe water source for collecting.

[11]Only drinking water from protected sources does not ensure the elimination of water related diseases. There exists high risk of water related health hazard if the use of safe water at least for the domestic purposes likes cooking, utensils cleaning and raw food/vegetables washing are not taken care of.

The above two graphs shows that although almost all (90%) households drink water collected from protected water source (TW/Mini TW/Tara pump) but 9% households use ring well with no cover and 1% households use directly ponds water for cooking, utensil cleaning, raw food and vegetables and fruits washing.

**Why they have the tendency:**

The 9% households means that number of four families are using water from Ringwell those which have no any cover protected from any dirty thinks like flies, garbage etc. considering the condition, this water is not safe for health, which may causes for any diseases like diarrhea, cholera, typhoid or such type of diseases. But, the respondents women had been asked the questions that why they are using those? They reported that, they have been using the water from their previous generation while it has passed already above 40 years. They are

[10] WatSan information booklet; NGOF,2011

[11] Baseline report of NCSNP,NGOF, 2007

using those for a habit of long time passed and they have no any physical problem for getting the water though some times they face dysentery and intestinal worm but they are not agreed to make it cause for using the ring wells water. They seem to feel comfort to use the water that is why they have no any tube well in their houses. Most of them gave opinion that tube wells water has a bad smell (!) that is not their user friendly.

Nearby the same causes 9% households are using the water of ring-wells those which are not with covered and 1% use ponds water for washing dishes, fruits and vegetables. The women are not interested to wash those with Tube well or such sources water. They reported that they have no own tub well in their house yard, so they carry water from neighbor's tube wells only for drinking purpose. But they feel easy to wash dishes, fruits, vegetables in the pond.

These are obviously dirty and unsafe water, which they use easily and without any hesitation. The concern housewives are noticed for that by the interviewer and they clarified that they trust these water is always safe and clean and they haven't faced any difficulties of diseases, though diarrhea, dysentery and worm patient have been explored from the concern families and their health is found at perilous level.

**Physical conditions of the used sources platforms and surrounding areas**

The water sources, those which are use in drinking or cooking and other domestic purposes, these must to be well constructed and well protected from any harmful diseases or such elements. if any platform is not well made (not well constructed, broken), or has any probability of the water for getting way inside of the platform towards center of the pipe of tube well, then the surface dirty water should be mixed with and contaminated the ground source water. Being this situation of plat form, no water of such type of sources is safe.

In this study, for physical observation the condition of the water sources platforms or floor of the points, a four dimensions indicators are considered like- Good, Not good, Clean or Hygienic and Dirty or unhygienic.

Good: Should have well constructed platform (standard size: 5'-5') and a drainage out let with the platform (at least 5' length)

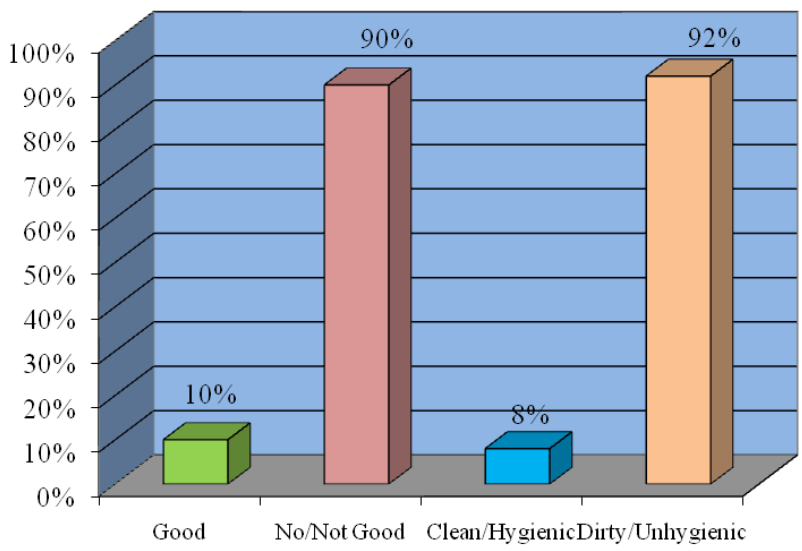
Not good: platform is existing, but broken, narrow, rugged, leaky, absent of drainage out let or not up to the standard size etc.

Clean/Hygienic: Well constructed platform (with standard drainage out let), clean atmosphere.

Dirty/Unhygienic: The sources of water is well constructed platform with standard drainage out let but, it covers with dirty water or unclean, infected things-these have been considered as dirty or unhygienic platform.

Here is a scenario of conditions of the water sources platforms of the selected households:

Figure: 11
Condition of TW. Platforms of Selected HHs




The Study observed that major number of the selected households is using No.6TW.s (Normal Shallow tube well) and Mini (small) TW.s water for drinking cooking and others domestic purposes, but It is very disappointing that the existing major Tub wells have no any platform (90%) and the surroundings are not clean or healthy. A little numbers of Tube well is found with platform

(10%) but these are not well constructed and dirtiness (92%). The platforms are covered with funguses. The without platform tub wells are with hole at the boring point (centre) of the water pipe and the holes are full filled by diseases of worm/earthworms.

If we want to see that what number of family are using well and good constructed, clean platform, then we can look the above graph shows the unhygienic and un-consciousness condition of the respondent's families. These situations always are caused of any harmful diseases.

**Comparison between Knowing and Doing on the context of safe water sources and its practices/use:**

The research has discussed at the beginning of this chapter that, knowledge about the sanitation element and related concepts is a must to implement those in practices effectively. Besides, the knowledge can be shared with others for making a total sanitation atmosphere. We can make a comparision between knowing and doing of the same.

Table – 4.10

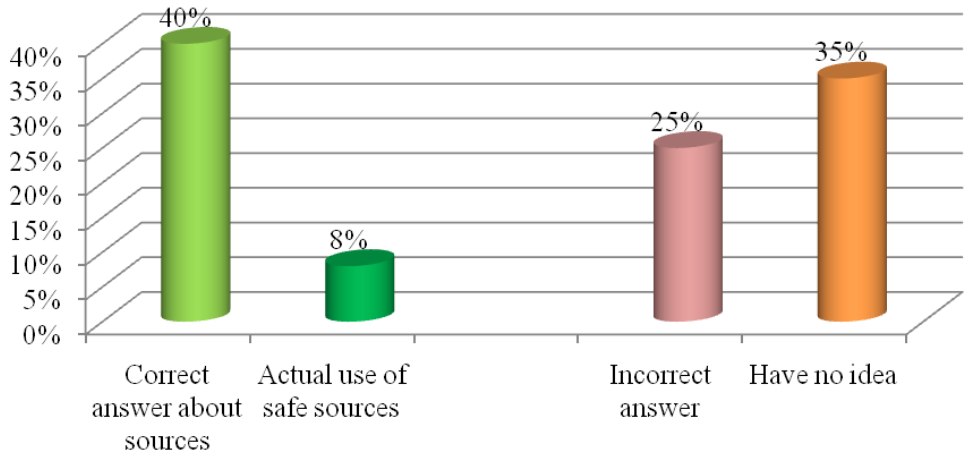
Comparative scenario about Knowledge on safe water/water sources and practices/use of water sources

| **Answer status** | **%** |
|---|---|
| Correct answer about sources | 40% |
| Actual use of safe sources | 8% |
| Incorrect answer | 25% |
| Have no idea | 35% |

The selected women reported on safe water sources positively and 40% of them have answered as correct about safe water source. But, it has an unimagined deviation in their practices than knowledge which the research has find out through physical observation. It is observed physically that, only 8% of the

households have actual safe water sources considering the safe waters definition focusing the standard of platform atmosphere.

Figure:12
Comparison between knowing and doing in using water source s




In this study, respondents show their knowingness on sources of safe water. Major of them quoted that good and clean platform are the significant element of safe water sources. But, we can see the practice level; they are very poor percentage in practicing of the same. As a result, in spite of use tube well, the sources of water are not safe while many of water born diseases may causes of these sources.

## 4.3 Knowledge About Diarrhoea

Diarrhoea is a significant disease which has a wider effect and impact over human health. Knowledge on diarrhoea can overcome remarkable causes of the diseases and promote human health.

[12]Diarrhoea is a clinical syndrome of diverse aetiology. It may be defined as increased frequency of motions whose consistency vary from loose/liquid (taking up the shape of the container) the watery stool. Passage of frequent loose or liquid stool with or without blood and/or mucus in the main feature of

[12] Community medicine and Public Health,Dhaka, 2004

acute diarrhoea.... Diarrhoeal diseases are responsible for a substantial proportion of childhood morbidity and mortality, particularly in the developing world especially in Asia, Africa and Latin America. Moreover, diarrhoea is the main cause of perpetuator of malnutrition in children and diarrhoea patients occupy about 30% of paediatric beds in hospitals in developing countries.
Over 50,000 children die from diarrhoreal diseases every year in Bangladesh (Shabnam 2010).
[13]Estimates from various studies suggests that, about 2-4 episodes of diarrhoea per child per year occur in the under five age group. Thus diarrhoeal illnesses put a heavy burden on the meager health facilities and resources of a poor country like Bangladesh.

All for the above issues, women are specially to know what is Diarrhea and what its consequences and incidents. That is why, women are mostly related to cooking and child nursing works in their daily life. Besides, they are intensely connected with water, its collection and as a whole sanitation and hygiene related tasks. The study tried to explore the knowledge and related issues of diarrohea among the village housewives those who are the respondents of the study.

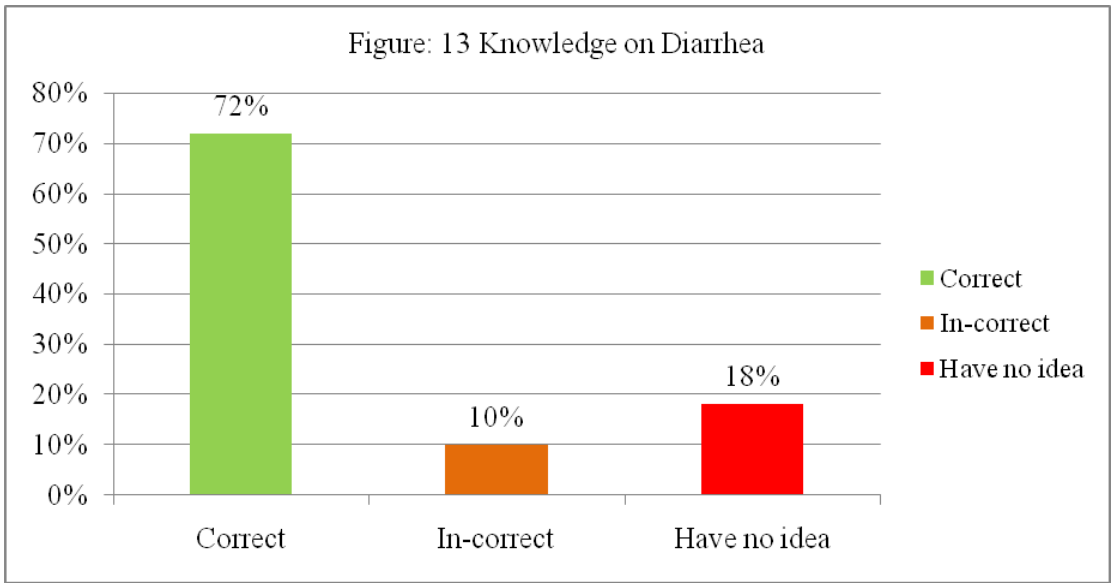
Table – 4.11

Knowledge on Diarrhea of the respondents

| Answer status | % |
|---|---|
| Correct | 72 |
| Incorrect | 10 |
| Have no idea at all | 18 |
| Total | 100 |

Diarrhea occurs every year and across the year in the country. So, as the other people, most of the respondents are know the occurrence, its nature and effect. In spite of this, the study result is not as satisfactory as expected level.

[13] Community medicine and Public Health,Dhaka, 2004




According to the above table of the knowledge level regarding diarrhea, the study shown that maximum respondents gave correct answer of diarrhea; very few answered incorrect and a remarkable figure (18%) have no idea at all on this burning issue.

Generally it can say that, a major number of respondent know the nature and viewpoint of Diarrhea. If this knowledge could properly apply to pre-action of incidence of Diarrhea, then the community would be safe from this dead list killer.

### 4.4 Knowledge level regarding prevention of Water born diseases like diarrhoea

Knowledge would be taken place objectively in successful while it takes in to action and the application with a frequent force. Knowledge or knowing about diarrhea is high of the respondent (72%) which is a positive and ambitious indicator to reduce the diarrheal incidents and its causes. But, the research has explored out more micro-level inquiry to take a real status regarding its prevention mechanism and initiatives against the acquired knowledge.

The respondents have been asked a question that ‘what you think about the prevention of diarrhea’?. They have answered with multiple options using a close ended questionnaire but the interviewer through the question as open ended and put the received answers in where it is required.

Table – 4.12

Knowledge level of prevention of water born diseases like diarrhea (Multiple answers):

| Sl. | Answer | % |
|---|---|---|
| 1 | Keep food covered | 55 |
| 2 | Avoid taking rotten food | 56 |
| 3 | Drink safe water | 18 |
| 4 | Preserve drinking water in covered pot | 7 |
| 5 | Keep drinking water pot clean | 17 |
| 6 | Hand washing practice before food preparation | 13 |
| 7 | Hand washing practice before serving food | 8 |
| 8 | Hand washing practice before eating | 33 |
| 9 | Hand washing practice before feeding | 12 |
| 10 | Hand washing practice after defecation | 29 |
| 11 | Hand washing practice after cleaning children’s bottom | 24 |
| 12 | Keep hand nail clean | 3 |
| 13 | using hygienic latrine | 25 |
| 14 | Keeping latrine clean | 10 |
| 15 | Using slipper for going to latrine | 7 |
| 16 | Keep faeces free courtyard | 4 |
| 17 | Dispose domestic garbage in a fixed hole/fixed place | 5 |
| 18 | Others | 2 |
| 19 | Have no idea at all | 10 |

In this portion of assessment of knowledge, the respondents gave answer showing self confidence. But, the positive answers are very poor against different answer options. In this segment, respondents gave openly their multiple answers. According to this sequence, mostly highest 56% answer comes up that “avoid taking rooted food” is one of the way/step for protecting diarrheal diseases. Secondly, highest 55% answer incited that “Keep food covered” is another way/ initiative to keep safe from diarrheal diseases. Thirdly

33% answers belong against “hand washing before eating” is one of the ways for avoiding and preventing diarrheal diseases.

The table (4.12) reveals that the above three important measures (Keep food covered, Avoid taking rotten food, Drink safe water) are significant against diarrhea. The table also reveals that very few of the responses are about the necessity of the other important preventive measures. Few answers (29%) bring out that hand washing practice after defecation is important to prevent diarrahoeal diseases.

The statistics of the table (4.12) is a remarkable reflection of knowledge of the respondents. Diarrhea is the dead list killer of human body, largely the children. So common people must have to know how it and the other water born diseases occur and what initiatives to be taken to prevent diarroheal and other water related diseases. But it is very disappointing that about 50% of respondents are not being knowledgeable regarding the issue.

The study area has been affected mostly by diarrhea, warm, dysentery etc (see table 4.24 & 4.25). Considering the scenario, the community needs to know the consequences of diarrhea and other water born disease.

It has been observed with more attention and with more surprising that there is no correlation between knowledge and practical atmosphere of the households. Interesting, there are no hygienic latrine or no symptoms of hygienic behavior among the correct respondents. It can say that, practical application of their knowledge is totally absent. We can go in-depth analysis of these issues detail in the next chapters.

## 4.5 Sanitation

Before discussion, It is essential to conceptualize sanitation and its other natures in name.

Generally, Sanitation means- The hygienic disposal or recycling of waste.

It is the policy and practice of protecting health through hygienic measures.

[14]Sanitation is a basic, as well as a long-standing, public health issue. When early peoples settled in communities and started to cultivate crops and raise animals, sanitation became a primary concern for society. Worldwide, 40 percent of the population does not have ready access to clean, safe drinking water, and approximately 60 percent does not have satisfactory facilities for the safe disposal of human waste.

[15]The word "sanitation" only entered the English language in the nineteenth century, and the term is inextricably linked with integrated water and sewer systems. Lacking such technologies, early modern Europeans are often reckoned to have lived without sanitation. Their epidemiology of the time might seem to support this contention: three out of every ten babies born in Geneva between 1580 and 1739 died by their first birthday and the infant mortality rate in late seventeenth-century London was over one in four. Many of these deaths were caused by dirt-related infections like infantile diarrhea.

In 2008, there were 27 countries in Africa with over 20% of the population having to defecate in the open, 8 in Asia and 2 in Latin America and the Caribbean (the developing-country average was 21%). Some countries have tackled open defecation rather well-for example, in Vietnam only 6% of the population used to practice open defecation in 2008, compared with 42% in 1990 ( nrc news letter,NGOF;June 2011).

[14] Gale encyclopedia of Public Health

[15] Gale encyclopedia of the early modern world

**Types of latrine:**

There are different types of latrine is introduced in different time in the sub-continent and in Bangladesh as well:

I. Bore hole latrine
II. Dug well or pit latrine
III. Water-seal type of latrines
IV. Septic tank
V. Aqua privy

Source: (K. PARK: Preventive and Social Medicine,1997)

In a developing country like Bangladesh, disposal of human excreta in rural areas is a great problem and a cause for many dreadful diseases.

At the present time, the most suitable method of excreta disposal in rural areas is the hand flushed water seal type of latrines for majority of the families and for the well-to-do family septic tank type of latrine. These latrines fulfill basic criterions of a sanitary latrine; they (a) prevent the access of flies to the excreta, (b) prevent pollution of soil, (c) prevent contamination of water supplies, (d) can be easily cleaned, (e) require small quantity of water for flushing, (f) do not smell so that it can be located within the courtyard or near the house, (g) can be easily constructed by a village mason, and reasonably cheap, and (h) accord safety, privacy, protection and acceptable to the villagers (Community medicine and public health).

The water seal type sanitary latrine is made of slab with water seal and rings of concrete. Most of the people of the research area (among the latrine owning families) are using this type of latrine.

[16]A staggering 2.6 billion people do not have somewhere safe to go to the toilet.

South asia loses at least 5.8 per cent of its regional GDP due to poor sanitation, it was reported. Since the last SACOSAN (South Asian Conference on

[16] nrc news letter June 2011,NGOF

Sanitation) in 2008, about 750,000 South Asian children have died of diarrhoea, said Amarananda Abeygunasekara, Secretary, Sri Lankan Ministry of Water Supply and Drainage.

South Asian minister have vowed to tackle the biggest sanitation challenges in the world (Colombo declaration, SACOSAN 7 April 2011), they promise to set up a national body in each country to coordinate sanitation and hygiene, involving all stakeholders, the aim of these bodies would be to enable access to sanitation to the 700 million South Asians who still defecate in the open.

In Bangladesh, A nationwide baseline survey was conducted in 2003 to assess the sanitation coverage in the country. The survey covered all rural and urban households. The survey revealed an appallingly poor sanitation scenario in the country. Only 33% of the households were found to have hygienic latrines, while 25% have unhygienic ones. About 55 million people (42% households) do not use any form of latrine (Source: National Sanitation Strategy, 2005).

In this survey, it is reported by the respondents, 73% rural household have no latrine due to lack of money, 25% due to lack of awareness, 10% due to lack of space and 4% reported that they prefer to use open defecation.

[17]The linkage between sanitation and health leads to an understanding that the primary focus of sanitation should be on the environmental transmission routes of excreta related diseases. Based on this understanding, a “hygienic latrine” is a sanitation facility the use of which effectively breaks the cycle of disease transmission. Improved hygiene practice is to be emphasized and proper use of hygienic latrines ensured because both play the vital role in breaking the cycle of disease transmission.

The most fundamental health objective of sanitation must be achieved through proper design, installation, and use of a sanitary or hygienic latrine. There is no universal design of a hygienic latrine that could be effectively used under all socio-economic and hydro geological conditions. It is therefore important that a

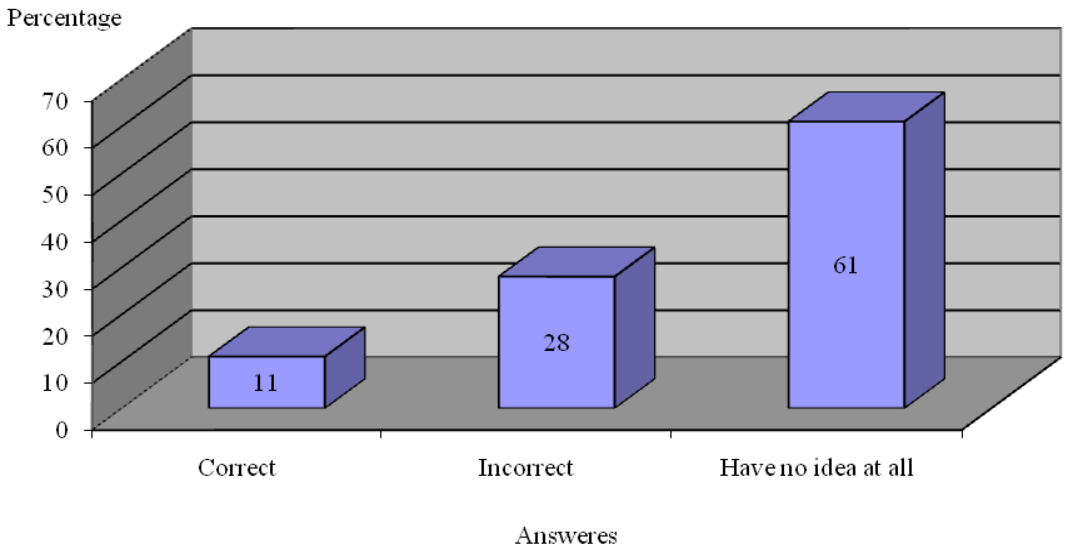
[17] National Sanitation Strategy-2005;P-8

wide range of sanitary or hygienic latrine technologies is available to suit different conditions.

**Understanding about "Hygienic Latrine" by the respondents**

Like drinking un-safe water, use of unhygienic latrine causes many water born diseases also. Following the earlier mentioned definition of hygienic latrine, the research finding reveals that only few percent (11%) Housewives know the

Figure: 14
Distribution of Percentage for Knowledge on Hygienic latrine of the respondents




correct meaning of Hygienic latrine, and surprising that, 61% have no idea at all on the matter.

Containing low level knowledge on hygienic latrine, none can expects proper hygienic situation or sanitation at household and all level in the society. It is mostly disappointing that a major number of respondents do not know the proper answer or meaning of Hygienic latrine. If we analyze this as symbol of knowledge and awareness then it is an upsetting message while Government of Bangladesh has given emphasis to achieve total sanitation for better life and reducing child mortality. The GO-NGOs are trying to cover almost all family

have hygienic latrine and they will use those in proper way and maintain accordingly.

Previously the Bangladesh government had initiated the National Sanitation Goal where key focus was to achieve 100% sanitation coverage by 2010 which was much ahead of the Millennium Development Goals (MDG). Because of, two of these goals are directly linked with sanitation-reduction in child mortality and ensuring environmental sustainability.

In earlier, the government has commenced The National Policy for Safe water supply and sanitation 1998 which mentioned that the government's goal is to ensure that all people have access to safe water and sanitation services at an affordable cost. The policy emphasized elements of behavioral changes and sustainability through user participation in planning, implementation, management and cost sharing.

Besides, The Government of Bangladesh (GoB) is committed to achieve the MDG targets and this commitment is reflected in the draft Poverty Reduction Strategy Paper (PRSP) in Bangladesh that envisages reducing infant mortality rate from the 2000 benchmark value of 66 to 37 by 2010 and 22 by 2015. Similarly, child mortality is to be reduced from 94 to 52 by 2010 and 31 by 2015. To achieve the targets, the government has emphasized improving sanitation as a national priority (*National Sanitation Strategy-2005*).

The above discussion should be frustrated while 61 persons don't know (out of 100) the real definition or appropriate meaning of Hygienic Latrine.

In the physical observation and discussion through interview, it is seemed that due to lack of education and learning, the respondents have a common conceptual gap on all related things. Besides, consciousness is majorly absent in the area while motivational work could be kept up the awareness level among the villagers.

**Knowledge on Consequences of Unhygienic latrine Use**

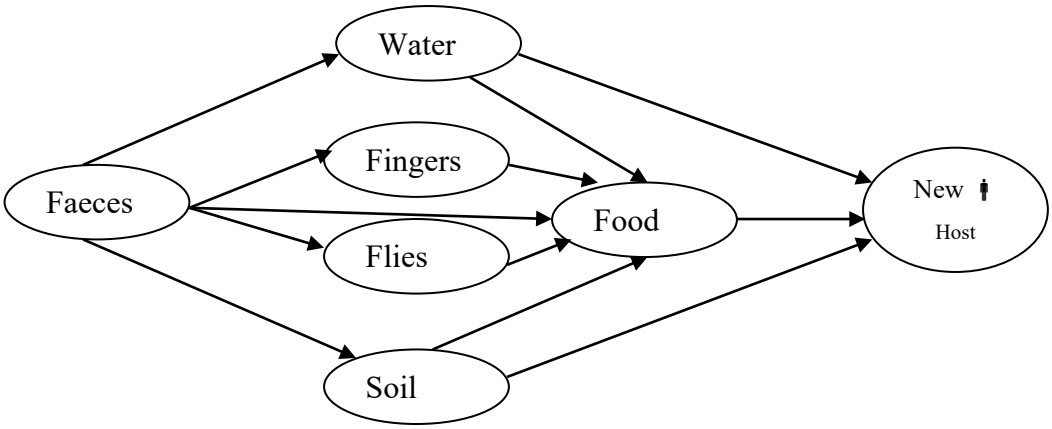
Knowledge about the consequences of Unhygienic latrine or defecation in unhygienic way is very much important to maintain the sanitation and hygiene condition. That is why; proper sanitation and hygienic behavior can prevent hundreds of diseases and can safe thousand of human life, save a lot of money which could be provided in livelihood development. Only, the knowledgeable persons those who are properly known about it consequences, can implement the proper sanitation and hygiene in daily life and share their knowledge with others. The other persons can apply the knowledge also, which is very significant to make the environment under 'Total Sanitation'.

We can see in a flow-picture that How disease is carried from excreta:

Let us consider how the faecal-borne diseases are transmitted to a new host. The human excreta of a sick person or a carrier of disease is the main focus of infection. It contains the disease agent which is transmitted to a new host through various channels: (1) Water, (2) fingers, (3) flies, (4) soils and (5) food. These events are shown in the following sketch:

Figure: 15

How disease is carried from excreta:




Source: (K. PARK: Preventive and Social Medicine, 1997)

Open defecation is a major cause for carrying the diseases and destroy of health also. Either open defecation or unhygienic, open and hanging latrine-every of

these ones are enough to keep diseases and ill health of human body which we can predict in the arrow chart (figure 15). Keeping these in consideration, the research took query among the respondents, their knowledge about the consequences of use of unhygienic latrine or any form of unhygienic way.

Table – 4.13

Knowledge on consequences of Unhygienic latrine use among the respondents

| Answer | % |
|---|---|
| Diarrohea | 70 |
| Dysentery | 47 |
| Skin Diseases | 4 |
| Worm | 21 |
| Typhoid | 17 |
| Jaundice | 18 |
| Others | 4 |

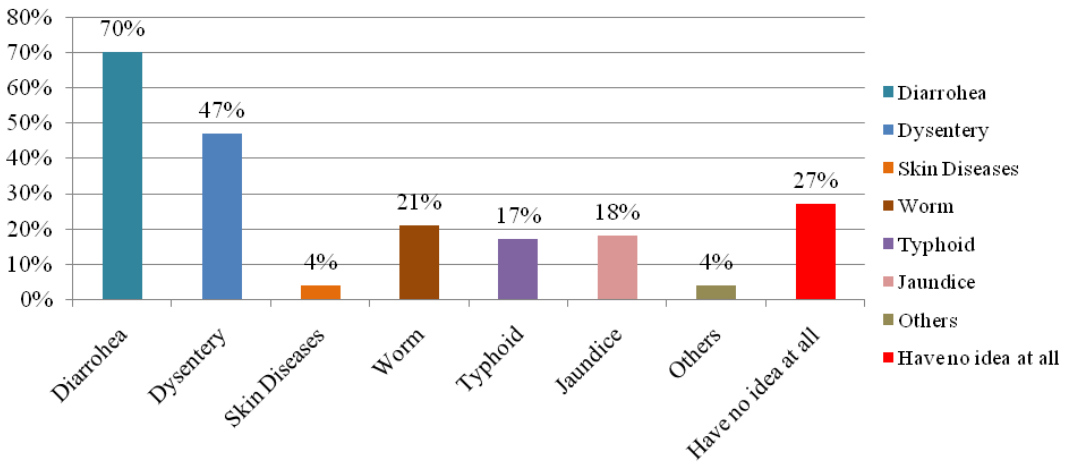
In this discussion, respondents reported multiple answers against close ended options. They have answered partly along with other options.

Amongst the total surveyed respondents, 70% have mentioned diarrhea as harmful cause for using unhygienic latrine.

The study findings also shows that, other water related diseases like dysentery, skin diseases, worm has taken attention of the housewives. They know the bad effect of these.

We can see the trend of such type of answer related to the knowledge on consequences of Diarrohea on a graph-

Figure: 16
Knowldege on Consequences of Unhygienic Latrine use




However, 27% respondents have no idea at all in this regard. It is noted here that scabies and eczema are two remarkable skin diseases easily occurred (they could opinioned openly). But the respondents don't keep such type of knowledge due to unhygienic latrine use or use of open defecation.

On the other hand, if we try to see and compare the result between knowing and doing or application of knowledge in practical facts, then we can see average 58% answered Diarrohea and Dysentery are two most incidents occur due to unhygienic defecation. how they have knew this as consequences of unhygienic defecation- they answered in the FGD that, both of the incidents occur frequently among them and for this they are commonly known this.

**Information on use of defecation and Keeping of Stool:**

It is very important discussion in the Sanitation part that, how and where human defecation does take place. The used latrine or place is the most significant indicator of proper sanitation, improved sanitation and total sanitation. At the same time it is the key indicator of hygienic behavior as in family, personal and environmental aspects as well. All of these are related to the human health.

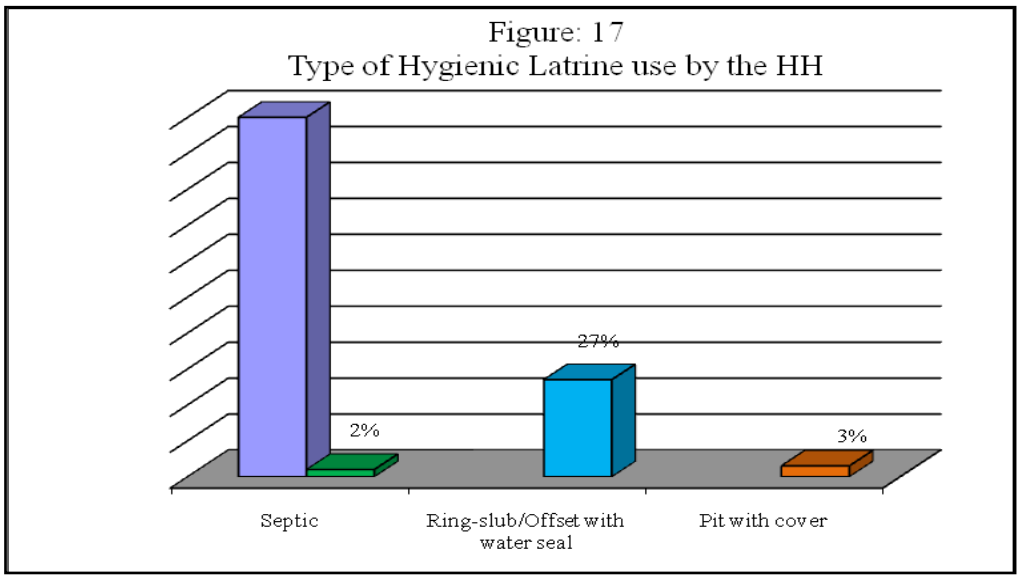
With those objectives, the research has taken in consideration the intervention for exploring the tendency of the respondents in defecation field. The research has concentrated how they use their defecation and where the place is.

**What type of latrine use by the members (> 5) of the families?:**

In the previous discussions we have legitimately discussed about the type of latrines. In the discussion, we have seen that different types of latrine are convenient for use and these do vary in types and prices also. It is also discussed whether the latrines are hygienic or un-hygienic those which are good or harmful for human health. Also discussed about low-cost latrines technologies which are easily affordable by the poor, can use for their favorable health and hygiene conditions.

Now, the discussion about the latrines use by the respondent families. This chapter also will discuss regarding the defecation matter while a large number of respondents have no particular place for defecation (In Bangladesh, 4% population still use open defecation-JMP report,2013;UNICEF-WHO). They are still making the environment ill healthy and diseases full.

Figure: 17
Type of Hygienic Latrine use by the HH




Latrine use is the key element of sanitation which is directly related to keeping health at standard level. In the research study, it is taken additional importance

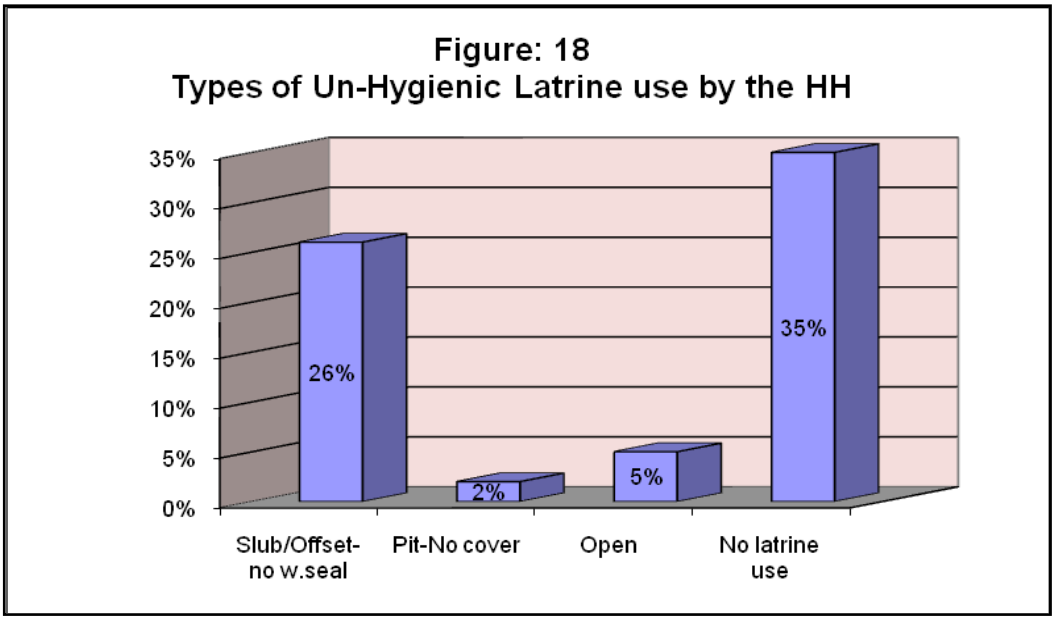
to find out the status of use latrines by the selected household of the respondent women. Women are given preference in using latrine because they are the key of regular completion of different tasks those which are commonly related to health.

Different types of hygienic latrine can be used to ensure the safe management of human excreta. Ring-slab with water seal is one of them options which can buy with a minimum cost and the option is ideal for the research area as well.

Here is, about 35% families reported that they have no particular latrine to use defecation and they are not using shared latrine with others for defecation. The result is, they are using open defecation completely.

Here is two types information about latrine use, one is types of Hygienic latrine use and the other is Un-hygienic latrine use by the families. Side by side, the study has find out the number of families are fully use open defecation those who have no any type of latrine or particular defecation place.

The Figure 17 shows that total 32% families of the respondent women use

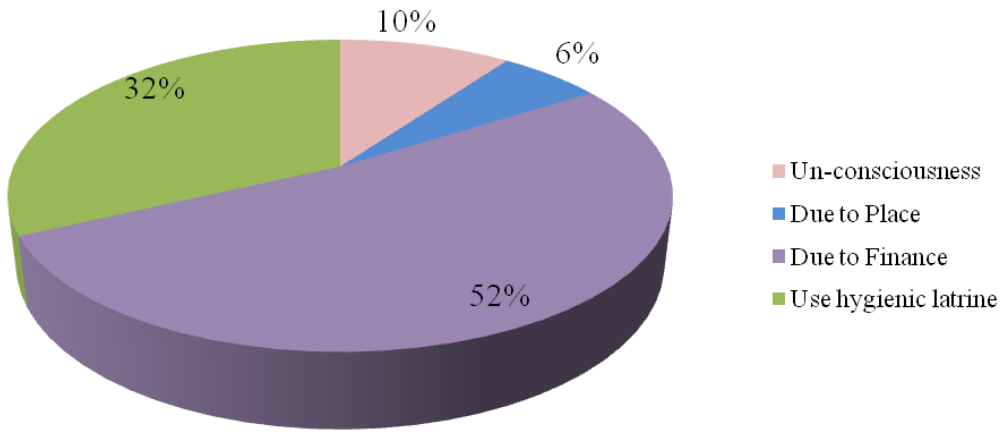



hygienic latrine. Amongst them, 2% families use septic latrine, 27% use Ring slab/offset with water seal latrine and 3% family use pit latrine with cover. It is observed that trend of using of Ring slab/Offset with water seal latrine is high amongst the hygienic latrine users as because this types of latrine is cost-

effective than the septic latrine for which user is only 2%. It has been explored the cause is the selected area is comparatively an extreme poor prone area than the other part of Rangpur district.

It is a visible finding of the study that 33% families of the respondent women use un-hygienic latrines. Amongst them, 26% use Ring slab/Offset with no water seal, 2% use pit with no cover and 5% use open latrine. Besides these, here is very much concentrating scenario that 35% family of the respondent women not use any latrine, they use open defecation.

Figure: 19
Causes of Use Defecation in un-Hygienic way




**4.6 Find the Causes for Open Defecation:** For the question like-why they do use open defecation in un-hygienic way and use un-hygienic latrine means Ring-slab/Offset with no water seal, pit, hole with no cover, hanging or open latrine- the respondents, 10% of them have reported for un-consciousness, 6% reported for shortage of land/place and 52% reported that they have no financial capacity to make hygienic latrine for use. It is notable here that 26% household out of 52% (those who have reported that they have no financial capacity) use Ring slab/Offset latrine but they have no water seal. It is very much interesting that the households those who are using the unhygienic latrine are reported that they have no financial capacity, but they had to bought latrine

by money as same as the hygienic latrine users. But, their latrine is seen as unhygienic because they are not using those in hygienic way. It is observed physically that their latrines have no water seal and before installing, they have broken the goose neck (for staying water on the pan) for easy use the latrines. For more questions relating to use of defecation in unhygienic way and about their opinion causing financial crisis, they reported that if their financial capacity could have, they are able to buy more better latrine like ceramic made pan and safety tank or offset latrine with different pit, they trust that that's are the ideal latrine of using defecation in hygienic way.

**Causes analysis:**

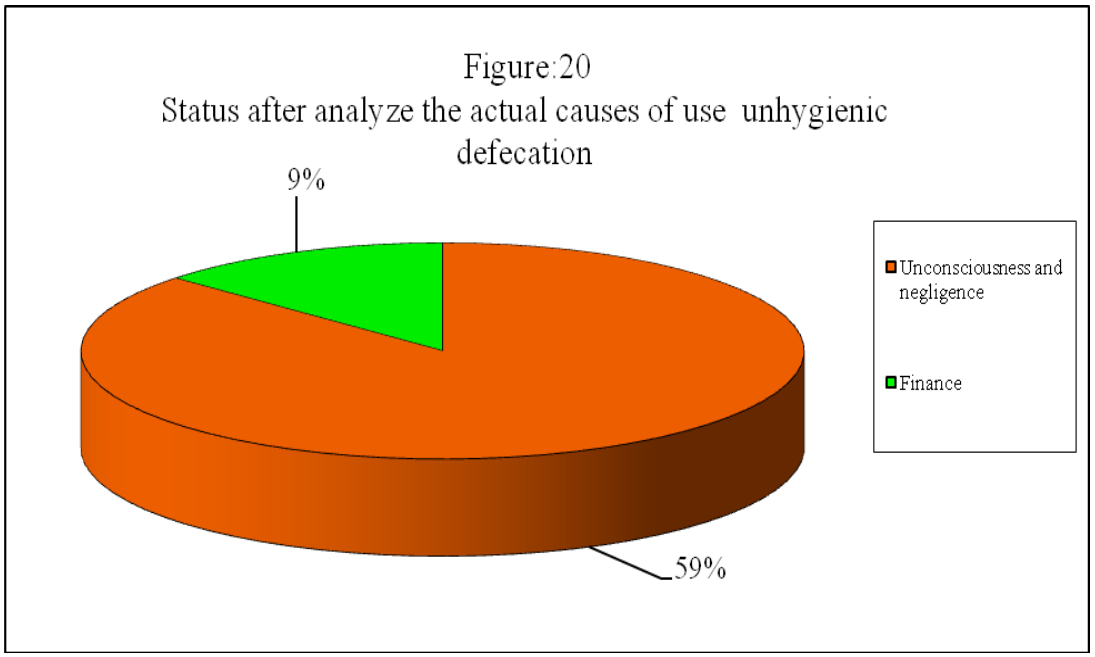
It is mentionable here, the 26% respondents had to bought Ring slab against own money and those were furnished with water seal which is fully hygienic, but they have broken those for easy use the latrine. Some of them broken those before and some of after installing the latrines- they reported. Not only that, 2% family use pit with no cover and 5% family use open latrine. It is physically observed that, they have minimum financial capacity to buy latrine set with minimum one ring-one slab while they are not interested to install those, it can say also a negligence. If we consider these two hidden causes, we can get a condition that 33% (26% +2%+5%) family is able to make and use hygiene latrine as per our analysis but they are not using the same due to their unconsciousness. Besides, 10% have directly recognized and they observed also that due to unconsciousness they are not using hygienic latrine. As a result, if we consider all above the matters, we can say a total 43% (26%+2%+5%+10%) family exits those who are using defecation in unhygienic way due to their un-consciousness. They actually don't know why and how they use water seal latrine or hygienic latrine, what are its merits and what are the demerits to the human life. Body languages of some ones were saying that, they are doing those normally for negligence and them like that they never think those from the sense of health impact or any serious risk for

health and environment. Study of this segment reveals that 6% household show causes that they are using open defecation due to they have no place for use the same. It is understandable that only 4 square feet place need to make a latrine easily and physically it is observed that almost all the family have the land sufficient to build a latrine room. But, they are not thinking the possibility from this sense. Many of them asked by the interviewer that they have minimum places to make a latrine, but they answered that if they build latrine nearest to their kitchen, they may face smell from the latrine, so they are not agreed to do that. If we analyze their opinion, then we can find a negligence tendency by the 6% households those who tried to stand the cause of open defecation as shortage of place for making latrine. This type of opinion obviously based on their negligence and unconsciousness about health, hygiene and sanitation. If their opinion is rejected and it is a result of unconsciousness, then the 6% also can merge with the figure of 43% and (43%+6%) 49% households are using unhygienic way for fully negligence and unconsciousness.

Out of these figures, amongst the rest 19% households who are also use open defecation, the study found that 9% have really the financial crisis to build latrine at a time (living hand to mouth, day basis worker but not in regular, beggar) and the due 10% is the negligence also those who have minimum capacity to buy a 1/2 ring, 1 slab and have sufficient place for installing the latrine, but they are also in the dark, have no consciousness and doing negligence. It is found out that, somewhere is also a gap between doing and knowing among the respondents and their house members. Among the respondents, some of them (Figure:19) are know the merits and demerits for using the unhygienic latrine or use defecation in unhygienic way. But, it is proved that, in spite of having a little knowledge about those, they are going on unhygienic way for negligence.

Finally it is found out that 32% household using defecation in hygienic way and the rest 59% using unhygienic way due to unconsciousness and negligence and 9% using unhygienic way due to financial crisis.

It is very disappointing and harmful warning for health & hygiene issues. Besides, Government derives the sanitation movements from last 2003 and




2010 is the first land marks for destination of the movements. From that sense, it is fully un-expected.

This sigh is not in good turn to health and hygiene. Without using of hygienic latrine by the 35% families, we can't expect a total sanitation as well as healthy environment in the village.

The scenario is not agreed with the national sanitation coverage; as the government has declared that 88% latrine coverage has achieved at the end of 2009 over the country.

[18]In 2010, UNICEF and WHO have published their Report titled Progress on Sanitation and Drinking Water: Update 2010 in Bangladesh. In that report, it had been stated that, only 53% latrine coverage has been achieved till the end of 2009. About 47% people are in existing use of open defecation or use unhygienic latrine. Amongst them, 7% fully in open defecation, 15% in use of undeveloped latrine, 25% use shared latrine. The report incited that 8% people in the rural area is using open defecation while the rate is 3% in urban area

[18] Prothom Alo; 26 April, 2010-The Bengali daily news

paper, Bangladesh.

The finding of this study not contradicts with the report of UNICEF & WHO.
Latrine use trend of all family members: It is a relative question will come; do the all family members use their latrines regularly?
As per the sanitation dictionary, it is a must to use latrine by all members of a household family and they must use the latrine regularly and proper way. It is a condition of habit and to keep proper hygiene and health criterion, it needs to give high priority to properly use latrine by everybody. If somebody of the household use defecation outside in spite of having latrine or use open defecation, then that must create health hazard through their stool and there is no positive result of use the latrine by some of other members of the same family.
From the participatory observation, a matter is detected that, it is still difficult to convince everyone to use toilets. In the study, about 65% household use hygienic or unhygienic latrine. Amongst them, 11% respondents not use their latrine regularly. They use some of days or some days they avoid the latrines and choose open defecation. Though they have latrine in their household premises, according to them, they don't feel easy to use those. And for this, Most of them wait for sun seat when they can easily use defecation in open field with the dark and otherwise they use the paddy field or on the river bank.
They still avoid using them because of:

⌂ Smell from the faces
⌂ They given preference to use the field.
⌂ jointly owned latrine or nearest household. This may cause of doing so sometimes.

If we consider or analyze the first two causes (among the top three), then we find again the negligence and unconsciousness of the respondents and their household members. But we know the total sanitation is covered when all family members are use latrine regularly in a household. If any one doesn't do

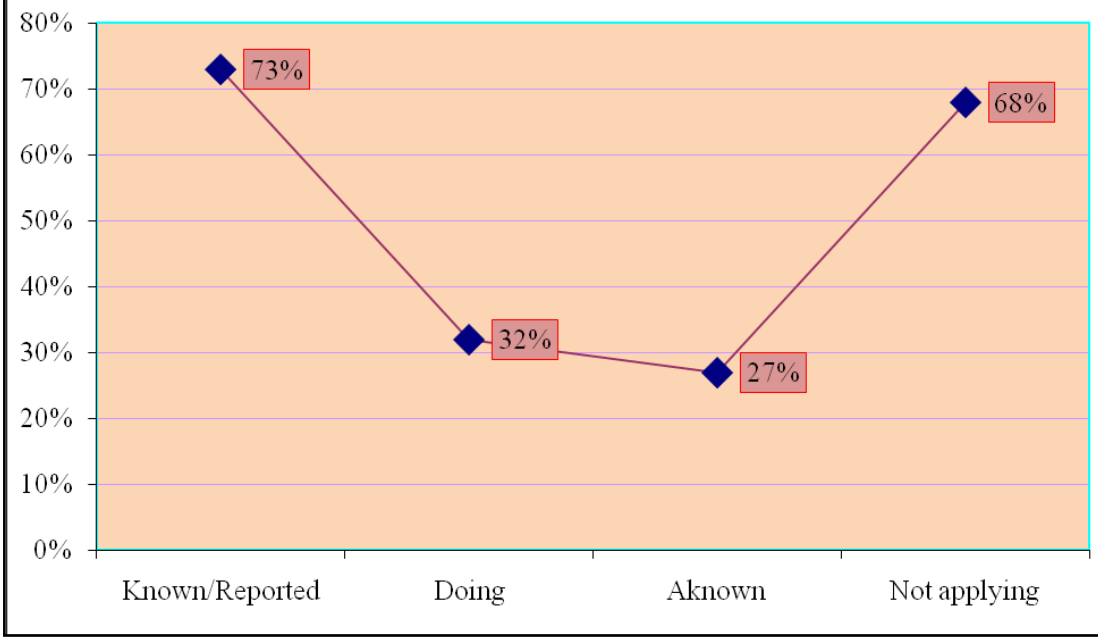
that, then it is not covered with total sanitation and no body of the respective household will come under sanitation.

Any type of diseases including diarrhea can be contaminated for such type of occurrence which form completely for unconsciousness and negligence.

**Comparative scenario between knowing and doing of use defecation in hygienic way:**

Here is a comparative scenario between knowing and doing of the respondents about hygienic latrine use.

Figure: 21 Comparative shape between knowing & Doing regarding use-Hygienic latrine




The above graph shows that there is a correlation and also a regression exists between knowing and doing regarding use of defecation in hygienic way. The respondents reported the incidents of use unhygienic latrine and its consequences (73%), but in the practice level they are not doing or not applying their known matter or knowledge (32%). This gap indicating their health status and the consciousness level as well.

**Cleanness of the used latrines**

To ensure environmental sanitation and hygiene practices it is a question that if the household latrines and the surrounding environment are clean, hygiene friendly or not. It is must to maintain the said environment and atmosphere in the location to keep the overall health situation at first in the household and the whole locality. Its impact is very wide while it could be scattered into the small and ultimately in the greater locality. It causes many of diseases for which those the economical and social harmfulness may be occurred.

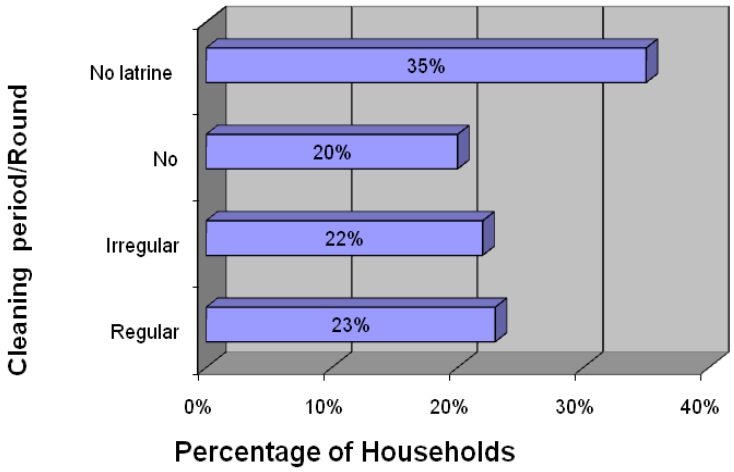
[19]Diarrhoea, intestinal worms, typhoid, cholera and trachoma are some of the common infectious diseases related to poor water, sanitation and hygiene (WASH). They cause serious illnesses and death. About 4 billion cases of diarrhoea cause 1.8 million deaths per year; over 90 per cent among them (1.6 million) are children under five. Repeated episodes of diarrhoea make children more vulnerable to other diseases and malnutrition. Improved access to safe drinking water and sanitation facilities play an important role in safeguarding the health of people. But targeted and consistent hygiene practices yield the greatest health benefits.

Hygiene promotion and Behaviour change is remarkable guiding principle in the National Sanitation Strategy, 2005 of Bangladesh. According to National Sanitation Strategy, Bangladesh (page-12), “Sanitation improvement is focused on achieving sustainable changes in hygiene behaviour and not limited to latrine installation only”.

The National Policy for Safe Water Supply and Sanitation 1998 is the basic policy document governing the water supply and sanitation sector.

[19] Ayub Qutub, Fauzia Butt, Erum Bashir, Sobia Shabbir (Pakistan) ; South Asian Hygiene conference, Dhaka-2010

**Figure:22** Cleanness of used latrines by the selected Households




Hygiene issue is deeply linked with cleanness of the used household latrines; specially it focused on the location where latrines are situated, its surrounding area, and its inside atmosphere where the defecation is take place. The study has concentrated to bring out the scenario according to reported and the actual physical observations containing these areas.

The respondents reported that they keep clean their used latrine regularly. Regularly means minimum 3 times in a week (in this study it is decided to detect standard) for cleaning the toilets. Amongst them 23% reported that they keep clean regularly (3 times in a week) while 22% reported irregularly (less than 3 times; 1 or 2 times), 20% reported that they do not keep their latrine regular or irregular basis. They do clean their latrines 1-2 times in a month at maximum level or whatever it is required. It is occur suddenly when they get leisure time from their domestic work. Their reported statements and the general discussion discovered their knowledge, attitude and practice also to keep the latrine as cleaning shape. But, they have a disappointing status in this regards where unhygienic situation may be continued and any diseases can be occurred in any time among them.

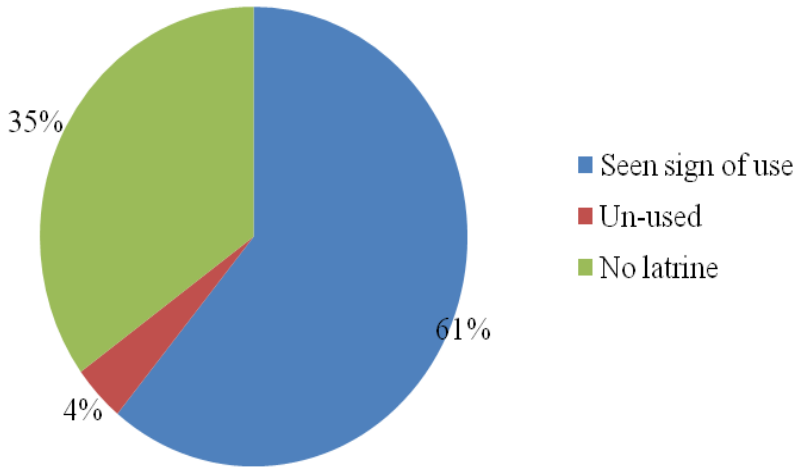
### 4.7 Physical Observation: The Household latrines and surrounding areas

In the previous discussion, the respondents reported that 23% of them keep clean their latrines on a regular basis. That means, the said percentage (23%) of family clean their latrines 3 times in a week. Let us a deep intervention regarding in and outside of the used latrines in two several discussions.

**Status of Household latrines**
**(Whether is any sign of use seen in the latrines or not)**

Latrine cleaning is a noticeable function. It is necessary to keep the latrines pan-slab and the surrounding areas to ensure the elimination of diseases related to improper sanitation. All hygienic and Semi-hygienic latrines have been observed to know the cleanliness status of latrines. For keeping the environment under hygiene friendly, these are a significant component of sanitation and most important pre-condition of good health. For this, latrine

**Figure: 23**
Status of Household latrines (using trends)



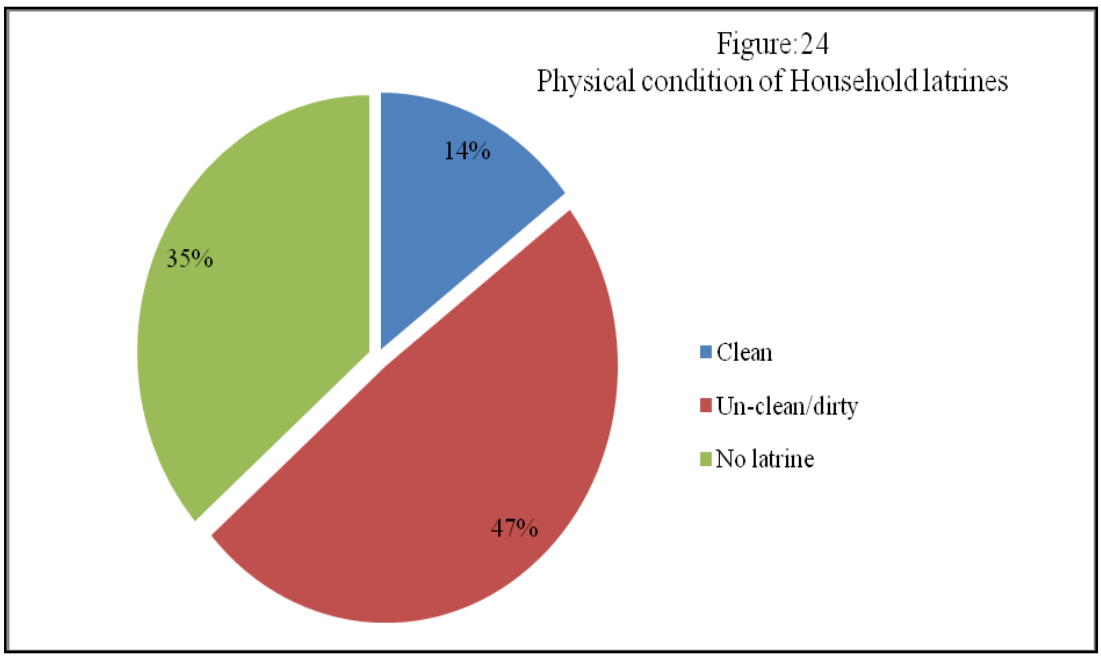

must keep clean frequently on a regular basis.

The research had a vital intension that what the physical conditions of the household latrines are exist. Besides, it was a crucial question that what is the tendency of toilets using and it's cleaning. What the conditions of the inside,

outside and surrounding areas are. The research revealed that, among the 65% latrine owned household, 61% latrine is seen used. It was also a question of investigating that, whether there is any sign of use of the latrines or not. 4% seen as un-used while it is seen covered with leaf and such things and dirty in some way. This type of latrines are used in unusually and these type of latrines are not been kept in hygienic use or clean sometimes. This is ultimately not easy to use and not good for human health and environment also.

**Physical Condition of used HH latrine (Inside of the things):**

It was a question in the research that if the inside atmosphere of the used latrines (there are 61% latrines found what are being used regularly-as the previous discussion) especially pan and slab of the latrines are clean/dirty free or not.



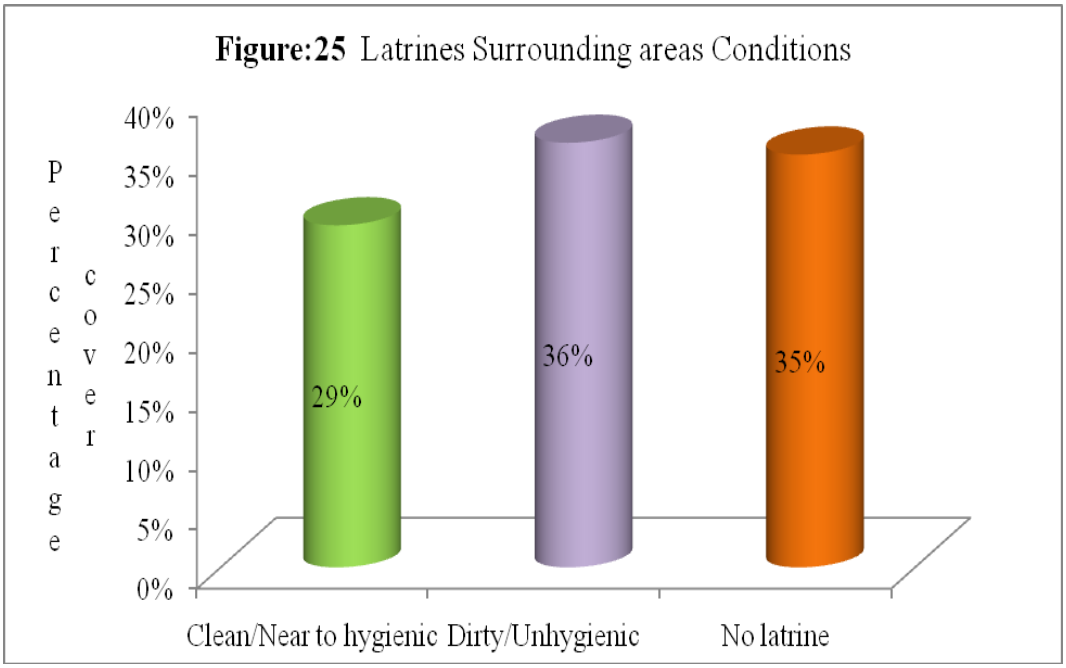
Among the latrines those which have seen useable, 14% latrines pan and slab found clean only and 47% is not clean at all while that's are dirty and not sign as cleaning on a certain interval basis.

This observation is completely negative in the sense of Hygiene promotion and positive health status.

**Condition of the surrounding areas of the Household latrines**

In the study it is seen that a total 65 latrines are present out of 100 selected household in the selected area.

For the interest of dirty free and diseases free from flies and other ways, the latrine has to be fully clean in its inside, outside and surrounding areas. It is a pre-condition of total sanitation coverage and hygiene full environment also. Health-hygiene is always depended on these very sensitive conditions. Without maintaining these conditions by all and every latrine owning household, nothing to be expected to ensure proper and total sanitation as well.




During the physical observation, it is seen that, only 29% latrines surrounding areas are clean and near to hygienic and the rest are dirty and unhygienic. A very disappointing thing has been found that the rest 36% households keep

their latrines unhygienic (i.e. pan-slab and its surrounding area) and that shows, it not maintains a routine to clean those.( though they have reported that they keep their latrine clean 23% regular and 22% irregular basis and 20% have reported that they never clean their latrines).

Besides, though the 29% is seen clean but not up to the satisfactory level and these not show as clean atmosphere.

It is practically proved that there is a deviation between what they have reported and what they are doing. Latrine and surrounding areas cleaning seems a secondary work of the household members which taken their less attention to do so and it is consciously been understood (in interview and FGD) that they have no headache and obligation to keep the latrine and surrounding areas as clean regularly. As a result, a completely dirty picture is existing in the households continuously. Among the 36% household women, most of them are agreed with the opinion that their latrines should be kept as clean and that is well for human health and for favorable environment. But, they recognized that their negligence is the remarkable cause for not doing and keeping clean the latrines and surrounding areas.

**General observation:**

In the study area, a scenario is observed that, the households are taken the latrine only for defecation purpose. They have an attitude that the latrines are no need to clean and no matter are related to cleaning the latrines and to human health. In the Focus group discussion, most of the villagers said that there was no one to advise them about cleanliness and hygiene when they were growing up. One villager said “I did not have any such concept (of cleanliness or hygiene). We used to eat, put and throw garbage in the same place - it was almost as if we were living like pigs.” –Aleya Begum (the village woman) expresses her opinion. Like for the above causes, the latrines of the selected households are often seen unclean, dirty and smell full during the field interview and observation.

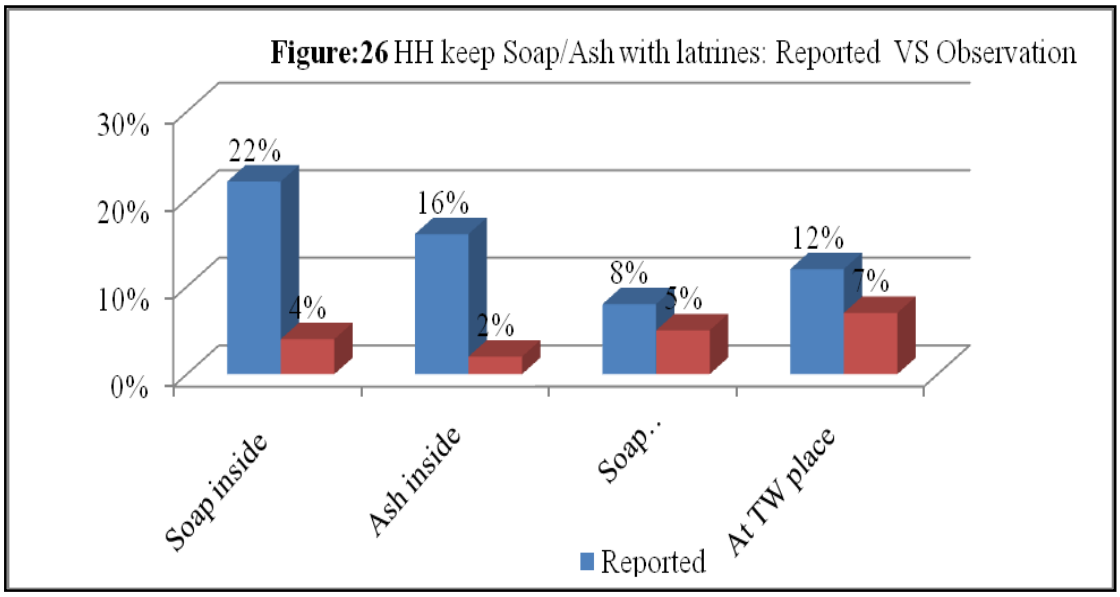
**Households keep soap/Ash with latrines: Reported Versus Observations**

Hand washing after defecation is a major significant hygiene behavior. It is a must behavior to keep human health as a good manner. Without knowledge of hand washing after defecation or for laziness of use proper hygienic way after defecation of hand washing, people are affected more from different diseases like diarrhorea, intestinal worm etc. These badly results on work lost, lost of schooling days of the students, financial lost can be made for increasing the medical expenditure.

It was a vital exploring about Soap or ash whether these are inside or outside of the household latrines. Normally, keeping soap or ash inside the latrine; otherwise, this can be put nearest place of outside the latrine.

The responded reported that 22% of them keep soap in inside of their latrine, 16% keep ash inside the latrine, 8% reported they keep soap and ash outside & nearest to the latrines, 12% says that they keep their soap at the Tube well place and that is easy to use by them at the time of hand washing through water.

But, during physical visit, actually it is observed that only 4% latrine has soap inside of the latrine, 2% ash inside of the latrine, 5% have soap outside/near to latrine and 7% soap is kept near to TW/ring well. The rest 7% households have no separate options or evidence to keep soap/ash in any place.

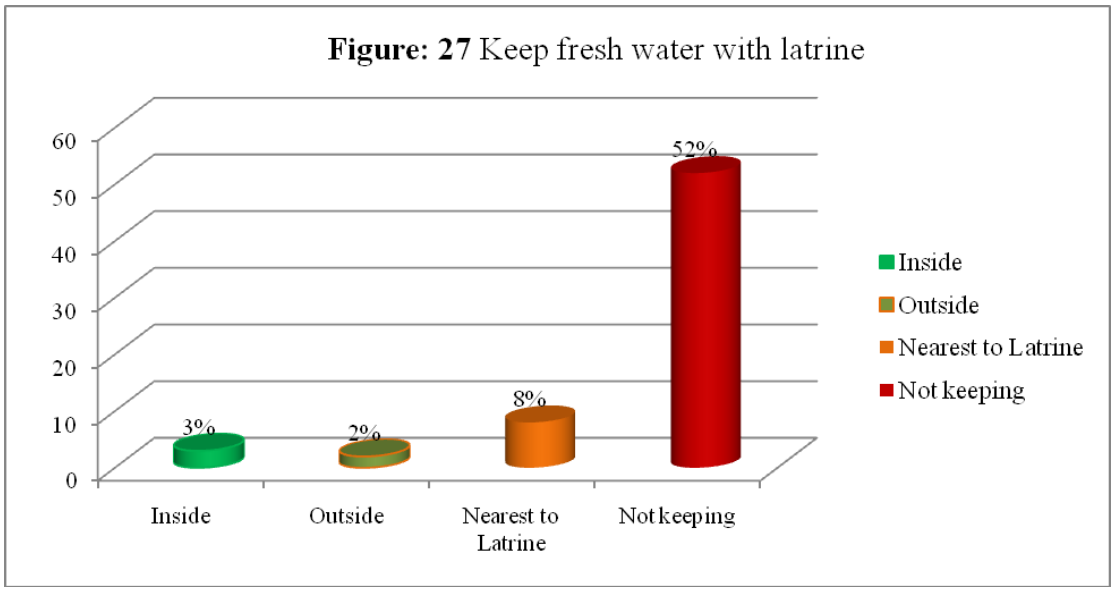



Here is very much interesting and astonishing that, 7% household has shown soap nearest to their Tube well and ring well. But, those soaps are not only for their hand washing after defecation, those for using their cloth washing and after a huge using the soap become smaller and they use the rest part of the soap for hand washing after defecation-they reported. When that is finished, then what you will do? “We will buy new soap for cloth washing and after using that, the last part of the soap when that will not be eligible for cloth washing more, then that will be used for hand washing again”-they stated. When the observation held, they shown some small size soap (rest part of used soap) which is used for their cloth washing purpose and they reported that they use those for hand washing purpose.

Actually it is kept for more washing of cloth and after defecation they use those on a willing basis, not from a habit or compulsory matter-it is observed.

**Keeping fresh water inside/outside of the latrines**

It is very essential to keep fresh or clean water with latrine for cleaning the bottom, hand washing and related things.




The research has a significant exploring/asking that how the households do their sensitive functions like defecation. If they keep and use fresh water which is commonly urgent for human health and for free from diseases.

The research has tried to find out whether any fresh water reserve inside/outside or nearest to the latrines of the selected households or not.

As per the exploring through physical observation, it is found out that 3% latrine with water inside of the latrines and they can use sufficient water after using defecation. 2% latrine keeps water outside and nearest to the latrines though it is not easier than inside. and 8% households have been seen that their latrines are very nearest to their Tube well and ring well, they reported that they can take water from that TW/ring wells to their latrine easily.

The water is reserve inside the latrine seen dirty much and that was old and seemed reserved for minimum 5-7 days since. Besides, the water is seen with the leaf, flies, mosquito and others insect. The outside also reserved dirty water and that water was not with cover and therefore, hazard things are mixing

always with the water and the water is becoming diseases full. If anyone uses this, different diseases may occur to body.

In the interview and FGD, the household owning women reported that, they often use clean water for bathing and during the time of using defecation.
But during the physical observation, It is very much disappointing that, few latrines are seen with water but, not fresh as they have reported. Actually they not feel that it is a must to keep fresh water inside/outside and nearest to the latrine that is why it is easy to catch the water and to use comfortably.

**The place where 3-5 years children use defecation**

Since children are more receptive to new ideas than adults, they can be influenced to cultivate the habits of good personal hygiene and environmental sanitation within schools during their formative years. Children can be effective change agents for healthy behavioural practices such as washing hands, using the latrine and cleaning up after using it. Moreover, children who adopt good hygiene practices at a young age are likely to grow-up to be conscientious parents and pass on their knowledge, skills and practices to their children and society (Qutub,Butt,Bashir,Shabbir,2010).

[20]The National Sanitation Strategy of Bangladesh-2005 says, Health and Hygiene education and promotion should be targeted at all levels of the community with particular focus at high risk groups such as mothers of infants, small children and the economically disadvantaged groups.
[21]According to a recent paper from the International Water and Sanitation Center (Applenton and van Wijk, p-9), Improved water quality reduces childhood diarrhea by 15-20% but better hygiene through hand washing and safe food handling reduces it by 35% and safe disposal of children's feces leads to a reduction of nearly 40%.

[20] The National Sanitation Strategy,2005;p-28
[21] Baseline survey Report on NCSNP-2007, NGO Forum for DWSS;p-24

[22]In Bangladesh a large number of <5 children do not use latrine. Many of them, who can walk, defecate in the courtyard, in home and other open places. Infants those cannot walk defecate mostly in their clothes. So the issue of washing the dirty clothes of infants and disposal of children's faeces is a very important question.

[23]Diarrhoea, intestinal worms, typhoid, cholera and trachoma are some of the common infectious diseases related to poor water, sanitation and hygiene (WASH). They cause serious illnesses and death. About 4 billion cases of diarrhoea cause 1.8 million deaths per year; over 90 per cent among them (1.6 million) are children under five. Repeated episodes of diarrhoea make children more vulnerable to other diseases and malnutrition. Improved access to safe drinking water and sanitation facilities play an important role in safeguarding the health of people. But targeted and consistent hygiene practices yield the greatest health benefits.

Since children are more receptive to new ideas than adults, they can be influenced to cultivate the habits of good personal hygiene and environmental sanitation within schools during their formative years. Schools can help raise the profile of hygiene and sanitation and trigger improvements in the environmental health conditions of communities. Children can be effective change agents for healthy behavioral practices such as washing hands, using the latrine and cleaning up after using it. Moreover, children who adopt good hygiene practices at a young age are likely to grow-up to be conscientious parents and pass on their knowledge, skills and practices to their children and society.

Children always convey different diseases for which major are faces related causes. So it is very important to defecate of the children in a particular place. Among the selected households, a total 54 is child owning family.

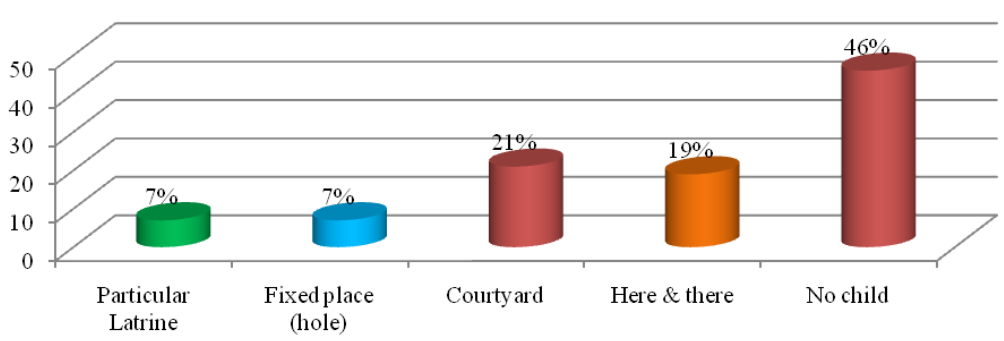
[22] Baseline survey Report on NCSNP-2007, NGO Forum for DWSS;p-24

[23] Who is responsible for soap in Pakistani school Toilet?-South Asia Hygiene practice workshop, Dhaka-2010

It was an exploring matter that where the children are defecate and how manage the stool of them.

The status of the child defecation among the selected households is shown in a figure.

Figure:28
The place where 3-5 years children use defecation




In the figure (figure number: 28),It has been shown that, only 7% families (among 54 child owning families) children are use defecation in particular latrine.

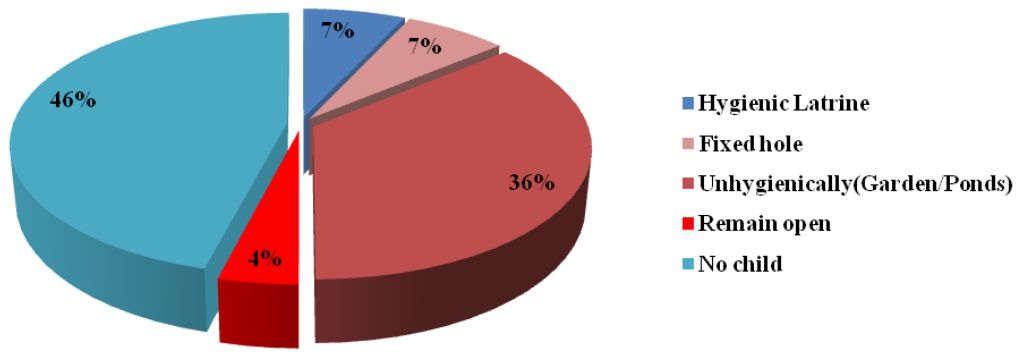
Another 7% use defecate fixed places like hole with cover etc. A large 21% defecate on the courtyard of the respective households. The surprising is that 19% defecate here and there. For upholding the family hygiene and health status, it is must to have the hygienic latrine will be used by everyone in the family even the children. Rural women have a great role in the context especially. Children have to be made habituated by the adult family members as well as mothers/sisters so that they can use properly & positively use the hygienic latrine. It is a great socialization of the children also. The children are get habit of behavior on defecation in proper hygienic place, hand washing, use of clean water etc. from the family first.

## Where and how manage /keep the stool of 0-5 children

(*The children those who are not able to use latrine*)

The children those who are below age of 2 years are not able to use latrine. These children use defecation in different places over the household premises. For the interest of better hygienic situation as well as healthy environment, the stools must keep in proper hygienic way.

**Figure:29**
**Where and How manage the stool of 0-5 Children**




The most disappointing scenario is in the figure 29 that 36% households keep child stool by other mean but not consider the hygiene factor which is most important for building their hygienic environment as well as prevent different diseases like diarrhea. 4% deposit open that means that, here & there, through paddy/vegetable field. The above figure is not associated to likely healthy or favorable environment at all because, after having this hazard defecation situation, no norms and indicators have been maintained for what human health is in a positive way of development. The women of the community have also a vital role to change these tradition and habits.

**If there is any stool in the courtyard of the selected households**

The study find out that two households have been seen with stool on their courtyard during data collection. Stool observed in two household ground and courtyard those families have 0-5 year's children. It is observed that, there is no any plan or place for placing the child stool in hygienic way. Therefore, Children always defecate in open places of household ground even courtyard and finally those raddled with different things which is hazard and produce different diseases among the family members and the villagers.

**Table – 4.14**

**Statistics of Stool found at household ground/Courtyard**

| **Observation** | **frequency** | **%** |
|---|---|---|
| Yes | 2 | 2% |
| No | 98 | 98% |
| Total | 100 | |

To keep family hygiene, which is the central point of hygiene socialization, children have to habituate to use hygienic latrine after two years aged. And before two years, child stool to push into hygienic latrine, wash child bottom with fresh water and in hygienic way.

## Table – 4.15

## Causes of presence child stool in household ground

| Causes (after conversation) | Frequency | % |
|---|---|---|
| Lack of knowledge | 1 | 1% |
| Un-consciousness | 1 | 1% |
| No | 98 | 98% |
| Total | 100 | 100% |

The respondent reported that, they didn't think that the child stool could be a reason for Diahorrea, Dysentray, Filiaricis and such type of disease. They thought, this is only the child stool, which is immature for disease.

As per the above table (4.15), it is observed and generalize after interviewed with the household women, lack of knowledge and un-consciousness are the key reasons of the presence of the things (child stool) at their household grounds in place of the hygienic latrine.

**Effect over Health Status:**

Poor hygiene habits, unhygienic latrine use, use of unsafe water for drinking, cooking and other purposes, different diseases could be taken place in human body.

Here is a statistical data of the selected Gongachara Upazila hospital, which indicate and helps to get an overall idea regarding health status of the selected area also.

Table – 4.16

Statistics of patients came for different disease at the Upazila hospital, Gongachara in June 2010.

| Diseases | Affected Children | | Affected Adult | |
|---|---|---|---|---|
| | Male | Female | Male | Female |
| Dysentery | 19 | 14 | 49 | 38 |
| Diarrhoea | 30 | 27 | 54 | 49 |
| Filiariacis | 2 | 1 | 16 | 15 |
| Hepatitis | 5 | 6 | 15 | 19 |
| Pneumonia (ARI) | 56 | 59 | - | - |

Source: Upazila Health Complex, Gongachara.

The above table (4.16) is a snap shot of the selected areas health status which can helps to get an idea of Sanitation and Hygiene promotions result of the area also.

In the table, Dysentery and Diarrhoea is trending to high among adult and child both classes people in a month among men and women. Besides, Pneumonia (ARI) is highly affects over the child which is very alarming also. It is noticeable that, Filiaricis and Hepatitis are trending to affect adult mostly and children slowly but distressing also.

## 4.8 Knowledge about immunization cycle of the Reproductive mothers

Immunization is very important for children and mother. [24]World Health Organization (WHO) launched a global immunization programme known as Expanded Programme of Immunization (EPI) officially in May 1974, to protect all children of the world against six vaccine preventable diseases. These diseases are Tuberculosis, Diphtheria, Whooping cough, Tetanus, Poliomyelitis and Measles. For developing countries these six killers of children have been the prime focus. Hepatitis B (new vaccine) was added to this list during 1992-93. In Bangladesh, EPI was formally launched on 7th April, 1979 (Community Medicine and Public health, p-408-10,4th ).

Most developing countries have adopted the standard vaccination schedule recommended by WHO.

Table – 4.17

WHO vaccination table

| Age of child | Vaccine |
|---|---|
| Birth | BCG and OPV |
| 6 week | DPT and OPV |
| 10 week | DPT and OPV |
| 14 week | DPT and OPV |
| 9 months | Measles and OPV |

**Antibodies against tetanus which develop in the mother are passively transferred to her unborn baby via the placenta, thereby conferring immunity against tetanus in the neonate. The vaccination of Tetanus toxoid (TT) mother scheduled for five doses with a minimum interval.

(Sourc: Community Medicine and Public health, p-409,4th edition, 2004)

[24] Community Medicine and Public health, p-408-410,4th edition, Dhaka

The above table 4.17 shows the vaccination through immunization programme where reproductive mothers have a vital role to know the cycle about vaccination to child and for own. Here is vaccination stated- BCG (Bacillus Calmette Guerin), OPV(Oral Polio Vaccine),DPT (Diptheria-Pertussis-Tetanus) and Measles. Besides, Tetanus Toxoid (TT) for mother.

The research at first discovered the knowledge of all reproductive aged mothers (54 women) about the diseases and immunization cycle.

The researcher asked to reproductive mothers if they know about how many diseases are exists and which the immunization is required for?

Table - 4.18

**Knowledge on diseases (as per answers of respondents)**

(Q: Do you know the names of diseases for which the vaccines are required?)

| **Response** | **fq** | **%** |
|---|---|---|
| Yes | 42 | 77.78 |
| No | 12 | 22.22 |
| **Total** | 54 | |

Table – 4.19

**Comparison between Knowledge on name of vaccines and vaccines schedule**

| | **Name of vaccine(s)** | | **Schedule of vaccine(s)** | |
|---|---|---|---|---|
| **Response** | **fq** | **%** | **fq** | **%** |
| Yes | 14 | 25.93 | 6 | 11.11 |
| No | 40 | 74.07 | 48 | 88.89 |
| **Total** | 54 | | 54 | |

It has been illustrated on the two above tables (table 4.18 & table 4.19) that the reproductive mothers are majorly known (77%) about the diseases for which the immunization is required for own and child. But, their knowledge is very low about vaccines and its schedule. They don't know which vaccines are required for which disease and the schedule. Though the schedule is very

important to know by every mother, only 11% of them have been able to say the exact schedule.

In spite of this scenario, they reported that, they do provide vaccine to child and own as when required where family welfare assistant come in the area for providing vaccines.

## 4.9 Treatment trends of reproductive mothers before delivery/during ANC period and after the delivery of child

It is very important for going to doctor visit for health check-up during Antenatal Care (ANC) or pre-natal period of pregnant woman. [25]As per medical science, among the stages of maternity cycle antenatal, intranasal and post-natal (PNC) periods are significant. Maternal health and the health of the women are the significant issues while the research is exploring the health status.

Here is a status of going for health assistance to different centers by the respondent women relating to child birth issue.

Table – 4.20

Tendency for going to health assistance for ANC & PNC issue

| Destination | Frequency | % |
|---|---|---|
| Registered doctor/Hospital | 3 | 6 |
| Village Doctor/Homeopathic | 40 | 74 |
| Health worker/FWA | 11 | 20 |
| Total | 54 | 100 |

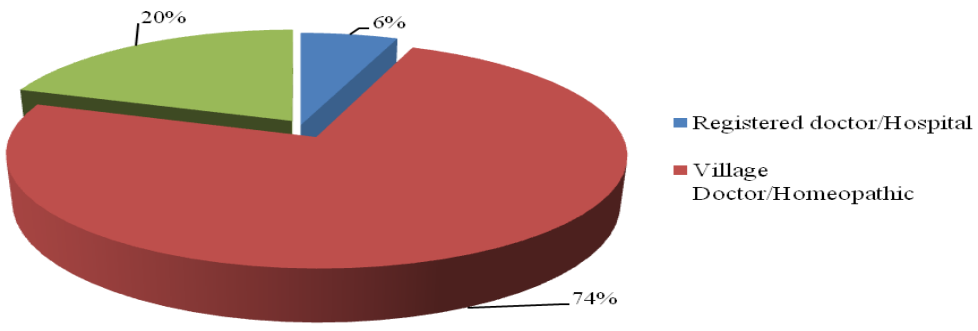
** Reproductive 54 women considered

As the table 4.20 they explained that registered doctors based in the Upazila head quarter (it is seen that though there is a Union health center, but registered doctor is not available there) and they are not interested to come the village which is 4 KM far from the Upazila. Besides, the fee of a registered doctor is minimum Tk. 200/- which is very high to them for payment. But, the village doctor is based in the nearest market of the village and their fee is low than the

[25] Community medicine, 2004

registered doctor which is Tk. 50/- and it is comparatively reasonable to them. On the other hand the Homeopathic doctor is cheaper than the registered and village doctor whom have to pay fee only Tk.10-25. They reported that, in some of cases, they go to the Homeopathic doctor, but they reported that in many of cases the village and Homeopathic doctors' diagnosis and treatment is less effective than registered doctor. Here is a data exists that, 20% of them go for advice only from government health worker/Family welfare visitor for contraceptives of birth control and some of maternal issues like vaginal and urinary cases. But, they face high difficulties for this because the family welfare visitor or health worker is not available all time in the village all day. It is observed, though there is a Union community clinic nearest to the village, but that is totally stopped for a long time.

**Figure:30**
Trend of Going for advice during ANC and PNC period




They explained that, in the village there is a traditional birth attendant and they call her in their related difficulties.

Through this data, it shows a picture that, in spite of financial crisis, they are very less interested to receive treatment from registered doctor. But, for proper diagnosis, advice of registered or specialist doctor (based on the necessity) is important.

## 4.10 General Health related Information:

General health depends on the tendency of diseases of certain people of certain area, treatment conditions, awareness of the people regarding different diseases and consequences of the diseases, idea about prevention of diseases and promotion of health.

It is true that man has reached in a satisfactory level to his journey towards health now the age of twentieth century. [26]But, this long journey did not have easy pace on all its way. Religious taboos, cultural habits, local superstitions, false theories, deceptive information and erroneous interpretation often made the journey hazardous at times brought it to a near halt; but sweeping aside all these obstacles man continued his movement ahead. His journey towards health still continues and will continue till the desired goal of 'Health for All' is reached.

Some of local cultures exist in the research area also where many of incidents are happening for those. The research has an exploring to discover the general diseases affected the area, among the selected households and their treatment status, awareness and ideas towards the diseases.

**Table – 4.21**

**Information of diseases with what the area is generally affected** (Opinion of the selected women considered)

| Diseases options | Answer (%) |
|---|---|
| Fever | 99 |
| Runny nose | 91 |
| Abdominal pain | 61 |
| Diarrhoea | 56 |
| Dysentery | 61 |
| Skin diseases | 3 |

** Multiple answers considered

The table (4.21) shows the reported statement of respondents that the people of this area are generally suffering from fever, runny nose, abdominal pain,

[26] Community Medicine and Public health, p-2,4th edition, 2004

dysentery and diarrhoea most. Most of these diseases have a linked with Water, Sanitation and Hygiene. But, why they are suffering from such type of diseases most, they reported that they don't know the actual causes. But they treated these as normal phenomenon which 'God created'-they opinioned. They are not able to explore the real source of causes for what they are losing their health and wealth as well.

**Family members of the selected Households affected different diseases during last 3 months:**

The households have a total 181 male, 163 female, 73 children of 0-5 year aged; total 417 members exists in selected 100 households. The research has a look at what number of members of the selected households are been affected by different diseases related to water, sanitation and hygiene during the last three months. This exploring was viewing to discover the correlation between household level WASH behavior leaded by the housewives and its effects over the other members health of the respective households.

**Table – 4.22**
**Suffering conditions of members of the households from last three months (respondents opinion)**

| Diseases | Total affected (fq) | % | Children (among affected) fq | % |
|---|---|---|---|---|
| Pneumonia | 11 | 2.63 | 8 | 1.91 |
| Otitismedia | 9 | 2.15 | 5 | 1.19 |
| Fever | 68 | 16 | 41 | 9.8 |
| Jaundice | 4 | 0.95 | 1 | 0.2 |
| Total | 92 | | 58 | |

** Calculated total population of selected 100 households (181 male, 163 female, 73 children of 0-5 year aged; total 417)

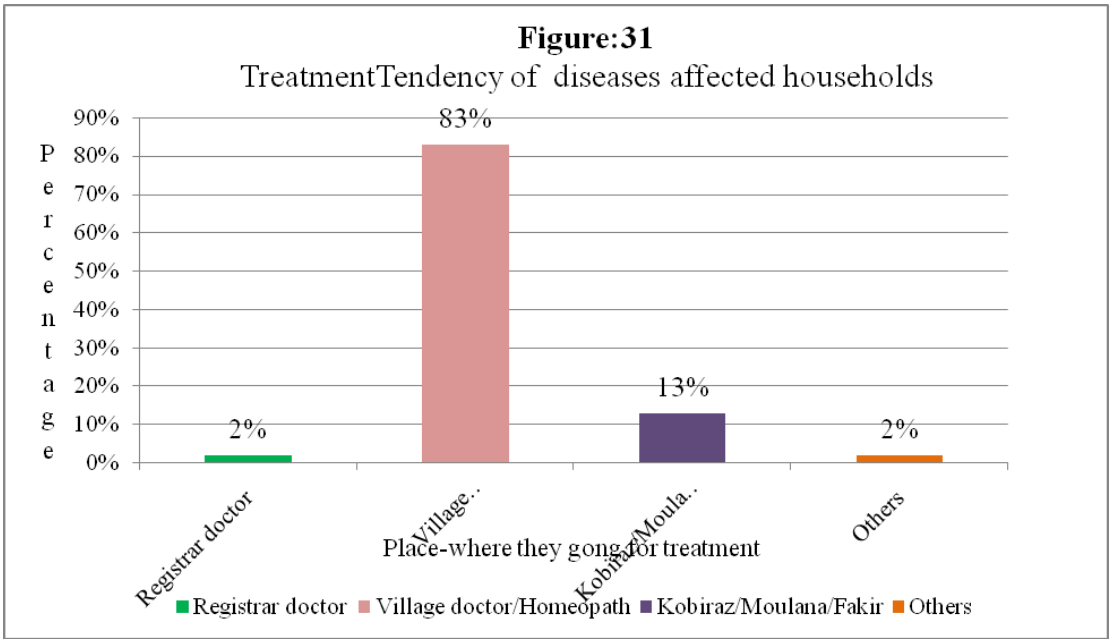
The above table (4.22) shows the statistics of the selected household members have been affected with different diseases during last three months from the time of data collection. There is a disappointing scenario that, 2.63% are

affected by Pneumonia among who 1.91% is children. Other diseases like Otitismedia (2.15%), fever (16%), jaundice 4 persons (1out of 73 children-0.2%) are also affected.

The households could avoid those incidents of diseases keeping Wash behavior mostly.

### 4.11 Treatment Tendency of the Household members

**Figure:31**




The households are been affected by Fever, Runny nose, abdominal pain, Diarrhoea, Dysentery, skin diseases generally in the area. Besides, Pneumonia, Otitifmedia, Jaundice are remarkably affected the selected community. To be cure or free from those diseases, the community people go to certain place for treatment.

The selected households reported that they have a tendency for going to nearest village doctor or “Kabiraz”/”Moulana” or “Fakir”for treatment.

As per the Figure: 31, they have gone to different places in last three months for treatment. The selected households reported that 2% of them gone to registered (MBBS) doctor, 83% of them gone to village doctor (diploma or homeopath), 13% to Kabiraz/Moulana/Fakir and 2% gone to others places.

**Mostly five causes for their going to reported places:**

(1) They are going to Kabiraz/Moulana/Fakir for religious believes. They feel mental satisfaction with their different advices.

(2) The village doctors or village based Homeopathy doctors because they are available and they demand minimum fee which the villagers are able to pay.

(3) Registered doctors are less interested to come to the village.

(4) The villagers have to spend additional cost for bringing the patients at Upazila hospital through different vehicles.

(5) Traditionally their mental set-up is exists for going to village based doctors (in place of considering the better place for better treatment).

## 4.12 Information regarding contaminated diseases among the households

Knowledge on different contaminated diseases can show the health status also. It gives the treatment tendency, idea about the diseases also. The research has discovered the knowledge on some of contaminated diseases which may easily be affected among community people. It is also observed through the study to their treatment tendency for the affected persons.

Table – 4.23

Knowledge level of the respondents regarding contaminated diseases

| Issue | Responses | Respondents (fq) | % |
|---|---|---|---|
| Tuber Closes (TB) | Correct | 30 | 30 |
| | Incorrect | 36 | 36 |
| | No idea | 34 | 34 |
| | Total | 100 | 100 |
| Malaria | Correct | 12 | 12 |
| | Incorrect | 23 | 23 |
| | No idea | 66 | 66 |
| | Total | 100 | 100 |
| Leprosy | Correct | 35 | 35 |
| | Incorrect | 17 | 17 |
| | No idea | 48 | 48 |
| | Total | 100 | 100 |
| Kalazar | Correct | 03 | 03 |
| | Incorrect | 15 | 15 |
| | No idea | 82 | 82 |
| | Total | 100 | 100 |
| Dengue | Correct | 31 | 31 |
| | Incorrect | 20 | 20 |
| | No idea | 49 | 49 |
| | Total | 100 | 100 |

As the above table 4.23, every respondent given their responses/opinions against the questions about their idea/or opinion on the respective diseases. As per the responses of the respondents, the above status is discovered.

The above discussion indicates the knowledge level is very low of the respondents about different diseases those which are also related to Water and Sanitation and Hygiene mostly.

### 4.13 Financial cost for treatment

The respondents have reported that 2 (two) male members of them have been affected with TB (Tuber Closes) in last one year and they went to village doctor for treatment at first. But, the village doctor referred them to government hospital situated at Upazila level. They have received treatment from the government hospital at Upazila level and have been fully cure presently. Besides, none of them has been affected with the other diseases like dengue, malaria, leprosy or kalazar.

**The tentative cost of their treatment:**
The total affected patients are 15 (13 female affected different diseases linked to unhygienic menstrual hygiene and 2 male are affected for Tuberculosis -TB). Among them, 9 are been improved and a little cured and 6 are under treatment. Though 9 are a little cured, but they need to take medicine regularly as per doctors prescriptions which will be continued up to a certain time unless until the doctors certify that the patients are fully cure. Besides, the 4 patients are under treatment those who are taking drug regularly and making follow up visit by the doctors maintaining a certain interval. Both types of patients have made cost up to the time of interview and FGD a remarkable amount which is in Taka 24,800; twenty four thousand and eight hundred as per their opinion.

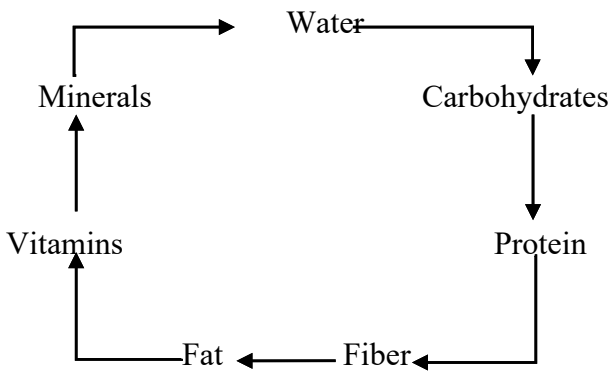
## 4.14 Food and Nutrition related information

Food and Nutrition are the significant indicators of health status of a community. Food is a composite mixture of substances which when consumed performs certain functions in the body. Nutrition is the process whereby living organisms utilize food for maintenance of life, growth, the normal functioning of tissues and organs and the production of energy (Com. Health)

Knowledge on Nutrition and balance food and its practices is also a vital sign of health status. As per UNICEF (2005), considering the existing context, average per capita per day 2253 gm calorie is needed. Balance diet focusing the protein needs 61.74 gm is required to human body.

We can see a nutrition cycle through what human body could take balance and essential nutrients:

**Figure: 32**
**Nutrition cycle: 7 essential nutrients:**




Source: Suzanne,

About seven Nutrients, it is said that, without water, anybody would die in just a few days. Potato, rice, grains contains carbohydrates which essential for health. Protein is sources from meat, poultry, fish, milk, eggs. Vegetables, grains, fruits contain protein. Brown rice, brain, root vegetables, peas, beans, citrus fruits are the sources of Fiber. Fat is essential as an energy store.

Vitamins A, B,C,D,E and K are organic compounds, essential for body growth, function, maintenance and repair. Minerals are essential inorganic compounds that aid energy production and body maintenance as well as assisting in the control of body reactions and reflexes. A diet that includes a wide range of animals and plant goods should provide all the minerals essential for health.

Nobody of the respondents knows how much per capita calorie is needed for human body.

**General food list (taking on a regular basis by the selected households-status as per their opinion)**

**Table – 4.24**

| Particulars (Food items) | Frequency | % | Remarks |
|---|---|---|---|
| Rice | 80 | 80% | Eat at least 2 times meal a day |
| Potato | 100 | 100% | Use as compulsory vegetable |
| Bread | 20 | 20% | eat as supplementary of rice for 1 meal a day |
| Vegetable | 60 | 60% | Other than potato |
| Fish | 52 | 52% | Small fish is comparatively chipper while this is a river belt area |
| Meat | 29 | 29% | |
| Milk | 15 | 15% | |
| Egg | 23 | 23% | |

** Multiple answers considered

The table shows that 80% people of the selected households eat rice as a two time's meal a day and 20% take wheat bread for one time. They reported that, wheat is chipper than rice, so they take that one time in place of rice. Besides, they can take bread without any curry and simple salt, while rice needs sufficient special curry. They take vegetable as a supplementary of potato especially during winter when vegetables are chipper than potato sometimes, but, usually they all take potato as a compulsory vegetable with rich. As a revering area, small fish is available for 9 months of the year and they can buy

fish reasonably. But, all of they can't take meat, milk or egg while those are essential remarkably for health and nutrition.

The above food conditions not mentioned a balance dieting positions among the respondents. Therefore, it is assumed that, they are captured by malnutrition and different diseases. This is a very narrow scenario of health status of the selected household as well.

## Five major WASH related Diseases occurred in the community During 2008-2010

### (The research duration is considered)

Table – 4.25

**Distribution of Statistics of Five Major diseases are occurred admitted to Gojghonta Union Health center (adult Male & Female): The patients come for treatment**

| Diseases/Vulnerability | 2008 (Jul-Dec) | | 2009 (Jan-Dec) | | 2010 (Jan-June) | |
|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female |
| Diarrhoea | 367 | 263 | 1051 | 928 | 467 | 483 |
| Dysentery | 359 | 306 | 347 | 279 | 208 | 159 |
| Worm | 410 | 257 | 483 | 498 | 254 | 246 |
| ARI | 345 | 222 | 522 | 437 | 317 | 275 |
| Urinary track infection | 20 | 5 | 352 | 376 | 216 | 243 |

**Source:** Upazila Health Complex register, Gongachara.

Table – 4.26

**Distribution of Statistics of Five Major diseases are occurred among <u>Children (0-5)</u> admitted to Gojghonta Union Health center: The patients come for treatment**

| Diseases/Vulnerability | 2008 (Jul-Dec) | | 2009 (Jan-Dec) | | 2010 (Jan-June) | |
|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female |
| Diarrhoea | 148 | 100 | 413 | 412 | 195 | 204 |
| Dysentery | 89 | 57 | 151 | 122 | 208 | 159 |
| Worm | 70 | 87 | 88 | 113 | 40 | 47 |
| ARI | 345 | 222 | 207 | 223 | 207 | 223 |
| Urinary tract infection | 20 | 5 | 136 | 143 | 66 | 75 |

**Source:** Upazila Health Complex register, Gongachara.

The hospital given data is a dependable evidence to know the existing condition of the concern community. Diarrhoea and Dysentery is very high every year among adult and children both. Worm, ARI take also remarkably the community. Urinary tract infection is comparatively high among children than the adult. All diseases are totally related with water, hygiene and sanitation as well.

**Summary:**

The study explored very poor conception of the respondents about safe water and Hygienic latrine, these consequences over health and environment. It has also found the disappointing status of health consciousness and treatment tendency of the respondents, their family which gives a general scenario of the community. Only 32% households use hygienic latrine and 40% has clear idea about safe water of the respondents while 22% has no idea about consequent of use of unsafe water. 9% using Ring-well with no cover and 1% using ponds as water sources for washing vegetables, fruits, washing dishes, bathing and such

type of other domestic purposes which is harmful for human health. Majority of them have no clear concept about cleanness of latrine, water options and these surrounding areas which is important sign for hygiene promotion. They are habituated children defecation with open and on courtyard due to their gap of knowledge. As a result, child diseases are increasing and they facing poor socialization.

In the working area, different water born diseases are occur like- Diahorrea, Dysentray intestinal worm etc. but, 50% of respondents are not being knowledgeable regarding the issue of Diahorrea. Among them, unconsciousness is the significant cause for such type of disease for which they had to spent big amount of money for treatment. But, they keep traditional tendency for treatment. They are not interested to go for treatment to a registered doctor than the village doctor, Kabiraz etc. The study revealed two causes for this-concept or consciousness is poor about develop treatment by registered doctor, secondly, poor financial condition; that is why, honorarium of registered doctor's is high and the hospital is too far from their village. On the other hand, the village doctors, Kabirazs are available all time and cheaper most. Their poor concept is discovered in the maternal health also. For ANC/PNC services, very few of the female respondents go to registered doctor, most of them go to village traditional birth attendant, Homeopathic doctor. Some of them are interested to check up or advice to village health worker and family welfare visitor, but they are rarely come to the village. As a result they faced many difficulties for urinary and vaginal infections.

The respondents are not aware at all about their nutrition and balance diet. They are not able to take balance diet due to financial crisis most. But, as a revering area, normally they eat sufficient fish every month-they reported.

After the discussion, it is explored that poor conception, traditional trust and culture, unconsciousness and a remarkably ignorance, negligence and superstation are covered and influenced the selected households and the community as well. And for this, their water and sanitation condition, hygiene practices and the health status is disappointingly poor and weak.

It can be recommended that, though government of Bangladesh has a mission to cover sanitary latrine in every household, but, Behavioral change communication is very much needed to change the human attitude towards sanitation and hygiene promotion. It needs to proper monitoring for actual use of hygienic latrine, replace the used and broken ones, proper maintaining those. Most of water options need to be monitored for proper maintaining in hygienic way. Government has village level community clinic and Union level health center, People don't know about these service due to those are a large time remain closed. Mass-awareness besides activation of those health centers is a must to divert the people traditional health service tendency. Household owners need to be oriented towards make their wives get forward in hygiene education. GO-NGO needs to implement rooted hygiene sessions among rural women.

# Chapter-5

# Problems and causes to smoothly maintain hygiene practice at rural household level

## 5.1 Information about personal Hygienic Behavior

Health is the quality of life that renders the individual fit to live most and serve best. But, attainment and maintenance of health may not be easy in this world when lives have become so complex and environment so hazardous. Because of improper living, the result of either ignorance of carelessness, the health of many even in the development world is below the desired level. It is not so much the knowledge of how to live as the practice of it that so greatly contributes to a satisfactory living.

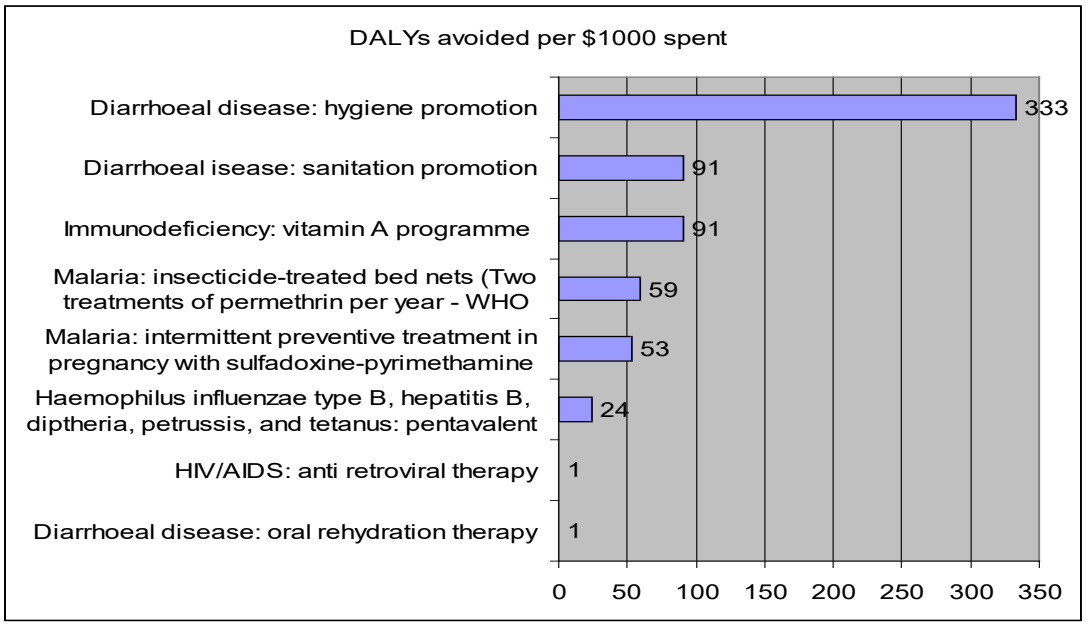
With the exception of heredity and constitution, many things about health depend upon individual's desire and endeavor, and this is known as personal hygiene. Personal hygiene or personal health care, therefore deals with measures which are the personal responsibilities of the individual for the promotion of good health. It is only when these become health practices that the art of healthful living can be achieved.

Increasing sanitation hardware provision alone is not enough and there is now evidence that focusing on hygiene promotion is the most cost-effective way of reducing diarrhoeal disease amongst children.

The mentioned (Figure: 33) Disability Adjusted Life Years shows that Hygiene practices are closely linked with health status and diseases. The Figure 33 uses the unit DALY (Disability Adjusted Life Year). This is the quantitative indicator of burden of disease that reflects the total amount of healthy life lost, whether from premature mortality or some degree of disability during a period of time (Peal, 2010).

Figure: 33

The cost-effectiveness of child survival interventions




The cost-effectiveness of child survival interventions; Source: World Bank, 2006.

Dedicated hygiene departments are rare but the initiative taken by the Bangladeshi government in setting up the Sanitation Secretariat shows an encouraging commitment to hygiene improvement. Hygiene is included as an important part of their agreed sanitation strategy's eleven principles to meet the goal of 100% sanitation by 2010 (GoB, 2006).

## 5.2 Overview of Hygiene in South Asia

[1] Ascertaining the current status of hygiene behaviour in South Asia is not straightforward. Different studies explored the status of water and sanitation coverage, but, No such data is available for hygiene.

However, in order to draw some comparisons and make observations to aid understanding of the situation Table-5.27 shows a snap-shot of relevant and significant health data from South Asian countries other developing regions and the rest of the world.

**Table -5.27**
**A snap-shot of significant health statistics in South Asia**

| Countries | Under-five mortality rank[1] | Under-five mortality rate (probable deaths by age 5 per 1,000 live births) | | Adult mortality rate (probable deaths between 15 to 60 years per 1,000 popn.) | | % of annual deaths due to diarrhoea, all ages |
|---|---|---|---|---|---|---|
| | | 1990 | 2008 | 1990 | 2006 | % |
| Afghanistan | 1 | 260 | 257 | 476 | 473 | 9 |
| Bangladesh | 58 | 149 | 54 | 319 | 254 | 6 |
| Bhutan | 44 | 148 | 81 | 333 | 218 | 6 |
| India | 49 | 116 | 69 | 278 | 241 | 4 |
| Maldives | 89 | 111 | 28 | 313 | 103 | 3 |
| Nepal | 60 | 142 | 51 | 350 | 286 | 7 |
| Pakistan | 42 | 130 | 89 | 250 | 206 | 9 |
| Sri Lanka | 120 | 29 | 15 | 241 | 166 | 0 |
| South Asia | NA | 124 | 76 | 320 | 244 | 5.5 |
| Developing countries | NA | 99 | 72 | 247 | 217 | 6.9 |
| The world | NA | 90 | 65 | 211 | 191 | 4 |

Source: UNICEF Child info (2009). Monitoring the situation of women and children (A J peal-UK-2010).

[1] A J Peal; Hygiene promotion in South Asia; progress, challenges and emerging issues South Asia Hygiene practice workshop, Dhaka-2010

**Natural Disasters is the key challenge of Hygiene behavior**

[2]The tsunami that struck Sri Lanka and the Maldives in 2004; the earthquakes in Pakistan in 2008 and 2005 and in India in 2001; and the flooding in India, Nepal, Bhutan and Bangladesh in 2007 are examples of recent catastrophic events that stretched the resources of governments, aid-agencies and NGOs alike. These natural disasters halted the hygiene promotion.

Bangladesh has recently faced two large natural disasters (Cyclone) Cyclone Sidr (in November 2007) and Cyclone Aila (in May 2009) those which is the significant obstacles on the way of hygiene promotion.

The research area is a flood prone and river erosion area. Most of the household faced several times disaster for river. They have a common vulnerability to maintain hygienic behaviour though it is a question of knowledge and awareness.

## 5.3 Knowledge Assessment: Hand Washing Knowledge on Six critical times

**Knowledge on Hand Washing through Hygienic way:**

Personal Hygiene promotion (HP) largely depends on hand washing. The hand washing focuses on six practices:

**a.** Washing hand with agent after defecation;

**b.** washing hand with agent before eating;

c. Washing hand with agent after cleaning child bottom;

**d.** Washing hand with agent before feeding the child;

**e.** Washing hand with agent before Khabar Paribesson (serving food),

The above five critical times is significantly acknowledged by all.

Besides the five critical times, In this research another one indicator is been added –

**f.** "Hand washing before food preparation"

2 A J Peal; Hygiene promotion in South Asia; progress, challenges and emerging issues South Asia Hygiene practice workshop, Dhaka-2010

The agent for hand washing might be soap or ash (powder that remains after the burning of fire wood) or clean mud (clay) as the latter may be more affordable for the poor.

**Importance**

Hand washing is a practice that adds substantially to the health of the nation. In this research, hand washing is given additional focus while it is an important hygiene behavior and it has a significant impact on human health and the child health as well. Different disease occur causes for lack of hand washing in various critical times.

The Bangladesh Government on 15 October 2009 observed Global Hand washing day along with 80 countries across the world for the second time. The theme of the day that year was 'My life is in my hands.' (Laboni 2010)

[3] Water and sanitation are among the reasons for increasing poverty as identified in second and seventh goal of MDGs. Over 50,000 children die from diarrhoreal diseases every year in Bangladesh. However, 40 percent of these can be reduced through the practice of hand washing. Hand washing can also help to reduce respiratory problems by 25 percent, according to a study conducted jointly by UNICEF and World Health Organization. Considerable achievement in water and sanitation has been observed but achievement in sectors like hygiene and behavioral practice has fallen behind. Hygiene and behavioral practices need to be given more attention. In this situation, Government of Bangladesh and its development partners are considering ambitious plans to achieve nationwide total sanitation by 2010 as stated in its international commitment made in 2003 at the South Asian Conference on Sanitation (SACOSAN). From 2003, October is being observed every year as

[3] Laboni Shabnam, South Asia Hygiene Practioners' Wshop, Dhaka 2010

sanitation month and any one day of October is being observed as national hand washing day over the country.

After end of 2010, the expected scenario is not being kept (55% population use improve sanitation, 4% use open defecation; UNICEF-WHO report,2011) and Bangladesh government has declared “Sanitation for everyone by 2013” program and government, non-government agencies and all level stakeholders are trying to achieve this declaration in time.

[4]Hand washing with cleaning agents is one of the low-cost interventions and can easily penetrate to the community people to reduce risk of common infections as well as diseases, especially water borne diseases. This practice could save more lives than any single vaccine or medical intervention, cut the number of child deaths from diarrhoea (the second leading cause of child deaths) by almost half and from pneumonia (the leading cause of child deaths) by one-quarter [Source: World Health Organization]. The Centre for Disease Control and Prevention (CDC) has stated that "It is well-documented that the most important measure for preventing the spread of pathogens is effective hand washing".

5The role and potential of hand washing, in particular hand washing with soap, is acknowledged as one of the most cost effective ways of preventing infectious diseases. It is now recognized as the “do- it yourself vaccine when promoted on a large scale due to its ability to interrupt the transmission of infectious disease pathogens and it is cited as being more effective than any single vaccine” (PPPHW 2003). Hand washing is regarded as a low cost intervention that reduces the incidence of two of the largest killers in children under five: diarrhoea and respiratory infections (Luby 2001). The importance of hand washing in reducing the transmission of infectious diseases cannot be underestimated. Although hand washing in itself is a simple act, evidence

[4] Ahmed & Begum, South Asia Hygiene Practioners’ Wshop, Dhaka 2010

[5] Lisa Danquah, United Kingdom; SAHW,2010

suggests that most mothers in developing and developed countries fail to wash their hands adequately after faecal contact.

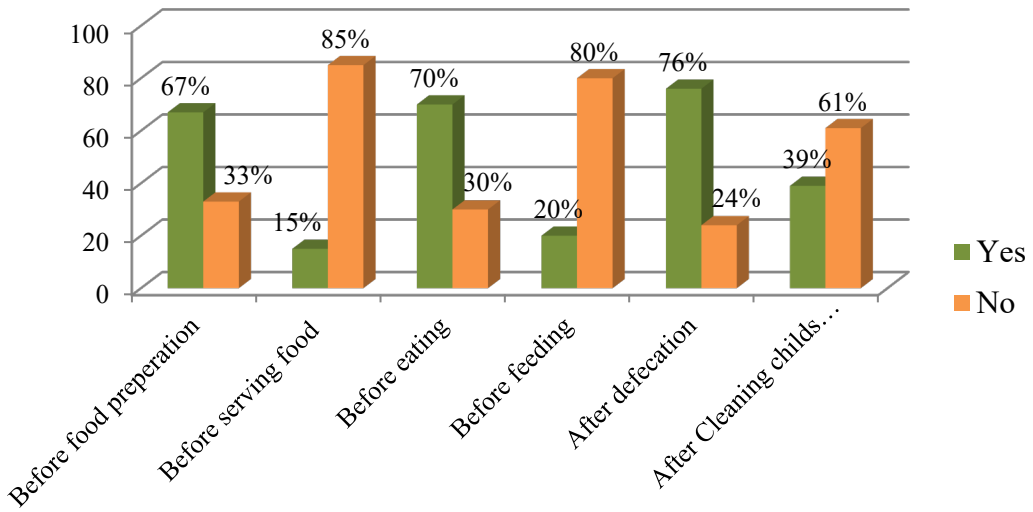
The ASEH project of WaterAid Bangladesh (started in 2004) provided different studies to reveal the status of hand washing knowledge, and people's attitude towards hand washing practice with cleaning agents, and also whether this intervention contributed towards the impact of the ASEH- reducing water borne diseases, increasing disposable income and decreasing workday loss.

The studies have shown that 27% of rural people have knowledge about six critical times of hand washing (Ahmed & Begum 2010).

If we see in the research area about the knowledge level of the respondents on hand washing, we can see some very unsatisfactory figures from which no

**Figure:34**

Knowledge on Handwashing(Reported by the respondents)




community could be free from health hazards. As per the above chart (Figure 34) 67% respondents know before food preparation is required while 15% do believe to wash hand before serving food and 70% realize to hand wash before eating. Only 20% realize that to wash hands before feeding, 76% do believe to wash hands and only 39% after cleaning Childs bottom. It is needed to mention here that, they told that they need to wash hands in every function through

either soap/ash or simple water. It indicates alarming information that, they don't feel the necessity of soap/ash for hand washing.

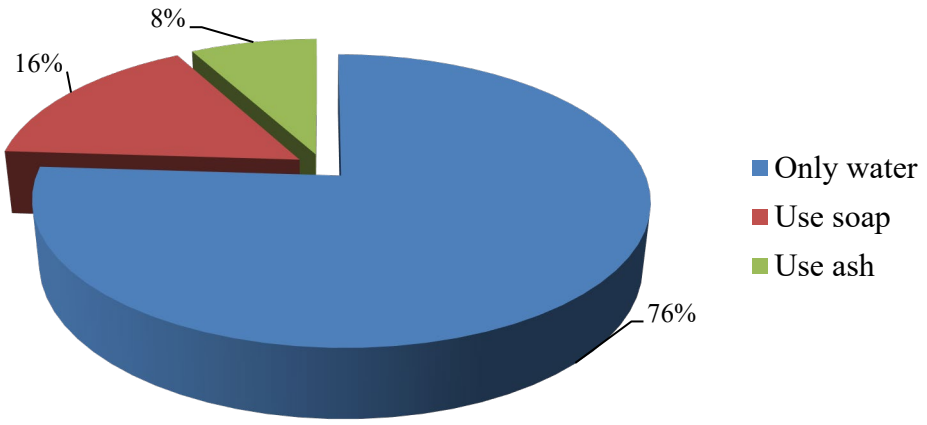
## 5.4 Observation: Practice and Dummy session of Hygienic behaviour on Six critical times

### Status of hand washing after defecation:

Hand washing after defecation is very significant hygiene practice. To make free from germs of stool, warm and other occurrences, hand washing with soap/ash is a must.

In this research, among 78% household women shown practice (dummy session) of hand washing. Additionally, It is also observed that the body languages and the comfortableness of the respondents to play the dummy role.

**Figure:35**
Status of hand washing (Observation) after defecation




After observing and in depth conservation with them, the research found the motive of hand washing of the respondents and it has found (in the above Figure:35) only 24% respondents use soap & ash after defecation and a major 76% use no alternative and use only water for defecation purpose.

Hand washing practice is significant in personal and household level as well. It is further essential to keep at community level also, where the community people inter acting each-other in regular life even taking food. Therefore, viewing to maintain the approach of community led total sanitation; hand washing after defecation is a must.

In this research, a tendency over the respondents and their family members is silently observed that, though 24% of them have the habit of both hand washing with soap and ash after defecation, it is doubted very much whether they are been used to with this type of habit due to their body language and atmosphere of the household ground.

So, it can say after this type of discussion that, hand washing with soap/ash is a critical and tuff habit to keep it especially among the rural women.

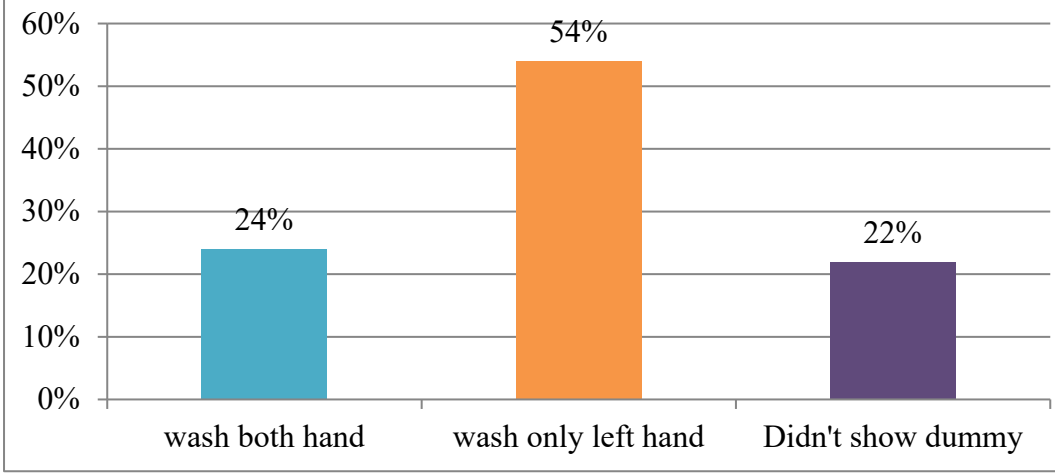
**Practice of hand washing after defecation: How use the hand(s)**

Since the hygiene issue the causes of many diseases are directly linked with health, hygiene practice is the significant part of discussion of this study. Therefore, every part or event of hygiene behavior is separately discussed and explained in this chapter of this research report.

In the previous section, we found and discussed the hand washing after defecation status through observing the dummy session of hand washing by the respondents and physical atmosphere of their household related to the habit.

In this section, we discussed how the respondents washing hands which they have shown in hand washing practices after defecation.

**Figure:36**
Practice of hand washing (Observation) after defecation: How use the hand(s)




A total 78 households have shown dummy practice of hand washing after defecation where only 24% wash both hands but a large number of 54% respondents have shown only left hand washing. It has a similarity with previous section where as the physical observation of the household atmosphere indicated hand washing habit after defecation. That is why, it is found there, only 24% (18+8) household of the respondents seen with soap and ash respectively. Now, it can say only 24% respondents those who have reserve soap in place and use soap and ash after defecation, they are only using both hand for washing purpose after defecation.

**Practice of hand washing after cleaning children bottoms**

Different studies conducted over the world focusing mothers' hygiene behaviour especially after cleaning the under five children bottom.

[6]Estimates from studies conducted in the developing world indicate that on average less than 20% of mothers wash their hands with soap after cleaning up a child or going to the toilet themselves (Curtis and Cairncross 2003; PPPHW 2003).Studies have tended to be targeted at mothers and female caregivers as they are identified to be the primary caregivers of children less than five years

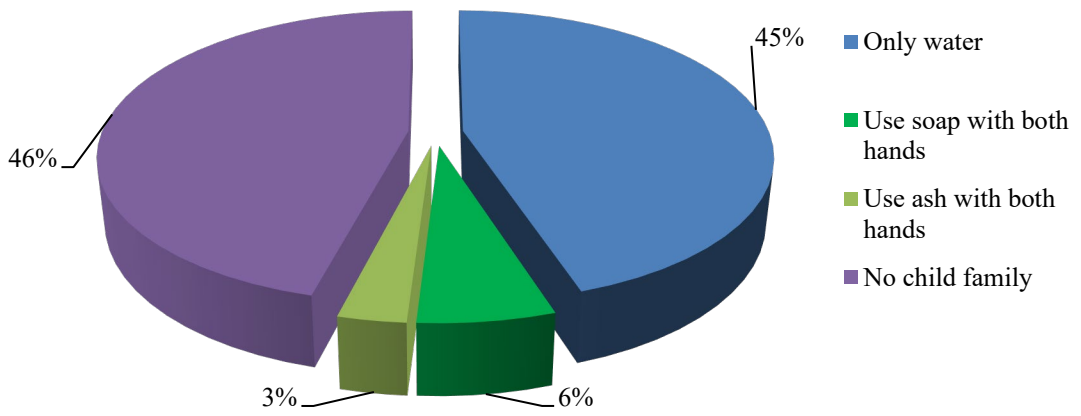
[6] Lisa Danquah, United Kingdom; SAHW,2010

of age. This is one of the fundamental reasons why the promotion of hand washing as a public health intervention has the potential to have an enormous impact on public health (Curtis and Cairncross 2003).

In the research samples, there are 54 households (out of 100) who owned under 5 children. Cleaning the bottom after defecation of the children is a vital task especially in the cases of the 0-5 aged children. It is also a vital hygiene behavior by the mothers those who have to clean their child's bottom. Cleaning hands after cleaning the child bottom must to be proper hygienic way. But, many of cases, it is observe and seen that, mothers are ignoring the matter thinking that only the matter related to just for children. But, it is issue that, children feaces is no difference than the adult people. Both of these will show equal consequence of diseases.

In the research area, similar scenario is seen during the data collection. No additional care of concentrate hygiene practice to disinfect after cleaning the child bottom.

**Figure:37**
Practice of hand washing (Observation) after Cleaning childrens bottom




In the above chart (Figure 37), it is indicated after observing the hand washing practices after cleaning the child bottom that, only 6% mother use soap and wash both hands and 3% use ash and wash both hands (2 actual cases happened during observation where one mother use ash). It is noted here that, if any one

use only water and wash both hand or if any one use ash or soap and wash only one hand, both cases are not considered here as the proper hygienic behavior because, both cases are not proper hygiene practices.

After in-depth discussion with the mothers, they didn't think the matter sincerely and they have ignored the issue as the child stool can also be the causes of different diseases. But, for socialization of children, it is also important that, they can learn the hygiene practices like the other matters from family. It is relates the MDG goals also.[7]The international community, through the Millennium Development Goals (MDG), is committed to reducing deaths among children under the age of five by two-thirds by 2015i. Compelling evidence exists to suggest that improved hygiene behaviours amongst critical populations is an essential element in achieving this goal. Whilst progress has been made, a recent publication by UNICEF/WHO (2009) reports that nine million children under the age of five die each year – nearly three million of them in South Asia (UNICEF Child Info, 2009).

After this types of research intervention, it is an observation that, mothers are not well educated regarding the matter, they have no minimum knowledge and awareness on the consequences of child stool for what, they have to wash hand with soap/ash after cleaning the child bottom after child defecation. So, it is alarming very much to reach the MDG goals as a satisfactory level achievement while cleaning child bottom is an important habit and task of hygiene promotion.

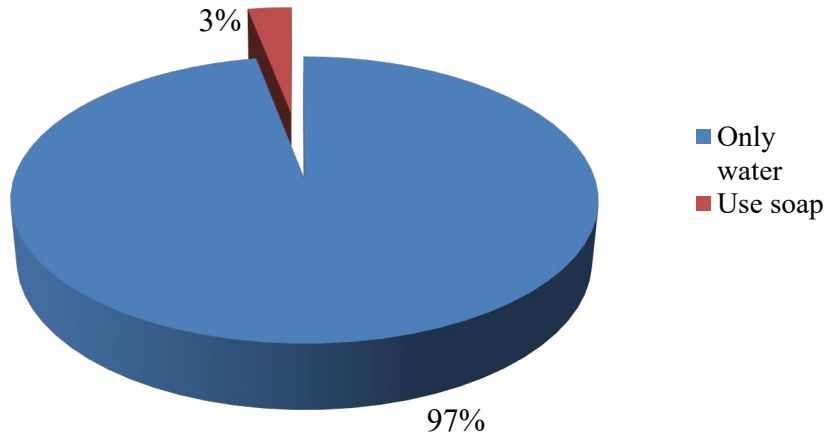
**Practice of hand washing before eating**

Hand washing before eating is an important task where both hand to be washed with proper cleaning agents. Both hands are continuously been riddled with multi germs or microorganisms those which anyone can't see normally. Those germs would be the causes of different diseases. In this intervention section, the

[7] A.J. Peal; SAHPW, Dhaka, 2010

research tried to find out the trend of hand washing practice through observation.

**Figure:38**
Hand washing trends of the respondents before eating




In the above chart (Figure 38), a very unsatisfactory status we can see where only 3% respondents take soap for hand washing before taking meal. Most of them wash only one hand and that is on the plat just before taking especially rice.

It seemed a common culture in this area, they wash only one hand on the plate with only plain water.

**Analysis the causes (Why they do this):**

With a deep conversation with them, it is find out that, they never feel that the hands may bring germ and those we can't see through only eye. That means, it is clear that they have no such type of knowledge or learning for which they are fully unaware on the issue. They reported that, some of them have heard such message from television and govt. field health worker, but they are not used to with such type of practice.

**Hand washing practices relating food (Preparation, Serving and Child feeding)**

Hand washing with soap or ash at critical times and this is crucial behavior to reduce the transmission of infectious disease pathogens onto hands.

The research observed hand washing practice physically in observation session in FGD among 20 women. It was explored deeply whether hands were washed, were both hands washed, whether soap was used or other hand washing materials at three critical times like before food preparation, before serving food and before feeding child.

In the FGD total 20 women have taken part those who were not able to show hand washing practice during household level data collection and they are the child owned mother who have child under five years aged.

The table 5.28 indicates the existing status of hand washing practices of the selected twenty women.

Table: 5.28

Existing status of hand washing practices of the selected women

| Episode | Only water | | With soap | | With ash | | Total |
|---|---|---|---|---|---|---|---|
| | (fq) | % | (fq) | % | (fq) | % | |
| Before food preparation | 14 | 70% | 2 | 10% | 4 | 20% | 100% |
| Before serving food | 17 | 85% | 1 | 5% | 2 | 10% | 100% |
| Before feeding child | 17 | 85% | 0 | 0% | 3 | 15% | 100% |

** The FGD conducted among 20 women.

In the above table (table no: 5.28), it is showing the FGD report among household women. As per the result of the FGD, 70% women use only water, 10% use soap and 20% use ash for hand washing before food preparation. Only water use is not sufficient to reduce bacterium. Germs can be contaminated

easily in the food that takes human body into diseases. But, soap or ash makes the hands germs free. In the FGD, the participants discussed openly that they have no such practices. They engaged many of times directly to prepare food without washing hands even with only water. Besides, they wash hand sometimes if prepare any curry or like blended food and if anything is raddled with hand then they wash hand but not the both hands in most times.

In the case of serving food 5% use soap and 10% use ash in hand washing purpose. But, 85% women reported that they don't wash both hands even single hands to serve or present food to other family members without need. The meaning of 'Need' they explained if anything raddled with hand(s), then they wash those with only water. Otherwise, they engage with the task directly. This is a harmful data for human health where no hygienic behavior is maintained remarkably.

Among the child own mother, they don't feel also the need of hand washing with cleaning agents before providing food or feeding to the children. Among them, 85% use only water- they stated. But, children can be the victims for any diseases easily. Mother is the big symbol of protection of the child from such incidence. But, they have the reluctant motive on this.

## 5.5 Comparative scenario (Knowledge VS Practice) of Hygienic Behaviour

### Practice of hand washing with soap/ash related to "Six Critical Times"

The simple act of hand washing with soap can reduce the risk of diarrhoeal disease by 42-45%, and interventions that promote hand washing 'might save a million lives'. Evidence is now also mounting that hand washing can significantly reduce the other 'major killer of the developing world' including Acute Respiratory Infections (Steve Luby, 2002/03).

The use of observation in this study to assess hand washing behaviours has provided an important and useful insight on the frequency in which hand

washing events occur and what individuals do on those incident for the six critical times. The study arranged a comparative study between knowing and doing on hand washing knowledge and practice of the respondents.

Table: 5.29

Practice of hand washing with soap/ash related to "Six Critical Times"

| Sl. | **Episode** | **Repo rted (fq)** | **Repor-ted (%)** | **Observation / In practice (fq)** | **Observati on/In practice (%)** | **Rem-arks** |
|---|---|---|---|---|---|---|
| **1** | Before food preparation | 67 | 67% | 30 | 30% | - |
| **2** | Before serving food | 15 | 15% | 2 | 2% | - |
| **3** | Before eating | 70 | 70% | 3 | 3% | - |
| **4** | Before feeding Child | 20 | 11% | 3 | 2% | 54 HH consid ered |
| **5** | After defecation | 76 | 76% | 24 | 24% | - |
| **6** | After Cleaning child bottom | 39 | 21% | 9 | 5% | 54 HH consid ered |

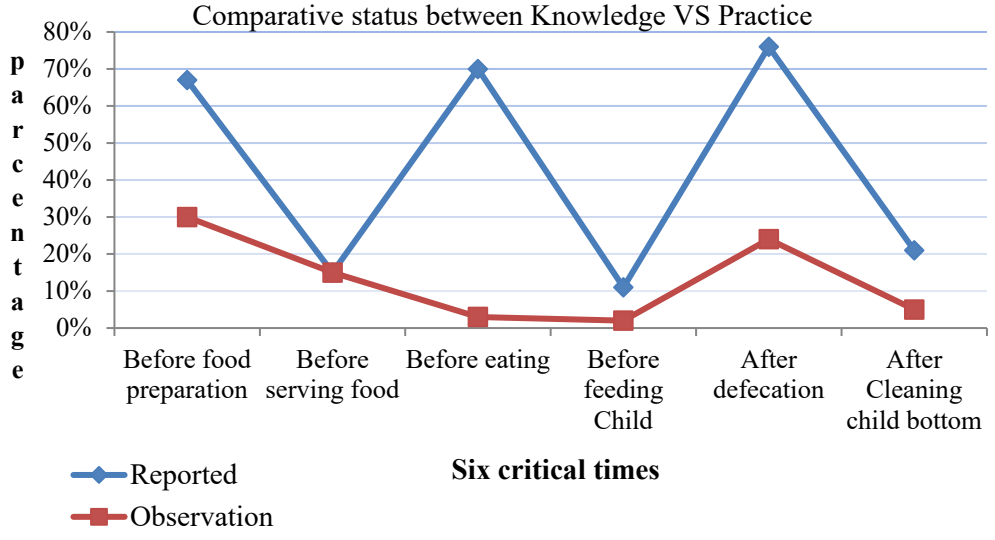
**Multiple answers considered

The table 5.29 shows the hand washing practices in six critical times by the respondents. If it can describe then it is seen that all the six category practices, the respondents reported high percentage what they do as per their responses. But, in practices, all of these come down what they have reported. These show very low level performing status of their hand washing habit which is directly linked with their health status.

The status also we can see in the graph below. In this graph, it is seen that reported line is upward level and it is low downing while the practice question is came up.

**Figure:39**

Comparative status between Knowledge VS Practice




It has a clear scenario at the above graph (Graph 39) that, In spite of peoples' a satisfactory level of knowledge and they have reported well, but there is often a gap between knowing and doing. For example although over 67% of respondents reported that they wash hand with soap/ash before food preparation but, they actually have only 30% in proper practice, 15% answered they used to hand washing with proper materials before serving food; however only 2% of them in appropriate habit in practice. As per reported, 70% of them use soap in washing hands before eating while only 3% are in proper habit and practice. 11% lactating mother reported that they wash hands with appropriate cleaning agents before feeding child while 2% of them are appropriate practice and used to. About after defecation, 76% reported, they use soap/ash where as 24% only in practice; also 21% mother had reported that they use soap/ash properly after cleaning their children bottom; however only 5% have shown appropriate practice and habit for the function.

These data indicates the narrow condition of the area where appropriate hygiene practice is truly absent. But, there is no suspicion that, Hand washing with cleaning agent is the most effective and inexpensive ways to prevent water, sanitation and hygiene related diseases that are responsible for child deaths. Therefore, promoting and practicing hand washing is the most appropriate and effective intervention for hygiene behavior in the developing countries (Ahmed & Begum, 2010).

## 5.6 Hygiene practice during defecation: Using "Slipper"

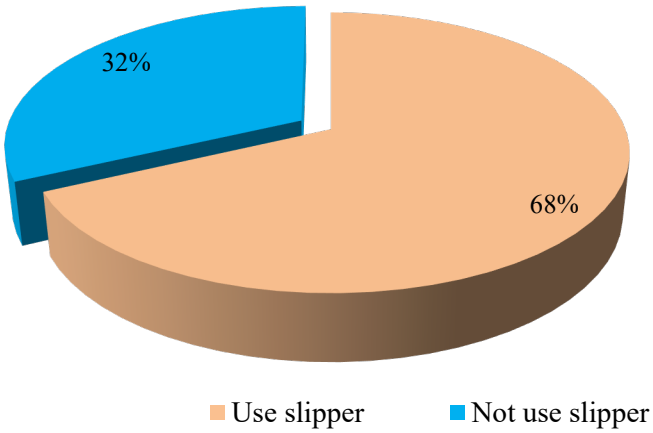
### Reported statement of the respondents regarding use of slipper during defecation

Slipper using is a significant function of hygiene practice towards obtaining the hygienic behavior. Worms may get inside our body by using defecation bare footed. This is one of the important areas which diseases and health condition are depends on.

It is an important that, only hygienic latrine and use of soap/ash not at the household level could not ensure the sound environment, sound health and hygiene situation by reducing risk of diseases related to improper sanitation. Sandal or slipper use is one of the important parts of better hygienic practice.

This study revealed that what are their status of slipper using and their reported statement. The research has discovered through physical observation the using trends and existence of slipper at the place of defecation (latrine and surrounding areas) in the household ground.

**Figure: 40**
Reported statement regarding slipper use during defecation




The above chart (Figure: 40) is showing that the respondent reported that 68% of them use slipper during defecation while 32% reported their trends of not using to.

Generally, it seems better as per their statement related to using slipper during defecation, but, the research couldn't generalize the result without observing the physical trend/conditions at the household ground.

Therefore, the study had needs to conduct physical observation at the household level at who had reported that they use slipper or sandle during defecation.

**Actual observation regarding use of slipper during the defecation**

To make a better hygienic and healthy environment, Slipper using is a must condition during defecation in hygienic way. Keeping this view, the research covered physical observation at the household level for exploring the real condition or trend of using slipper among the respondents those who use hygienic latrine and reported regarding use of slipper during defecation time.

Table: 5.30

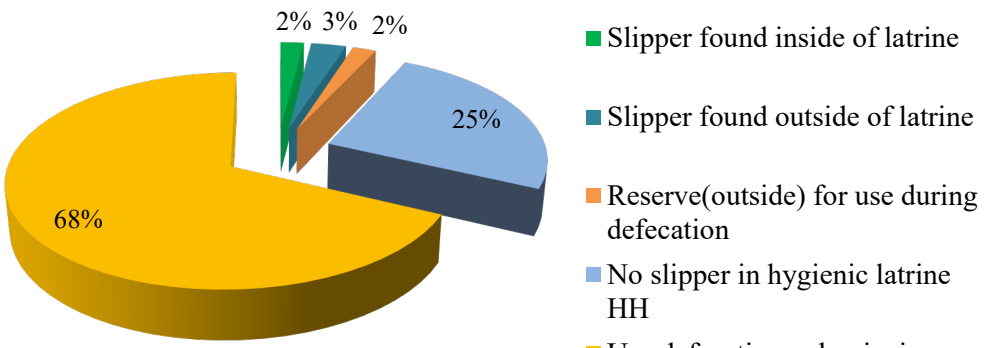
Existence of Slipper positions in the Latrines

| Event | Frequency | % |
|---|---|---|
| Slipper found inside of latrine | 2 | 2% |
| Slipper found outside of latrine | 3 | 3% |
| Reserve(outside) for use during defecation | 2 | 2% |
| No slipper in hygienic latrine HH | 25 | 25% |
| Use defecation unhygienic way | 68 | 68% |

The above data is shown through the chart below.

**Figuer: 41**

Actual Observation of using slipper during defecation



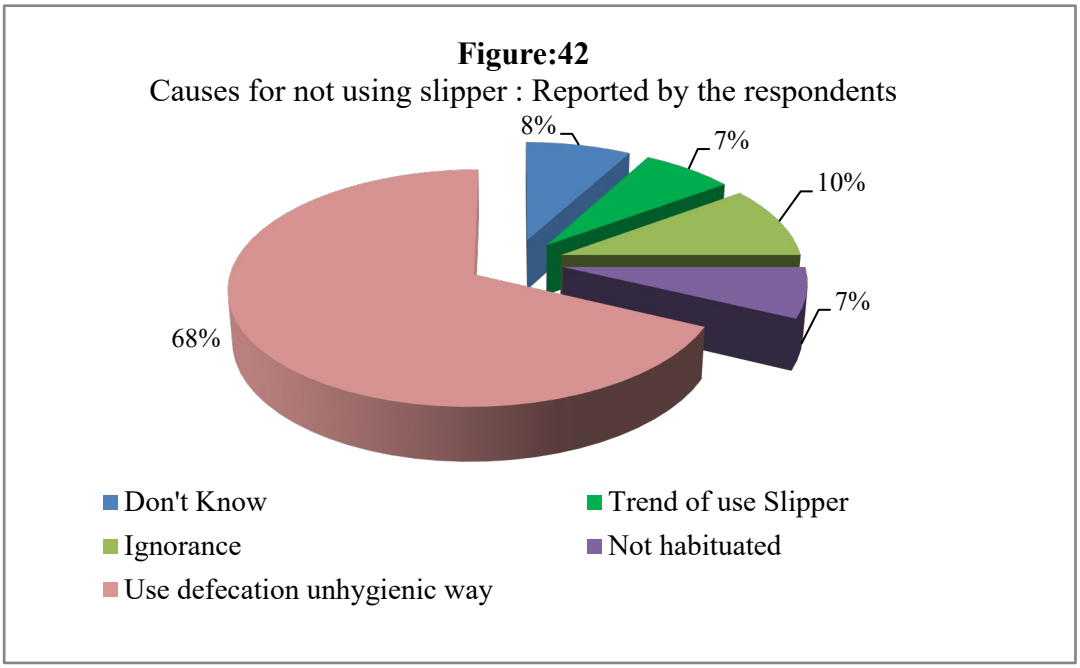

This observation (chart 41) is made only in the households those who are use hygienic latrine (32% of total 100 households). Generally, it is found that the village women are not interested to use slipper especially in the daylight in their house hold. They are working with bare foot and they feel easy with those. It is found and fact in not the women only, all the household members are familiar with such habit. They wash legs and take slipper after sun set. But major of the women are take slipper just before taking bed at night. They feel easy to cook and finish other domestic works without taking slipper. During the

time, if they feel that they need to use latrine, they go to latrine without taking slipper or any device for this. It is a sign/indicator of their habit which is been made as a traditional things in the locality. And it is found through conversation with them in interview and FGD with the rural women.

**Analysis the causes:**
**Why they are not using slipper during defecation (Information of Hygienic Latrine owning House hold)**

Knowledge, Attitude and Practice (KAP) has a correlation with improve hygiene situation and health status as well. The study has identified the causes for such type of habit where only at 7% household been observed with slipper inside, outside or nearest to the latrine for using during defecation. It is explored that, though they have hygienic latrine, not so clean, they have no sandal or slipper and they have no plan or hesitation for this. They have no tendency to use slipper during defecation. They don't know in depth the consequence of not using slipper, not habituated and no deep knowledge about the same. It is observed that, they are totally in dark and not aware of slipper using. But, the 7% became known about the habit from radio and village doctor while they informed regarding the consequences for not using the slipper.

**Figure:42**
Causes for not using slipper : Reported by the respondents



The chart (Figure 42) indicates their opinion after been asked the question that why they are not using slipper. As per their statement, 8% don't knows about the essentiality and consequences of this type of habit, 10% knows a little bit about the usefulness but ignore to do the task, 7% not habituated while they haven't received such related message to make the practice in habit. If we analyze the total condition of using slipper, we can see only 7% household maintain proper hygienic environment while slipper using a personal hygienic behavior which promotes the environmental hygiene as well.

**Habit in using slipper among the Households with unhygienic latrines**

This research has found out that total 68% household use defecation through unhygienic way. It was an exploring whether the women and their family members do use slipper or not during defecation though their latrines are not fully or partly hygienic and some of them use defecation under open sky. As per the received data from the study, 35% household uses open defecation regularly. They not think about the matter or consequences of their open or unhygienic defecation in-depth- it is observed. Besides, 33% household are using unhygienic latrine in their household premises. It is explored that 3% of the unhygienic latrine owned households are using slipper during use of their latrines. The slippers were reserved outside of the latrines-it is found. It was an asking to the respective household women that they are using unhygienic latrine but, using slipper (3% HH)-why? They answered that, they know that the slipper use is a must to protect the worm and other kit for diseases, but they not know or they have no such consciousness that how the latrines should keep or use in hygienic way (water seal or such types) which is good for health and to protect different sources of diseases.

## 5.7 Information about Diarrhoea:Diarrhoea is covered the area

Diarrhoea is a clinical syndrome of diverse aetiology. It may be defined as increased frequency of motions whose consistency vary from loose/liquid (taking up the shape of the container) to watery stool. Passage of frequent loose or liquid stool with or without blood and /or mucus is the main feature of acute diarrhoea. Acute watery diarrhoea begins abruptly and lasts for less than two weeks whereas chronic or persistent diarrhoea episodes can be divided into two broad groups based on the stool character-non-dysenteric group and the invasive dysenteric group. presence of blood and mucus in stool, which often is accompanied by fever, differentiates dysenteric episodes from non-dysenteric ones in which blood is absent in the stool but may contain little or no mucus (Community medicine and public health).

Diarrhoeal diseases are responsible for a substantial proportion of childhood morbidity, particularly in the developing world. Over three million deaths occur due to diarrhoea through the world. Most of these occur in Asia, Africa and Latin America, Moreover, diarrhoea is the main cause or perpetuator of malnutrition in children, and diarrhoea patients occupy about 30% of paediatric beds in hospitals of developing countries.

Bangladesh and other countries of South-East Asia are well known in the history for giving rise to numerous epidemics of cholera which often became pandemics by spreading to many other countries. However, during non-epidemic period it is not cholera but other causes of infectious diarrhoea and dysentery that cause the highest morbidity and mortality (Community medicine and public health).

Despite the existence of expensive and efficient means of treatment, diarrhoea kills more children than AIDS, malaria and measles combined, according to a new report by UNICEF and the World Health Organization (WHO). Other

research finds that diarrhoea kills 1.5 million over-five-years-olds-mostly adolescents and the elderly-in Africa and South-East Asia, more than three times more than previously thought. There is now and urgent need to shift attention and resources back to treating and preventing diarrhoea, the two UN organizations say. (nrc newsletter-December 2009, NGO Forum).

[8]Diarrhoea, intestinal worms, typhoid, cholera and trachoma are some of the common infectious diseases related to poor water, sanitation and hygiene (WASH). They cause serious illnesses and death. About 4 billion cases of diarrhoea cause 1.8 million deaths per year; over 90 per cent among them (1.6 million) are children under five. Repeated episodes of diarrhoea make children more vulnerable to other diseases and malnutrition.

Some 88 percent of diarrhoeal deaths worldwide are attributable to unsafe water, inadequate sanitation and poor hygiene. Only 39 per cent of children with diarrhoea receive the recommended treatment (nrc newsletter-December 2009, NGO Forum).

Diarrhea is a major diseases contributing to the childhood malnutrition and mortality in Bangladesh. It is true as day light today that diarrhea is the dead list killer to human life. About 50,000 children die every year due to diarrheal diseases in Bangladesh (WatSan information booklet; NGOF, 2011).

Besides, [9]of all water born diseases, the multiple pathogens and parasites that cause diarrhoea are the biggest killers. No vaccine will ever be able to prevent all of these causes. Good water and sanitation services cut them off at their roots. Many waterborne diseases are prone to explosive outbreaks. Outbreaks of cholera, for example, are reported in more than 50 countries every year.

As a significant issue related to Water, Sanitation and Hygiene, this research has discussed vastly about diarrhoea and its causes, consequences and long term effects in the study area.

[8] Qutub, Butt, Bashir, Shabbir-Pakistan; Presented SAHP workshop, Dhaka-2010
[9] Dr. Margaret Chan-WHO Director General, Budapest Water Summit, 9 October 2013

**If someone has been affected by Diarrhoea in last one month among the families**

Diarrhoea is the dead list killer to human life. It is highly affected especially in Bangladesh as well as in South Asia. It is the one of best indicator to identify the health and hygiene status of general people. That is why; Diahorreal diseases reduce productivity of human body. It reduces productive time, School time for student and reduce creativity of the potential personnel.

The research work was an objective that how many numbers of people have been affected by diarrhoea, dysentery in a family in last one month from the date of data collection and what is the existing condition of the patient/affected persons.

Table - 5.31

Diarrhoea, Dysentery condition among the households

| Diarrhoea /dysentery condition in last one month | Frequency of Patient(s) | Number of household(s) |
|---|---|---|
| Affected family members (Both child & adult) | 28 | 27 |
| Free from diarrhea (family/household) | - | 73 |
| Total | 28 | 100 |

The table 5.31 showing that, 28 persons is affected from diarrhoeal diseases from 27 households out of selected 100 during last one month from the time of data collection. 2 (two) persons are affected from same household several two times. This data indicates a very vulnerable health conditions and a poor syndrome of sanitation and hygiene consciousness also.

**Scenario about Diarrhoea/dysentery among children:**

Children can easily be affected by diarrhoea and dysentery, That is why they are always with a careless hygiene condition and not conscious enough hygienic behavior. Dirty or rotten food, germy food makes a child affected by diarrhoea and dysentery largely.

It was an exploring through this study, which number of children is affected among the affected total people by diarrhoeal diseases during last one month from the time of data collection. The following data is found from this type of exploring.

Table - 5.32

Children affected by Diahorrea among affected households

| **Affected children** | **Frequency** |
|---|---|
| Children (0-5) | 08 |
| > 5 Years men/women | 20 |
| Total | 28 |

The table 5.32 shows that among 28 affected members, 8 children have been affected by diarrhoeal diseases in last one month from the time of data collection. It is most alarming scenario in the study area as well as for the health status of Bangladesh.

**What are the present conditions of the patients:** During the data collection of the study, it was an exploring issue which was to follow-up that what are the present situations of the diarrhoea affected patients/persons of the selected household.

Table - 5.33

Follow-up conditions of the Diahorrea affected patients

| Follow-up Condition | Frequency |
|---|---|
| Got Cure | 24 |
| The patient(s) is under treatment | 04 |
| Total | 28 |

In the exploring, it has been identified that a total 28 persons have been affected amongst them, 24 persons (6 children) have been cured and the rest 4 persons (2 children) was under treatment at the time of the interview. But, the 24 persons those who are as cured as the respondents reported, found very weak and unfit to move or work easily. They are not able to engage with any tasks of their daily activities. Among the cured people, 6 children among who, 4 are school going. They reported that, they feel weak much and not feel easy in school class. They have missed class several times and days during and after the disease.

The 4 patients those who are in under treatment, seen not able to work and move with physical strength. Two of them are day laborers who are seemed very weak and the rest two are children under 5 those who seemed weak much also. All of them are getting medicine/treatment prescribed by village doctors.

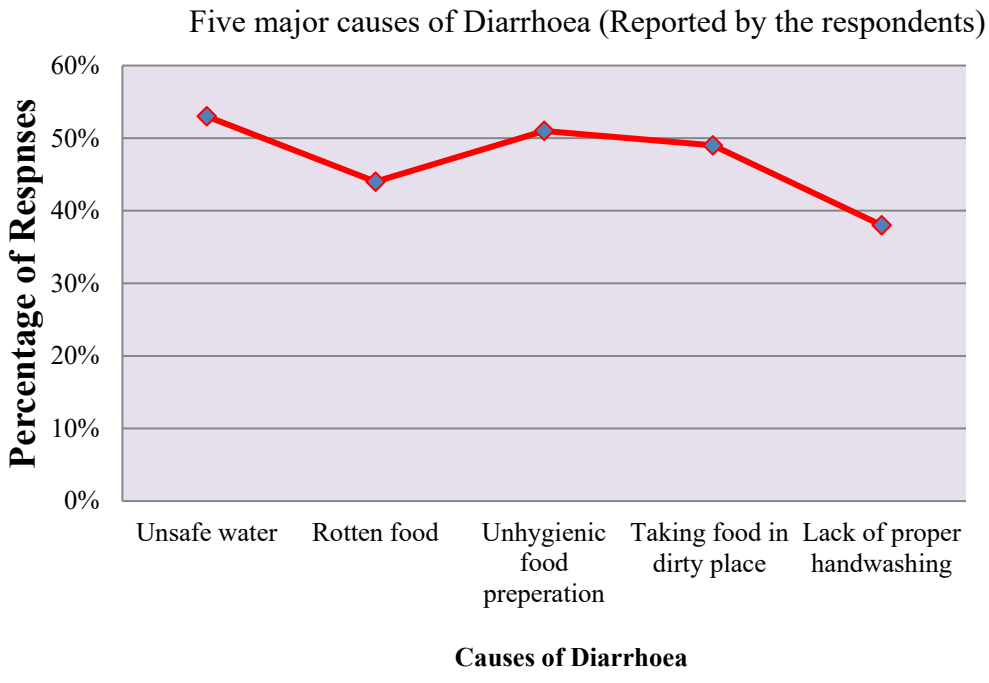
**Why Diarrhea: Discussion with respondents about the root causes**

Diarrhoea remains a major killer disease. Over 65 million episodes occur annually among under five years aged children. An average child in Bangladesh suffers 3-4 episodes of diarrhoeal diseases every year (National Sanitation strategy 2005, Bangladesh).

The respondents assess themselves and found out why diarrhea occurs and why are becoming weak and productive less for the major illness. It was an open-ended question to the respondents for finding out five remarkable causes for diarrhea. All the respondents done assessment and find many of causes for the same.

The study got five major causes of diarrhea which reported by the respondents:

**Figure:43**




The chart (Figure 43) indicates that the statement which the respondents have reported about the causes (they did multiple answers) of diarrhoea and diarrhoeal diseases. As per their statement stated in the graph that, 53% answer came for the cause of unsafe water, 44% shows for taking rotten food, 51%

answer came for food preparation in unhygienic way,49% answer indicates taking food in dirty places and 38% answer identified the cause lack of proper hand washing as the cause of diarrhoea and diarrhoeal diseases.

Some of respondents reported that, they don't know the causes actually why they are being affected by Diarrhea or diarrheal diseases.

After analyzing the causes, it is seen that, 3 of 5 causes are directly linked with hygienic behaviour-Unhygienic food preperation, taking food in dirty place, lack of proper hand washing. These causes have been proved while in the other sections discussions of this study has the examples for unhygienic situation by the respondents.

In the study it was a question that if anybody is dead due to affection of diarrhoea in last one year amongst the selected family or in the village. All the respondents and the a major number of villagers informed that nobody is dead in the village or amongst the selected families for diarrhea, but they reported significantly that they had to spent a lot of money, industry and time for making cure the diahorreal patients. It was a large hazard to them-they opinioned.

**Cost for Diarrhea**

[10]The high diseases burden translates into high health care cost. It is estimated that the people of Bangladesh spend no less than taka 500 crore annually to cover physicians fee, medicine and travel cost in treating the major water born diseases. The cost would be much higher if the loss of income, time spent for patient care and effect on child development are factored in. Diahorreal diseases in Bangladesh cause the loss of 5.7 million Disabilities adjusted Life Years, 61% of total DALYS.

[10] National Sanitation Strategy-2005, Bangladesh

The diarrhoea affected people of the study area have suffered most for treatment cost of the incidents. The table indicates below about tentative cost statement of the patients.

Table - 5.34

Cost statement of Diahorrea affected patients
(reported by the respondents)

| **Age level of Patients** | **Quantity of patients** | **Treatment and others Cost (Tk)** |
|---|---|---|
| Under 5 Children | 08 | 9145.00 |
| Over 5 years old | 20 | 13950.00 |
| Total | 28 | 23095.00 |

The table 5.34 shows that, a total 8 persons of fewer than five years old children have been affected with diarrhea. They spent tentative a total of Tk. 9145.00; On the other hand a total 20 families of over five years old men & women have been affected by diahorrea and they spent tentatively a total 13950.00 Taka. The spent is including travel cost, accommodation, food and other related cost of patients and attendances.

Diahorreal diseases make a nation unproductive, looser and finally poor. It is a significant stairs towards poverty. So, to make a productive and innovative nation, at first steps should be taken to prevent and protect the diarrheal diseases. [11]The poor are the hardest hit by the sanitation related diseases, Loss of income and productivity due to the diseases may push a poor family further into poverty and debt, thereby perpetuating the cycle of poverty.

[11] National Sanitation Strategy-2005, Bangladesh

**Defecation status of the Diarrhea affected Families:**

In the research, we have found out that a total 28 persons have been affected from diarrhea in latest one month. It was a matter of exploring that what the defecation condition of the affected persons/families that they are used to. Because, it is mostly important factor of causes of diarrhoea and it influence over other causes mostly. As per physical observation at the household level of the affected persons, only 3 households have latrines found at their household ground but those are not hygienic, they use latrines without water seal. Among others, 9 households have pit latrines (3 of them are open) which is not hygienic also, 2 of them use shared latrine with others house sometimes, not regular; they reported that sometimes they use open defecation. The other affected families have no latrine and they use open defecation.

It is interesting that, at the first time of discussion, they did not agreed about their diseases as a result of their poor and unhygienic method of defecation. Moreover, they treated this as natural disease while finally some of them agreed that their lack of knowing and ignorance are the remarkable cause of such type of diseases like diarrhoea or dysentery.

## 5.8 Food,Environmental hygiene and Sanitation related Observations

[12]It is seen that there are some basic socio-economic factors like religion, education and level of economic status which play a pivotal role in conditioning the perception and practice of hygiene. Perception of the community on health and hygiene issues has a strong influence on practice of hygiene and both together along with provision of sanitation facilities have significant impact on reducing burden of communicable diseases like cholera, diarrhea, typhoid, hepatitis, etc.

[12] **"Study on Perception and Practice of Hygiene and impact on health in India"Kumar Jyoti Nath, Barenyo Chowdhury, Anish Sengupta [India], South Asian Hygiene conference, Dhaka-2010**

The study has intervened in the area of kitchen and the places where of food related functions hold regularly in a household level. It is very important that where and how the food is prepare, cook and be distributed. All of these functions are significant to measure the personal and environmental hygiene and the food hygiene also those which are inter-related to the health status of the selected households.

**Place of food preparation**

Place for food preparation is a vital matter while food is a significant element to survive of human life. Food needs to be prepared and take in a hygienic and confined from any sort of rotten or dirty free place.

The study has a different scenario observed that a key number of families are using open place for cooking and preparation of food. In the interview they expressed satisfaction with using the same easily and most of them recommended that it is a tradition in the area. In observation found that the villagers are well habituated with the function.

Table - 5.35

Distribution of data regarding place of Food preparation

| **Place of food preparation** | **fq** | **%** |
|---|---|---|
| Fixed place/Kitchen | 39 | 39 |
| Open place/Courtyard | 61 | 61 |
| Total | 100 | 100 |

The table – 5.35 shows that maximum (61%) households use open place/courtyard for preparation/cooking food. Only few (39%) use fixed place or kitchen for the function.

If the food preparation and cooking conduct under open sky, feaces of flies or anything would be riddled with that which is fully unhygienic and mostly

harmful to human body. That's should be causes for diarrhoea and other related diseases. But the villagers are not interested with this statement or not agreed with the advice.

For those tasks, all people, mainly children should be victims mostly which is very crucial sign for their total health.

**Is the Place of cooking Clean/hygiene friendly?**

Food preparation in clean and hygiene places is a necessity pre-condition of hazard free food as well as favorable health. It is the central point of view for hygiene practice particularly in domestic life.

The study was a point of findings that whether the place of the household's food preparation or the places of cooking are clean or hygiene friendly or not. It indicates the significant sign of health and hygiene status of common people in the area.

Table - 5.36

Observation the condition of Food preparation places

| **Observation of Food preparation Places** | fq | % |
|---|---|---|
| Clean & Hygienic | 32 | 32 % |
| Unhygienic/Polluted | 68 | 68 % |
| Total | 100 | 100 % |

As per the table 5.36, the research found out that maximum places (68%) of food preparation are unhygienic and polluted.

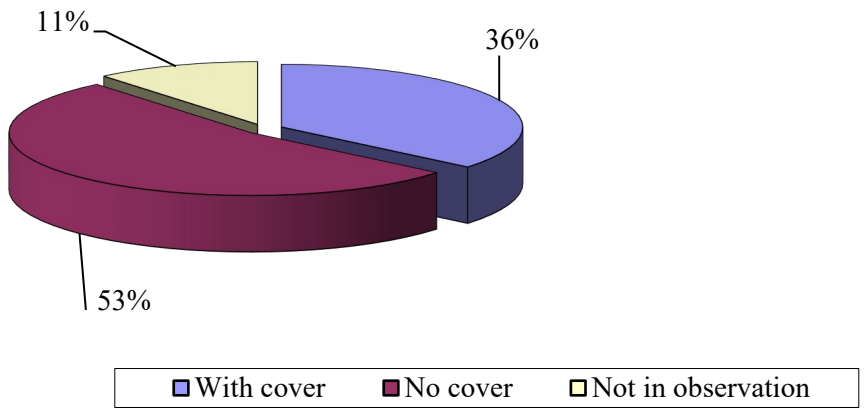
A scenario is kept in a household that in the kitchen there are two spaces in the room. One corner is use for cooking and another is fixed for cow shelter. There is only 6-7 feet distance between the two corners and it is more disappointing findings in the study.

Astonishing that, the household owner is taking it as a normal factor and his opinion that he was bound to do this arrangement while he has too financial crisis to build separate arrangement for those. At night, the cows take shelter in a corner of the shade while at the same time cooking is running in another corner. Related to this matter, Opinion of the household owner is that, they are not facing any problem for that. Though he reported that 5 members of the family faced 4 times (several persons) dysentery, diarrhea and worm related problem in last six months. But, they don't acknowledge these hazards caused for the said diseases. It is true that this is fully unhygienic and viruses from the hazard points must be contaminated to the others.

**Food covering conditions**

Cover food is a must to avoid and protect flies and the same related obstacles which are significantly danger for human body. The research has recognized in early that major proportion of the selected households (61%) use their yard under open sky for preparation or cooking food. In spite of that, It is tried to find out through this research that how they cover their food or not at all, how

**Figure: 44**
Covering food & Drinking Water (Observation)




they keep their drinking water, food materials etc.

Chart (Figure 44) indicates the observation status of covering food and drinking water at the selected household level. In the observation, it is found

that only 36% family has covered their food and drinking water. They reported that, they do such task regularly to protect dirty, flies and other insects. On the other hand, 53% family is not habituate to cover the same. They shown their confident for no hazard facing due to uncovering food and drinking water in their households. Here is also seen a motive of 'normal taking' the matter to the respondents.

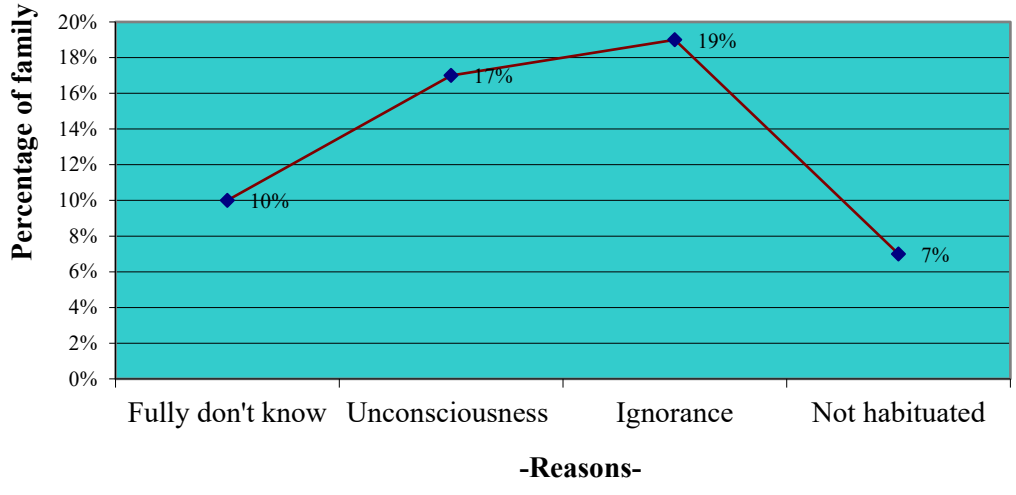
**Reasons for not keeping the food and drinking water in a hygienic way**

Food safety is extremely important for everyone's health. Food is easy to cross contaminate if precautions are not taken. For food safety, food covering is important and a significant precondition. Without covering, germs and disease would spread quickly with the food. This would make people get sick and die more often, and would make for a disgusting world too.

The research has explored the appropriate answers from the respondents the reason for not covering food and drinking water in their household and the kitchens as well.

**Figure: 45**

Reasons for Not covering food & Drinking water




Among the families those who are not using any cover for keeping in hygiene way their foods, the research has found (in the Figure 45) that, for lack of knowledge (they are in fully in dark and don't know that they have to do this,

they have no minimum knowledge on the issue), unconsciousness (in this group, most of them deep or lightly know the matter and its consequences, but they don't do the habit in practice), ignoring tendencies (that means they do this but not continually, some of days they don't make it in practice) and not habituated with the tasks of covering food and drinking water in hygienic way (though they know its consequences) are the main causes.

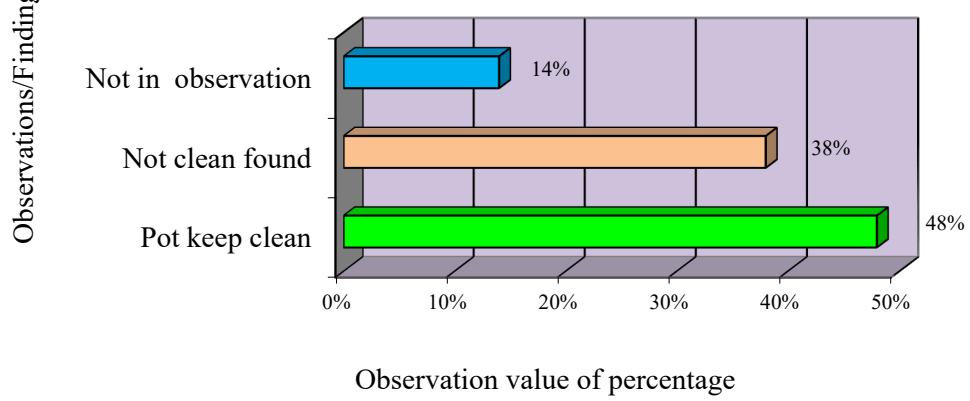
If we criticize the above conditions, we can deeply think and find that an in-depth knowledge level gap is existing here. Among the four groups (as per respondent category), none are easy with the nature and consequences of no covering the things. If we count only the three category-Unconsciousness, Ignorance and not habituated groups, then we can find all of them have little or deep knowing about these. But, they are not keep these in practices in their daily dealings. We can say, they have not deep learning about its result (whatever it is negative or positive) and for this, they have no consciousness, they do ignore to do this and they have no habit to do the practices.

**Cleaning conditions of food containers**

It is a pre-condition for ensuring hygiene that - keeping clean the containers of food, drinking water and the palates or pots for taking food. During the data collection it is observed with additional implication. The following status is found.

**Figure: 46**

Keep clean the containers of food (Observation)




The data (Figure 46) is regarding cleanness of containers for food and drinking water. Though the major percentage of the families (48%) found that they are keeping in clean and hygienic way their containers for food and drinking water, but 38% is a remarkable figure of the households those who are not doing the same. But if we consider the observed situation, we obviously say it as a disappointing because, for promoting and ensuring full hygiene and diseases free environment, totally the families as well as the persons have to maintain the cleaning practices. The 38% families found no hesitation or self criticism for not continuing the practices. They reported that they will try to do the same in the next.

**Causes for existing conditions (Why they are not keeping clean the containers for food):**

After asking the question and exploring the causes from the respondents, the study found out the following segmental causes.

Table - 5.37

Causes for existing conditions of Un-Hygienic food containers

| **Causes** | **fq** | **%** |
|---|---|---|
| Lack of Knowledge | 12 | 12% |
| Un-consciousness | 12 | 12% |
| Due to negligence | 9 | 9% |
| Not habituate | 5 | 5% |
| keeping in clean and hygienic way | 48 | 48% |
| Not in observation (during the home visit) | 14 | 14% |
| Total | 100 | 100% |

The observation has been occurred among the total 38 families due to lack of knowledge of 12 households, un-consciousness of 12 households, due to negligence of 9 households and last 5 households reported that they are not habituated with the functions at all.

The depth of hygiene knowledge, practice and habit of rural women as well as the total household members is very poor- this is another sign of that.

## 5.9 Distance between latrine and Tube wells of the families

The study has an important issue of its observation part is the distance between Latrines and Tube wells.

Generally latrines of any kind should be located at least 50 feet (15 m) away from a source of water supply, and should be at a lower elevation to prevent the possibility of bacterial contamination of water supply. Where possible, latrines should not be located in areas usually subjected to flooding (Community medicine and public health)

WHO prescribed standard that there should have minimum 30 feet distance is eligible between tube well and latrine. Without mentioning this distance, the water of tube well might be contaminated with faeces; that is highly harmful to human health. All of respondents don't know the ideology and they generally assume a distance by their own and take steps to install tube wells and latrines. Some of cases, they installed the same without thinking or realizing the matter.

Table - 5.38

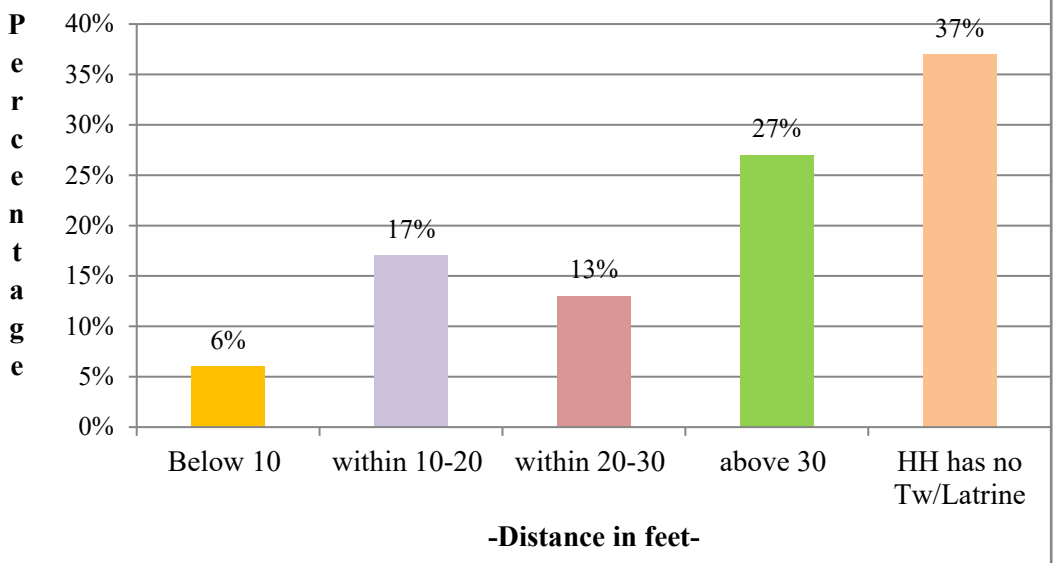
Status of distance between Tube well and Latrine of the Households

| Distance | frequency | % |
|---|---|---|
| Below 10 feet | 6 | 6% |
| within 10-20 feet | 17 | 17% |
| within 20-30 feet | 13 | 13% |
| above 30 feet | 27 | 27% |
| HH has no Tw/Latrine | 37 | 37% |
| Total | 100 | |

The table 5.38 indicating the statistics regarding the matter can give idea about the issue; the area (of 100 HH) has a total 63 tube wells among the household levels, the rest 37 households share with others tube wells for their water needs. But, there have 6 tube wells located with below 10 feet distance from latrines, 17 tube wells are between 10-20 feet distance, 13 tube wells are between 20-30 feet distance, 27 tube wells with about 30 feet distance. It is a result of only 30 or above 30 feet tube wells consists of safe distance from latrine.

This analysis giving a message that, the selected households are drinking unsafe water regularly while they have no knowledge on the matter and no consciousness on that. As a result, they have no common practice to keep their drinking water safe by installing the tube wells in safe standards distance from defecation places.

**Figure: 47**
Distance between Latrine and Tube well of the Households




Even the households those who have their tube wells (30 households) situated far from latrine and keeping safe places, they don't know the consequences of the matter. It is explored that, they have installed tube wells randomly without thinking the matter seemed safe from the latrines. It also indicates the poor knowledge or unknown conditions of the respondents regarding the issue.

It is a matter of thinking here that, Latrines/defecation places shouldn't be much far from household ground. One of the consequences of this is the inconvenience for users, especially at night time or when it is raining. When the toilet is far from the house, especially the case for the women, there may be a greater tendency for neglect and for it to deteriorate into a filthy, stinking place. Most of the latrines found in the study area are located on the river bank those which are too far from the households, those latrines found less used mostly.

### 5.10 Place for preservation the household Garbage

If we think about environmental hygiene or environmental sanitation, we have to consider at first the sanitation conditions, then the other features of the surrounding area of the respective unit. In the observation part of this study, every household has been considered as the unit of environmental sanitation.

The study found that the selected families positively preserving their households garbage in fixed place majorly.

Table - 5.39

Place for preserving household garbage of the Families

| **Place** | **Frequency** | **%** |
|---|---|---|
| Fixed place/hole | 76 | 76% |
| Pond/River/Khal | 4 | 4% |
| Any where | 20 | 20% |
| Total | 100 | 100% |

According to the table 5.39 here is an observation that for keeping garbage in a fixed place (76% HH) due to some perception is exists in the mind of the respondents as well as among the household members. That is the garbage is being destroyed/mixed day by day and become compost finally. According to them, the compost is mostly essential for cultivation as well as home gardening. From that sense the respondents and households members are keeping the garbage in a fixed place. In the interview and observation, it has been observed that they gave priority to make compost other than the issue of hygiene. Therefore, there is no cover on the garbage where flies, insects sitting and moving everywhere of the household. These are the caused for different diseases occurring into human body.

**Reason for their perception:** It is clear that similar to the others questions, the perception of the respondents is low on WatSan and hygiene issues. They are not keeping the garbage towards compost fertilizer through hygienic way. It is seen that the household garbage is placed not into any fixed hole or place but

open and without any cover. Some of them have very little insufficient cover on the garbage to protect the hazard. They reported that they never thought deeply the environmental hygiene issue.

## 5.11 Information of Menstrual Hygiene:

### What things they use in the menstruation period

Maintain menstrual hygiene closely is the pre-condition of good health of the women especially. While good hygiene and better health are directly related, poor menstrual hygiene among women can cause urinary tract or other infections. Women refrain from seeking medical remedies or advice due to non-availability of female practitioners in rural area and thus many times serious infections are left untreated (Fernandes, 2010). Reproductive tract infections, which has become a silent epidemic that devastates women's life, is closely interrelated with poor menstrual hygiene. Therefore, proper menstrual hygiene, correct perceptions and beliefs can protect the womenfolk from this suffering (Dasgupta and Sarkar, 2008).So, safe, hygienic menstrual practice should start from early life. Despite major developments in the hygiene and sanitation sector in recent years, the menstrual requirements of women and adolescent girls have been ignored (Ahmed and Yesmin, 2008).

### Context of South Asia:

Let have a further discussion which will be supported by exploring prevailing knowledge, attitudes and practices around menstruation in the context of South Asia. A number of studies show that whilst the majority of girls are aware of menstruation before menarche (their first menstrual period), a significant number are not, and most girls do not fully understand the physical process of menstruation. A survey of 160 girls in West Bengal (Dasgupta and Sarkar 2008), India found that 67.5 per cent were aware about menstruation prior to menarche, but 97.5 per cent did not know the source of menstrual bleeding. In Nepal, 92 per cent of 204 adolescent girls surveyed had heard about

menstruation, but the majority of respondents reported that they were not prepared in any way for their first period (WaterAid in Nepal 2009). In Bangladesh, a survey (1373 adolescent girls from 22 schools, 11 districts in Chittagong division) said, Maximum number of survey respondents (96%) reported that they had known about menstruation before their menarche (I. B. Muhit, S. Tasneem Chowdhury; June 2013). A common belief amongst Gujjar girls (a semi-nomadic tribal group in Jammu and Kashmir) was that menstruation was the removal of bad blood from the body necessary to prevent infection (Dhingra, Kumar and Kour 2009).

The evidence from these few studies suggest that in South Asia formal education about reproductive health is very limited (WaterAid in Nepal 2009).

The awareness of practices and access to facilities needed to maintain good hygiene during menstruation were generally found to be lacking. In Bangladesh, India and Nepal the majority of women in rural areas use reusable cloths to absorb menstrual blood.

In the West Bengal,11.25 per cent of girls used disposable sanitary pads with availability and affordability being stated as the key obstacle to more widespread use (Dasgupta and Sarkar 2008). In Nepal use of sanitary pads was higher among girls in urban schools (50 per cent in contrast to 19 per cent in rural schools).

In Bangladesh,95% of women and 90% of adolescent girls use rags during menstruation(Rokeya Ahmed and Kabita Yesmin,2008).

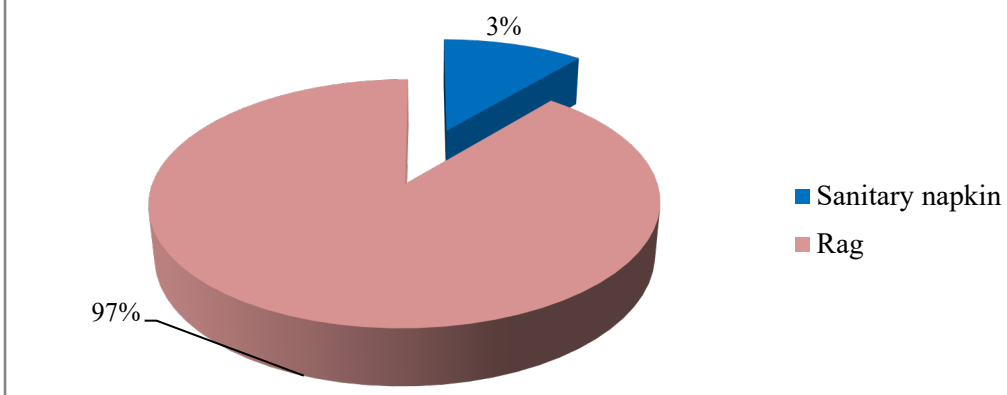
In the above discussion, we have seen a very narrow scenario over the South Asian region in overall management of menstrual hygiene.

**What about from the study area:** Now, we have to look at the study area where we have tried to find the prevailing scenario.

There are 54 fertile women exist among the selected 100 house wives from one hundred households in the study area. A FGD held among 20 reproductive women from 54 in the area where they have stated different opinion against different conceptual and knowledge related questions openly. Besides, some of observation related data have been collected during the home visit for observation and interview. In this discussion on menstrual hygiene, both sources data are used in analysis.

They reported that 98% of them had known about menstruation before their menarche. From whom they had been informed about such incidents-they stated about this asking that, they informed from their mother, aunt, elder sister etc.

**Figure: 48**
Use of things/tools during menstruation




**What things they use during menstruation:** In poor countries, Women and girls can't afford sanitary pads or tampons, which would normally be changed around four times a day during menstruation. Instead, the vast majority of women and girls in Bangladesh use rags. These are usually torn from old saris and known as 'nekra'. Rags are washed quickly (with a small clay pot or

plastic tub of water called ‘bodna’) inside the latrine and used several times (Ahmed and Yasmin 2008).

It was a point of exploring in the study area that what things they use during the menstruation period. They reported that, they use rag majorly. Among the fertile women, 97% of them use rags (called Nekra) generally. The things are a small part or curtail part of their old used ‘sari’ of the women. They use one rag in several times of menstruation.

In the graph (no: 48), it shows that, 97% respondents women use rag during menstruation. They use several rags, wash after using and use again. They pass a of 4-7 days menstruation period through this cyclic use of rags. They reported that, they wash those in ponds generally of which water is not safe from diseases. But, they use ponds water than other like tube well because, they feel shame and confusion thinking about “bad blood” - they revealed. Side by side, As this is a Muslim majority area, a religious taboo also is staying this area that if they touch the handle of tube well then that would be impure which is harmful for ‘Oju’ during the washing hand-mouth for prayer of the Muslims.

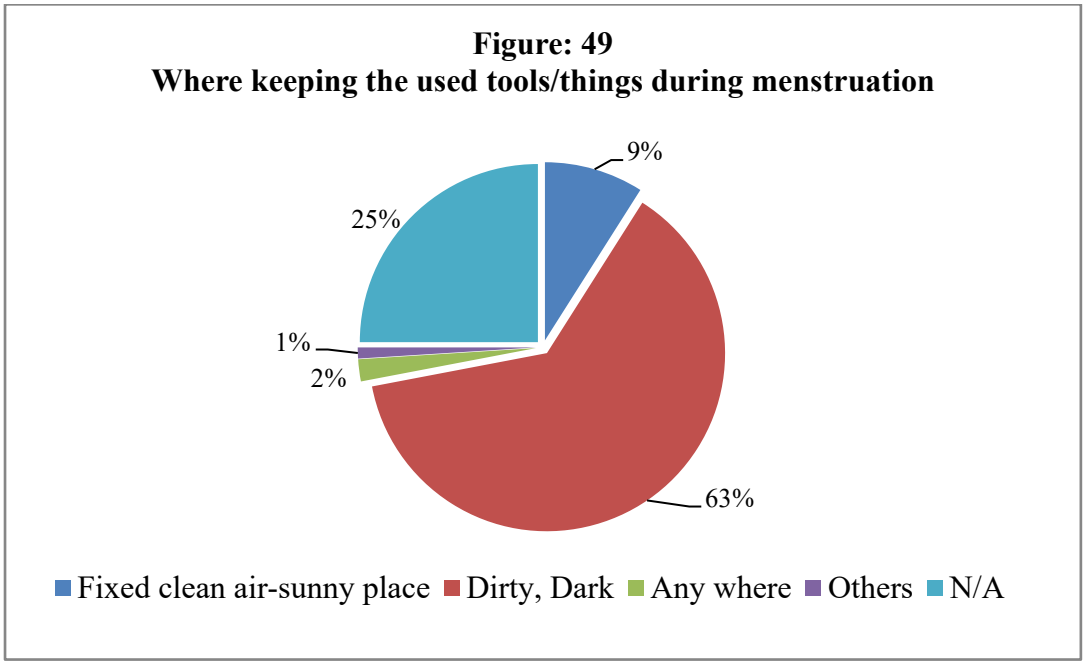
**Where keeping the tools/things during the menstruation period**

Menstrual hygiene closely connected with WASH. In order for women and girls to live healthy, productive and dignified lives, it is essential that they are able to manage menstrual bleeding effectively. This requires access to appropriate water, sanitation and hygiene services, including clean water for washing clothes used to absorb menstrual blood and having a place to dry them, having somewhere private to change clothes or disposable sanitary pads, facilities to dispose of used cloths and pads, and access to information to understand the menstrual cycle and how to manage menstruation hygienically.

As well as addressing practical needs like this, it is also necessary to promote better awareness amongst women and men to overcome the embarrassment, cultural practices and taboos around menstruation that impact negatively on

women and girls' lives, and reinforce gender inequities and exclusion (Mahon and Maria Fernandes, 2010).

**Figure: 49**
**Where keeping the used tools/things during menstruation**




The Figure 49 indicates the keeping places the used rags during and after the menstruation. According to the chart, 9% keep fixed clean and air-sunny place, 2% & 1% keep not fixed places (any where & others) and a majority (63%) of the reproductive women keep in dirty and dark place.

This data is very disappointing and alarming for women health and hygiene also. Because, due to keeping in dirty and dark places, diseases may contamiate every time and when the rags use in second time, that easily spread into the vaginal points.

**Root causes analysis: What the causes of keeping dark, dirty places the things**

In order to kill harmful bacteria that can cause infection cloths should be washed with soap and dried in sunlight. Lack of facilities, including safe water and clean, private toilets, many women and girls do not have anywhere to change their cloths and are not always able to wash themselves regularly. Many are unable to wash their cloths adequately and have nowhere to dry them

hygienically, instead they must find secretive, dark places to hide their cloths (Ahmed and Yesmin 2008; Dasgupta and Sarkar 2009; Dhingra, Kumar and Kour 2009).

In the study area, The respondents reported that they keeping the things in different dirty or dark places because: This exclusion is undoubtedly due to the prevailing culture of shame, which created silence. Shame from other persons while they mean that this type of things are “Napak”(Islamic term mean impure).They reported another cause whether the used things may be touched or used by other persons in the household, if it is happened, the persons would be impure too. They said also that they are keeping the things in dirty and dark places containing this believe that they think these will contaminate diseases to other persons in the household and to others in the locality.

**Why they use the dirty things/rag**

To avoid vaginal and urinary diseases, things for using in menstruation time should be fully germ free and hygienic. The respondents are not used to with such type of trends, the causes for, they stated as the table below.

As the table (5.39) mentioning hardly narrow condition showing the things use during menstruation period where 57% of respondents don’t know about the consequences of use of dirty things and the result of clean things or sanitary napkins as well.

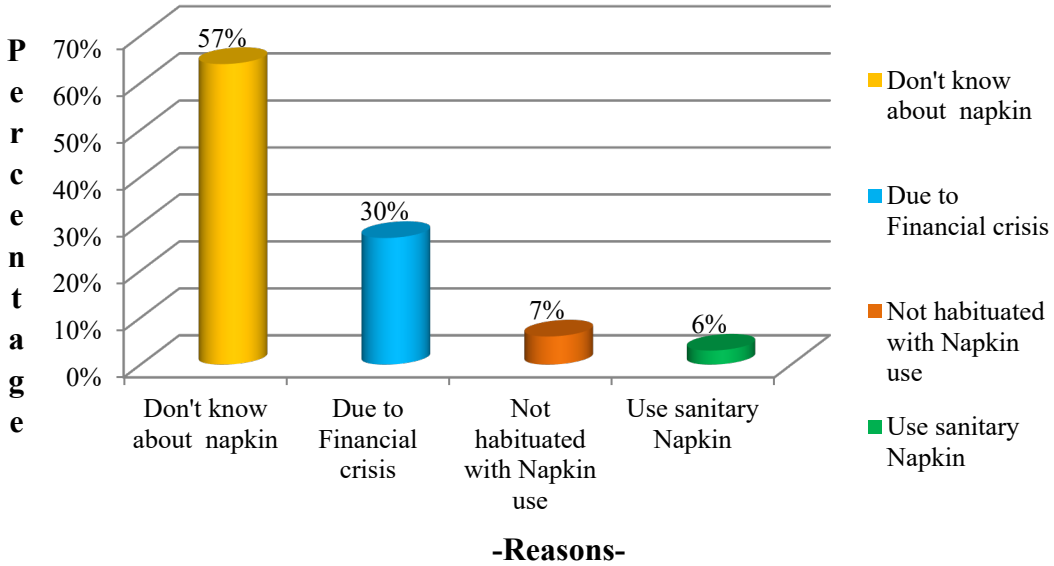
Table - 5.40

Reported causes for using the dirty things during menstruation period

| Information/answers | Frequency | % |
|---|---|---|
| Don't know about napkin | 31 | 57% |
| Due to Financial crisis | 16 | 30% |
| Not habituated with Napkin use | 4 | 7% |
| Use sanitary Napkin | 3 | 6% |
| Total | 54 | |

Not only, 30% of them stated the cause of financial crisis than habit in use the same while 7% reported that they are not habituated in sanitary napkin use. Here is a correlation among all the causes they have stated that is- commonly they are unconscious due to lack of knowledge and learning and education also. Therefore, they are staying in said 3 similar categories.

**Figure: 50**
Reasons of use Rags/Dirty things during menstruation period




Through the chart (Figure 50) it is again tried to show the trend of causes for using of dirty things. It is showing the high bar of un-consciousness (un-known) about use of sanitary napkin. On the other hand, only 6% shows through smaller than the first one for using trend of sanitary napkins. the middles two bars are higher than the last one (30% & 7%) indicating another causes of financial crisis and not habituated with sanitary napkin use.

**Point of Analysis: Why the 6% using sanitary napkin**

They reported that they have heard about napkin from FWA (Family Welfare Assistant) of government department and from Radio programme, two persons of them heard these types of messages from NGO meeting (a local development organization is working in this area). They always willing to use napkin and know how to use this. Among them 3 persons have passed the secondary level examination and they are aware their health and the menstruation hygienic behavior. They buy those materials from hawkers bring in the locality and their husbands buy those from Rangpur town who are the day laborer and small business men. The researcher asked them, whether their husbands not agreed to buy napkins due to cost or any argument from them or not? or do their husbands push them to use used rags like others? they reported that their husbands were denied them at the first time, but they have provided counseling to their husbands and convinced them. But there is a problem exists, their husbands buy those things when they have available money with their pocket. For this, in the menstruation period, sometimes they miss the napkin and they have to use rags.

## 5.12 Female are affected with related diseases in last Five years among the community and the selected households

Experiences from different studies said, there is a clear links between poor menstrual hygiene (that is, re-using cloths that have not been adequately cleaned and dried, and not being able to wash regularly), and urinary or reproductive tract infections and other illnesses. Some survey reported health problems such as vaginal scabies, abnormal discharge, and urinary infections, and associated these with menstrual hygiene (Ahmed and Yesmin 2008).

The female of the study area have reported that, 13 of them (among 54 reproductive mothers), have been affected with different diseases in last 5 years

those which disease has a strong link with water and sanitation, hygiene and menstrual hygienic behavior as well.

What are the disease those they affect for and present conditions of the affected patients?

Table – 5.41

Distribution of percentage for affected diseases and Treatment conditions (respondents' opinion)

| Phenomenon | fq | % | Treatment status | | | |
|---|---|---|---|---|---|---|
| | | | Cure | | Under treatment | |
| | | | fq | % | fq | % |
| Abdominal pain | 5 | 9.2 | 2 | 40.0 | 3 | 60.0 |
| Vaginal infection | 3 | 5.5 | 1 | 33.3 | 2 | 66.7 |
| Urinary/related infections | 5 | 9.2 | 3 | 60.0 | 2 | 40.0 |
| Free from diseases | 41 | 75.9 | 00 | 00 | 00 | 00 |
| Total | 54 | | 6 | | 7 | |

** 54 reproductive women are considered

Here is the status of the illness and infection disease affected to the women (as per table 5.41) due to unhealthy situation of menstrual hygiene management. The table shows that, total 13 women out of 54 are been affected with different diseases, like abdominal pain, vaginal infections, urinary or related infections. Besides, they reported that, 6 of them are cure now and 7 are still under treatment out of 13.

Here is an observation discovered by the research that, they respondents even the affected women don't know what the causes of their diseases or where the sources of different syndromes of their diseases and illness. After hearing the consequences of unhygienic menstrual management, they didn't acknowledge those at the first time. They reported that, they never think the matter in-depth and the consequences also.

## Analytical statement

## Impact on development goals:

Menstrual hygiene is an important element of Hygiene and women health also which has an in-depth and long term impact on social, economical, political and over sustainable development as well.

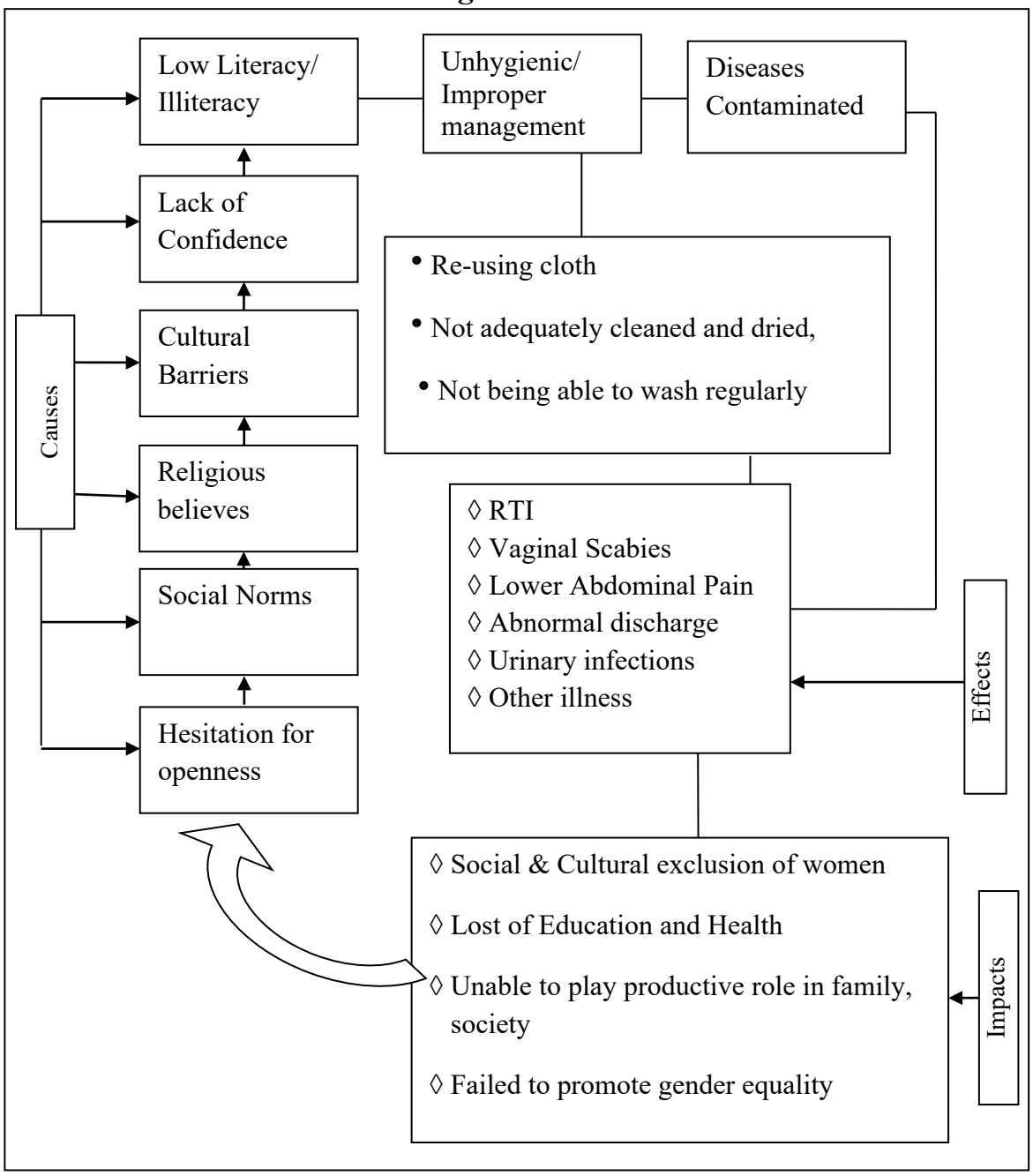
[13]The cumulative effects of ignoring menstrual hygiene and management (on social exclusion, access to water, sanitation and hygiene services, education and health) discussed above may affect the achievement of the development goals which governments, donors and agencies have committed through the Millennium Development Goals (Ten 2007).

The reproductive mothers (respondents) reported that, they are not able to easy to do domestic work containing the disease. Some of them are engaged with paddy cutting, day laboring and different agro- field activities, but they loss their working days and lost the earning money for those. They are not able to play significant role in family, society due to lack of working opportunity and financial losing also.

[13] Mahon & Maria Fernandes," Menstrual Hygiene in South Asia"p-7, 2010, Nepal

**Unhealthy Menstrual Hygiene-Causes & Effects and Impact**

**Figure: 51**




Source: Empirical data from the current study

We can see causes, these effects and impact of menstrual hygiene in the above figure.

**Summary:**

Hygienic behavior is a synergistic part of health and sanitation as well. Hand washing after different critical times is important to keep up the hygiene promotion habits. The study explored that, 67% respondents know before food preparation is required while 15% do believe to wash hand before serving food and 70% realize to hand wash before eating. Only 20% realize that to wash hands before feeding, 76% do believe to wash hands and only 39% after cleaning Childs bottom. It is needed to mention here that, they told that they need to wash hands in every function through either soap/ash or simple water. It indicates alarming information that, they don't feel the necessity of soap/ash for hand washing. Only 24% respondents use soap & ash after defecation and a major 76% use no alternative and use only water for defecation purpose.

In the research, it is observed that no additional care of concentrate hygiene practice to disinfect after cleaning the child bottom. Only 6% mother use soap and wash both hands and 3% use ash and wash both hands.

The respondents reported that, some of them have received such message from television and govt. field health worker, but they are not used to with such type of practice. So, is observed that, hand washing with soap/ash is a critical and tuff habit to keep it especially among the rural women. They need a vast manners orientation and practical dummy session on hand washing in six critical times. Government and Non-government institutions, civil society and media can take initiatives to do that.

A scenario is kept in a household that in the same kitchen, one part is using for cooking and the other part is caw shelter where hgyienic practice is fully absent. the respondent reported that they doing this due to shortage of room.

the research gives a result of only 30 or above 30 feet tube wells consists of safe distance from latrine.

This analysis giving a message that, the selected households are drinking unsafe water regularly while they have no knowledge on the matter and no consciousness on that. As a result, they have no common practice to keep their drinking water safe by installing the tube wells in safe standards distance from defecation places.

6% female reported that they use sanitary napkin but most of their use is irregular due to their dependency on husband's financial capacity and willingness also. They face different difficulties for un-hygienic menstrual hygiene which turned into other related diseases and causes vast financial harmfulness.

# Chapter-6

# Conclusion:

This chapter is focused the result of entire study. The remarkable aspects of the study area are indicating the socio-economic conditions of the households with a key concentration on education and occupation. These two areas are connected with the ability of maintaining the WASH activities vastly.

The Socio-economic conditions of the selected households are not as satisfactory level as they play synergistic role to improve WASH promotional behavior and habit also. The selected households have mostly unsatisfactory education status in the selected households where 64 (out of 100) respondents have no any space of academic education/learning at minimum level. This is a disappointing to keep up health and hygiene related education and practice also.

It is remarkably noted that, day laboring is the main way of income and 80% families are dependents on the agriculture direct or indirectly. The area commonly living below poverty line and their concentration is centered to only be alive containing the basic needs than health and sanitation.

This is a disaster prone revering area where most of the households are affected by river erosion by Tista.

The study explored very poor conception of the respondents about safe water and Hygienic latrine, these consequences over health and environment. It has also found the disappointing status of health consciousness and treatment tendency of the respondents, their family which gives a general scenario of the community. The household women have no sufficient knowledge about hygienic knowledge and safe water; some of them are using ponds as water sources for washing vegetables, fruits, washing dishes, bathing and such type of other domestic purposes which is harmful for human health. Majority of them have no clear concept about cleanness of latrine, water options and these surrounding areas which is important sign for hygiene promotion. They

normally use open defecation of children due to their gap of knowledge. As a result, child diseases are increasing and they facing poor socialization.

In the working area, different water born diseases are occur like- Diahorrea, Dysentray intestinal worm etc. but, 50% of respondents are not being knowledgeable regarding the issue of Diahorrea. Among them, unconsciousness is the significant cause for such type of disease for which they had to spent big amount of money for treatment. But, they keep traditional tendency for treatment. They are not interested to go for treatment to a registered doctor than the village doctor, Kabiraz etc. The study revealed two causes for this-concept or consciousness is poor about develop treatment by registered doctor, secondly, poor financial condition; that is why, honorarium of registered doctor's is high and the hospital is too far from their village. On the other hand, the village doctors, Kabirazs are available all time and cheaper most. Their poor concept is discovered in the maternal health also. For ANC/PNC services, very few of the female respondents go to registered doctor, most of them go to village traditional birth attendant, Homeopathic doctor. Some of them are interested to check up or advice to village health worker and family welfare visitor, but they are rarely come to the village. As a result they faced many difficulties for urinary and vaginal infections.

The respondents are not aware at all about their nutrition and balance diet. They are not able to take balance diet due to financial crisis most. But, as a revering area, normally they eat sufficient fish every month-they reported.

After the discussion, it is explored that poor conception, traditional trust and culture, unconsciousness and a remarkably ignorance, negligence and superstation are covered and influenced the selected households and the community as well. And for this, their water and sanitation condition, hygiene practices and the health status is disappointingly poor and weak.

It can be recommended that, though government of Bangladesh has a mission to cover sanitary latrine in every household, but, Behavioral change

communication is very much needed to change the human attitude towards sanitation and hygiene promotion. It needs to proper monitoring for actual use of hygienic latrine, replace the used and broken ones, proper maintaining those. Most of water options need to be monitored for proper maintaining in hygienic way. Government has village level community clinic and Union level health center, People don't know about these service due to those are a large time remain closed. Mass-awareness besides activation of those health centers is a must to divert the people traditional health service tendency. Household owners need to be oriented towards make their wives get forward in hygiene education. GO-NGO needs to implement rooted hygiene sessions among rural women.

Hygienic behavior is a synergistic part of health and sanitation as well. Hand washing after different critical times is important to keep up the hygiene promotion habits. The study discovered six critical times instead of five which is very important. the new one is "Before serving food". The study has explored that, 67% respondents know before food preparation is required while 15% do believe to wash hand before serving food and 70% realize to hand wash before eating. Only 20% realize that to wash hands before feeding, 76% do believe to wash hands and only 39% after cleaning Childs bottom. It is needed to mention here that, they told that they need to wash hands in every function through either soap/ash or simple water. It indicates alarming information that, they don't feel the necessity of soap/ash for hand washing. Only 24% respondents use soap & ash after defecation and a major 76% use no alternative and use only water for defecation purpose.

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This analysis giving a message that, the selected households are drinking unsafe water regularly while they have no knowledge on the matter and no consciousness on that. As a result, they have no common practice to keep their drinking water safe by installing the tube wells in safe standards distance from defecation places.

6% female reported that they use sanitary napkin but most of their use is irregular due to their husband's financial capacity and willingness also. They face different difficulties for un-hygienic menstrual hygiene which turned into other related diseases and causes vast financial harmfulness.

Actually the Health, Sanitation and Hygiene demand the matter of vast discussions. Besides, this research is a result from only a village; it might not be the reflection of whole rural Bangladesh. But, this is a sample of WASH dealings of rural women and rural Bangladesh also which can give an idea about the issues. This result may be helpful to make any further policy or steps and study for reducing vulnerability of Water and Sanitation and Hygiene promotion at domestic household level in rural or urban also which makes effects over human health and economy. The study has given a message that for improved total sanitation coverage and Healthy environment, proper Hygiene promotion, continuous hygiene education is a must. Besides, proper monitoring and follow-up of hygienic activities is vastly required for keeping the human habits. Only Hygiene promotion can largely keep the people in

using Hygienic latrine, its continues use and cleanness which will make a positive effect on human health and gain sustainable impact for optimum development to the economy in the society.

তারিখ: ১৮/০৬/২০১৪

বরাবর

রেজিষ্ট্রার,

রাজশাহী বিশ্ববিদ্যালয়, রাজশাহী।

মাধ্যম: সভাপতি, সমাজবিজ্ঞান বিভাগ এবং ডীন, সামাজিক বিজ্ঞান অনুষদ।

বিষয়: এম.ফিল থিসিস পেপার জমা প্রদান প্রসঙ্গে।

জনাব,

আমি সমাজবিজ্ঞান বিভাগের ২০০৭-০৮ শিক্ষাবর্ষের এম.ফিল প্রোগ্রামে ভর্ত্তি হই। আমার গবেষণার কাজ সুষ্ঠুভাবে সম্পন্ন হবার পর এম.ফিল থিসিস জমা প্রদান করতে ইচ্ছুক। এ বিষয়ে আপনার প্রয়োজনীয় সহযোগিতা কামনা করি।

অতএব মহোদয় সমীপে আবেদন, আমার এম.ফিল থিসিস পেপার জমা গ্রহন করে পরবর্তী প্রয়োজনীয় ব্যবস্থা গ্রহনের জন্য অনুরোধ করছি।

বিনীত নিবেদক-

মোঃ আব্দুল্লাহ্ আল মামুন

এম.ফিল ফেলো

শিক্ষাবর্ষ: ২০০৭-০৮

রোল নং-০৭৮২২

সমাজবিজ্ঞান বিভাগ

রাজশাহী বিশ্ববিদ্যালয়।

তারিখ: ১৮/০৬/২০১৪

বরাবর

রেজিষ্ট্রার,

রাজশাহী বিশ্ববিদ্যালয়, রাজশাহী।

মাধ্যম: সভাপতি, সমাজবিজ্ঞান বিভাগ এবং ডীন, সামাজিক বিজ্ঞান অনুষদ।

বিষয়: এম.ফিল থিসিস পেপার জমা প্রদান প্রসঙ্গে।

জনাব,

আমি সমাজবিজ্ঞান বিভাগের ২০০৭-০৮ শিক্ষাবর্ষের এম.ফিল প্রোগ্রামে ভর্ত্তি হই। আমার গবেষণার কাজ সুষ্ঠুভাবে সম্পন্ন হবার পর এম.ফিল থিসিস জমা প্রদান করতে ইচ্ছুক। এ বিষয়ে আপনার প্রয়োজনীয় সহযোগিতা কামনা করি।

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বিনীত নিবেদক-

মোঃ জিকরুল ইসলাম ফাতেমী

এম.ফিল ফেলো

শিক্ষাবর্ষ: ২০০৭-০৮

রোল নং-০৭৮২০

সমাজবিজ্ঞান বিভাগ

রাজশাহী বিশ্ববিদ্যালয়।

# Appendix

## Questionnaire

Questionnaire No.:

Hygiene Practice and Health Status of the Rural Women: A study of a Village in Northern Region of Bangladesh

**1. General Information:**

Name of Respondents: .....Age:.....

Husband/Fathers name:.....

Education:.....(A) No sign, (B) only sign, (C) Class 1-5 (D) class 6-10 (E)Secondary/Equal (F) Higher secondary/Equal (G) Graduate/Equal (H)Masters/Equal (I) Others

**2. Information about Socio-economic conditions:**

2.1 Members of the Household:

Male:.....; Female:.....0-5 years Child:..... Total:.....

2.2 How many members of the household do income?.....

2.3 What is the main source of income?: (Multiple answeres considered)

Agriculture/Day labor/Fishing/Small business/Contractor/Rickshow-Van puller/Boat man/Service/Beggar/Potter/othrs:.....

2.4 Tentative annual income of the household:.....(Taka)

2.5 Do you think, this is a Hard-core poor family?..... Y/N

2.6 What is the Economic condition of the household?:

> Surplus after income & expenditure

> Regular shortage after income & expenditure

> Irregular shortage after income & expenditure

>No shortage or surplus after income & expenditure

2.7 Educational status of the adult (>5) members of the household:

(A) No sign, (B) only sign, (C) Class 1-5 (D) class 6-10
(E)Secondary/Equal (F) Higher secondary/Equal (G) Graduate/Equal
(H)Masters/Equal (I) Others

2.8 Does the household faced any natural disaster during last 5 years?: Y/N

If Yes, What kind of Disaster?:.....

**3. Information about WATSAN related knowledge and awareness:**

3.1 What do you mean about "Safe Water"

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Correct/Incorrect/Don't know

3.2 Do you know what diseases may occur due to drink un-safe water? (Multiple answers):

> Diarrhoea

>Dysentery

>Skin diseases

>Worm

>Typhoid

>Jaundice

>Others

>Don't know

3.3 What you mean about "Hygienic Latrine"?

| |
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Correct/Incorrect/Don’t know

3.4 Do you know what’s the consequence of using Un-hygienic latrine? (Multiple answers considered):

> Diarrhoea

>Dysentery

>Skin diseases

>Worm

>Typhoid

>Jaundice

>Others

>Don’t know

3.5 What you mean by Diarrhoea?:

| |
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| |

Correct/Incorrect/Don’t know

3.6 What are the causes do think for Diahorrea or other water born diseases? (Multiple answers considered):

>Eat open food (without cover)

>Eat rotten food

>Use/Drink unsafe water

>Drink water without cover

>Dirty water pot

>Without hand washing before eating

>No wash hands before serving food

>No wash hands before preparing food

>No wash hands before feeding

>Without hand washing after defecation

>Without hand washing after cleaning child bottom

>Without cleaning the nails regularly

> No use of hygienic latrine

>Without cleaning the latrine

> No slipper use during defecation

> No cleaning the household yard

> Keeping the household garbage here & there

> Others

> Don’t know

**4. Information about Sources of Water and use:**

4.1 What source you use for Drinking and cooking purpose? (Question & Observation)

>Shallow

> Shallow (Mini)

>Tara pump

>Ring well

>Ponds

>River/Bill

>Others

4.2 What source you use for Washing dishes/wash fruits/vegetables? (Question & Observation)

>Shallow

> Shallow (Mini)

>Tara pump

>Ring well

>Ponds

>River/Bill

>Others

4.3 Has platform of the used water sources (specially tubewell/pump)

> Yes, Good

>Yes, Not good

> No

4.4 Is the platform clean?

> Yes

> No

> Doesn't use Tube well/pump

**5. Information of Defecation and Preservation the stool:**

5.1 What kinds of latrine use by the adult (>5) members of the household? (Observation)

> Septic latrine

>Slab/Offset (with water seal)

>Pit/hole with cover

> Slab/Offset (without water seal)

>Pit/hole without cover

>Hanging latrine

> No latrine for use

5.2 Do you clean the used latrine (if yes, Regular or Irregular?):

> Yes, Regular

>Yes, Irregular

> No

> Not applicable (the household has no latrine)

5.3 Please tell the causes for not cleaning the latrine regularly?:

.....

5.4 Do the household members (>5) use the latrine regularly?

> Yes

> No

>N/A

5.5 If the household has latrine, keep note after observation:

> The latrine is running (using)...Y/N

>There is sign of using the latrine...Y/N

> If the Pan/Slab Clean..Y/N

> If the surrounding area is clean>.Y/N

5.6 Where the children of 3-5 age use defecation of the household?

> Latrine

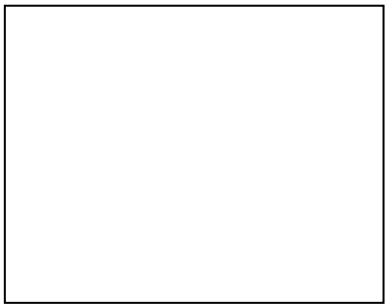
>Fixed place

>Yard

>Here & there

>Others.....

>N/A (the HH has no 3-5 aged children)



5.7 The children (0-5) are unable to use latrine, where you keep the stool and how?

> Keep in Hygienic latrine

>Keep in hygienic fixed hole

>Others way but not thinking the hygienic matter

>Keep Open

>Children use latrine/fixed place

> N/A (the HH has no 0-5 children)

5.8 If the household members use Pit/hole without cover, hang/open latrine or open defecation, what's the causes? (Multiple answer consider)

>Don know/Un-consciousness

>Shortage of place for latrine installation

>Financial crisis

>N/A (the HH has hygienic latrine)

**6. Information regarding Personal Hygiene:**

6.1 What time you wash your hands?: (Multiple answer considered)

> Before preparing food.....Y/N

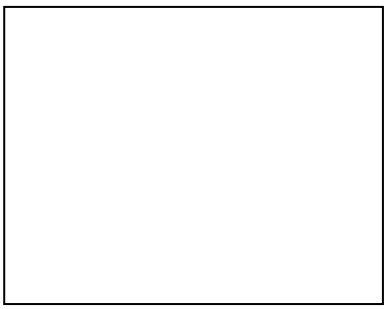
>Before present food.....Y/N

>Before eating.....Y/N

>Before feeding.....Y/N

>After defecation.....Y/N

>After cleaning child bottom...Y/N



6.2 Please show, how you wash hands for the above facts? (Multiple answer considered)

>Use water

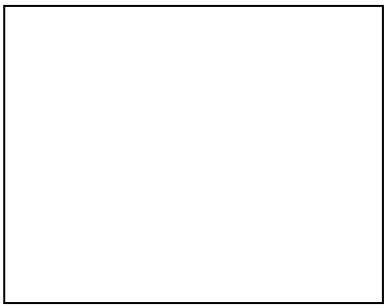
>Use soap

>Use Ash

>Wash both hands

> Didn't show

> Others.....



6.3 Do the all members of the household use slipper during defecation? Y/N

6.4 If No, What's the causes-you think?:

Known-less/ Un-consciousness/Ignorance/Not habituated

**7. Information about Diahorrea**

7.1 Has any member of your household affected by Diahorrea/Dysentery during last one month? Y/N

7.2 If yes,:

>0-5 years children..... person

> above 5 years..... person

7.3 What is the present condition of the affected patient(s)?:

>Cure/Not cure/Died/Not applicable (due to none affected)

7.4 What you think the cause of Diahorrea? (for the particular patient)

.....

7.5 Has any member of your household died during last one year due to diahorrea?

> Yes

>No

>N/A (No body been affected during last one year)

7.6 If yes:

>0-5 years child..... person

> Adult (above 5 years age)..... person

7.6 How much money you spent for diahorrea affected people of your household during last one month?:

> ..... Taka

> N/A (No body been affected during last one year)

**8. Sanitation and Hygiene related observation:**

8.1 Where you prepare food? (A) Fixed room (B) Under open sky (C) Others.....

8.2 Is the place of Cooking clean? Y/N

8.3 If the food with cover? Y/N

If No, What are the causes: Known-less/ Unconsciousness/Ignorance/Not Habituated/Not applicable (No food seen during observation)

8.4 Does the pot of food clean?

>Yes

>No

If No, What are the causes: Known-less/ Unconsciousness/Ignorance/Not Habituated/Not applicable (No food seen during observation)

8.5 Has Water/Soap/Ash is preserved inside/nearest of the latrine?

>Yes

>No

If No, What are the causes: Known-less/ Unconsciousness/Ignorance/Not Habituated/Not applicable (the Household has no latrine for use)

8.6 What is the distance between Tube well and Latrine of the household?(feet):

>..... feet

> Not applicable (the household has no Latrine or Tube well for use)

8.7 Has any stool exists over the yard of the household?

>Yes

>No

If Yes, What are the causes: Known-less/ Unconsciousness/Ignorance/Not

8.8 Where you put the household garbage?

> Fixed place/hole

>Pond/river/Bill

>Here & there

>Others.....

What the causes for putting garbage in Pond/river/Bill/Here & there.....
.....
.....

**9. Information about menstrual Hygiene:**

9.1What things use by the women members of the household during menstruation period?

> Sanitary Napkin

> Rag

> Others

9.2 If they not use Sanitary napkin, what the causes? (multiple answer considered)

Unconsciousness/Ignorance/Not habituated/ Financial crisis/not available in the locality

9.3 Where they dry/keep the used rags'

> Fixed place with sunlight

>Dirty, dark places

> Here & there

>Others.....

Why they do this:.....

.....

9.4 Has any reproductive woman of your household affected of any Vaginal infection during last five years?

>Yes

>No

>N/A (the household has no reproductive aged woman)

9.5 How much money you spent for treatment of that case? (so far) ..... Taka

**10. General Health related information:**

10.1 What diseases, generally you affected for?

> Fever

>Runny nose

>Abdominal pain

>Diahorrea

>Dysentery

>Skin diseases

10.2 What steps you take during affection of diseases of any one of your household?

> Visit registrar doctor

> Kobiraz

>Village doctor

>Others

10.3 Has any one of your household been affected by Pneumonia during last one month?: Yes/No

If yes, What steps you taken?

> Visited registrar doctor

> Kabiraz

> Village doctor

>Others

10.4 Has any one of your household been affected by Otitifmedia during last one month?: Yes/No

If yes, What steps you taken?

> Visited registrar doctor

> Kabiraz

> Village doctor

>Others

10.5 Has any one of your household been affected by Fever during last one month?: Yes/No

If yes, What steps you taken?

> Visited registrar doctor

> Kabiraz

> Village doctor

>Others

10.6 Has any one of your household been affected by Jaundice during last one month?: Yes/No

If yes, What steps you taken?

> Visited registrar doctor

> Kabiraz

> Village doctor

>Others

**11 Information about contaminated diseases**

11.1 Do you know what is Tuberclosis? Y/N

If yes, Answere:.....

11.2 Do you know what is Malaria? Y/N

If yes, Answere:.....

11.3 Do you know what is Leprosy? Y/N

If yes, Answere:.....

11.4 Do you know what is Kalazor? Y/N

If yes, Answere:.....

11.5 Do you know what is Dengue? Y/N

If yes, Answere:.....

11.6 How many person of your household been affected by worm during last one year? ..... person/Not affected

**12. Food and Nutrition related information:**

12.1 Please tell me, the daily food list of your household:

(A)Rice(B)Potato(C)Bread(D)Vegitable(E)Fish(F)Meat(G)Milk(H)Egg

12.2 Do you know about essential calorie of a man daily? Y/N

12.3 Can you tell about food list for which the daily calorie demand of a human body would be fill-up? Know/Don't know

If know,:

.....

.....

Thanks to you.

Name of Interviewer:

Signature:

Date:

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