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Water and Sanitation Practices among the Migrant Slum Dwellers: A Sociological Study in Sylhet City

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ABSTRACT

Water and sanitation are very important for human life. In Bangladesh, the water and sanitation condition is not satisfactory, especially for slum dwellers. Majority of slum dwellers are poor migrants. This study tries to explore the water and sanitation practices of slum dwellers. The data of this research has been collected through In-depth interviews observation and Case studies etc. This study shows that most of the slum dwellers are very poor and illiterate. They have not enough money to maintain their family. They are unaware of hygiene and sanitation. Most of them drink the supply water without boiling it. For this reason, they suffer from various diseases.

Keywords: Water, Sanitation, Practices, Slum dwellers, Migration

INTRODUCTION

Health is an important issue at the present time. Health cannot be isolated from its social context. The last few decades have shown that the social and economic factors have a direct bearing on the incidence, course, and outcome of a wide variety of communicable and non-communicable diseases as well as on many other problems besetting world today. They also have an effect on the provision of healthcare to all strata of society, poverty, malnutrition, poor working conditions, cultural and behavioral factors all predispose to ill health.

Water, sanitation and personal hygienic awareness should be an integrated strategy for health promotion in Bangladesh. These are important variable s that should involve important effort to protest and control the environment especially for the control and prevention of diseases. The low awareness on water use, sanitation and personal hygienic in largely responsible for slum dwellers health hazard in the country, especially in the villages. The people who use the pond, river and other surface water throughout the year for their main water needs has become easy victims or many diseases. Unsafe water usages, unimproved sanitation and improper hand washing practices are harmful for slum dwellers (Schmidt, 2014). And many studies have been conducted on the health impact of water sanitation and most of them have shown a positive effect of it on child mortality in Bangladesh. To emphasis the importance, united Nations declared safe and clean drinking water and sanitation " a human right essential to the full enjoyment of life and other human rights".(UN,2010). It is very important to find out the present state of health and sanitation affairs in urban areas particularly slum dwellers.

Global sanitation coverage rose from 49 percent in1990 to 58 percent in 2002. Still, some 2.6 billion people – half of the developing world – live without improved sanitation. Sanitation coverage in the developing world (49 percent) is only half that of the developed world (98 percent). Meeting the MDG target requires that, between 1990 and 2015, the world must reduce by half the proportion of the population lacking improved drinking-water sources and sanitation. Sustainable development in an area (such as multipurpose river basin development

and aquifer management) and in a specific location (such as watershed management within degraded areas framed by poor families), both types of interventions are important for turning many of the MDGs into a reality. Among the approaches shown to be effective in speeding up progress in spite of several obstacles are devolution of responsibility and ownership and providing a choice of service level to communities, based on their ability and willingness to pay. (water@nzwwa.org.nz).

UN General Assembly Declares 2005-2015 the International Decade for Action Water for life. The UN General Assembly resolution strongly urges communication and social mobilization at both the global and national levels. While much of global and regional water and sanitation communication to date has been directed, quite successfully, at mobilization resources and strengthening political and governmental commitment, there is an urgent need to intensify these efforts that are specifically directed at increasing societal commitment and participation. Much more still needs to be done. Safe water supply and adequate sanitation to protect health are considered fundamental human rights. As of today, there are still almost 1.1 billion people who have inadequate access to water and 2.6 billion without appropriate sanitation. (www.ciwem.org.uk).

Conceptual Framework:

Slum settlement

"Slums are highly congested urban areas marked by deteriorated, unsanitary buildings, poverty, and social disorganization (www.gdve.org). Richard Basham (1978) identifies slums as 'where home is generally rented and squatter settlements (usually owner-occupied in the illegally seized land). Known as villas miserias (Argentina), barong-barong (the Philippines), bidonvilles (Morocco), favelas (Brazil), barriadas (Peru), ranchos (Panama), coloniasproletarias (Mexico), or bustees, jhoupris, and jhuggis (India and Pakistan), they sprawl within and around major cities, sometimes encompassing them like a noose. (Basham 1978 pp- 174- 75) Encyclopedia Britannica defines a slum as… residential areas that areas that are physically and socially deteriorated and in which satisfactory family life is impossible. Bad housing is a major index of slum condition. By bad housing it meant dwellings that have inadequate light, air, toilet and bathing facilities that are in bad repair, dump and improperly heated; that does not afford an opportunity for family privacy; that is subject to fire hazard and that overcrowd that land, leaving no space for recreational use…' Definition of a squatter settlement also varies widely. In general, it is considered as a residential area in an urban locality inhabited by the very poor who have no access to the required land of their own and have 'squat' on vacant land, either private and public. A squatter settlement, therefore, can be defined as a residential area which has developed without legal claims to the land/or permission from the concerned authorities to build, as a result of their illegal or semi-legal status, infrastructure and services are usually inadequate. (www.gdrc.org)

Sanitation

According to the Oxford Dictionary sanitation means "The equipment and systems that keep places clean, especially by removing human waste: disease resulting from poor sanitation".

Sanitation arrangement concerns the model of disposal of human wastes; who carries out the disposal; whether they are disposed of near residences, food supplies, bathing areas, or water sources (Helman, 1995; pp-328). Cultural practices help to understand the meaning of sanitation. Helman, 1995; documented that, 'the practice of digging deep latrines (as opposed to discharging waste products into rivers streams) offers protection against those parasitic infections that are spread by urine or feces. Contamination of water supplies is also prevented by its location far from domestic animals or human habitations, and by the separation of

drinking sources of water used for bathing or laundering. Patterns of visiting the sick or attending large public rites or festivals may also be related to the spread of epidemics. Sharing of clothing within a family may also spread infection'. So cultural practices are been mostly related within sanitation.

Water supply and sewage in cities are heavily representing the condition of sanitation (A.McElroy and P.K. Townsend 1985; pp-553). Personal hygiene related with sanitation which includes whether personal hygiene is neglected or encouraged; whether, and how often, hair is washed or cut; how often clothing is changed; whether rituals of washing and purification are carried out on a regular basis; and whether bathing arrangements are private or communal(Helman, 1995; pp-327).

USA's National Sanitation foundation defines sanitation as 'Sanitation is a way of life, it is the quality of living that is expressed in the clean home, the clean farm, the clean business, the clean neighborhood, and the clean community. Being a way of life it is must come from within the people; it is nourished by knowledge and grows as an obligation and an ideal in human relations'.

OPERATIONAL DEFINITION

Migration: Migration incorporates all kinds of movement of people from one place to another. It may take place within a particular geographical boundary of a country and then beyond its boundaries. Johnston et al (2000:504) define migration as permanent or semi-permanent change of residence by an individual or a group of people. Migration means physical movement of people from one place to another for the betterment of life.

Labor: Labor is a process whereby people interact with the environment to produce useful products for the purpose of human reproduction. It is a social activity that requires the expenditure of time and energy and involves the transformation of raw materials inputs into outputs using various techniques.

In this research, I was considering those activities as a labor, which has monetary value. Unpaid labor is not taken under consideration here. So, those activities are considered labor, which can be sold for existence.

Objectives of the Study:

General Objective

There was an attempt to identify the sources of drinking water and sanitation and the related behavior and practices of urban slum dwellers.

Along with this main objective there are some specific objectives to explore:

Specific Objectives:

1. To know the different information about water, sanitation and personal hygiene related behavior and practices of the migrant urban slum people.
2. To find out the common health problems of users which are particularly related to water and sanitation.
3. To promote the linkage between water, sanitation, and hygiene with health and environment policies.

RATIONALITY OF THE STUDY

"Water and sanitation practices in the urban slum dwellers" is very important issue in recent time. . The migrant people who live in the urban slum area are very poor. They leave their

earlier settlement by some critical causes. Pull or push factor often the cause of migration. Most of the time, they have lost their living entity in their earlier settlement. When those people are migrated to the urban areas, they have to face some problem to adjust to this new setting. Water uses, sanitation practice, personal hygiene practice are the most important. The reliability of drinking-water supplies and improved water management in human settlement areas reduce transmission risks of malaria and dengue fever. This research will provide the socio-culture condition of the poor migrated people in the urban area and the correlation of health situation and specific urban environment setting of the poor people.

LITERATURE REVIEW

People migrate in the city by traditional fashion and by some causes, which are called the primary urbanization. In the contest of worldwide migration of rural to urban, here focus two-type migration the 'push' factor and the 'poll' factor. People are migrated on the causes of 'push' factors, its occurred to rural pressure to leave his/her village residence, and 'pull' factors people their village by attraction city's facilities. In the situation of rural-urban migration, there are four types of migration beyond the push and pull factors, such as sedentary, circulatory, oscillatory and linear. Population movement can also depend on some cultural, economic and personal motivation. Economic motivations rank first among reasons ordinary advance for urban or any form of migration. Some points are mostly interrelated with health. Such as over-crowding, urban slum is interlinked with water, and sanitation, which is essential for the human. McElroy and Patricia K. Townsend (1984) says that the distribution of diseases overtime and space indirectly related to a population role in its ecosystem. A community health closely reflects the nature of its adaptation to the environment. Suzanne et.al (2003) found their research that most people probably can afford to pay the cost of the water they use, but many will be unable to help much with loan repayments. Alam et.al (2013) found their research majority of slum people use tube well water for drinking. Significant numbers of people are found to be habituated to open defecation. For lack of sufficient water resources, most people resort to unsafe water resources like ponds, rivers and even ditches which cause sufferings from diseases.

Methods and Materials:

The study area of this research was Bhutto Miah's Slum, Ward no.08, Sylhet City Corporation. In this study the data were collected through network techniques: Such as In-depth interviews, Observation, Case studies etc. Every head of the household was the respondent and the data were collected from 30 respondents purposively. After the collection of data, it had been elaborated on basis of the theoretical framework.

Age of the poor migrants

In the slum areas, migrated peoples are living in economic condition. Man mainly creates a nuclear family after marriage and detached from his previous family. He has to bind to take his responsibility to him. For that, he migrates to a new place. In Bhutto Miah's slum 80 percent of respondents belong to the age group of 21-50. 7 percent of respondents are the age group of 51 or more. In this age, a man mainly depends on other but for their poverty, they have to do hard work like drive handcart. After marriage normally, a woman has to do household works but the situation binds them to do work in construction or mass or in the other home as a household labor local name 'boa'. The male respondents' that have various reason for migration. Some of them do not take the father in his family or the father has married in different places and for that, the responsibility comes to him. In other cases, after the death of his father, his mother marriage another person and he has to take his responsibility.

Table-4.1: Age of the slum area's people

Age groups	Number	Percentages
10-20 Years	4	13.33
20-30 Years	9	30
30-40 Years	8	26.67
40-50 Years	7	23.33
50+ Years	2	6.67
Total	30	100

(Source: Field data, 2018)

In this table the migrants in the age of 31-40 are the highest group and second highest age group is 40-50. In the different age group, all of them are married. The married people have to bind their family. Assurance of food consumption and all of the daily need are in his/her responsibility. So they have to take the risk for their migration.

Marital Status of the Migrants

Marriage is one of the important factor to create a nuclear family. In the total respondents, 70 percent of them have or had married life. 10 percent are divorced after a few years of marriage. Most of them divorced due to not giving a bride price to her husband. Now she is staying with her father with her children and her husband had married later and he stays with his second wife as a separate family. There are some respondents who are inthe age of 10-15 is not married yet. The major part of the married person proved that the migration occurs mainly on those people who have the responsibility to maintain a household.

Table-4.2: Marital status

Marital status	**Number**	**Percentage**
Married	21	70
Unmarried	6	20
Divorced	3	10
Total	30	100

(Source: Field data 2018)

The migratory people can have the burden of two families at a time. Sometimes he has to see his sisters family or others relatives family. So it is very important to the identity of family types here.

Types of Family

The family pattern of the slum dwellers is as like as village area. There are so many families who had linked with the village joint family once. In BhuttoMiah's slum, most of the families are nuclear and some are extended and very few are the joint family in this area. Most people like to live in a nuclear family. Each family contains with five to six members in an average. The nuclear family normally contains a husband, a wife, and their children. Extended family forms by a husband and wife with their children and other relatives.

Table-4.3: Types of Family

Types of Family	Number	Percentage
Nuclear	24	80
Joint	2	7
Extended	4	13
Total	30	100

(Source: Field data 2018)

The family types also play a vital role in the poor migrant's family. There are 7 percent is joint family, 13 percent is extended family, and rests of the 80 percent are a nuclear family, which is preferable in the Bhutto Miah's slum.

Migrants wage labors made their life strategy according to their family members and family types. If they have some back up for the family they can take the risk to go for a new place in his offseason. They have someone to look after his family. During the time when he cannot do anything at his place, he can consider to go in the nonagricultural sector. Sometimes the family members of close relatives work in the field jointly. So the family member became the number used in the field as a laborer. Sometimes the migrant people have a large member of his responsibility. The proportion between the number of the family and earning member is very important to understand the reason for migration.

Number of Family members

Poor people trends towards Sylhet are migration seasonally. For that, they keep their family in their home village sometimes they move with their family with them. This trend is basically on the laborers who come from the place nearby. As the variation of family types, the total family members fluctuate every year. Fluctuation occurs for various reasons like family split out to more nuclear families. Splitting process some time occurs in negotiation with other family members or sometimes in a harsh way. This number of family members sometimes gives pressure to the total income of the family. In general, the member of the family cannot be more than that because of the marriage of a younger member of the family. Sometimes the land they use for their products made the split out of the family. The people who have a large number of family members have the worst sufferings.

Table-4.4: Number of family members

Members	Number	Percentage
1-3	6	20
4-7	18	60
8-9	4	13.33
10+	2	6.67
Total	30	100

(Source: Field data 2018)

Earning members of the family

Although every family has more than 6 members, number of earning members of the family is very poor. More than 50 percent of the families have one or two earning members, but their total income is not sufficient to feed the whole family. The family, which has the earning member more than 4, is mostly joint family. They came here just to utilize their off time to manage the lacking of their money they borrowed for some purposes. So they have nothing to do with their heal hygiene with their small income.

Table-4.5: The earning situation of the family:

Range	Number	Percentage
1-2	19	63.33
3-4	9	30
4+	2	6.67
Total	30	100

(Source: Field data 2018)

Economic Status of Slum dwellers:

To access the income level 30 family it is shown that the 10percent respondent's monthly income is below 1000 taka, mainly this kinds of respondents are female and they work as Bua. Near about 27 percent respondent monthly income is 1000-3000 taka, 40 percent respondents monthly income is 3000-4000 taka, 17 percent peoples monthly income is 4000-5000 taka and above 5000 taka earn 7 percent people in a month. So I realize that most of the people of slum dwellers earn 3000-4000 taka in a month. As a result, it is very difficult for them to give attention to sanitary hygiene practice.

Table4.6: Educational Qualification

Economic Condition	Number	Percentage
Below 1000	3	10
1000-2000	4	13.33
2000-3000	4	13.33
3000-4000	12	40
4000-5000	5	16.67
5000+	2	6.67
Total	30	100

(Source: Field data 2018)

The Education Qualification

Most of the migrants are illiterate. About 60 percent of the respondents have no educational qualification.

Table4.7: Educational Qualification of the Slum Dwellers

Education	Number	Percentage
Illiterate	18	60
0-5 class	09	30
6-10 class	02	6.67
10+ class	01	3.33
Total	30	100

(Source: Field data 2018)

The educational qualification proves that they do not have the chance to shift their skill in international level. So they cannot increase their knowledge about sanitary hygiene practice. The whole picture shown above can be summarizing in the way that the migrants in the Sylhet region come in different parts of the country. Most of the people came here with a high rate of family members. She/he is the only or second earning member of the family. So the person has the family pressure to earn all the time and give support to the large size family. Their small incomes only support them to their food. So they cannot realize their health hygiene. River near side people also not much conscious about their health because modern system does not reach there. Besides this, they are not so much educated that makes them conscious about their health hygiene.

Pattern of Settlement

It is a matter of great regret that the slum dwellers have no running capital for establishing any trade and commerce for their survival purpose. So they vary from one another. Most of the colony has no urban facilities like electricity, gas and sanitary latrine. Also, slum dwellers are living in small houses and few people are living in the semi-pucca building. There is few flexible small Jhupri (small shelter) which made of polythene or straw in Sylhet city-corporation area. In comparison to other slum areas of Bangladesh Sylhet, slums are much better in respect of

slum dwelling system. Most of the dwellers are living in semi-pucca building, corrugated tin sheet houses and good small huts.

Most of the colonies in Sylhet are Private. In the private colony, the rich men in their private fallow land construct houses. This type of colony is enhancing by the private effort. Also, the local rich people treat that type of colony is providing common toilet, open bathroom, and tube well. Few are providing electricity with a single bulb for one room.

Settlement system

The tradition of housing practice of slum dwellers is in a traditional way. They linear pattern architectural design, small pattern house design, Jhupri (small house) and traditional houses are being constructed by the slum owner. Most of the dwellers live in the slum area. Normally the houses are constructing with ten feet long and six feet wide. The houses are made of old corrugated tin sheet and the habitable room in too small to live. In every small house, there is one small door, but no window. Small houses made of bamboo and corrugated tin. Few houses are made of local clayey soil with chatty (mat) and the floor in every house is not pucca. Few houses are made of straw and polythene. Also, there is a tiny kitchen near this straw-made house. Those who are living in this house, they are facing various peculiar situations during the blustery weather and the rainy season.

In BhuttiMiah's slum, there found the crowd together the form of settlement. Most houses of the slum are semi-pucca. Some of the houses are made of bamboo and tin. These slum dwellers are not getting proper sanitation facilities.

Housing Appliance

There are simple housing appliances in a slum family. Most of the family members are using mat and normal cot for their sleeping. They set this mat on the muddy floor and sleep with the family members. In the winter season, they use the simple cotton wrapper to protect them from cold. In every family, they have simple furniture like table, chair, bedstead etc. Most of the family has a small common kitchen that is attached to their habitable house. In the kitchen they are using the clay-made pitcher, jar, rice, bowl rice cooking pot (round dish earthen vessel), wooden spoon dish (earthen dish), clay-made hearth etc. Most of the family has no separate mini-kitchen; they are using their habitat room for cooking. In the same room, they are sleeping and simultaneously using for the kitchen, guest room and guardian's room.

Ventilation and air conditioning

Ventilation is the process of supplying or removing air to or from any space by natural or mechanical means. The effect of human occupancy of ill-ventilated rooms are reduction of oxygen content; increase of carbon dioxide content, addition of organics matters and odors given off from the skin, clothing, mouths noses of the occupants ; rise in temperature by heat generated in body processes ; and increase in humidity by the breath and evaporation from the skin.

For fresh air space requirements per capita per hour are:

1. 25m for sleeping rooms
2. 12.5-17.0m for factories and workshops
3. 35-40m for hospital theaters restaurants and dining halls public halls lecture rooms, meeting rooms etc.
4. 20-25mm for schools.

This situation is only dreamed to the slum dwellers. The space of the room is too small that it is impossible to stay here.

Effective temperature

Effective temperature is an arbitrary index of the degree of warmth or cold felt by the human body. The generally comfortable effective temperature during summer is 21.7 C and during winter 19 C.

Table-5.1: Accommodation system of the slum dwellers

No of Room	Size of each room(sq.f)	People live in each Room	Square feet per person
3	09*6=54	3	18
4	09*6=54	4	13.5
6	10*7=70	3	23.33
8	10*7=70	4	17.5
5	10*7=70	5	14
5	10*7=70	6	11.67
3	12*8=96	5	19.5
3	12*8=96	7	13.71
4	12*8=96	8	12

From the above figure, it observed that their accommodation system is not well. The density of population in a room is so high, which is not hygiene for people.

Water Source in the slum Area:

All of the migrated people are mainly depend on tube well for their daily usable water. There is only one tube well in Bhutto Miah's slum. In this slum, there was 40 families used only one tube well. This tube- well has to situate only one year ago. Besides this, they have to use pond's water and have to collection drinking water far from distance of another colony. The nearer pond is filled up by the owner to construct for high multistoried building, which creates a problem for them and they presser their colony owner to situate tube well. The owner situates a tube well for 40 families. It is too little to fulfill their demand.

Water supply system

In this slum area, drinking water sources are not available. Only one tube well is providing for a colony. About 63 families have to share a tube well for drinking and cooking purposes. Some families have no get chance to use this tube well; they collect water from a nearby colony.

Water Using Pattern of poor Migrated People

Migrants use the water for various purposes. They use water mainly meet up their thirsty. Beside this water, also use to bathing, cooking, washing etc. Here these matters have been concern among that distinction.

Water for drinking

Migrant people use water for drinking to meet up their thirst in the different position from different sources as water is important for human beings. Obviously, tube -well is an important source. In the Bhutto Miah's slum, one tube well has to share by 40 families. So it is not very easy to collect drinking water properly. They have to store water in various pots like pitcher, jug or pet bottle. On the other hand, when the tube well disturbs or the water level decreased, they collect water from ponds. The migrants used ponds water by mixing white powder (bleaching powder) or fitkiry. In the rainy season, they collect rain-water to use for drinking or other purposes like washing, cooking etc. They also collect water for long to use for their demand fulfilled.

When migrants take their meal, they mainly drink more water. The household leader of migrants people stay all day long outside their house for their occupation. At that time, they used outsider water from different places. The leaders of the household who pull rickshaw, desire more drink water. To fulfill their thirty they go to the near about any tea stall for the drink, at that time they do not try to know what are the source of this water. Other occupations like handcart pulling, day labor in construction have the same scenery. Female are drinking waterless. Their work pattern and their traditional knowledge have to do that. Female works in a cold area like houses, mess etc. they have to less water and they drink less water. Besides these, the women who work as the construction labor, or soil cutting labor, have to need more water but their traditional knowledge bound them to drink more water.

Table-6.2: Ratio of Drinking Water (per day)

Quantity of water	Number of people	Percent
Up to 3 litters	15	50
2-3 litters	5	16.67
Bellow 2 litter	10	33.33
Total	30	100

(Source: Field data, 2018)

The figure shows that 50 percent of respondents regularly drink up to 3 liters, 16.67 percent drink 2-3 liters and other remaining respondents drink only below 2 liters water in per day. It has to observe that core household who pull rickshaw or work hard to survive his family drinks up to 3 liters of water through it is not sufficient for him. Women and children drink less than 2 liters of water per day. Besides this, children drink less than 1.5 liters per day. This mainly occurred for them to lack of their consciousness about drinking water.

Bathing System

Sanitation refers not only to a physical state but also to a state of mind. However, water plays a significantly important role in all aspect of purity, from physical to spiritual. There is no pucca bathroom provision for the slum dwellers. In this slum, people are taking their bath in the open bathroom; they take their bath near the tube well. Male and female are taking bath in an open bathroom at tube well. Beside these slum dwellers are also taking bath at near pond. In the rainy season, the slum dwellers are taking bath in rain. During the winter season, the slum dwellers have to face water scarcity. Few people are collecting water from nearer ponds by some sort of condition like free housework. Obviously, women are facing troubles to use this common bathroom. Sometimes they are avoiding their shyness and modesty. They bath in the afternoon when they comeback from their works. On the other hand, at that time all people comeback from the workplace, the bathing area becoming busy. As they have to depend on only one tube well, so it is very difficult for them to fulfill their desire.

Water for Washing

Sanitation hygiene is mostly depending on the people washing with water. The major uses of water are cleaning of the body, cooking tools, different usable tools and different aspect of the material culture. Rickshaw puller washes his rickshaw by water. At that point, their view that if they wash it, it like new and attracted man. They also remembered that it makes pure of the rickshaw. People fell that they are becoming pure from the impurity of their body and mind by washing. They use water for washing their clothes; most of the migrants used tube well water because it is only one source of water. Sometimes, when they face big occasion like Eid, marriage and so on, they have to wash huge amount of cloth, use nearer pond by taking permission from the pond's owner. Normally women like to wash their cloth in the pond because huge of water need less labor and time to wash cloth. Female migrants people of this

area washing their cooking instrument, which includes regular using dishes, cooking pots, glass, etc. Migrated people used water for washing their mouth in the morning. They are also using tube well water for a latrine. Come back from the latrine they wash their hand leg and mouth by using tube well water. As there are no sources of water nearer, they have to use tube well water for every work without any option.

Water Use for Cooling

Slum dwellers use water for cooling their bodies. When they come back home from their work, they have to try to cool their body by anyhow. As they are poorer in economic level, they cannot arrange electrical facilities by their own income, on the other hand, slum owner has to bind them to use of electricity as he pays the electricity bill. Therefore, they cannot use an electric fan. They have only one way that they have to cool their body with water. Most of the migrants do that type of approach.

Water for ritual management

People use water for removing their body and mind from impurity to pure. Migrated people have also some sort of belief about water using. As it is a Muslim religious based area, they used water for various purposes of religious activities. Slum dwellers used water before their prayer. As slum dwellers are economically poor, they believe in popular and folk sector about health treatment. In a folk healer 'panic pora' is an important treatment. So they use water for health treatment.

In below provide a Figure, which focuses the different purpose of water using pattern of migrated people in this area. The Figure shows that, water use mostly for three purposes, such as consuming, bathing and washing different things. Some water also uses in other different purposes as well water used for ritual management that includes different healing purposes water using and water used for sanctity as well after using the latrine.

Table-6.3: Using source of water in percentage:

Source	Drinking (%)	Cooking (%)	Washing (%)	Bathing (%)	Cleaning Teeth (%)	In latrine (%)
Tube well	100	100	90	95	100	100
Pond	0	10	10	5	40	20
Rain water	-	-	-	-	-	-

(Source: Field data 2018)

In a slum area water source are very short. So everybody gathers here. When they gather there, they express their daily experience that builds up their relationship and makes closer to one another. On this tube well place, they maintain their relationships with other people. Various kind of relation builds up here. Social and mental interaction grows to share water in the tube well and it also stays by the using water sharing.

So, it is said that water is a part and parcel for the life of slum dwellers. Their purity, prolusion, belief system, interaction with one another depends on water behavior.

Sanitation

Sanitation may be defined as the science and practice of effecting healthful and hygienic condition and involves the study and use of hygienic measures such as: Safe, reliable water supply. Proper drainage of waste water, proper disposal of all human excreta. Proper removal of reuse. The word sanitation actually refers to all conditions that affect health and according

to World Health Organization may include such things as food sanitation, rainwater drainage, solid waste disposal, and atmospheric pollution.

Sanitation Practice in the slum area of Bangladesh

The present scenario of sanitation in Bangladesh is not good enough. Most of the poor people use latrines but not as hygienic way. Although some households have some sort of latrines, most of them are not hygienic or not constructed according to the WHO or DPHE standards. In Bangladesh, have approximately 30 million urban dwellers. Only 61 percent of the total population has access to the same latrine. About 16 percent of the 30 million urban dwellers use sanitary latrines, and 22 percent use latrines constructed by placing a slab made of bamboo over a manually dug pit.

Different types of Sanitation

The different types of sanitation practice are given below

Latrine

In the event of an infrastructure failure, dealing with feces shit is an important priority. Feces contain and potentially transmit a variety of pathogens, including bacteria, viruses, and worms. Exposed feces also attract flies, which may spread diseases. Latrines are structures that collect feces in one place, prevent access by insects, keep water from being contaminated, give some privacy to the users, and in some cases, provide usable fertilizer.

Site selection of a Latrine

Due to potential groundwater contamination, latrines should be a bare minimum of 30 meters from any well, body of water, or potential drinking water source (though this is less of a problem with most composting toilers). Medicines Sans Frontiers recommends a distance of at least 50 meters from water. They should also be a reasonable distance from dwellers no less than about 5 meters (because of possible smell problem) or more than about 50 meters (for convenience). Latrines should also be downwind of dwellers, especially the improvised types. Choose a site, which is not going to flood. When digging a pit, leave at least 1.5 meters between the bottom of the pit and the top of water table. For hygiene purposes, there should be a source of soap and wash water near all latrines.

Different types of Latrines

The Latrine is an important factor in human life. There various types of latrine are used in slum areas of Bangladesh. It is clear that the most broadly used slum latrines are the Home made and unhygienic. Homemade latrine is increasing as an option to improve the existing sanitation. But for these types of latrine the major problem is to cleanse the pits when they are filled.

It is the simplest of all onsite disposal system. It consists of an unlined pit covered with a platform and a hole in it. It is cheap and easy to construct and maintain. It has an odor and flies problem. It generally used in both urban and rural areas. As it has to need low cost, slum owner gives these kinds of the latrine for use of slum dwellers.

Water Sealed Latrine

It consists of a concrete platform, pan and simply lined pit. It prevents insects and odor due to the presence of water seal incorporated between the pan and the pit. When the pit fills up, a new pit has to dig and the superstructure has to be relocated or the pit has to be emptied. It is simple and easy to use. It is used in both rural and urban areas.

Defecation practice of the study areas

In Ward no. 08, most of fthe migrated people use that type of latrine. There is no latrine having a septic tank for slum dwellers. In Bhutto Miah's slum, there are three open toilets and a water stead toilet. These toilets that are used by more than 200 male and female slum dwellers. There is no removing system of human tools. When these toilets are overflowed, the whole environment becomes polluted. There are also some open and shifting latrines. Some of the migrated people in these area whose have no particular place for using defecate; they leave it here and there.

The following table represents the present toilet facility of the slum areas:

Table-7.1: Ratio of different type of latrine used by poor migrate people

Different types of latrine	Use oh house holds	Number of latrine	Latrine per households
Handmade latrine (pit latrine)	57	03	19
Open roof latrine (Water sealed latrine)	06	01	06
Total	63	04	

(Source: Field data 2018)

This table indicates how many households are using one latrine. On average 19 households use a latrine. Though it is impossible, they have nothing to do. When they use this latrine, not only the colony people but also surrounding houses people look that situation. Latrine place mainly becomes very busy in the morning. At that time, they give a serial to use the latrine. The entire spread bad smell, when they use it they covered their mouth with a cloth. As it is very close to their house, bed smell affects those most. They use a slipper when they use the latrine because it impossible to go that place. But they have no awareness about slipper. For this situation, they are trying to send their children into the open field for defecation

Defecation after practice

After defecation, most of the slum dwellers wash their hand with water, some time they use soap. Most of the time they use clay, muddy or ash for wash their hand. Sometimes migrated people use soap at their bathing, when they fell that their body is so dirty for daily work. The ratio of soap using is more in female person to male person. For their economic condition and less aware they are not interested to use soap after defecation or in the bath.

Food sanitation

Poor food hygiene is a major cause of regular disease and discomfort. Adulteration of foodstuffs is rampant. There is a lack of appreciation by slum dwellers for food safety. Collaboration with sector agencies for consumer education is critical. Poorly cooked or uncooked food can serve as a vector for the spread of disease if proper sanitation measures are not taken. The main diseases spread through uncooked or poorly cooked food include trichinosis, typhoid fever, salmonellosis, amebiasis, food poisoning etc. The objective of food sanitation is to reduce food borne diseases. Taking proper care to minimize food contamination can prevent most of the food borne illness. In BhuttoMiah's slum area, most of the people are not aware of food sanitation. When the female works in the rich people house she works as like as they want, but when she comes home she works as like to her. She thinks that economic condition makes difference between that. Cultural behavior also affects it. So work like other women in the colony. They are not well conscious for washing about row vegetable. After cooking food, they put it open for cooling. Various kinds of insects like flies sited on it. But they do not care about it. After taking their meal they do not wash their hand

with soap. They wash their hand and mouth only water. It may not clean them properly but they are not aware of that.

Air pollution

ARI and other respiratory diseases form the largest share of the reported disease burden in Bangladesh; slum dwellers uses of biomass as cooking fuel is the main cause of indoor air pollution; Vehicular air pollution is a major cause of respiratory distress in Urban Bangladesh.

Insects and vectors

Insects are the small invertebrate-segmented animals. The vectors are anthropoids or other invertebrates, which transmit infection by inoculation into or through the skin mucous membrane by biting or by deposit of infective material on the skin or food or other objectives.

Mosquito as carrier of disease

The mosquito as a carrier of the disease first obtains parasite or causative organism while feeding upon the blood of an infected animal or man and then injects it into a susceptible individual. Malaria is been caused by certain parasites that live in the blood of an infected person. The impounding reservoirs, answered area, inefficient swage and sludge disposal etc. help the breeding of mosquitoes.

Drainage system

The drainage systems in Bangladesh are not well. Most of the drainage condition of the city is very deprived. Sylhet city is not exceptional with other cities; its drainage system is very old. From the very beginning of the city, some natural mini-canals play role as drainage. The waste water and rain water are moved towards the SurmaRiver by these natural canals. Gradually city dwellers are making different closer settlement near the canal and more unplanned expansion is going on. As a result, a natural drainage system is not functioning properly. The inner part of the city dwellers are facing silted and water polluted the bad environment. In the slum area, there are no sewerage systems, but small drain has passed through the slum. In the rainy season, rain water is stored in their house area. Then they try to remove this water by cutting soil and create a path for removing water. The slum dwellers throw waste in the drain. There are many toilet pipe is linked to the drain, which is quite open. Human disposal creates the bad smell in that locality. Above all their situation becomes very miserable.

Solid Waste Disposal

People create waste in daily life. Migrated people also gather more waste. In the slum area, there is no waste collection system by dustbin. There are particular places for disposed of their daily waste. Most of the time they fall their solid waste near in the houses or a different particular place like low land, drain, side of the road etc. These places are not well planned. When this waste is purified, it spreads bad smell in the surrounding area. Migrated people know that this bad smell is more harmful to their health, but they have nothing to do for this. Sometimes they discuss their owner of the house. But do not take fruitful activities from them. For this, when this situation becomes more suffering to them, they arrange own self to clear this waste or chop soil in over the waste place.

The following table represents the present solid waste disposal system of the slum areas:

Table-7.2: Solid waste disposal system

Waste disposal site	Percentage of user (percent)
Open area near the house	50
Drain site	40
Nearer pond	10

Dustbin	0

The figure shows that 50 percent of slum respondents waste disposes ofan open area near the house, 10percent nearer pond, 40 percent waste dispose at the drain side. There is no waste collection system by dustbin.

Health and Hygiene

People living in flood-prone areas and urban slum, the poor, disabled persons and the elderly, children and adolescents are affected proportionally more by poor environment and infrastructure. Special attention and advocacy are needed to ensure that health risks are reduced, access to services is established and sustained, and economic and educational opportunities are created. Climate change is affecting Bangladesh disproportionately. Increased risks due to vector-borne diseases, flooding and air quality will need to be assessed. Casual labor, industrial and agricultural workers work long hours in exhausting and often dangerous conditions. Unbridled urban growth and proliferating slums are leading to serious risks to well-being and health of the urban population. Most of the slum dwellers of Sylhet city have to live in very low condition houses. BhuttoMiah'sslum is also like others. These houses are made of the muddy floor that sopping water. Home location of slum suffused by rain. Slum people also have to use the open toilet and open bathroom. There is no well solid waste management system and drainage system. For this purpose all the year, they have to face unhygienic slum environment. They are living in a congested room. On an average, six people have to live in a small room that is not hygienic or healthy. That means the density of population in a room is high. Ventilation process is not standard. They are not following proper health care. In addition, they are not aware of their health practice. For this purpose, every slum dweller is facing a health problem. Diseases are not the same for everybody. It varies from age to age. Different types of disease are affected by slum dweller in particular age are shown in the table.

Table-8.1: Different diseases affected by Age group

Age group	Name of the disease
Children	Diarrhoea, fever, cold, Pneumonia
Youth	Diarrhoea, fever, cold, cancer
Women	Chest pain, gastric, dysentery, goll bloodier stone, viral hepatitis
Men	Viral hepatitis, Chest pain, gastric, Peptic-altar

Health Caring behavior

The slum people are not aware about their treatment. They are not taking the modern medicine. Their view about modern medicine is not well. They always fair the side effect. They fair that after taking modern medicine they will affect with other serious diseases like cancer. Therefore, they are trying to stay the far distance from modern medicine in their primary disease position. At that time, they also try to heal from disease with a folk or popular healer. Most of the slum dwellers cannot contact with a doctor due to their economic condition. If they are in contact with modern medicine doctor, they have to need much money. Many slum people said that if they will contact with modern medicine doctor they have to pay for his visit and then the doctor gives them a prescription of medicine which has to need much money. On the other hand, if they contact folk healer they have no need much money, which is helpful for their family.

Table-8.2: Initial Choice of treatment of the slum dwellers

Types of treatment	Number of Respondents	Percentage
Popular sector	18	60
Folk sector	10	33.33
Professional sector	2	6.67
Total	30	100

Above figure shows that at the initial period 60 percent of slum dwellers in the study area have to treat them with a popular sector. 33 percent treat with a folk sector and 7 percent treat them in profession sector. If they treat them in popular, folk or professional sector, they mainly start with a popular sector. If it will not happen, they have to change their belief in another. Most of the time they use three sectors at once. Besides these, they have to the particular belief of treatment about the particular disease. Their particular disease treatment beliefs are shown in table below.

Table-8.3: Particular treatment for a particular disease

Treatment sector	Name of the disease
Popular	Diarrhoea, fever, cold, Pneumonia
Folk sector	Viral hepatitis, Chest pain, gastric, Peptic-altar, cancer, dysentery, goll bloodier stone
Professional sector	Diarrhoea, fever, cold, Pneumonia, Peptic-altar,gastric, dysentery

MAJOR FINDINGS AND CONCLUSION

1. Most of the families earn 3000-4000 taka monthly, which is insufficient to main a family.
2. Sixty percent people in the study are illiterate.
3. There are only three latrines are used by the total slum dwellers. Which indicate that the Latrine facility of the study area is so poor.
4. Most of the latrines outlets are drain which polluting surface water source.
5. Sixty-three households on an average use a tube well.
6. No solid waste collection system is present in the study areas.
7. There are no windows are present in the houses of the colonies slum areas.
8. The population density of a room is very high, which is not hygienic.

In a nutshell, the result from the data analysis shows that most of the slum dweller lives in the socially odd situation. Their economic condition indicates the tomorrow's vulnerability of the country. Most of the slum girls and boys are not getting education facilities. They have not enough facility for the hygienic latrine, drinking water, solid waste management, and housing.
The major objectives of the research work were to access the sanitation conditions of the low-income areas of the Sylhet City-corporation. Due to poverty, most of the people cannot afford the sanitary latrines, although they became aware of healthy sanitation with the motivational works. Overall health and sanitation condition of the study area was worse. Poverty, lack of knowledge and awareness about health and hygiene, unwillingness, superstitions etc. were responsible for the deteriorated condition of the sanitation system. This situation has improved as a result of the intervention.

Partnership between local government authorities and citizens (groups) for development of infrastructure and improvement of primary health care services in combination with awareness raising on health and environment linkages and targeted action to improve and promote community-based water supply, sanitation, shelter, management of solid and hazardous (in clinical) waste, air quality management etc. is proving a promising way forward.

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APPENDIX-A

Case Study

The case study can be helpful for giving a clear idea about the water and sanitation behavior of migrants.

CASE-1:

Md. DulalMiah

Age: 28 years old

Educational status: primary passed

Md. Dulal Miah lives at BhuttoMiah's slum at Pollobi, ward no. 08, Sylhet city from 2000. He has three sons (7, 4, and 1) and two daughters (8, 3). He is the head of his family because he is the elder son of his family. His father was a day labor. When he was in 20 years old his father made him married. After one year he became the father of a daughter. Next year he also became thefather of a son. In this way, he made a big family. So he had to need more earn to maintain his big family. So he had come to Sylhet to earn more. At first, he stayed with his neighbors at Bhutto Miah's colony. Lastly, he established here permanently. He went village in occasionally.

When he first came at colony it was very much challenge for him to establish himself here. But his low incomes of past bound him to stay here. He always tries to earn more and for that, he gives more labor to pull a rickshaw. One day he felt that his urine looks like yellow, and his eyes look so. He also felt his body is weak and tired. So he discussed with his neighbor about his body condition. They confirmed him that he attacked in viral hepatitis. They also suggested him to contact with a Kobiraj. Therefore, he went to Kobiraj who give him a Mala. He had to put that in his head. Some days past, he did not feel well. At that time another relative suggested him to go to another Kobiraj who lived at his village. So he went back to his village. Kobiraj gave him Gasanto medicine which local name is Bonany. After some days, he felt well and back Sylhet again. After some days, his youngest son attacked with fever. It turned into pneumonia. He made treatment his son with his relatives' suggestion. After five days when he came back from pulling a rickshaw, he heard crying. He saw that his son looks like a dead body. The whole family was crying for his sons died. At that time, a neighbor came and observed that nerve is running. Therefore, he took him to Osmani medical college. The child became well after fifteen days. Now his economic condition becomes marginal for his illness and his son's illness.

CASE-2:

AfiaKhatun

Age: 32 years

Educational status: primary passed

AfiaKhatun lives at BhuttoMiah's slum from 2002, her husband died in 2002. Her husband was the head of their household when he was alive. After his death, she became the head of her household. For any kind of decision-making, she took alone. She also took the guidance of her children. She had four daughters {10, 8, 3 (age limit)}. In 2002 when she was pregnant, her husband died of an unknown disease. Although she took her husband at Osmani medical college for well treatment, the doctor was hopeless for him and said to back him at home.

After some days when her husband was very serious, her mother-in-low took her husband to Sylhet again. On the way, her husband died. She was not seen her husband at the death time. It shocked her most. Besides these, after the death of her husband, her family wanted to marry her again. However, she had not forgotten her husband. After her husband's death, she had a big amount loan because during the time of her husband's illness she made that loan to cure her husband. Therefore, she had come here for earning. She selected this area for staying because she had an aunt here and her aunt has two houses, which she provided as a rent by

monthly rent. The monthly rent for these houses was three hundred taka only. She gave two hundred and fifty taka for her vulgar situation. She has two daughters and she has a great consideration about the education of her daughters.

Her sister had lived here since 2003. She took her (sister) here. She rented another house for her sister. Then, she started working as a maidservant. She also taught the Arabic language among children in front of her house.

She always tried to maintain a good relationship with her neighbor. She is known as 'MiasabAfa' (Women priest) to the Akhalia area. She never goes to any local people for help. The increase of emergency she could lend from her neighbor and sometimes she helps them. She does not want to stay here permanently. If she could clear her debt, she will return with her daughters.

CASE- 3:

Kamal Uddin

Age: 25 years

Educational status: Illiterate

Kamal Uddin had been lived at BhuttoMiah's slum since 1998. Twenty years ago, he came here with his father. His father was a vegetable seller. After his father's death, he had become head of the family. Now he is a rickshaw meeker. He is also a rickshaw puller. He works whole day at the colony. If he could not work of rickshaw then he pulls a rickshaw. The whole family depends on him. If he felt in illness income also stops. He thinks if he could save some money, he will back to his village and will take a small shop for business. He married here. His wife came from a different district. She lived in a colony where her husband's uncle stayed, her mother-in-law choose her for her son.

In his lifetime, he changes various colonies for various reasons. He and his family always try to maintain good relationships with their neighbors. In his present colony, there are some problems with three toilets for sixty- three families and only a tube well. There is a density of the population is so high. If he or his family members become ill, he straightly goes to the nearest dispensary where a local doctor sits and gives advice. Few days ago, he attacked in viral hepatitis and became well with the treatment of a Kobiraj. He believed that there is no scientific treatment of viral hepatitis. It only cured with Kobiraj. Now he is well and again back to his work.

