



Present Situation of Water Supply and Sanitation at Karail Slum Dhaka

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Abstract

The populations of the slums are increasing day by day at an alarming rate due to the urbanization of the country. The living condition in the slum area is very low. Generally slums are lacking from access to safe water, drainage and sanitation facilities and basic health care facilities. The study has been carried out to assess the present conditions of the water supply and sanitation of the Karail slum of Dhaka city. The research work was carried out by using Participatory Rural Appraisal tools including Focus Group Discussion, Key Informant Interview and Household Survey. Poor physical environment with non-existent solid waste disposal system is very common phenomenon in Surveyed slum. Most of the people of the slum live under unhygienic environment. However, the level of hygiene knowledge and practice has been found to be significantly low among the Karail slum dwellers. The study in Karail area of Dhaka city has found that the sanitary and water supply conditions are improving very slowly. Comprehensive and sustained wastewater management in combination with sanitation and hygiene is central to good health, food security, and economic development for the slum people.

Key words: Hygiene, Solid waste, Slum, Water borne diseases, Water quality

Introduction

Bangladesh is one of the most densely populated countries in the world. Most of the people are living under poverty line. A huge amount of the people of this country is illiterate. So they have no adequate knowledge about family planning, proper use of water and sanitation, environmental pollution and their impacts on humans as well on overall environments. As a result, many water borne diseases are spreading out in all over the country specifically in urban slum areas. Slum people have a poor understanding about the relationship between health, water and sanitation. Especially Bangladeshi children have suffered from water and sanitation-related diseases include various types such as diarrhea, dysentery, typhoid, worm infestations, skin and eye infections etc. So beside environmental sanitation practice a good water supply system is also very important to ensure a healthy community. In educational institution these practices will play a vital role so that the students of institution can teach the water supply and sanitation practices to their family members. In this way a large number of people of the country would be aware of sanitation and water supply system. Water supply and sanitation is a big issue in Dhaka city. In slum areas of Dhaka city there are many problems found related to water supply and sanitation issue. The main objective of the research work was to assessing the situation of water supply and sanitation of the Karail slum area.

Materials and Methods

The methodology of this survey consists of practical field observation and field based data collection of water supply and sanitation situation through Participatory Rural Appraisal tools and semi structured questionnaire survey. The relevant

secondary data for this study was collected from published and unpublished sources.

Study area

There are around 4,000 slums found in Dhaka. Karail slum is one of the biggest slums of Dhaka city. Karail slum was selected for the study due to having huge population in the slum. The important statistics related to this area is given on Table 1.

Table 1. General information of Karail slum

Name of the Area	Karail
Thana (Police station)	Gulshan
WASA Zone	05
District	Dhaka
Area	90 Acre
Households	20000
Population	Total= 90237 (Male: 43315, Female: 46922)
Education Rate	20%
Government Primary School	Nil
High School (Non-Govt)	02
Primary School (Non-Govt)	20
Primary Health Care (Govt)	01
Primary Health Care (Non-Govt)	04

Source: DSK report, 2014

The study was conducted to assess the environmental conditions of the slums including water supply, sanitation etc. For conducting the study the Participatory Rural Appraisal tools and questionnaire survey were used. The Participatory Rural Appraisal tools include Focus Group Discussion, Individual Interview and Key Informant Interview. Social Mapping and Resource Mapping was also developed during the study by the participants to assess the resources of the area.

Social and resource mapping

A social and resource map of Karail slum is prepared. For preparing social and resource map of the area, a focus group discussion has been made. At first a focus group of 8-10 persons is formulated. They were provided with art paper and sign pen to draw the outline of their community. They showed the important social institutions and resources like school, mosque, water body, tube well, open spaces etc.

Focus group discussion and individual interview

A detailed focus group discussion was conducted to get the information from a homogenous group of people. Two focus group discussion containing 10-12 people were conducted for the study in the slum area. One group was the women group and another group was the male group. Several individual interview and key informant interview was conducted to get quantitative data and to verify the data with data gathered by the FGD.



Fig. 1. Preparing social map



Fig. 2. An aerial view of Karail slum, Dhaka

Results and Discussion**Water supply****Assessments on water quality**

Most of the people (85%) participated in the interview were dissatisfied about the quality of water. Odor was the primary issue to them. Some had objection with color too. Participants emphasized to set up a deep tube well within in the slum area to avail quality water.

Perception of safe drinking water

Most of the household of the slum area use piped water for their drinking purpose supplied by Dhaka Water Supply and Sewerage Authority. For maximum respondents of about 67% of the slum described tube-well water is safe for drinking. About 10% people said piped water is safe to them. Rest of the respondents gave their opinion to use boiled water is much safe for their drinking purpose.

Assessment on water quantity

Some respondents claimed that water through pipe does not come all time. It comes in a certain period of time in a day. By passing this claim most of the participants were satisfied with the availability of water and the timing of supply. Only 15% people claims about not getting enough water for the whole day. Some of them opinioned that have no enough reservoirs for saving the water for the whole day.

Water sources for drinking purpose

Most of the people of the slums use DWASA water for all types of domestic work including drinking, cooking, bathing, washing etc. Around 73% of the people of the slum use DWASA water for their drinking purposes and about 27% people use shallow tube well water for their drinking purposes.

Distance of household from water sources

Most of the households (68%) of Karail slum area have their source of drinking water available within 10 m and 20% have claimed about the distance is 10-50 m and rest of the respondents claimed about this drinking water source is above 50 m away from their households.

Diseases caused by contaminated water

There is almost universal knowledge among adult women, adult man and young generation from all contexts that contaminated water can cause diarrhea or cholera. The most of the diseases by which they are being suffered mostly by water borne diseases. However, the data was collected from different sources and persons for assessing common water borne diseases in Karail slum. The most occurring diseases are diarrhea, dysentery and cholera. The respondents seem to have fair knowledge on the mode of transmitting germs from human excreta. Hands and nails, flies were mentioned the most followed by breathe or air.

Table 2. Survey details

Criteria	Result of Survey
Assessment of water quality	Acceptability- 15% Unacceptable- 85%
Perception of safe drinking water	Tube well water- 67% Piped water- 10% Boiled water- 23%
Assessment on water Quantity	Sufficient- 85% Not sufficient- 15%
Water sources for drinking purpose	DWASA Water- 73% Shallow Tube well water 6 27%
Distance of household from water sources	<10m- 68% 10-50m- 20% >50m- 12%
Environmental sanitation	
Type of latrine people use	Sanitary Latrine- 42% Unhygienic latrine- 57% Others- 1%
Use of soap after coming back from toilet	Yes- 14% No- 86%

Environmental sanitation

According to the participant the sanitation available was proper and acceptable. Availability of latrine per house was adequate. Participants accepted the presence of open or unhygienic latrines but demanded the number is too small. As per participants, due to proper campaigning of several NGOs peoples has started to follow hygiene practices.

Type of latrine people use

It was found that only 42% of households use sanitary latrines, 57% uses unhygienic latrines and 1% uses no latrines. It has also been found that many households cannot construct sanitary latrines for financial inability and also due to not having enough land to construct latrines.

Use of soap after coming back from toilet

Most of the respondents have responded that they do not use any soap or liquid hand wash after coming back from toilet. It was found that 14% claimed that they use soap after come back from toilet and the rest of the big amount do not use any hand wash.

Distance between latrine and tube-well

Most of the Latrines of the slums are very close to the drinking water source. It is observed that the distance between the drinking water source and the latrine is within 5 m mostly and some are also greater than 5 m away from the water source. It is due to the lack of land facility.

Solid waste disposal

Food waste, paper, rubbish, ashes and residues, special wastes such as street sweeping, roadside litter and abandoned vehicles are the main solid

wastes in the study area. Some municipal dustbins are found in Karail slum area for solid waste disposal, but not sufficient and the inhabitants have to dispose solid wastes in open spaces and road sides that is very vulnerable for the deterioration of environment.



Fig. 3. Open dumping of solid waste in the nearby lake

Conclusions

Water is one of the most important components of the physical environment. The quality of drinking water is closely associated with human health and providing safe drinking water is one of important public health priorities. According to the local people, they have adequate access of water. They have no objection about the quantity of water but they have raised objection about the quality of water especially about the odor and color problem. The overall sanitation scenario of the area is also good enough. Some people have claimed about several water related diseases due to poor water quality. Therefore, ensuring quality water is the foremost agenda for the people of Karail slum area. The solid waste are being open dumped due to the overall environment is becoming bad day to day. The sanitation scenario is not good enough as well. People are mostly ignored mostly about the importance of hygienic condition. So for maintaining average standard of living proper water supply and sanitation can play a key role.

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