

Urban Sanitation Issues and Level of Awareness on Hygiene Practices: A Study in Jorhat of Assam

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Abstract

Proper sanitation is an important indicator of human well-being and social development. But inadequate sanitation and hygiene maintenance is become a burning issue in our country basically in urban areas due to high population explosion, which is a major cause of disease world -wide and impacts on health both in households and community level. Urban sanitation in India faces lots of challenges, where many people in urban areas lack proper access to clean drinking water, millions of people lack adequate access to sanitary toilets, and improper disposal of solid waste and liquid waste pollutes environment to a large extent. Therefore, in this paper an attempt has been made to examine the status of sanitation facilities and its related issues on health of the people under Jorhat municipality of Assam. Moreover, the study also focused on the level of awareness of the people towards hygiene practices in their daily life. The study reveals that poverty, lack of awareness and proper health education of the residents on sanitation and hygiene, limited participation and disinterestedness of residents towards awareness camp and workshop organised by Municipality under Swachh Bharat Mission undertaken by the Government of India, communication gap between authority level and common people are the highlighting factors associated with improper management of sanitation. The findings of the study will be significant for future research and policy framework in promoting community development and urban development programme.

Keywords: Sanitation, Hygiene, Municipality, Awareness, Health

INTRODUCTION

Sanitation is one of the major determinants of quality of life and human development index. The concept 'Sanitation' is expanded to include personal hygiene, proper garbage disposal, excreta disposal, disposal of waste water and others. Sociology of sanitation is a scientific study to resolve the problems of human society linked with sanitation, water, public health, hygiene, environment, poverty, welfare of children and women, empowering people to attaining sustainable development (SDGs) and millennium development goals (MDGs). (Nagla,2015) Sanitation is defined as safe management of human excreta and any kind of waste, including its safe treatment, disposal and hygiene-related practices. Under Jorhat municipality sanitation is a complex and pressing issue. Unhygienic standards, crowded situation and inadequate sanitation contribute to rapid outbreak of diseases in different times, particularly in slum areas. Lack of sanitary toilet and bathroom facilities in the slum area of selected wards highlighted the

question of dignity and safety of women as well.

According to ‘WHO / UNICEF joint monitoring report (2012)’, it was estimated that in India 90% from the total of 692 million people in South Asia practice open defecation and has 97 million people live without access improved drinking water. (Showkat, 2016)

Therefore, the current study attempts to describe the existing status of sanitation practices in the selected areas under Jorhat Municipality where researcher seeks to reflect the awareness of people on hygiene and its importance. It is noteworthy to explain that access sanitation can be listed in the Maslow’s hierarchy of needs. One can count it among the physiological need, at the bottom of the pyramid that are indispensable for the survival.

Methodology

Brief description of the area of study

Assam is situated in the North-Eastern part of the India. The study took place in Jorhat town which is the administrative headquarters of Jorhat district in Assam, also called as the cultural capital and last Ahom kingdom of Assam. (Gattani, 2014) Jorhat is the second largest city in Assam after Guwahati and it was the last capital of Ahom kingdom. Currently there are nineteen (19) wards under Jorhat municipality and respondents from two of the wards, ward no 1 and ward no 19 are selected for the study.

The study is based on descriptive research design and the researcher has adopted the Random Sampling method to select the respondents and a total of 82 respondents are chosen for the research. The respondents of the present study are of four types, these are: 1. Head of the household 2. Sanitation Workers of the municipality, 3. Ward commissioner of selected wards 4. Municipality board officials

Table 1: Selection of the Respondents

Sl. No	Respondents	Numbers			Percentage (%)
		Ward 1	Ward 19	Total	
1	Head of the Household	30	30	60	73.2%
2	Ward Commissioner	2			2.4%
3	Municipal Board Employee	10			12.2%
4	Sanitation Worker	10			12.2%
Total		82			100%

Both primary data and secondary data have been collected for the research. The researcher has adopted the semi structured interview schedule, focus group discussion and observation method for primary data collection. On the other hand, secondary data are collected from published books, research paper, government report and websites related to the topic.

Objectives of The Study

The research work has been conducted to fulfil the following objectives -

1. To study the status of sanitation and its impact on health and environment in the area of study.
2. To examine the awareness of the respondents regarding the importance of sanitation and hygiene practices.

Review of Related Literature

The term 'Sanitation' includes a broad range of environmental health related aspects including safe disposal of human urine and faeces, faecal sludge treatment, water supply, proper drainage system, solid waste management, mosquito vector control etc. (Cairncross, 2018) In this context it is a truth that a huge number of people in India still have not follows adequate means of disposing their daily waste. Despite the presence of several national and international sanitation schemes, sanitation and its proper maintenance remain to be one of the great concerned for the people. (Showkat,2016) Along with, lack of proper planning, staffing and financial resources makes the sanitation, basically among slums very problematic. (Collender,2011) Therefore, it cannot be denied that urban sanitation remains a critical problem in modern India. Despitess the achievements in the urban sanitation sector following several policy and schemes like Swachh Bharat Mission, Total Sanitation Campaign etc., the key challenges are still lies upon the lives of marginalised community such as economically poor people, poor women and so on. In the contemporary time also, issues related to proper disposal, transportation, recycling and reuse of faecal waste are yet to be fully addressed. So, the role of social innovation and behavioural change of people regarding sanitation practices become important to meet their social needs. Social innovation in urban sanitation can bring change in the livelihood through servicing the voice of the poor. Moreover, sanitation is not just about toilets, it is more than that. It is about the safe containment of faeces, safe emptying of faeces, its transportation and safe treatment as well. (Dasgupta et al., 2023). Improper urban sanitation causes many hazardous situations towards environmental sustainability. Most of the times it has been noticed that people are not even aware about the importance of proper hand washing after defecation. Due to which, several infectious diseases spread over time in the community life. (Jena, 2018) Safe drinking water, sanitation and good hygiene practices are crucial for a healthy life of human being. Actual growth and development of a society is also influenced by safe sanitation and hygiene. (Kalita & Borah,2019)

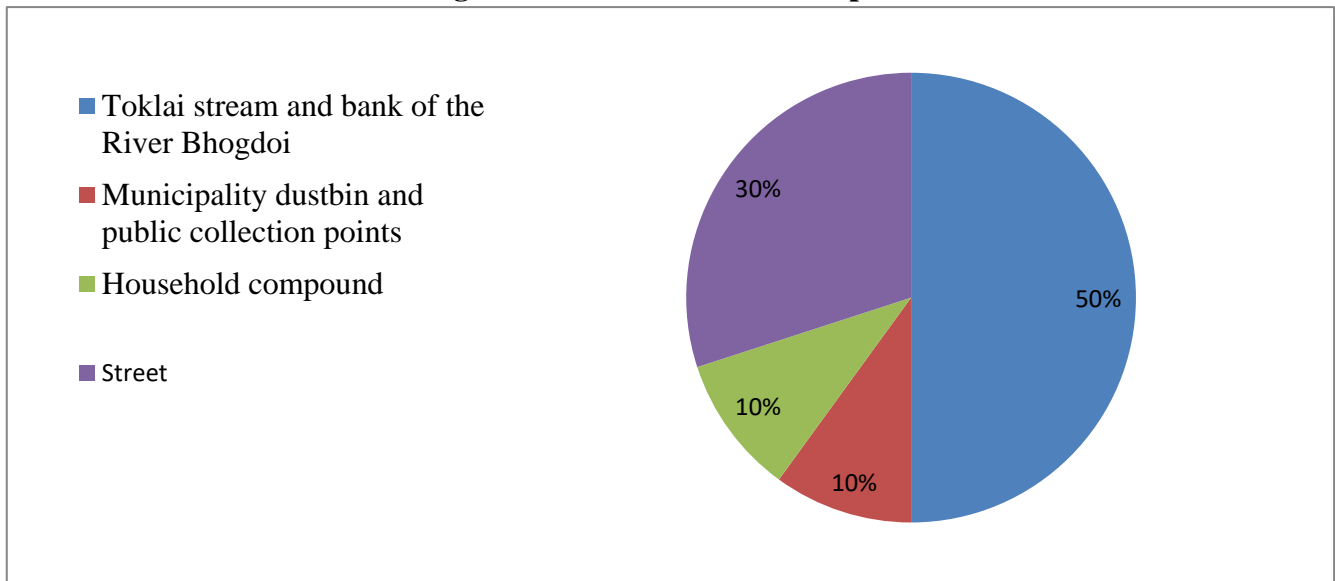
Analysis

Sanitation and hygiene are the basic necessities of livelihood and lower standard of these basic needs can cause many tenacious problems in a society. The status of sanitary condition and its related issues are always found to be linked with housing condition, water facility, waste management facility, toilet facility and so on. In this regard, economic factor matters a lot to access the facilities in a standard way. In the studied population, all kinds of housing pattern like kutchha, semi – pucca, RCC are getting represented from both the ward. The housing condition of the inhabitants, who are basically squatters residing at the bank of the river Bhogdoi (a tributary of the river Brahmaputra of Assam) is very poor in terms of their housing condition compared to other respondent's house in the wards. Housing pattern of the inhabitants particularly people of slum area are constructed with bamboo, cane, straw, plastic tarpaulin etc. On the other hand, a very few numbers of house have used tin, wood etc. and safely constructed their roofing.



Photo of Garbage Disposal on Street Side (Photo Courtesy: First Author)

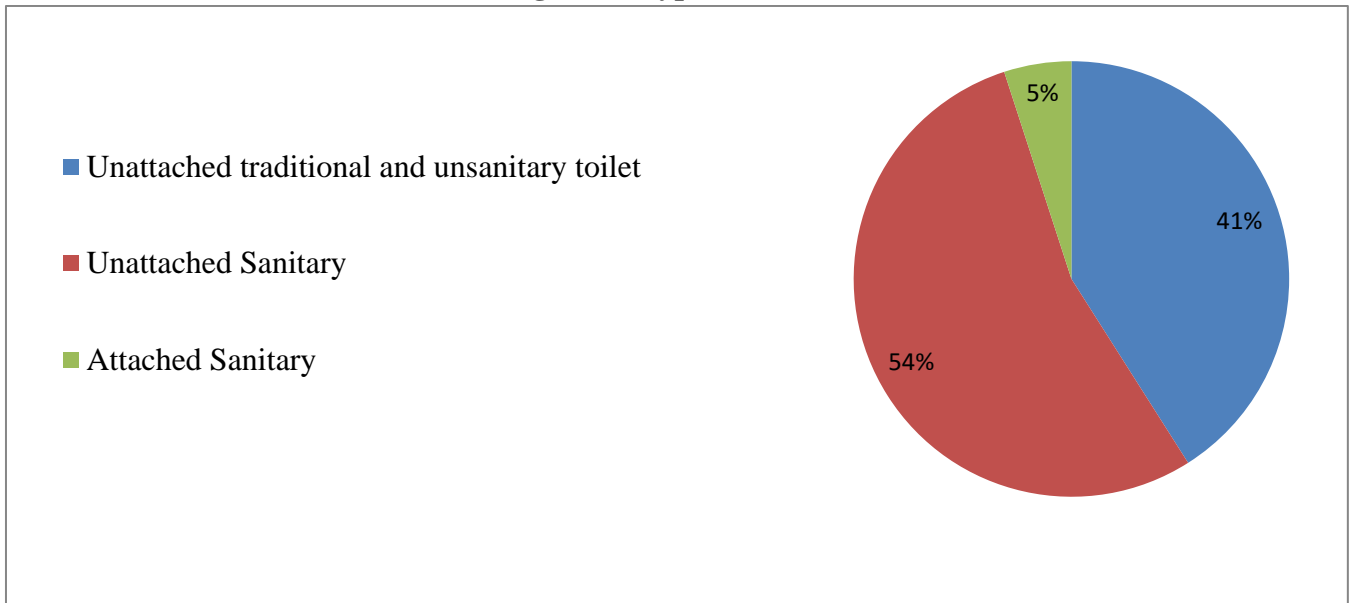
Figure 1: Household Waste Disposal



Moreover, it was observed that most of the houses in slum areas are like a hut where a large family, basically joint families are being resided. It is found that, about 50 per cent of the respondents, there is no such available facility of systematic dustbin facility and municipalities public collection points for solid waste disposal through proper segregation, in opposition to that rest of the household have not used dustbin and municipalities public collection points instead of its availability due to lack of personal interest and awareness. As a results, huge amount of household waste generation by the families and its open dumping in the open site of Bhogdoi river (one of the major Tributary of the river Brahmaputra of Assam), streets, household compound and Tocklai stream (One of the major stream flows into Bhogdoi river passes through Jorhat town) pollutes the ground and surface water quality to a large extent. Alongside, open dumping of stinking garbage and burning of household wastes effect the surrounding

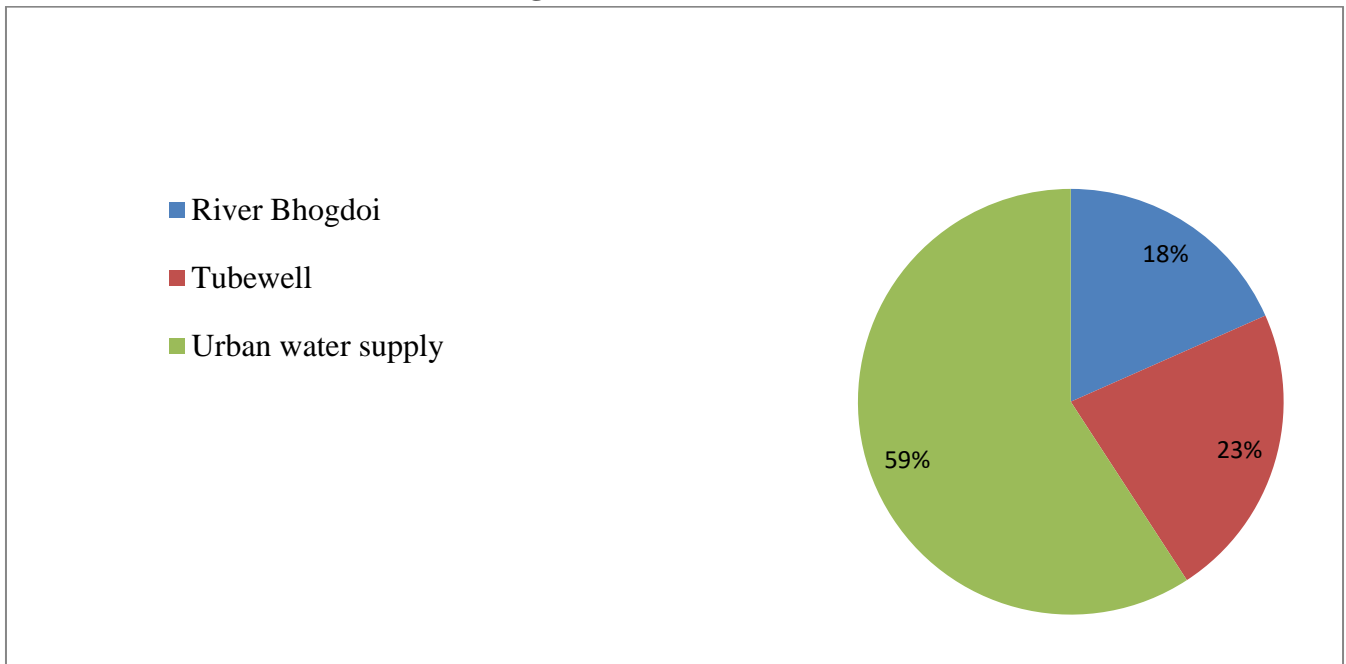
environment adversely. Moreover, due to the open dumping of wastes in the Tocklai stream from last few years, it become an easy dumping zone as well as a dirty drain for its nearby inhabitants. As a consequence, the stagnant water of Tocklai stream serving directly to host vector borne diseases such as mosquito transmitting Malaria, Dengue, Japanese Encephalitis etc. In this way, it is important to mention that, to prevent mosquitoes, municipality provides the facility of fogging in wards as vector control activity seldomly.

Figure 2: Types of Toilets



In the studied area of Jorhat, majority of the respondents belong to economically weaker section. People who do not have sanitary toilets are due to lack of adequate place for its construction and their poor economic condition as their residing area is like slum pockets located at the bank of river Bhogdoi. In the study, only a few numbers of household that is 5 per cent have attached sanitary toilets, whereas 54 per cent household have unattached sanitary toilet followed by 41 per cent have traditional and unsanitary toilets which are made of polythene, bamboo, tin etc. It is observed that unsanitary toilets are very uncomfortable for defecation and hygiene is not practised at all. Additionally, due to this horrible situation women and girls are suffering every day, especially during menstruation, and pregnancy time as they risking their personal safety, hygiene and dignity. Along with toilet condition, bathrooms are also made of bamboo, plastic polythene and tin without having any proper facility of waste water disposal. Apart from these, some people revealed and shared their experience of using open site at the river bank of Bhogdoi and other comfortable open sites for defecation.

Figure 3: Source of Water



Although people have access water from urban water supply and tube wells, some people from Raja Maidam new colony, Digambar Chouk area and Bari gaon area and squatters residing at the Bank of the river Bhodgoi have face the problem of water scarcity as they could not get municipality’s water adequately distributed through pipe line system and even some people do not willing to take the service of urban municipal water by paying for it. Both ward no 1 and ward no 19 shares its boundary with the bank of river Brahmaputra and that’s why, people have use water from the river Bhogdoi for different kinds of household and extra uses including taking bath, washing cloths and defecation. Due to which water of Bhogdoi pollutes to a great extent which is a major source of water supply for Jorhat municipality and causes several water borne diseases among users, basically skin disease, diarrhoea, gastro-intestinal etc. Additionally, prevalent sanitation related diseases reported in wards are dengue, skin disease, asthma, typhoid, cholera, common cold, urine infection etc. As a result, air of the surrounding area, ground water of the river became polluted day by day and creates a hellish atmosphere around the city. Review of literature about this matter also depicts concern and pointed out that it is one of the major reasons behind the water pollution of the river Bhogdoi. But unfortunately, respondents of the study are not much aware of this issue. In addition to that, it is noteworthy to mention that, in terms of public toilet under Jorhat municipality, there are only a few numbers of toilets which are located in the main town area of Jorhat, whereas there is no such facility of public toilet in wards. Although these public toilets are paid toilet, the sanitary condition and hygiene is barely maintained as there is a lacking of proper water facility, cleanliness and hand washing products as well.

Moreover, the inadequacy of proper drainage system in the wards as well as in the boundary of house and its irregular cleaning plays a major role in public health problems. In the main town area of Jorhat, drainage system is very poor and not cleaned regularly. Most of the existing drainage systems in the studied area are blocked with plastic and other solid wastes, and uncovered in slum areas, as a consequence the waste water accumulates in the streets, for which children are primarily vulnerable to disease through direct contact. People who are residing at the bank of the river Bhogdoi, most of their

household toilets, bathroom pipe and drainage system are directly connected to the river Bhogdoi from where people use water for various kinds of household activities and drinking purpose.

Although there are several public schemes and policies implemented by the government to ensure sanitation, hygiene and cleanliness in the country, still inadequate sanitation remains to be one of the burning problems faced by the urban dwellers in terms of hygiene practices. The ineffective management of human excreta is directly or indirectly associated with health issues. In this context, Indian government launched the Swachh Bharat Mission (Urban) on 2nd October, 2014 with the vision to make India clean or at least free from open defecation. After that, to carry forward the progress of the mission, Swachh Bharat Mission- Urban (2.0) has been launched on 1st October, 2021 for the next five years, up to 1st October, 2026 with the vision of achieving zero waste (aims to reduce waste by recycling and reusing the waste material and preventing waste from going to landfills) status for all urban centres through 100 per cent source segregation, door-to-door collection of waste, systematic and scientific management of all fraction of waste and safe disposal in scientific land-filling sites. (PIB, 2023) The mission also aims at remediation of all legacy waste dumpsite and conversion of these areas into green zones. Therefore, highlighting the efforts of the Indian government towards sustainable waste management, Swachh Bharat Mission - Urban (2.0) is a shining example of concerned authorities' green vision in terms of sustainable method adoption as well as proper service delivery. The mission intends to make urban centres 100 per cent Open Defecation Free (ODF), in which deeply ingrained unsanitary and unhygienic sanitary condition of the people from different wards in Jorhat may hinders to be successful in this mission. On another note, hundred per cent scientific waste management practices and behavioural change of the masses is also focused by the mission. Moreover, significantly Jorhat municipal board have recently executed their plan on construction of 'Faecal Sludge Treatment Plant' that is a facility of treating human waste from septic tanks and other sanitation system with the purpose of reducing the environmental impact of untreated sewage, prevent the spread of infectious diseases caused by unsanitary condition, and to recover resources like water and other nutrients. This plant would help to make human waste safe for disposal as well as reused for gardening, farming and so on. Along with, it will help to reduce health risks for town dwellers. Progress of the project is going on in a place of Jorhat district itself, known as Kachogal and this innovative work received its success about 40 per cent as of now.

Level of Awareness among People

In terms of sanitation practices Jorhat municipality distributes two colour coded dustbin facilities (one is green for wet waste, another one is blue for dry waste) among 50 per cent respondent's households to segregate dry and wet waste but somehow there is a lacks of awareness among people about how to segregate waste and its importance. That is why, people used to dispose their solid household wastes without any segregation, even hazardous waste also throws away in the same dustbins and public collection points. In this regard municipal board officials with the full cooperation of ward commissioners and community leader such as Self- Help Group members, Nurse, ASHA workers tried to disperse awareness and bring behavioural change through awareness campaign, public meeting, street play etc. In terms of inadequate sanitation, lack of awareness is the major and critical reason behind all its related issues. Many people do not even hear about Swachh Bharat Mission and its objectives. There is very less numbers of people that is only 20 per cent have joined and participate actively in Swachh Bharat Mission campaign and awareness programme organised by the municipality. As municipal

officials and community leaders opined, people try to run away from public meeting by expressing their personal issues during campaign on awareness of hygiene and cleanliness related activities in ward level. It is clearly found that peoples' knowledge on sanitation and hygiene, its significance for a healthy lifestyle and its inherent linked with public health related issues are very minimum and rarely aware of it. Moreover, it was observed during study that in spite of supplied the adequate sanitary equipment and materials to sanitation workers for toilet cleaning, street sweeping, garbage collection etc. by the municipal authority, most of the workers are seems to be working without wearing and using sanitary kits. As they said, they are not comfortable every time during working hours to use sanitary kits like hand gloves, face masks, boot shoes etc.

Conclusion and Suggestions

The study reflects that the governmental effort is indeed a very necessary for the improvement of livelihood condition of the people in terms of sanitation and hygiene in urban areas. Particularly there is a great need of special slum improvement schemes and policies for slum areas development. Along with government, non-governmental organization and private sector undertakings should look into the issues of people's sanitary and hygiene condition living in urban area. In this context, total sanitation campaign is a commendable initiative of government. The municipal authority, particularly waste management authority needs to examine the root causes and loopholes associated with the problem of public health, hygiene and sanitation. Moreover, it is always the women who fetch water for the household activities and looks after hygiene of the house. Thus, their health education and awareness towards sanitation, cleanliness and hygiene is primary concern to ensure proper sanitation. Many studies depict the fact that women are mostly vulnerable by the lack of proper sanitation.

To ensure sanitation among all the wards, municipal authority should implement a transparent monitoring systems for water distribution among wards, basically in slums as an essential steps towards enhancing accountability in the entire management system and ensuring that every household has fair and equitable as well as efficient access to water. It is also important to make active involvement of young people and community leaders from each ward in the decision -making process of municipality administration to strengthen the community engagement process on water and sanitation. The strategy can definitely empower the youth and will foster a sense of responsibility within a community for sustainable improvements in water and sanitation services. Moreover, making a great effort to involve women from different wards and communities in the decision – making process would help to make them aware about the healthy lifestyle and well-being of their family. Alongside, to make solid waste management service effective and sustainable, residents need to be penalised for generating non-segregated waste and collectors should be accountable enough for only collecting segregated waste from household level. Apart from these, contribution of public sector undertakings and their corporate social responsibility (CSR) funds are very beneficial for development of a country but it is seen that there has been very limited involvement of private sector of India in sanitation management sector.

The study may definitely help for further research in urban area such as sanitation issues of women, sanitation issues related to children, their health problems, environmental impacts of inadequate sanitation management, level of health education and awareness about the importance sanitation, effectiveness of government plan and programme for ensuring sanitation as well as slum development, role of civil society and NGOs on sanitation and hygiene management in urban area etc.

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