

# **Status of Sanitation and Hygiene Practice at Kumardoba Mouza, Simlapal Block, Bankura, West Bengal**

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## **Abstract**

*Health is one of the major determinants of happiness. A bed ridden person with a huge bank balance and all comforts and luxuries of life will remain unhappy. At present, disease due to poor hygiene practice and improper sanitation is increasing day by day, particularly in developing countries. More than 2.5 billion people of the world population live without basic sanitation facilities and 100 millions of people do not have soap and clean water to wash their hands, which can directly, prevents the spread of diarrhoeal and respiratory diseases. In India, Government has adopted several programmes to increase awareness which in turn may reduce health hazards due to poor hygienic practice and improper sanitation, such as Central Rural Sanitation Programme (CRSP, 1986), Total Sanitation Campaign (TSC, 1999), Nirmal Gram Puraskar (NGP, October, 2003), Nirmal Bharat Abhiyan (NBA, April, 2012), and Swachh Bharat Abhiyan (SBA, October, 2014) etc.*

*This research study at Kumardoba Mouza in Simlapal Block of Bankura District, West Bengal shows that more than 92.30% households have no toilet facilities. The household members use to defecate in open places like-embankment of pond, agricultural fields and other nearest open spaces. Surprisingly, handwashing practice in critical time is quite uncommon with proper hand wash materials. Unfortunately, people of the study area, have been suffered from the symptoms related with Dysentery, Diarrhea, Cholera, Typhoid, Hook Worm Infection and Urinary Tract Infection, Asthma, and Trachoma etc.*

**Key words-** Improper Sanitation, Hygiene Practice, Infectious Diseases

## **1. Introduction:**

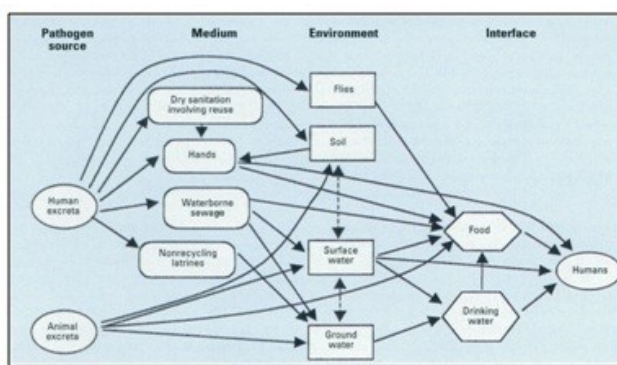
Mahatma Gandhi stated that sanitation is more important than independence. Sanitation includes safe disposal of human and animal excreta, safe storage and handling of drinking water, personal hygiene, cleanliness of house, food hygiene, safe disposal of waste water, safe disposal of solid waste and community hygiene (Gol, 2014). Sanitation, itself has the poor relation in UN's Millennium Development Goals (MDGs, 2000-2015), but without it, the chances of meeting many of the other goals are much reduced (Coombes, 2010 and Sharp, 2008). In rural India, inadequate availability of drinking water and proper sanitation, lead to

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innumerable deadly diseases, and also harm the environment (Kumar, 2015). It is the fact that, 53% of India's population defecates in adjacent open space, which, in consequence, leads to children for exposing to faecally-transmitted infections (Chambers & Medeazza, 2013). Presently, Prime Minister of India, Mr. Narendra Modi, has also focused on the important of toilet, and argued that toilets should be prioritized over temples (*pehle shauchalaya, phir devalaya*), (Doron & Jeffrey, 2014). Open defecation is one of the most important factors for polluting the ground water sources such as, open well, hand pumps, and tube well, which is the direct causes for health hazard and also causes enormous hardship, especially to rural women (Rajgire, 2013 & Dhaktode, 2014). The lack of awareness about sanitation and better hygiene practices also results in unnecessary expenditure on health and loss of income because of productive days wasted due to sickness (Gupta & Pal, 2008). Community participation and awareness generation are at the core of strategy having to be adopted to ensure sustainability of sanitation (George, 2009). India needs a large-scale campaign to change sanitation preferences and to promote latrine use (Coffey et al., 2014). The promotion of hygienic behaviours may as a preventive measure against diarrhoeal diseases (Huttly et al., 1994). Unhygienic disposal of excreta will greatly increase the risk of transmission of various types of infectious diseases (Feachem, 1977). Water, sanitation and unhygienic conditions are important determinants in a number of diseases like Schistosomiasis, Trachoma, Hookworm Infection, Malaria, Yellow fever, Filariasis, Dengue, Hepatitis A, Hepatitis E, Typhoid and sometimes poor sanitation and lack of access to safe drinking water contribute to high rate of child mortality and morbidity (Osore, 1983, Sharp, 2008, Clasen et al., 2012, and Satpathy, 2014). Five percent of hookworm cases could be prevented through improving toilet facilities (Magalhaes et al., 2011). Access to improved sanitation plays an important role in child health through its impact on diarrheal mortality and malnutrition (Acharya et al., 2013). It is estimated that, 4.0% of all deaths and 5.7% of the total disease burden are occurring worldwide by poor quality of water, sanitation, and hygiene.



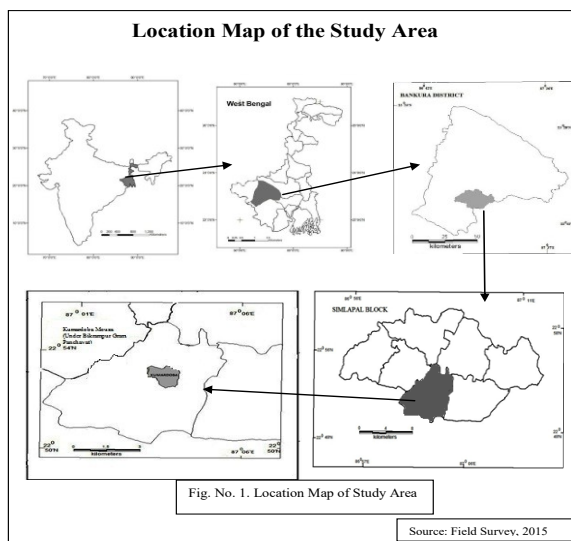
(Source: Pruss et. al. 2002)

Human and animal excreta can affect human health through various pathways like drinking water, sewage, indirect contact and food. Not only diseases burden, but also, the affects of sanitation have a large impact on society (Pruss et. al., 2002, and

Gage, 2012). It is the fact that, more than, 88% of diarrhoeal disease is caused by unsafe water supply, and inadequate sanitation and hygiene (WHO, 2004). By improving the quality of water supplies cuts the risk of diarrhoea by only about 16% (although it has other benefits) and making water more available reduces the risk by 20% (Curtis & Cairncross, 2003).

## 2. Study Area

Kumardoba Mouza (J.L. No. 082) is situated at Bikrampur G.P. ( $22^{\circ}50'22''N$  -  $22^{\circ}55'16''N$  and  $87^{\circ}0'E$ -  $87^{\circ}06'E$ ), under the jurisdiction of Simlupal C.D. Block of Bankura District in West Bengal. There are 13 households the mouza, where people have been suffered by symptoms of various infectious diseases may, due to, be poor hygiene practices.



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Fig. No. 1. Location Map of Study Area

Source: Field Survey, 2015

## 3. Objectives

The major objectives of the study are as follow.

1. To know sanitation status of the area.
2. To show rate of open defecation of the area.
3. To understand level of hygiene practice of the area.
4. To identify the symptoms of diseases due to poor hygiene practices of the villagers.

## 4. Materials and Methods

This research study has been done based on primary and secondary data. The primary information has been prepared through door to door survey by using a set of questionnaire concerned to the topic. The secondary data source includes- Census of India reports (2001 and 2011), Gazetteer of Bankura District (1995), and relevant maps (collected from different Government Office), various books, journals, research reports, and web based information etc.

In this investigation qualitative as well as quantitative methods have been applied to complete the study for evaluating the results obtained from the field visit and

secondary information. Diseases are inferred by asking the common symptoms of physiological ailments among the villagers, and inferred the probable diseases by the medical practitioners of the area including concerned information in studied literatures. Collected information has been quantified, analyzed and represented by suitable statistical techniques and by using various related software like- Microsoft Office Word 2007, Microsoft Office Excel 2007, MapInfo Professional 7.0 etc.

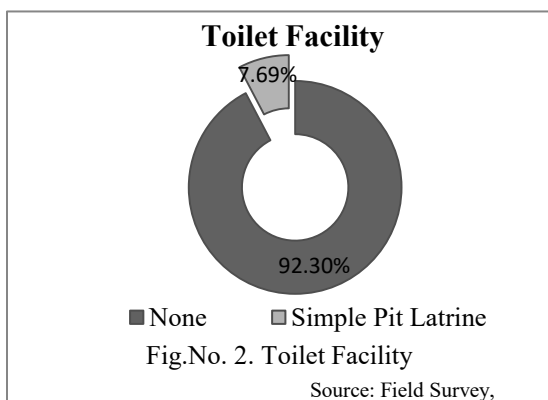
## 5. Result and Discussion

The Study has been done by putting emphasis on the status of sanitation and level of hygiene practice, which has further been divided by few key points, including- (i) defecation practice (ii) handwashing practice, (iii) covering of water vessels and use of food container, (iv) use of filtered/boiled water, (v) use of different towels and different soaps for each member, (vi) places for taking bath and washing clothes.

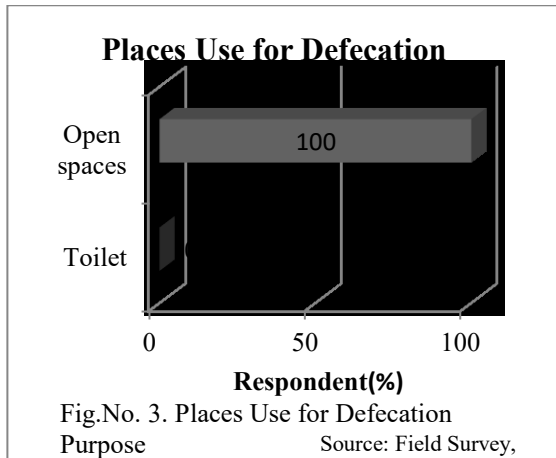
### 5.1 Status of Toilet Facility

In the study, it is very pathetic to know that all the household members (100%) of each household defecate in the open, instead of using toilet. Defecation practices can be categorized by two ways i.e. (i) toilet facility, and (ii) open defecation practices.

**5.1.1. Toilet Facility:** The study of the 13 households consisting of 50 people, shows that only one household (7.69%) having toilet facility, but, pitiable fact is that, the members of the household do not use it in all time, rather like to go outsidess for defecating. About 92.30% households have no toilet.



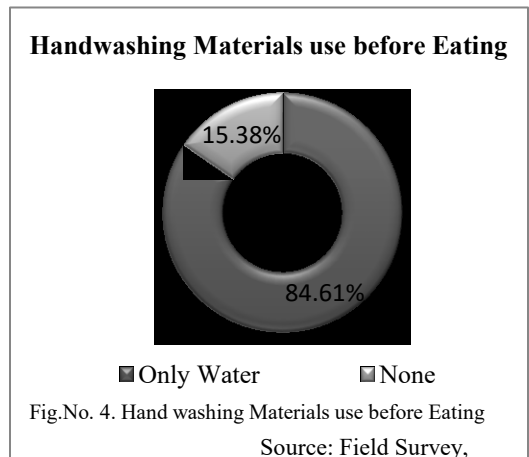
**5.1.2. Households under Open Defecation Practices:** The shocked fact is that, all the members (100%) of the village defecate in open spaces, like agricultural field, canal side etc. and even they are not aware about the adverse impact of open defecation.



**5.2. Handwashing Practice:** Hand wash is not a common practice in the study area. No one uses any types of handwashing materials (e.g. soap, hand wash liquid etc.). Here, two critical times have been chosen to understand the level of hygiene practice in hand wash as after defecating and before eating.

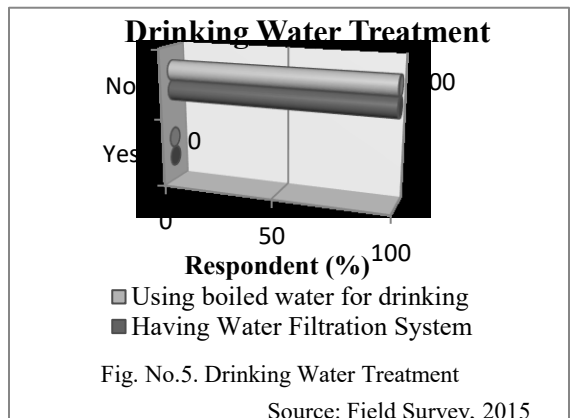
**5.2.1. Handwashing Practice after Defecating:** In general, all members of the households wash their hand after defecating, but, the fact lies on the materials they use for the purpose. All the people (100%) use mud or ash after defecating, which is the direct cause of infectious diseases.

**5.2.2. Wash Hand before Eating:** In case of hand clean practice before taking food, 84.61% households take only water for washing hands before eating. Remaining, 15.38% household member replied that sometimes they forget to wash hands before eating.



**5.3. Drinking Water Treatment:**

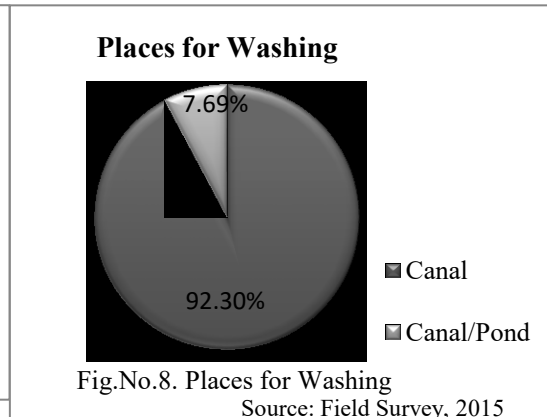
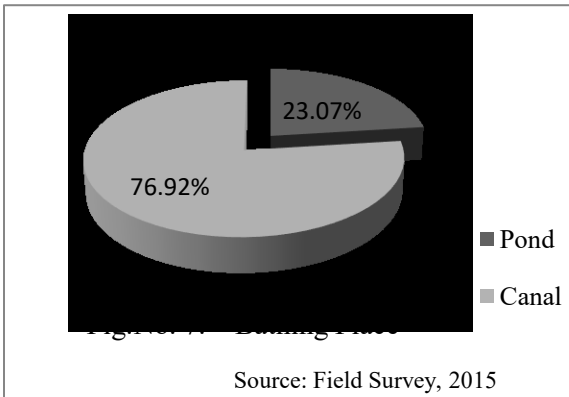
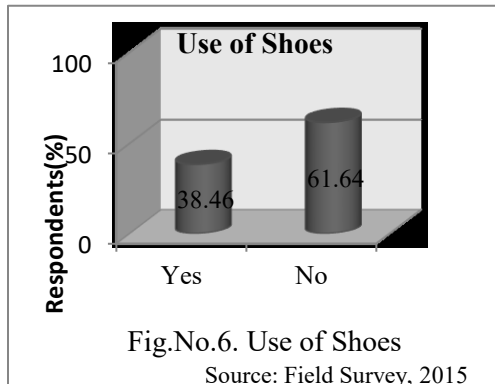
In Kumardoba, the main source of drinking water is public tube well, which is in the centre of the village. The Study shows, 53.84% households use cover to water vessels of drinking water. The villagers do not follow any type of water treatment procedure. Neither they use



water filtration system, nor boiled the water for drinking purpose.

### 5.4. Personal Hygiene Practice

Use of shoes in time of defecating purpose is unusual. Though, 38.46% household members use shoes in time of defecation but that same shoe also uses in other works in day to day life. Bathroom facilities are not found in the study area. People go to nearest canal, pond for bathing. 23.07% and 76.92% households have been bathing nearest pond and canal respectively. 15.38% household member have been using different towel and different soap within household. Around 92.30% household prefer to wash their clothes in nearest canal and remaining 7.69% in pond and canal, which are the direct causes behind polluting surface water directly, in where they take bath and collect water for washing their hand before eating and other domestic usages. 84.61% households use food container. But rests are not always doing this.



### 6. Diseases due to Unhygienic Activities

A large portion of the villagers have been suffering from various types of infectious diseases may, due to, be improper sanitation and low level of hygiene practices including rampant open defecation. In the study area, common diseases are as, Dysentery (76.92%), Diarrhea (23.07%), Typhoid (7.69%), Cholera (7.69%), Hookworm Infection (30.76%), Cystitis (Urinary Tract Infection, 23.07%) Asthma (15.38%) and Trachoma (23.07%). Diseases are identified by asking the common

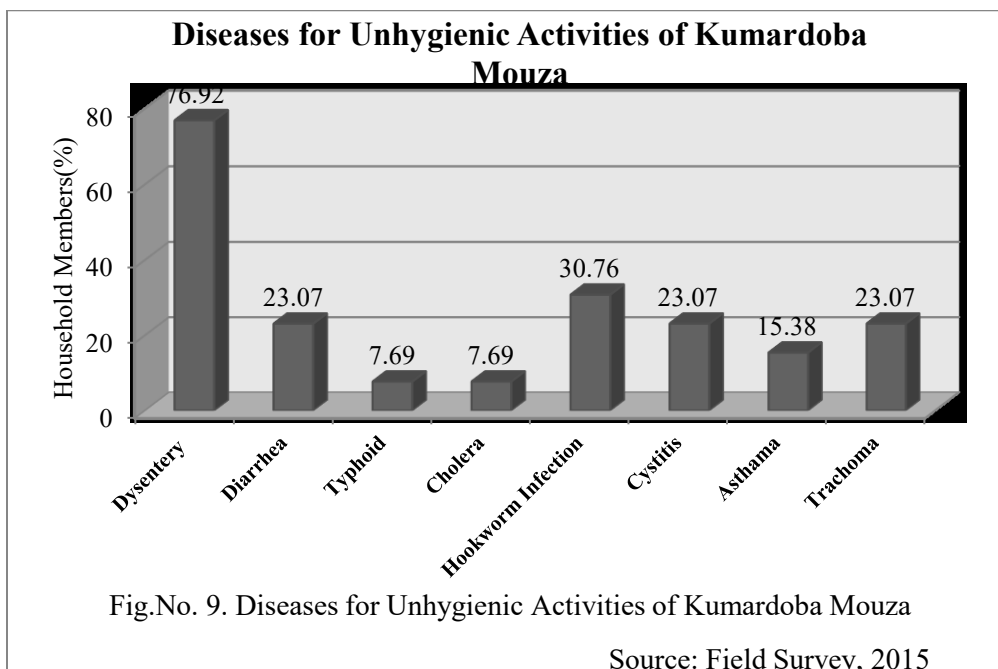
symptoms of common physiological ailments of the villagers, inferred and ensured by the medical practitioners of the area. According to the medical practitioners, high rate of open defecation and very poor hygienic practice are the responsible factor for the fate in the village.

**6.1. Dysentery:** It is common disease of the villagers of Kumardoba. Sometimes, people have suffered from various symptoms like, watery diarrhea that contains blood or mucus, nausea/vomiting, abdominal pain, stomach cramps, etc. About 76.92% household members have suffered from this disease.

**6.2. Diarrhea:** Diarrhea is one of the water borne diseases, found in the study area at high rate. About 23.07% households have suffered from this disease; dehydration and loose bowel movement are the major symptoms for this. People are suffering from this disease due to use of contaminated water for drinking purpose, rather use of boiled/filtered water for drinking purpose and open defecation is also high.

**6.3. Typhoid:** Villagers, who have suffered from high temperature (103-104°F), headache, muscle aches, stomach pain, feeling sick, loss of appetite, Constipation/diarrhea are under the symptoms of this disease. About 7.69% villagers have suffered from the disease, due to unhygienic activities.

**6.4. Cholera:** It is an infectious disease that causes severe watery diarrhea. People, who have suffered from diarrhea with continuous vomiting, are affected by Cholera. 7.69% household members are identified under the disease. Poor hygiene is the responsible factors for the disease.



**6.5. Hookworm Infection:** All villagers have been practicing open defecation, most of them (61.64%) without shoe; eggs of these hookworms end up on the ground after passing through human feces which may be the direct cause for the disease. 30.76% household members have been suffering by abdominal pain, Colic (cramping and excessive crying in infants), intestinal cramps, nausea, fever, blood in stools (excreta), appetite loss, and itchy rash.

**6.6. Cystitis:** High rate of open defecation with open urination and expose in different contaminated environments are the responsible factor for affecting by Escherichia Coli (*E. coli*) bacteria. During the field survey, 23.07% household members have suffered from problems like, burning with urination, significant pain, having to urinate frequently (or an urge to urinate), etc.

**6.7. Asthma:** There are 15.38% household members have been suffering from breathing problem, which is relatively high in winter, as dust particle is high at the time.

**6.8. Trachoma:** This is highly associated with unhygienic activities, like practice of open defecation. 23.07% household members of the study area have suffered from roughening of the inner surface of their eyelids, pain in eye, and unclear vision, which are the symptoms of this disease.

## 7. Conclusion



From this field based study, it can be said that, improper sanitation as open defecation and other poor hygiene practices are the responsible factors for affecting them by various types of infectious diseases, which can easily be mitigated and tackled through raising the awareness of people of the concerned issues. Children who have get chance to enjoy adequate potable water, sanitation and hygiene conditions at school are more able to integrate hygiene education into their daily lives, and can be effective messengers and agents for change in their families and wider community. Health sector also require giving equal importance to preventive healthcare interventions like access to safe drinking water, proper sanitation and promotion of safe hygiene practices.

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