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## **Status of Sanitation in Kaniabali and Bara Hetyagera Mouza of Bikrampur Gram Panchayat, Simlupal Block, Bankura, West Bengal**

### **Somenath Kar**

*Research Scholar, (Junior Research Fellow - UGC)*

**&**

### **Biswaranjan Mistri**

*Assistant Professor, Department of Geography, The University of Burdwan, India*

#### **Abstract**

*Mahatma Gandhi stated that sanitation is more important than independence. In broader senses, sanitation includes safe disposal of human and animal excreta, safe storage and handling of drinking water, personal hygiene, cleanliness of the house, food hygiene, safe disposal of waste water, safe disposal of solid waste and community hygiene etc. At present, people of the world, particularly in developing countries, more than 2.5 billion and 100 million, have been failing to access basic sanitation facilities and good hygiene practice respectively. In India, the scenario is very pathetic as more than 53% of Indian population defecates in the open.*

*Empirical study in Bikrampur G.P., Bankura, West Bengal shows that, most of the people (more than 80%) of the study area are not under basic sanitation facilities. Due to lack of awareness, they neither practice handwashing in critical times, nor treated drinking water and other important hygienic practice in their day-today lives. There are distinct spatial pattern of each mouza in respect of sanitation status as well as hygienic practice. The people of the area have been suffering from symptoms of various diseases closely related with poor hygiene practices.*

***Key words: Sanitation, Open Defecation, Hygiene Practice***

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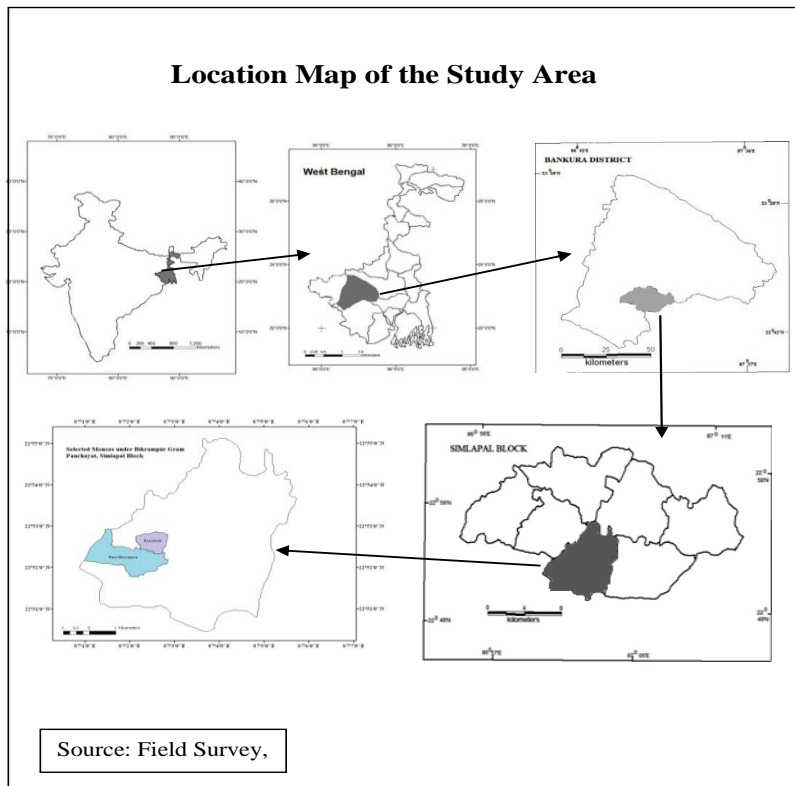
**1. Introduction:** According to World Bank Report on World Toilet Day (November 19, 2013), 53% of Indian households are still defecating in open spaces. Enduring open defecation needlessly kills hundreds of thousands of babies and stunts the growth among infants and children, diminish the development and lives of those who survive, and the economy that all Indians share; yet, building of a toilet has been perceived as a home improvement not as a health intervention, equally, using soap to make hands look, feel, and smell good, not to prevent sickness (Coffey et al., 2014; Doron & Jeffrey, 2014, Chambers & Medeazza, 2013 and Curtis, 2003). At present, drinking water and sanitation have to give more priority as, poor sanitation and lack of access to safe drinking water are still contributing to significant and avoidable morbidity and mortality, especially in children (Sharp, 2008 and Pruss et al., 2002). There are 80% of the diseases such as, dysentery, diarrhoea, cholera, typhoid and hepatitis A and E occur due to non-potable of drinking water (Bedi et al., 2015; Satpathy, 2014; Rajgire, 2013; Clasen et al., 2012; and Feachem, 1977). Lack of private toilets in schools has long been a major reason for girls discontinuing their education once they enter puberty (Kumar, 2015 and George, 2009). Non-availability of toilets has not been due to economic reasons

but because of the lack of awareness about the benefits, as, more people aware to use televisions, radio or mobile phone rather using toilet (Gupta and Pal, 2008). Access to a toilet does not always mean that it is used or maintained (MDWS, GoI and UNICEF, 2012). No subsidized toilet programme in the world that has been successful, as people are used to shitting in the open except using toilet (Coombes, 2010).

Inadequate solid waste management policy and the absence of appropriate guidelines led to serious health and environmental problems all over India (Balasubramanian, 2015 and Srinivasan, 2006). Sometimes lack of proper sewage system also creates serious health hazard (Osore, 1983). Sanitation programme can be achieved success through effective participation of a community (Dhaktode, 2014). If Swachh Bharat (Clean India) is to be a fact, then the government and citizens both have to engage with all aspects of sanitation work , otherwise, only launching campaigns and uttering the right words will not make much of a difference, after all, the first sanitation bill in India was introduced in 1878 (Kumar, 2014 and MDWS, GoI, 2014).

**2. Study Area:** Bikrampur Gram Panchayat (G.P.) lies between 22°50'22"N - 22°55'16"N and 87°0'E - 87°06'E, under the jurisdiction of Simlapal C.D. Block of Bankura District in West Bengal. The selected two mouzas of Bikrampur G.P. are Kaniabali Mouza (J.L. No.063) and Bara Hetyagera Mouza (J.L. No. 065) (Fig. No.1).

**Fig. No. 1. Location Map of Study Area**



**3. Objectives**

The main objectives of the study are as follows,

1. To examine the level of hygiene practice of the area.
2. To show the rate of open defecation and status of sanitation of the area.
3. To find out the symptoms of diseases due to poor sanitation.

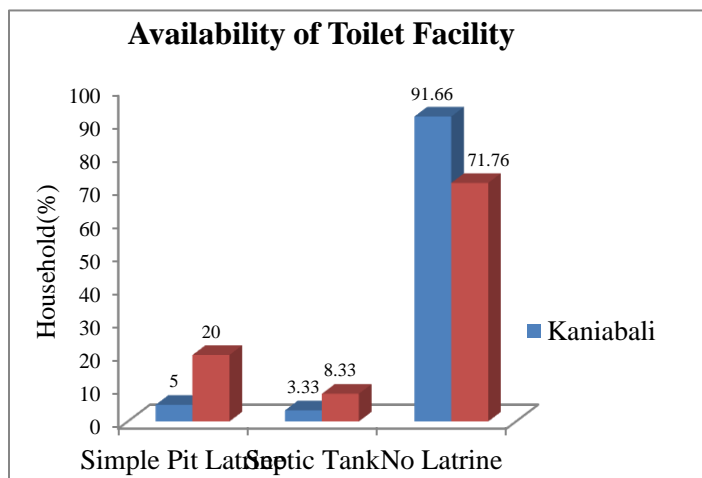
**4. Materials and Methods:** This research study has been done based on primary and secondary data. The primary information has been prepared through door to door survey by selecting 120 houses from the two mouzas by using a set of questionnaire concerned to the topic. The secondary data source includes- 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 study, 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. 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. Diseases are inferred by asking the common symptoms of physiological ailments among the villagers, and inferred the diseases by which respondents are suffering, with the help of medical practitioners of the area including concerned information in studied literatures.

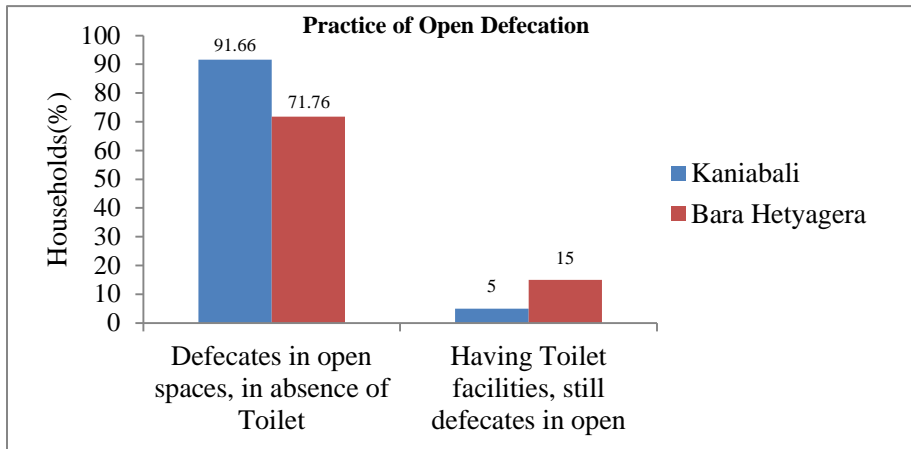
**5. Result and Discussion:** The investigation has been done to show the status of sanitation, which is further, sub-divided into two categories- 1) Status of Sanitation and 2) Symptoms of Diseases Suffered due to Poor Sanitation. 1) Status of Sanitation includes- (i) availability of toilet facility, (ii) practice of open defecation, (iii) personal hygiene practice, (iv) accessibility and treatment of drinking water, and (v) treatment of solid and liquid waste.

**(i) Availability of Toilet Facility:** From the field based study, it can be said that there are clear differences on availability of toilet facility within the selected mouzas. At Kaniabali mouza out of 60 surveyed households, only five households (8.33%) have toilet facility, among them 5% using simple pit latrine and remaining 3.33%, using septic tank type. But, at Bara Hetyagera mouza out of 60 households, only 17 households (28.33%) have toilet facility, among them 20% using simple pit latrine and 8.33% using septic tank type (Fig No. 2).

**Fig. No. 2. Availability of Toilet Facility**

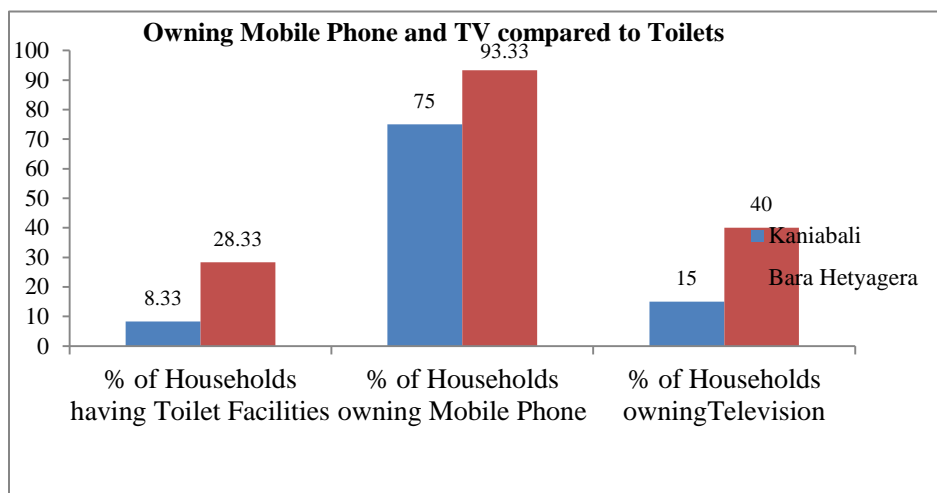


**Fig. No. 3. Practice of Open Defecation**

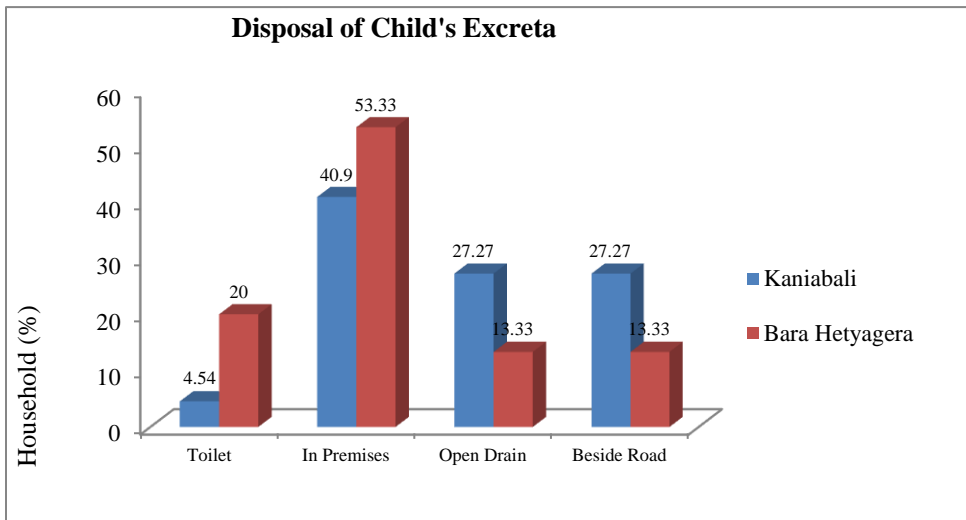


**(ii) Practice of Open Defecation:** Practice of open defecation in the study area is relatively high. 91.66% and 71.76% household’s members of Kaniabali and Bara Hetyagera mouza respectively, have no latrine facility, the members are habituated to defecate in open space. Another important fact is that 5% people of Kaniabali mouza and 15% people of Bara Hetyagera mouza having toilet facility but the people are not using the structure, where most of them have replied that, they are not satisfied of the structure of the latrine or habituated to defecate in the open (Fig. No.3). Most miserably fact is that the people of two mouzas are very much concern to use mobile phone or colour T.V., except using toilet (Fig. No.4 ). Disposal system of child excreta is also put question mark regarding awareness on sanitation of the area, most of the people disposing excreta in the premises they belong. (Fig. No.5). 45.45% and 33.33% household’s members of Kaniabali and Bara Hetyagera mouza respectively answered that they have taken child’s excreta as harmless (Fig No. 6).

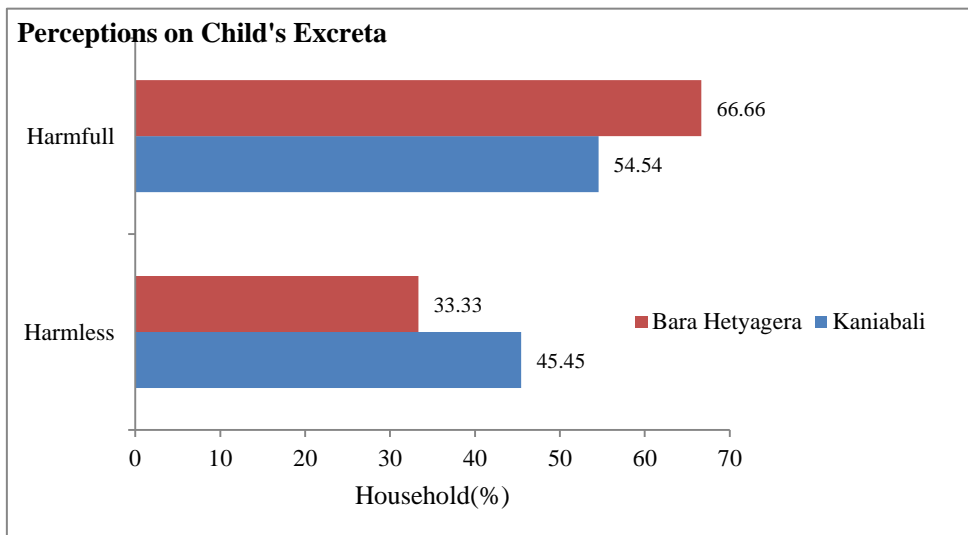
**Fig. No. 4. Owning Mobile Phone and T.V. Compared to Toilets**



**Fig. No. 5. Disposal of Child' Excreta**

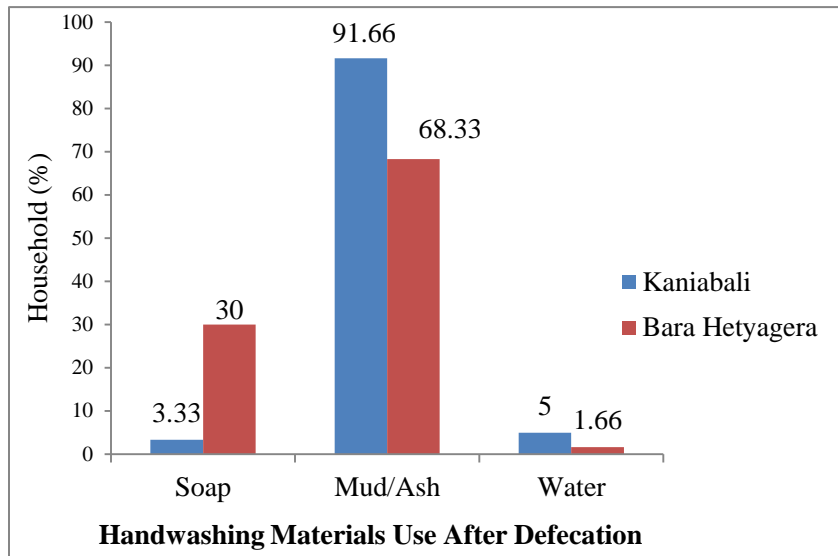


**Fig. No. 6. Perceptions on Child's Excreta**



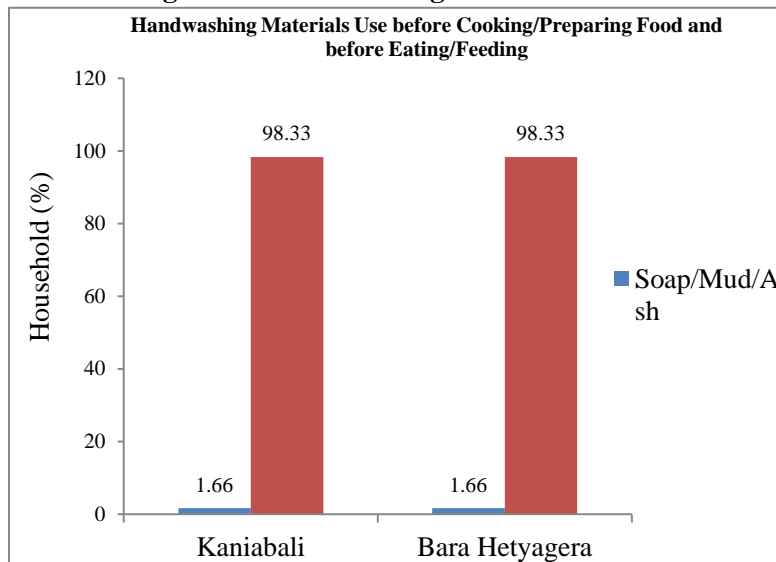
**(iii) Personal Hygiene Practice:** Handwashing in critical time's i.e. after defecation, before cooking/preparing food, before eating/feeding, with proper handwashing material is quite uncommon of the area. Most of the people of the area are familiarized to use mud/ash after defecation (Fig. No. 7), and water before cooking/preparing food and before eating/feeding (Fig. No.8). People of the area, may be due to this reason, have been suffering from the symptoms of various water borne diseases (Fig. No. 17).

**Fig. No. 7. Materials Use for Hand washing**

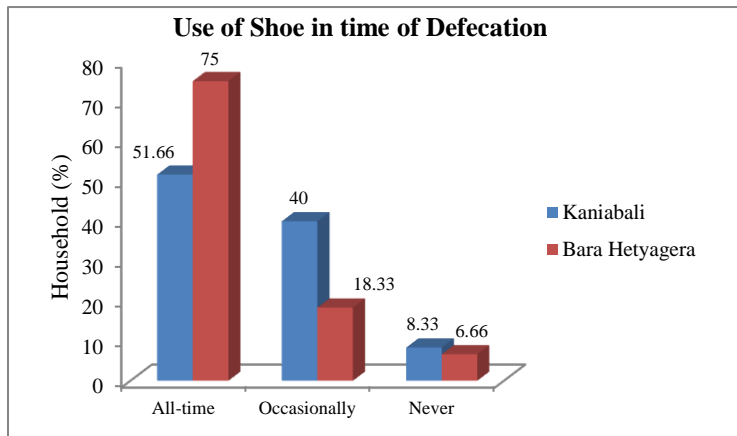


Use of shoe in time of defecation is also uncommon in the area. Some of the respondent have answered that they use shoe all-time, some of them, occasionally, whereas, few respondent forget to use shoe in time of defecation (Fig. No.9). Another dazing fact is that 88.33% and 81.66% household’s members of Kaniabali and Bara Hetyagera mouza respectively have been using that shoe for other day to day purposes too.

**Fig. No. 8. Handwashing Materials Use**

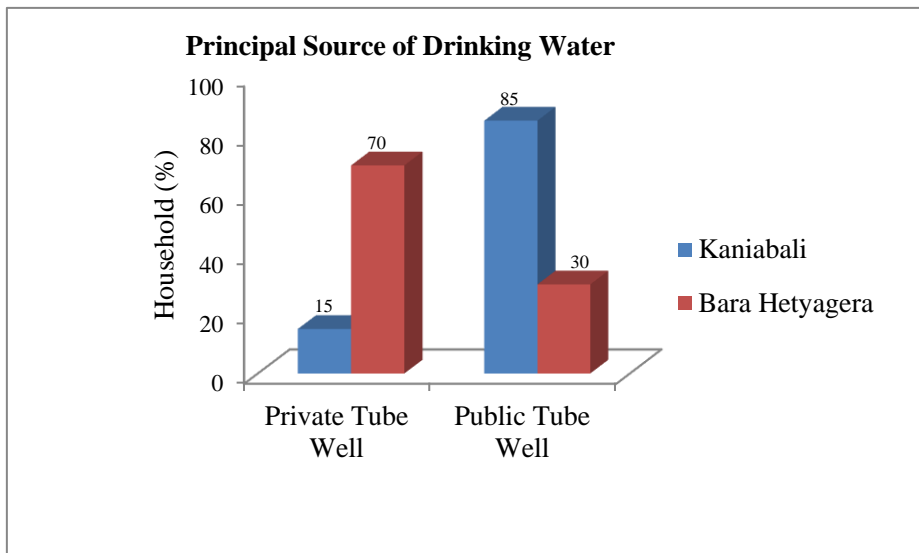


**Fig. No. 9. Use of shoe in Time of Defecation**

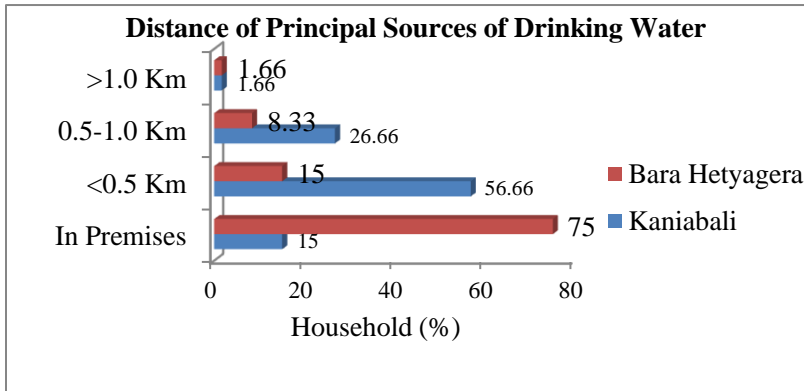


**(iv) Accessibility and Treatment of Drinking Water:** There are clear differences in question of accessibility of drinking water sources. At Kaniabali, only 15% household’s members are using private tube well at premises, whereas, at Bara Hetyagera, it is 70% (Fig. No. 10). About, 1.66% household’s members have to travel more than 1 Km. to fetch drinking water from principal sources of potable water (Fig. No. 11). More than 96.66% household’s members do not protect drinking water during transportation (Fig. No.12).Only 1.66% household’s members of each mouza have been using water filter to treat drinking water (Fig. No. 13).

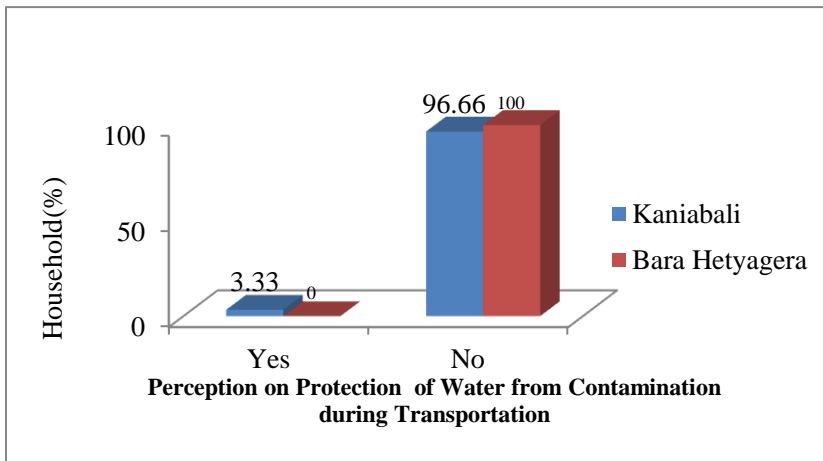
**Fig. No. 10. Principal Source of Drinking Water**



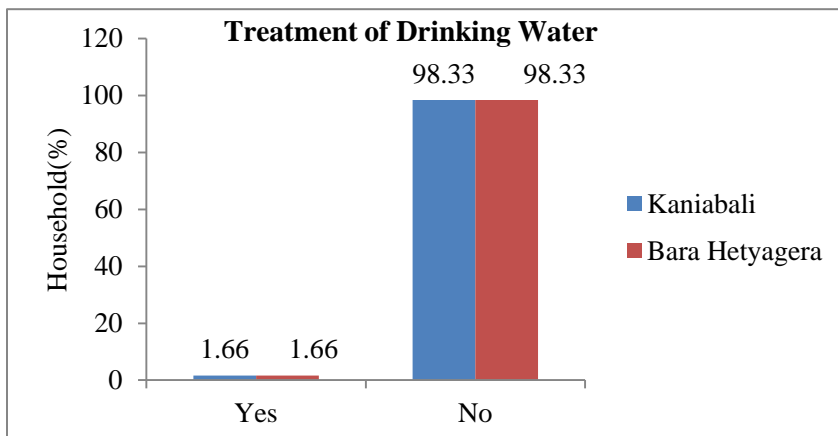
**Fig. No. 11. Distance of Principal Sources of Drinking Water**



**Fig. No. 12. Perception on Protection of Water**



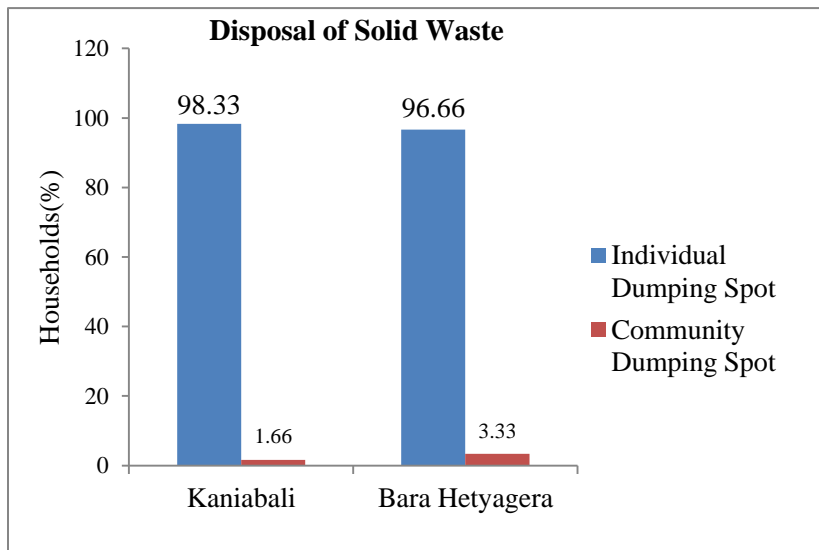
**Fig. No. 13. Treatment of Drinking Water**



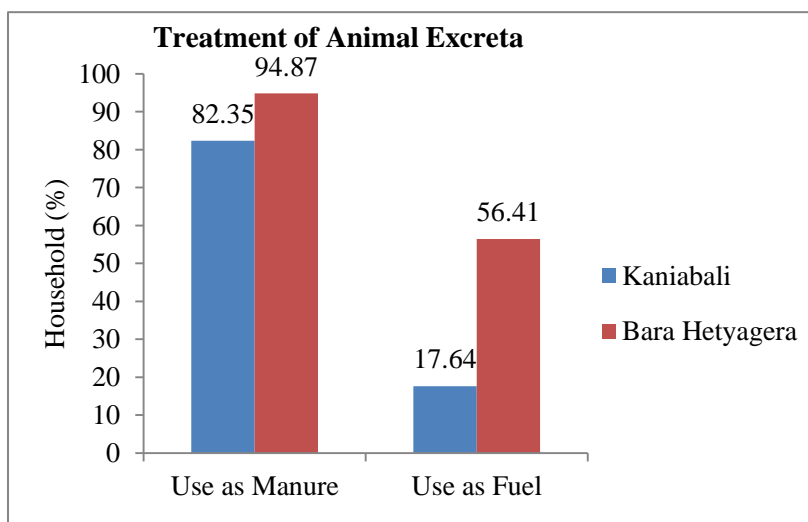


(v) **Solid and Liquid Waste Management:** There is no arrangement made by local Gram Panchayat as well as a group of resident for solid and liquid waste management. There are 98.33% and 99.66% household's members of Kaniabali and Bara Hetyagera respectively have individual dumping spot for dumping solid waste materials, which include, organic waste (veg. and fruit peels, leftover foodstuff etc.), animal dung, tin, aluminum, and other metal items, hard plastic/plastic bags, glass bottles etc.(Fig. No. 14 ).Animal dung is being used for manure and fuel (Fig. No.15). More than 86.66% household's members of each mouza have no drainage facility for proper disposal of liquid waste. (Fig. No. 16 ).

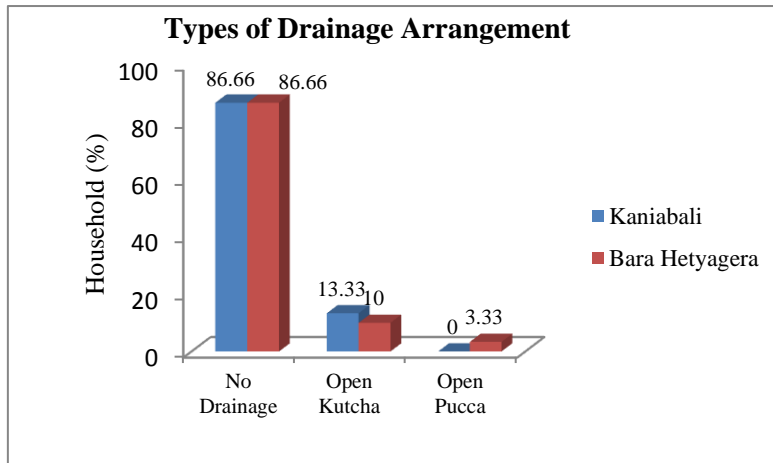
**Fig. No. 14. Disposal of Solid**



**Fig. No. 15. Treatment of Animal Excreta**

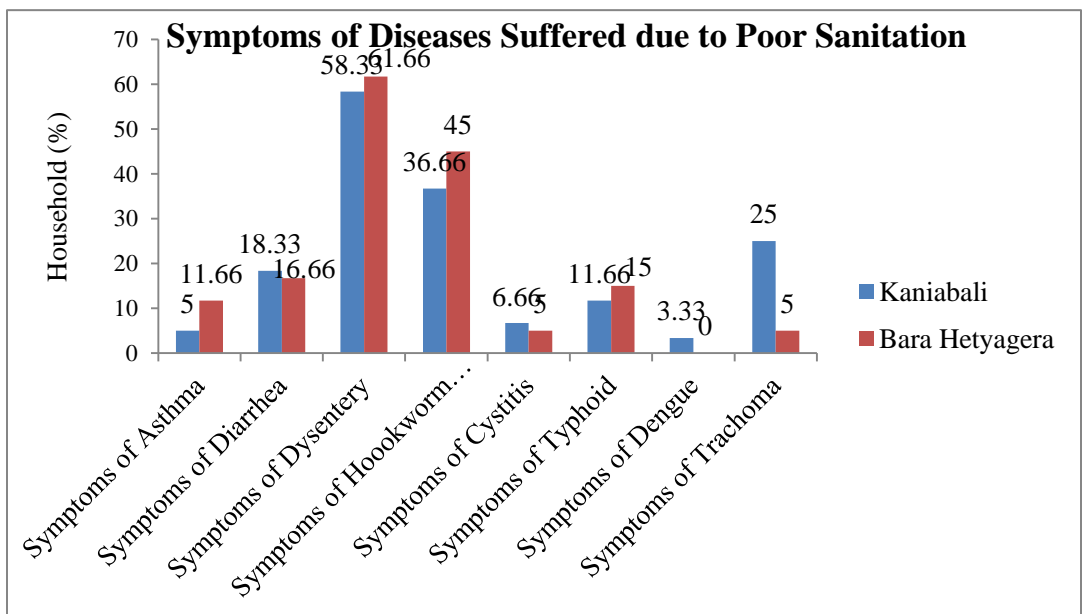


**Fig. No. 16. Types of Drainage Arrangement**



**B) Symptoms of Diseases Suffered due to Poor Sanitation:** Due to unhygienic activities, in the form of high rate of open defecation, lack of proper drainage facility, untreated drinking water people of the area have been suffering from symptoms of various types of infectious diseases, such as, Asthma, Diarrhea, Dysentery, Hookworm Infection, Cystitis, Typhoid, Dengue, Trachoma. Symptoms of dysentery are at high rate within the study area (Fig. No.17). Diseases are inferred by asking the common symptoms of the villagers, and rectified by the respective medical practitioners of the area.

**Fig. No. 17. Symptoms of Diseases Suffered due to Poor**



**Conclusion:** From this empirical study, it can be mentioned that, without people's effective awareness and community participation, sanitation programme cannot be achieved success. Money is factor, but not prime, as, more people have been using mobile phone, colour T.V. except using toilet. Measures have to be taken by the government as well as community, to ban open defecation, as it not only creates health hazards, but also it is fact for several accidental cases (Such as, snake bite). Children who have gotten 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.

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