



A STATUS OF DRINKING WATER AND SANITATION IN SAMBHAPUR VILLAGE, KOLHAPUR DISTRICT

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ABSTRACT

Water, vital to all life, is planet earth's most abundant component. Safe and available water for all is a vital part of the world. Improved drinking water, sanitation, and hygiene are all necessary component for human health. The main objective of this study is to assess the drinking water facility, sanitation and hygiene practices in Sambhapur village. The primary data was collected through fieldwork. A set of harmonized survey questions developed by WHO/UNICEF joint Monitoring Programme (JMP) are used for collection of data. Improved drinking water sources, water treatment practices, sanitation practices and hygiene related practices are calculated. In Sambhapur village, improved sources of drinking water facilities and improved water treatment methods are used in Sambhapur villages but the concentration of Total Dissolve Salt is higher and the water purity is less in this village. The participation of Gram Panchayat and local people is essential to improving water and sanitation management.

KEYWORDS: Drinking water, Sanitation, Hygiene.

• INTRODUCTION:

Water, vital to all life, is planet earth's most abundant component. The 97.2 per cent of water is in the oceans. Only 2.8per cent of the total water on earth is in the form of fresh water, out of which 2.15 per cent is found as ice, in the form of glaciers, ice sheets and ice caps. Most of the remaining 0.62 per cent is found underground. A small fraction of earth's water exists in fresh water lakes (0.009 per cent), saline lakes and inland seas (0.008 per cent), soil moisture (0.005 per cent), atmosphere (0.001 per cent) and stream channels (0.0001 per cent). (Federick K. Lutgens , 2012)

Improved drinking water, sanitation, and hygiene are all necessary component for human health. The world's drinking water condition is improving. The global sanitation problem needs urgent awareness. Hygiene creates another global health challenge. (Uschi Eid, 2015) Poor water quality and sanitation adverse effect on food security, educational opportunities for poor people across the globe. (United Nations) About 8, 40,000 people die every year because they do not have safe drinking water and while 2.5 billion people require access to better sanitation. About 80% of all infection in developing countries can be traced back to lack of safe water and sanitation. (World Economic forum, 2015) fresh water, basic latrines and high-quality hygiene practices are required for the sustained survival and progress of children. Presently, there are about 2.4 billion people who do not utilize better sanitation, and 663 million who do not have access to improved water sources. (UNICEF)

Household surveys and censuses are regularly organized every year across the globe to assess household use of suitable drinking water and sanitation, and to assess hygiene related methods at the household level. Accurate and systematic information about drinking water, sanitation and hygiene related matter are valuable to national leaders, decision-makers and stakeholders when building policy decisions. This information also helps to assess improvement towards national and international goals and also to focus attentions on needy regions and proficiently allocate resources. (WHO/UNISEF)

A set of harmonized survey questions developed by WHO/UNICEF joint Monitoring Programme (JMP) are used for the obtaining accurate and systematic data about drinking water and sanitation in Sambhapur village.

• OBJECTIVES:

1. To study the drinking water facilities used by members of the household
2. To assess the sanitation facilities used by adults of the household
3. To discuss the sanitary disposal practices of children's faeces

• DATA SOURCES AND METHODOLOGIES:

The present research paper is based on primary data. The primary data was collected through fieldwork. There are 100 questionnaire prepared and filled up by the household members and local people at the Sambhapur village. A set of harmonized survey questions developed by WHO/UNICEF joint Monitoring Programme (JMP) are used for collection of data.

The following methodologies are used for improved drinking water sources, sanitation facilities and sanitary disposal method of children's faeces.

1. Use of improved drinking water sources = Number of household members using suitable sources of drinking water / Total number of household members in households surveyed *100 (WHO/UNICEF)
2. Use of adequate water treatment practices = Number of household members who treat their water using an safe water treatment method / Total number of household surveyed * 100 (WHO/UNICEF)
3. Use of improved sanitation facility = Number of household members using improved sanitation facilities / Total number of household members in households surveyed *100 (WHO/UNICEF)
4. Sanitary disposal of children's faeces = Number of children under the age group three years whose (last) stools were disposed safely / Total number of children under the age of three years surveyed * 100 (WHO/UNICEF)

• STUDY REGION:

Sambhapur village is situated on 16° 48' 10" north latitude and 74° 17' 32" East Longitude in Hatkangale taluka of Kolhapur district in Maharashtra. The area of Sambhapur village is 320 hector. The population of village is 2474 and sex ratio is 891 per thousand male as per 2011 census. Literacy rate is 73.12 percent out of which male literacy rate is 76.68 per cent and 69.12 per cent. (Kolhapur District Census Handbook, 2011)

• RESULT AND DISCUSSION:

A status of drinking water facilities, sanitation facilities and disposal practices of child faeces are following:

1.1 Drinking Water Facilities:**a. Sources of Drinking Water:**

Piped water supply into the house, piped water to a plot, a public tap, borehole, a protected dug well, a protected spring and rainwater sources are a improved quality water sources. Unimproved sources are: Surface water; Unprotected dug well; spring; and water tanker.

In Sambhapur village, the use of improved drinking water source is higher (97.94 %) than unimproved water sources. The main source of improved drinking water is public tap (61.64 %) in Sambhapur village. (Table 1)

b. Water Treatment:

The study of the water treatment practices at the household level is necessary for understanding the quality of the drinking water used in the household. The water treatment practices a suitable quality is: add bleach / chlorine; use of water filter; boil; and solar disinfection. Strain it through a cloth; and let it stand and settle are the unimproved water treatment methods.

In Sambhapur village, the use of improved water treatment practices at the household level is lower (44.12 %) than unimproved water treatment practices. The about 30.72 per cent household are used water filter treatment practices in Sambhapur village. (Table 2)

1.2 Sanitation Facility:

A sanitation practices is measured adequate if it hygienically take apart human excreta from human contact. Flush to piped sewer system; flush to septic tank; flush to pit latrine; composite toilet; pit latrine with slab are the adequate sanitation facilities. Open pits or latrine without slab to cover directly in to water bodies

and in the open, are unimproved sanitation practices. This is a high risk to persons and direct contact with human excreta.

Improved sanitation facilities are higher (77.30 %) than unimproved sanitation facility in Sambhapur village. About 56.28 per cent household members are used flush to septic tank sanitation facility in Sambhapur village. (Table 3)

1.3 Disposal of children's faeces:

Children's faeces are a source of contamination for the household surroundings. Many cultures, children's faeces are not hazardous and do not dispose of them in a safe manner. Child used toilet or latrine, rinsed faeces into the toilet and buried the faeces are the sanitary disposal methods of children's faeces. Unsanitary disposal practices are: putting or rinsed into a drain; and buried in the open

In Sambhapur village, About 55.55 per cent household member are used sanitary disposal methods. About 33.33 per cent Child is used toilet and latrine sanitary disposal method in Sambhapur village. (Table 4)

Improved water source	Percent	Unimproved water source	Per cent
Piped into dwelling	05.36	Unprotected well	02.06
Piped into plot	61.64	Unprotected Spring	00.00
Public tap	15.50	Surface Water	00.00
Borehole	00.00	Tanker	00.00
Protected well	00.00	Cart with tank	00.00
Rain water	00.00	Bottled Water	00.00
Bottled Water	00.00	Other	00.00
Percentage using improved sources of drinking water	97.94	Percentage using unimproved sources of drinking water	02.06

Source: Calculated by author

Improved water treatment practices	Percent	Unimproved water treatment practices	Per cent
Boil	00.00	Strain it through a cloth	24.32
Add bleach / chlorine	13.40	Let it stand and settle	29.27
Use of water filter	30.72	Other	00.00
Solar disinfection	00.00	Don't know	02.29
Percentage using improved drinking water treatment practices	44.12	Percentage using unimproved drinking water treatment practices	55.88

Source: Calculated by author

Use of improved sanitation facility	Percent	Use of unimproved sanitation facility	Per cent
Flush to piped sewer system	02.68	Flush to elsewhere	03.91
Flush to septic tank	56.28	Pit latrine without slab	01.85
Flush to pit latrine	14.84	Bucket	00.00
Pit latrine with slab	00.00	No facilities/ bush / field	05.15
Ventilated pit latrine	03.50	Other (no response)	11.79
Percentage using improved sanitation facility	77.30	Percentage using improved sanitation facility	22.70

Source: Calculated by author

Disposal of Children's Faeces			
Sanitary disposal of children's faeces	Percent	Unsanitary disposal of children's faeces	Per cent
Child used toilet/ latrine	33.33	Rinsed into a drain	07.41
Rinsed into toilet or latrine	22.22	Buried in the open	14.81
Buried the faeces	00.00	Other	22.22
Percentage using improved sanitation facility	55.55	Percentage using improved sanitation facility	44.45

Source: Calculated by author

• **CONCLUSION:**

- i. Drinking water and sanitation surveys are essential for improvement of drinking water treatments, sanitation practices and hygiene related practices.
- ii. Formulation of standard questions is necessary for drinking water, sanitation and hygiene related household surveys at global level.
- iii. In Sambhapur village, improved sources of drinking water facilities and improved water treatment methods are used in Sambhapur villages but the concentration of Total Dissolve Salt (TDS) is higher and the water purity is less in this village. The participation of Gram Panchayat and local people is essential to improving water and sanitation management.

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