



Assessment of water, sanitation and hygiene in village Kothey, district Samba, (Jammu and Kashmir)

Kiran Kumari*, **Angelika Sharma****

Post Graduate Student*, Assistant Professor**

Environmental Science, Central University of Jammu

Abstract

India is a developing country and nearly 72% population in India lives in rural area. The people in the rural areas do not have access to safe drinking water, sanitation and hygiene conditions and this is because of lack of awareness of rural people for the same. Safe drinking water is essential to sustain life. It is the basis for human health survival and development. The present work gives an overview of the Water, Sanitation and Hygiene status of the village Kothey in Samba district, J&K. The random survey of households have been done with the help of questionnaire prepared by UNICEF. Information regarding the availability of water, its storage, sanitation, hygiene and health status have been provided and discussed. The drinking water of the area have been found to be acceptable as most of the households are having their own bore wells. The sanitation condition of the area is not up to the mark as most of the households do not have toilet facility in their homes and go out for open defecation. The hygiene condition of the area are not satisfactory as they use traditional chullas for warming water, do not shower daily, not frequently wash their hands with soap. So, there is urgent need to upgrade the existing conditions so as to have an access to safe water, proper sanitation, hygiene and health condition.

Keywords: Diarrhoea, Hygiene, Sanitation, Water.

Introduction:

India is drawing the world's attention because of its existing as well as emerging health profile. The policies implemented so far concentrate only on the growth of economy but not on the equality which has widened the gap between the urban and the rural people. Some progress has been made since independence in the health status of the population which is being reflected in the improvement in some basic health indicators. (Patil, 2002)

In the developing countries, the sanitary disposal of human waste is sewerage. The septic tank system is quite expensive and requires large amount of water for flushing. Additionally, inadequate effluent disposal is the source of various health hazards. Over 90 percent of sewage in developing countries is discharged untreated, polluting lakes, rivers and oceans and thus posing danger from threat to various species living thereof as well as to the human beings. It is estimated that 90 percent of the rural population was practicing open defecation in 1990. The Indian census and the world health organization UNICEF joint monitoring programme data indicates that the proportion of the people with access to sanitation has almost doubled in the last 10-12 years. Despite of this progress open defecation is still in practice by a large number of rural inhabitants. Approximately 60 crores Indian living in rural areas defecate in open. The concept of sanitation



was expanded to include home sanitation, personal hygiene, garbage disposal, safe water. (www.dailyexcelsior.com/rural-sanitation-in-india/)

Contact to waste water can cause diseases of faecal-oral transmission (diarrhoea, typhoid, hepatitis, cholera), or related to vector (malaria, filariasis, dengue). Sanitation aims to ensure the disposal and treatment of the waste-water excreta and to minimize the impacts to human health and the environment.

The various procedures which can be followed for clean water and better sanitation are:

FILTRATION: Wastewater is filtered as to reduce the effect of the polluted water on living beings as well as on the environment.

SANITATION LANDFILLS: Sanitary landfill is a site where the waste is buried either underground or in piles.

UTILIZATION: Next is utilization of garbage and waste products which can be used for recycling.

ECOLOGICAL SANITATION: Ecological sanitation involves the installation of composting toilets, where the situation requires it (e.g. developing countries).

Materials and Methods:

The survey has been done in village Kothey, tehsil Vijaypur, district Samba and 60 households have been selected randomly for the study. In the survey four areas were taken into consideration i.e. Water, Sanitation, Hygiene and Health which further involved the following subareas drinking water, domestic water, wastewater, hygiene and health. The survey has been done by using the questionnaire prepared by UNICEF.

Results and Discussions:

The total survey consisted of 60 households and the survey was conducted in the month of April, 2017. The preliminary analysis of the results shows that as the municipal water network did not meet the needs of the people so most of the households have their own bore wells through which they meet their requirements of water. Although the households are connected by the wastewater sewage network, but this wastewater sewage is then channelled in an open land along the periphery of the village where this wastewater remain stagnant and thus can be a reason for various vector borne diseases. Another analysis was also made regarding the defecation method. Some households were not having septic tanks and they directly throw their toilet waste into the sewer channel.



The following results and discussions have been made during the survey:

Drinking water:

Maximum values for the primary source of drinking water was found to be 66.66% (table 1), which is the water drawn from the private wells.

Table 1. Primary source of Drinking water

S.No	Primary source (Drinking water)	Number of respondents	Percentage (%)
1.	Municipal Network	16	26.66%
2.	Water vendor-tanker delivery	-	-
3.	Free aid from humanitarian	-	-
4.	Private well (bore wells+ hand pumps)	(37+3=40)	66.66%
5.	Other (taking from other households)	4	6.66%

The households having handpumps does not get water which is acceptable for drinking because the depth of the handpumps is less than 100 meters and samba district falls in Kandi belt so the water present below 100 meters of depth is muddy water and is not suitable for drinking as analyzed by the physical observation in which it was found that the colour of the water is pale yellow, while the households who are having bore wells are having water which is good to them for drinking because the depth of their bore wells is between 130 meters to 150 meters and at this depth good water is found as analyzed in the physical observation and taste.

Maximum percentage for good quality of water for drinking purpose was found to be 48.33% (table 2)

Table 2. Quality of water used by the households for drinking purpose

S.No	Quality of water	Number of respondents	Percentage (%)
1.	Excellent	5	8.33%
2.	Acceptable	15	25%
3.	Unacceptable	11	18.33%
4.	Good	29	48.33%



Domestic water:

Out of 60 households 16 households (26.66%) are connected to the municipal water supply by less than 4 hours per day (Table 3). The main reason for less municipal connection of the households is that the municipal water connection did not provide water to the households regularly. So the people are being forced to have their own private wells in the form of hand pumps or bore wells.

Table 3. Running water from the network per day

S.No.	Running water from network	Number of respondents	Percentage (%)
1.	Not connected	44	73.33%
2.	Less than 4 hours per day	16	26.66%
3.	5-12 hours per day	-	-
4.	More than 12 hours per day	-	-

73.33% households represents that they were not connected to the municipal water network (figure 1), instead they are having their own private wells (66.66%) or they are taking water from other households (6.66%) (table 1)

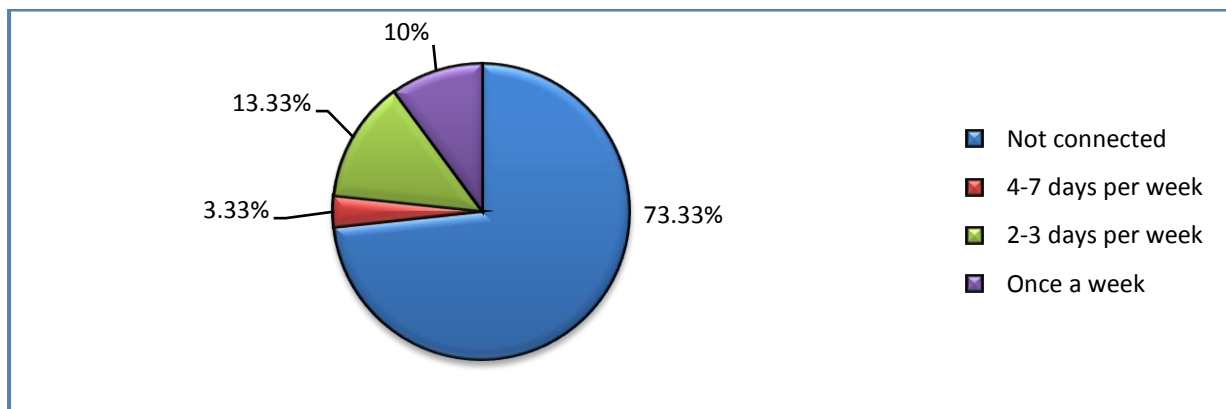


Figure 1. Graphical representation of the running water from the network per weeks

Sanitation:

36.66% households do not have latrines in their houses (Table 4). They go for open-defecation and thus there is a danger of vector borne diseases and also due to the low income of the residents affordability is less for toilets.



Table 4.Type of toilets used by the households

S.No.	Sort of toilet	Number of respondents	Percentage (%)
1.	Sit down toilet with water flush	9	15%
2.	Squat toilet with water flush	27	45%
3.	Pit latrine	2	3.33%
4.	Other (not having latrine at home)	22	36.66%

Hygiene:

58.33% households use gas heating as their primary source for heating water for bathing (table 5).

Table 5.Source used for heating water for bathing

S.No.	Source (water heating for bathing)	Number of respondents	Percentage (%)
1.	Solar heating	-	-
2.	Electrical heating	10	16.66%
3.	Gas heating	35	58.33%
4.	Other (traditional chullah)	15	25%

Maximum values of washing hands with soap after using the toilet was found to be 55% (table 6).

Table 6.How usually the households wash their hands with soap

S.No.	Washing of hands (using soap)	Number of respondents	Percentage (%)
1.	At prayer times	-	-
2.	Before meal times	27	45%
3.	After meal times	-	-
4.	Before bed	-	-
5.	Before cooking	-	-
6.	After using the toilet	33	55%



Maximum value for frequency of showering everyday was found to be 85% (figure 2). These households are those who are having either municipal connection or not having any connection at all. So there is less availability of water to shower every day.

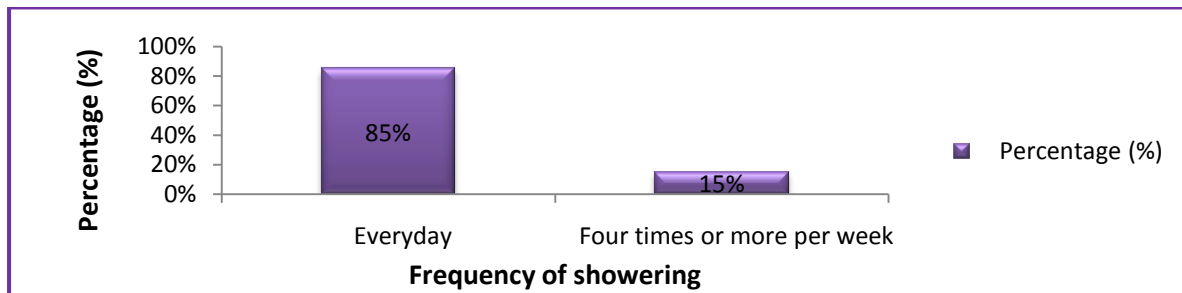


Figure 2. Graphical representation of how frequently the households shower

Health:

70% households are not having children below the age of 5 while 18% households are having children below the age of 5 (table 7).

Table 7. Number of households having children below the age of 5 years

S.No	Number of children	Number of respondents	Percentage (%)
1.	Number of households having children below 5 years of age	18	18%
2.	Number of households having members above 5 years of age	42	70%

Diarrheal infection in households where the members are above 5 years of age were found to be 19.04% (out of 70%), whereas the diarrheal infection in households having children below 5 years of age were found to be 5.55% (out of 18%).

Conclusion: The present study aims to provide the information about the status of water, sanitation and hygiene condition of village Kothey, district Samba, J&K using the questionnaire method randomly. The UNICEF questionnaires have been followed to obtain this information. Most of the households are having their own private wells (Bore wells and hand pumps) due to insufficient supply of water from the municipal water network. There are some households in the survey who are not having any kind of connection i.e. neither private wells nor municipal water connection and they use to take water for their daily requirement from the neighbourhood houses. The average drinking water storage capacity of the survey area is found to be 3-4 litres



while that of the domestic water is found to be around 500 litres. The connection from the municipal water network also receives very less amount of water and the households are not satisfied with the amount of water they are receiving from the municipal water network.

The sanitation condition of the area is also not good. Still many households go outside in the fields for open defecation and thus can be a trigger for generation of many diseases.

The hygiene conditions of the area were also not good. People warm water for bathing either with the help of electricity, gas or chullah. The use of the traditional chullah is not good for health. Frequency of washing hands with soap was also found to be less.

The health status of area reveals that there is only one family in which there is complaint of diarrheal symptom in children less than 5 years of age and only few whose age is above 5 years are having diarrheal symptoms.

Based on the results following recommendations have been made:

- Proper utilization of water by the households having their own bore wells.
- Repairing of municipal water network pipes.
- Proper sanitation, hygiene and health practice i.e. not to defecate in open, washing hands with soap, taking shower daily.
- Promotion of awareness on health, sanitation and clean drinking water through means of radio, TV, skits.

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