



Original Research Article

Hygiene Practices in Rural Area of Doti District, Nepal

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ABSTRACT

This household based descriptive study was conducted to ascertain sanitation and hygiene practices of households. Doti, a hilly district of Far West Nepal was selected purposively. Multistage sampling and proportionate random sampling method was used to find the number of sample. The data was collected from 174 households of 10 Village Development Committee by using pre structured interview schedule and observation check list. The study found that hand washing with plain water before eating was found 81.03 per cent and after using toilet was 35 per cent. Practice of open defecation was found in 48.27 per cent of the households. During the observation water container was found open in 70.11 per cent of the families. Near about half of the families collect kitchen waste in a container and throw openly outside the kitchen room while other half collect it and feed cattle. Household waste was collected and kept open in 50.57 per cent and thrown improperly in 36.20 per cent of the families. This study revealed that 43.13 percent of the household left children's faeces in open and 41.17 percent throw into the garden. The study showed that almost all (91.37%) of the families don't treat water before consumption. Firewood was used in 94.82 percent of the families and among them 96.55 percent of the families had traditional smoky chulo (stove). Only 11.49 percent of the families use detergent to wash pots after using in kitchen. In the observation it was found that 39.08% of families had practice of washing cooking and feeding pots with Bhusha (cover of rice peeled out after beating) without changing it for several days in the yard. This study revealed that ARI (60.78%) and Diarrhea (56.86%) were found as leading health problems in children under five years.

It is concluded that most of practices of households were need to change for the better sanitation and hygiene condition of household.

Key Words: Hygiene, Sanitation, Household.

INTRODUCTION

Hygiene refers to the set of practices perceived by an individual or a community to be associated with the preservation of health and healthy living. In other words, hygiene means practices which prevent spread of disease causing-organism.

Hygiene plays an important role in preventing spread of infectious disease. Hygiene and sanitation are basic practices for healthy life. Basic hygiene practices can reduce a significant burden of disease. Similarly expenditure health can be reduced if proper hygiene is there.

In fact, an estimated 88 per cent of diarrhea deaths worldwide are attributable to unsafe water, inadequate sanitation and poor hygiene. Water, sanitation and hygiene programmes that include: disposing of human excreta in a sanitary manner, washing hands with soap, increasing access to safe water, improving water quality at the source, and treating household water and storing it safely can reduce the number of diarrhoea cases. (BMJ, 2007).

Nepal has to achieve universal toilet coverage by 2017. Despite the gradual achievements in sanitation, still 57% of the country's population lacks access to a toilet. The toilet coverage in urban areas is 78% against the rural coverage of only 37%. The poor and disadvantaged communities are the most affected, with children and women fairing worst. Solid waste and wastewater problems are growing rapidly in urban areas. Despite the best efforts of government departments, international agencies and NGOs, over 70% of Nepal's population is still without access to safe sanitation (Water, Engineering and Development Centre, 2005 Loughborough University,UK) .

A significant number of people are dying of diarrhea every year in rainy season. In 2009, there was an outbreak of cholera in Jajarkot, a hilly remote district of Mid-Western region. Later it is spread up to its adjoining 19 districts of mid-western and far western region of Nepal. The outbreak affected 52,014 populations and caused 282 deaths. All these mortality and morbidity were from in rural area. The drinking water test report from these districts showed the presence of E coli in large number. This indicates the condition of sanitation and hygiene (WHO 13th Aug 2009).

MATERIALS AND METHODS

This household based descriptive study was conducted in 174 households of Doti, a hilly district of Nepal. The district

was selected purposively. Multistage sampling method was used to find out the sample of study unit. Ten Village Development Committees (VDCs), that is 20%, of total 50, were taken purposively. The district was divided into two parts, northern and southern. Five VDCs from northern and five from southern part were selected randomly. One ward from each VDC was selected through random sampling method and number of sample from selected ward was determined using proportionate sampling method. Systematic random sampling method was used to collect data from the household.

RESULTS AND DISCUSSION

Hand washing is the fundamental hygiene practice. Transmission and occurrence of many diseases can be prevented with proper hand washing using soap and water in critical situation which was found in minimum (18.96%) of households. This finding is higher than that of India- 4.9 percent (Nath et. al, 2007). There should be hand washing with soap and water before eating, after using toilet, before feeding children, after working in the field, after handling animal dung or human excreta etc, but the table I shows that most (81.03%) of the families use only plain water to wash hand before eating.

Table I. Materials used to wash hand before eating.

Hand washing with	Frequency	Percentage
Plain water	141	81.03
Soap and water	33	18.96
Total	174	100

Table II shows the situation of kitchen waste management system. Half of the families collect kitchen waste in a container and feed their cattle. Waste water and garbage is mostly fed cattle. This can be reported as good practice of utilizing kitchen waste. Rest near about half (43.1%) of the families throw the kitchen waste openly just outside

the kitchen room improperly. Due to lack of proper drainage, there was muddy dirt in front of the house in most of the household. Proper drainage system was found only in 6.32 percent of the families, which is similar to the finding that was found in rural area of India- 8% (Nath et. al, 2007).

Table II. Kitchen waste management and treatment practice.

Disposal method of kitchen waste	Frequency	Percentage
Collected and Thrown openly	75	43.1
Collected and Feed cattle	88	50.57
Proper drainage system	11	6.32
Total	174	100

Table III shows a common practice of washing cooking and feeding pots. More than half of the families washed pots at the back side of the house while other 39% washed in the yard using “Bhusha” (cover of rice peeled out after beating) without changing it for days. Practice of washing pots in the yard is found to be the attraction and breeding place for house fly.

Table III. Place of washing pots as observed.

Place for washing pots	Frequency	Percentage
In the yard	68	39.08
Back side of the house near the pit	106	60.91
Total	174	100

Table IV shows that very few families use detergent to wash pots after using in the kitchen. Bhusha was used mostly for the purpose. A similar study in India showed that 27.1 percent of respondents were using detergents, 66.9 percent were using ash/mud and 6 percent were using plain water in rural community (Nath et.al, 2007).

Table IV. Materials used to wash pots after using in the kitchen.

Materials for washing pots	Frequency	Percentage
Ash	57	32.75
Bhusha	93	53.44
Soil	4	2.29
Detergents	20	11.49
Total	174	100

Table V shows that almost all of the families don't treat water before consumption. At the rainy season flood contaminate the source of water. There is more chance of fecal contamination in water in hilly area at rainy season. In such condition, practice of consuming untreated water is prone to develop diarrhea. So this study also revealed that diarrhea was main health problem in both adult and children less than five years.

Table V. Treatment of water before consumption.

Treatment of water	Frequency	Percentage
Boiling	1	0.57
Filtration	14	8.04
Chlorination	0	0
Don't treat	159	91.37
Total	174	100

Table VI shows observed and responded data on practice of covering water container at home. In most of (70.11%) the families, water container was found not covered during the observation. By this practice, there is more chance of contamination of water at household level even the source is clean.

Table VI. Practice of covering water container.

Covering of water container	Responses of respondents (%)	Observation (%)
Yes	65 (37.35)	52 (29.88)
No	109 (62.64)	122 (70.11)
Total	174 (100)	174 (100)

Table VII shows that near about half of the households practice open defecation. It was found in the study that 51.72 percent of the households use latrine for defecation which is higher than the findings found in India in rural area -38 percent (Nath et.al, 2007). Nepal has to achieve universal toilet coverage by the year 2017. To support this objective, some NGOs and INGOs are working in the sector of water sanitation and hygiene. Some local Village Development Committees and communities have been declared open defecation free by the help of state and non state organizations and this movement is going on. The challenge to

achieve this goal is that Education level and income of the household is low and people are not aware of consequence of open defecation. Some of the families had no enough money to make sanitary latrine.

Table VII. Practice of defecation

Practice	Frequency	Percentage
Latrine	90	51.72
Open defecation	84	48.27
Total	174	100

Table VIII. Practice of hand washing after using toilet.

Hand washing	Frequency	Percentage
Soap and water	71	40.80
Ash	15	8.62
Soil	27	15.51
Plain water	61	35.05
Total	174	100

Table VIII shows that only less than half (40.80%) of families had practice of hand washing with soap and water after using toilet which is lower than the observed findings found in Bangladesh-51 percent (Hadler, 2010) and higher than that found in India-36.8 per cent (Nath et.al, 2007). Hand washing with soap and water is basic hygiene practice. Only toilet and tap construction is not enough for improved sanitation and hygiene. Proper hygiene practice should be there. Still around 60 per cent families don't use soap and water to wash hand after using toilet in rural area of Doti. The study revealed that 15.51 per cent of families used soil and 35.05 per cent used plain water for hand washing after using toilet which is lower than findings of India-21.2 per cent with ash/mud and 42 per cent with plain water (Nath et. al, 2007). The result of such practices has been seen in Doti barely. There were around 14 deaths due to diarrhea in the rainy season, June and July 2012. Diarrhea breaks out and death due to diarrhea has been reported from such community where there was toilet in every household and good water supply supported by different NGOs and INGOs.

Table IX shows that near about half of the families left the children's faeces open. This question was asked to the family with children under five. Faeces of children were found managed improperly. It can be seen open near the house, in the garden or in the street. Use of toilet by the children need to promote. Children's faeces were found open though there was toilet in the household. This practice helps to growth of house fly and transmission of disease easily.

Table IX. Disposal of children's faeces.

Disposal site	Frequency	Percentage
Rinse into latrine	14	13.72
Left in open	44	43.13
Thrown into garden	42	41.17
Other	2	1.96
Total	102	100

CONCLUSIONS

Almost half (48.27%) of the families were practicing open defecation in rural area of Doti. Children's faeces was left open in 43.13 percent of the families. Hand washing with plain before eating was found in 81.03 percent of the families. Practice of hand washing with soap and water after using toilet was found in 40.80 percent of the families. Only 6.32 percent of the families had proper drainage system in the kitchen. Use of detergent to wash pots after cooking and feeding was found only in 11.49 per cent of the families. Almost all (91.37%) of the households drink water without any treatment and 70.11 percent household don't cover the water container at home.

At last it can be concluded that there is too much left to do in the sector of hygiene in Doti District of Nepal. Simple and basic hygiene practices are not found adopted at household level.

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