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Safe Drinking Water and Hygiene Facilities Utilization in Rural Households of Kathua District: A Descriptive Study

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Abstract

Introduction: Provision of safe water and basic sanitation is becoming a challenge in rural areas which is adversely affecting the health of the people living in such areas.

Objective: To assess the core indicators on Sanitation and drinking water from rural area of Kathua district.

Methodology: The present study was conducted over a period of 2 months i.e., from November 2019 to December 2019 among rural population of households falling under jurisdiction of Rural Health Training Centre, Budhi. Information was collected from the head of the household as well as from other household members. Overall, 320 households were assessed using standardized study tool.

Results: The study revealed that the 72% families were of joint type and most of the families were headed by Male (82%). Main source of drinking water was tube well/borehole. 59% of adult females usually went to fetch the water from source. 82.37% of the rural population used water for drinking from improved source but only 35.59% of the household members used adequate water treatment method i.e., boiling. About 70.95% of the household members used improved sanitation facilities and only 43.17% was the sanitary disposal of children feces.

Conclusion: Sanitization and hygiene practices in rural population was reported satisfactory as compared to other studies but still needs public health intervention. Various programs focusing on sanitation and personal hygiene with direct involvement of community should be conducted to raise awareness.

Keywords: MDG; WASH; WHO

Introduction

The collective term for WASH is Water, Sanitation and Hygiene. These three issues are interdependent on each other [1]. Improvement of Water and sanitation, in association with change in hygiene behaviour, results in maximum effects on health of the people because of variety of disease conditions like diarrhea, intestinal infections, skin diseases etc. These improvements of WASH practices in health in turn result in the reduction in the mortality and morbidity which in turn lead to improvement in nutritional status [2]. It is a pre-condition to access to Water, Sanitation and Hygiene (WASH) for people so that they can acquire better health and get benefits from all the economic development. The WASH efforts were firstly initiated by the International Drinking-Water, Supply and Sanitation Decade (IDWSSD) during 1980s which was then followed by Millennium Development Goals (MDGs) so that the WASH accesses can increase [3]. The Sustainable Development Goals (SDGs) expanded all the targets of MDGs, more focused on SDG 6 so that WASH will become the priority issue till 2030 [4].

Globally, approximately 2.5 billion lack improved sanitation, out of which 1.1 billion people still choose open field defecation and maximum people (780 million) lack improved drinking water [5]. Due to the lack of WASH practices, everyday approximately 800 children die because of this preventable diseases [6]. 58% of burden is due to unsafe WASH practices which results in at least 9.1% of disease burden globally [7]. As per the NFHS-4 data

on WASH practices, overall sanitary facilities are very poor in northern and eastern India with U.P and Bihar having increased prevalence of poor WASH conditions as compared to Sikkim and Kerala with lowest prevalence of WASH conditions. As per the recent data (NFHS-5), there are quiet improvements in the last 5 years but there was huge gap between rural and urban population [8,9]. Most important causes for infectious disease transmission is due to the lack of WASH knowledge, and also most importantly on their attitude, and practice (KAP). The WASH effectiveness depends not only on whether WASH facilities are available or not but also on the individual compliance [10].

Material and Methodology

The present study was conducted over a period of 2 months i.e. from November 2019 to December 2019 in rural households of Rural Health Training Centre, Budhi, which comes under the field practice area of Department of Community Medicine, GMC Kathua. Institutional ethics approval was taken for conducting the study. Information related to socio-demographic details and other information based on WHO and UNICEF validated questionnaire was gathered from the head of the household as well as from other household members after taking individual consent from them [11]. The total population of the village is 3635 covering two villages Budhi and Nagrota (729 households in total). Budhi village consisted of 350 households and Nagrota consisted of 379 households respectively. We randomly selected 50% of the household which came out to be 175 and 189 households respectively from both villages using simple random sampling with sum total of 364 households. But at the time of study, only 320 households were assessed because of the non-availability of household members and some households were locked at the time of interview.

After taking institutional ethics clearance, all the female multipurpose workers, ASHA workers as well as public health nurse were briefed about the study so that adequate cooperation was achieved from the members of the rural households. Data was entered in Microsoft Excel and descriptive statistics was calculated in the form of number and percentages.

Results

The study revealed that the most of the families in the rural area were of joint type (72%) and headed by males (82%). Regarding the education of the head of the household, most of them were literate (65%). Table 1 depicts frequency distribution regarding drinking water where about 35.59% of the household members were using adequate water treatment method i.e. boiling in the rural area. 51% of the adult women in the rural area fetch water for household. 40% of the households were using adequate water treatment method. Table 2 shows that 31.8% used pit latrine without slab/open pit, 40.13% of the households dispose of children's feces into toilet/latrine and about 12.8% shared toilet facilities with other households. Indicators regarding use of improved drinking water sources revealed that about 82.37% of the household members were using improved source of drinking water in the rural area. Adequate water treatment method was used by 35.59% of households, use of improved sanitation facility was found to be 70.9% and about only 43.17% of the children were using the toilets which are shown in Figure 1.

Variable	n (%)
Main source of drinking water for members of rural household	
Tube well/borehole	192 (60%)
Piped water to yard/plot	62 (19.5%)
Piped water into dwelling	42 (13.12%)
Tanker-truck	24 (7.5%)
How long does it take to go there, get water, and come back?	
1-10in	28 (8.7%)
11-20 min	19 (5.9%)
21-30 min	83 (25.9%)
>30 min	6 (1.8%)
Water on premises	172 (53.7%)
Don't know	12 (3.7%)
Who usually goes to this source to fetch the water for household? (n=125)	
Adult woman	74 (59%)
Adult man	4 (3%)
Female child (under 15 years)	39 (31%)
Male child (under 15 years)	8 (6%)
Don't know	-
Do you treat water in any way to make it safer to drink?	
Yes	128 (40%)
No	160 (50%)
Don't know	32 (10%)
What do you do to the water to make it safer to drink? (n=128)	
Boil	93 (58%)
Purifier	66 (16.5%)

Table 1: Frequency distribution regarding drinking water (n=320).

S. No.	Questions	n (%)
1.	**What kind of toilet facility do members of household usually use?**	
	Flush/pour flush to:	
	Piped sewer system	16 (5%)
	Pit latrine	54 (16.87%)
	Septic tank	23 (7.18%)
	Ventilated improved pit latrine (VIP)	46 (14.37%)
	Pit Latrine with slab	64 (20%)
	Pit latrine without slab/open pit	102 (31.87%)
	Bucket	7 (2.18%)
	No facilities/brush/field	8 (2.5%)
2.	**Share the toilet facility with other households**	41 (12.81%)
3.	**What was done to dispose off child's feces(under 3 years) (n-147)**	
	Child used toilet/latrine	36 (24.48%)
	Put/rinsed into toilet or latrine	59 (40.13%)
	Put/rinsed into drain or ditch	52 (35.37%)
	Thrown into garbage	-
	Left it in the open	-
	Others	-

Table 2: Frequency distribution regarding sanitation (n=320).

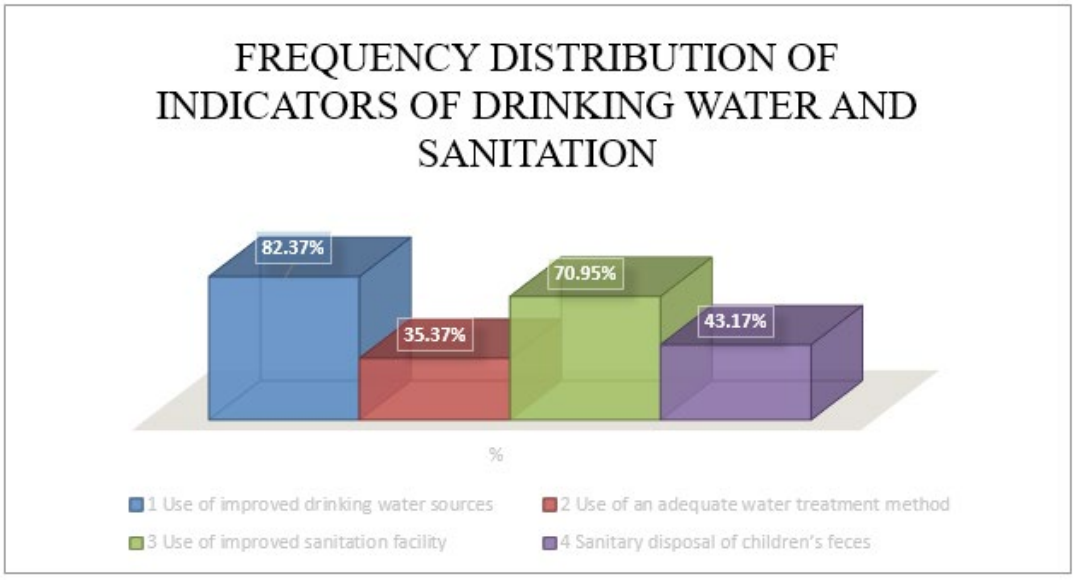

Figure 1: Frequency distribution of indicators of drinking water and sanitation.

Discussion

Water is an important element of our life. To prevent the various disease, we have to focus on clean water and use the optimum sanitation facilities which help in decreasing various water related morbidity and mortality. WASH practices reduce the illness related to water borne diseases as well as other. Adequate sanitation and related diseases, proper hygiene education and global access to safe drinking water can reduce illness and death which leads to improved health. The supply of drinking water along with provision of safe drinking water and sanitation facilities is one of the important elements of primary health care. It helps in prevention of various diseases. So, improvement in safe drinking water and sanitation facilities helps in achieving the stronger primary health care which is very essential so that we are able to achieve health- related Sustainable Development goal and Universal health coverage. The present study was conducted in rural area of district Kathua to understand various WASH indicators at the household level.

Maximum rural households used Tube well/borehole and Piped water to yard/plot as source of water and most of them had water supply inside their household premises. Maximum females were the primarily responsible for fetching the water for household from the main source which is similar with the previous studies [12]. In our study, 35.59% of the households used to treat water to make it safer to drink, out of which 58% were using boiling method and 16.5% of the households were using purifiers for purification of drinking water respectively. But maximum households didn't follow any method for water treatment method due to lack of knowledge and awareness which is consistent with other studies [13,14].

Under the MDGs, there was inadequate progress in Sanitation Sector in India (56% population with access to improved sanitation) despite lot of improvement in improved drinking water sources. If the goals of sanitation in India is achieved, it would indirectly contribute in achieving the global target of Sanitation under SDG-6. In our study, regarding the use of improved sanitation facilities our results was better (70.95%) in comparison to other studies [15]. 12.81% of the household members were using shared toilet facility with other households which contradicted the findings of other studies. Maximum people disposed off children feces into drain or ditch as there were no toilet facility available [16].

Conclusion

Sanitization and hygiene practices in rural population was reported satisfactory as compared to other studies but still needs public health intervention. Various programs focusing on sanitation and personal hygiene with direct involvement of community should be conducted to raise awareness. The IEC activities (Information, Education, and Communication) activities made the rural people to realize about the unsanitary conditions as well as about the unsafe drinking water and about the disadvantages related to the unhealthy behaviour. There should be time to time follow-up visits and also repetition of these health education activities to bring and sustain the healthy WASH behaviour in the community. Emphasis is to be given to behaviour change communication so that they understand the importance of healthy WASH practices.

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