An Analytical Study of Personal Hygiene and Household Sanitation in Rural Areas of Telangana state.

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Abstract- In 2015, the United Nations adopted Sustainable Development Goals [SDG]. SDG-6 is to ensure access to water and sanitation for all by 2030. India to achieve this target has started programs like Clean India Mission [Swachh Bharat Abhiyan] and Jal Jeevan Mission. We conducted a survey about WASH practice in 252 households in 6 rural villages in Sangareddy of Telangana state in 5 categories namely, Type of housing, Drinking water supply, Toilet availability in the household, Refuse disposal method and Handwashing practices. We observed that 33.6% and 17% of households were dependent on groundwater and private companies to fulfill their demand for drinking water even though 100% of households have tap water connections. 6% households do not cover their drinking water storage containers risking water contamination. Individuals in 17.06% and 22.2% households do not practice hand washing after defecation and before eating food. 7.7% households use Community Sanitary Complex [CSC] as these households lack household toilets, having household toilets encourages individuals to avoid open defecation. 8.7% of households dispose of their garbage in indiscriminate ways. 12.3% households use public dustbin this can lead to accumulation of solid waste if not disposed of on a regular basis. As a significant number of individuals lack awareness about hand hygiene, consumption of safe water, proper disposal of solid wastes and risks of diseases associated with these unhygienic practices, the government should take initiatives to create awareness among individuals with help of ASHA workers, anganwadi workers and social media.

Keywords: Sanitation, Water Supply, Toilets, Handwashing Practices.

1.Introduction

In 2010, the UN general assembly declared access to safe drinking water and toilets as basic human rights [1]. This resolution was adopted as poor sanitation is a primary cause for many deadly diseases, deaths among children under age five, contamination of ground water sources, and compromised human dignity. Exposure to contaminated drinking water sources and food with pathogen-laden human waste is a major cause of diarrhea, and can be affected by cholera, trachoma, intestinal worms, malaria, ascariasis [2]. Almost 60 percent of deaths due to diarrhea worldwide are attributable to unsafe drinking water and poor hygiene and sanitation. Hand washing with soap alone can cut the risk of diarrhea and significantly lower the risk of respiratory infections [3]. 72.63% of households in rural India practice open defecation [OD] irrespective of the fact of having toilet facilities. The reasons for this being lack of awareness, established age old practices, non-existence of community latrines and insufficient number of latrines [4]. Open defecation and poor sanitation facilities are directly associated with stunted growth in children [5]. Basic services such as water and sanitation have a significant role to play in improving the environment and also improving child health through reducing stunting [6]. For adequate hygiene, water supply should be within the household. Census 2011 reports that 22.17% of rural households have their drinking water supply beyond 500 meters from their household [7]. Many children [particularly girls] drop out of school as they are busy fetching water or are deterred by the lack of separate and decent sanitation facilities in schools. Women often suffer from lack of privacy, harassment and need to walk large distances to find a suitable place for defecation in the absence of household/ appropriate neighborhood toilet facilities. In households with the availability of the toilet, women feel more secure [4]. Since August, 2019 Government of India is implementing Jal Jeevan Mission [JJM] to make provision of potable water to every rural household through tap water connection, by 2024. As of date, 9.24 Crore [48%] rural households in the country are reported to have tap water supply in their homes. Aim of JJM is to make provision of potable water to every rural household through tap water connection at a service level of 55 liter per capita per day [LPCD], of prescribed quality [BIS:10500], on regular and long-term basis[8]. One of the projected outcomes of JJM is reduction in the number of acute diarrhoeal diseases leading to improvement of health indicators for rural populations [9].
2. Methodology

2.1 Data

We conducted surveys in rural areas of Sangareddy district of Telangana state about Water, Sanitation and Hygiene [WASH]. House surgeons and post graduates from our teaching hospital and community medicine department were involved in this survey of rural areas of Sangareddy district. Each doctor was handed over a printed format to collect data from the household.

Overall, this survey has included the data from 252 rural households in 6 rural villages. This survey on Water, Sanitation and Hygiene [WASH] was divided into 5 categories namely:

A. Type of housing,
B. Drinking water supply,
C. Toilet availability in the household,
D. Refuse disposal method and
E. Handwashing practices.

For the purposes of this survey, we only used [A] to [E] because according to Swachh Bharat Mission: the availability of sustainable water supply not only encourages toilet usage, but also motivates people to adopt good sanitary practices including hand washing before and after meals, post defecation, and also maintaining cleanliness and proper hygiene within and outside houses.

2.2 Sampling method

The interviews were carried out using the structured format. During the Household survey, respondents could select only one of the following sub-categories pertaining to each household category:

a. **Type of family**: Nuclear / Joint / Extended / Three generation
b. **Head of family**: Male or Female
c. **Type of housing**: pucca roof with concrete floor/ pucca roof with mud floor/ kutcha roof with mud floor/ kutcha roof with concrete floor
d. **Main drinking water source**: municipality supply/ bore well/ other resources.
e. **Storage of drinking water**: covered/ uncovered  
f. **Main sanitation facility**: Individual Household Latrines [IHHLs]/ Community Sanitary Complexes [CSCs]
g. **Garbage disposal**: use of household dustbin - yes / no, disposal of garbage in public bin / door to door collection of garbage
h. **Handwashing practice**: before food - yes / no, after defection - yes / no.

3. Analysis of data and results

We analyzed 252 households in 6 villages of Sangareddy district of Telangana state. The largest sample was a village with 47 households and smallest sample was a village with 35 households. Out of 252 households, 14.6% were women-headed households and 67.5% were nuclear families, 7.5% were joint or extended families and 25% were Three generation families. Data collected from survey was analyzed and results are as follows:

★ A total of 97.22% of households owned Individual Household Latrines [IHHLs] while 7.7% of households used Community Sanitary Complexes [CSCs]
★ **Primary source of drinking water:**

→ Piped water supply to individual households [municipality supply] - 49.4%
→ Bore well water supply - 33.6%
→ Other resources of water supply [including water tankers, private company supplied purified water] - 17%
Individual household, type of housing:

- Pucca house with concrete floor - 79%
- Pucca house with mud floor - 2%
- Kutch house with concrete floor - 13%
- Kutch house with mud floor - 6%

94% of households use lids to cover their water storage containers.

Type of solid waste disposal:

- Door to door garbage collection by village by Swachh Autos - 79%
- Households using public dustbin - 12.3%
- Household with indiscriminate way of garbage disposal - 8.7%

Handwashing practices [all individuals of household included] [out of 252 households]:

<table>
<thead>
<tr>
<th>Handwashing practices</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before eating</td>
<td>196 [77.7%]</td>
<td>56 [22.2%]</td>
</tr>
<tr>
<td>After defecation</td>
<td>209 [82.94%]</td>
<td>43 [17.06%]</td>
</tr>
</tbody>
</table>
4. Discussion

The Government of India, in partnership with State Governments, is implementing the Jal Jeevan Mission [JJM] - Har Ghar Jal from August 2019. Under this mission, there is a significant rise in the number of rural households with tap water connection. Telangana state has a total number of 53.98 Lakh households with 100% households having Tap water supply [as on 30.01.2023] [10]. In our survey, we found that 49.4% of households relied on piped water supply by the government. 17% households paid private companies for water supply in the form of purified water cans and water tankers while 33.6% households relied on ground water. Reasons for use of alternate sources for water can be residents’ doubts regarding the tap water quality; use of other sources out of habit; and availability of cheaper or free sources [11]. Government supplies tap water to households only for a few hours in a day. Individuals of such households may not be present at home at the time when water is supplied to fill their storage containers therefore these households rely on either groundwater or other resources for their water demands. Moreover few households wich can be on outskirts of village may not be supplied with sufficient water to meet their daily demands causing them to rely on groundwater and other resources. We made an observation that individuals in 17.06% households do not wash hands after defecation and individuals in 22.2% households do not wash hands before eating food. This is attributed to lack of awareness among individuals, old time habits, lack of adequate water supply. Individuals will feel more encouraged to wash hands, if they have adequate water supply [1]. 6% of households do not cover their water storage containers, potentially risking water contamination, due to lack of awareness. 97.2% of households own Individual Household Latrines [IHHL’s] while 7.7% of households use Community Sanitary Complexes [CHC’s]. The amount of dwelling space owned by households is significantly associated with Household Latrine ownership [12]. We observed that households with kutcha type of housing use Community Sanitary Complexes [CHC’s]. To maintain Open Defecation Free [ODF] status, the government should take initiatives for proper maintenance of Community Sanitary Complexes [CHC’s] in regards to latrine cleanliness, water supply to toilets and availability of soaps for hand washing. 79% of households dispose of their solid waste to swachh autos on a daily basis or on alternate day basis. 12.3% Households use public dustbins and 8.7% households dispose of their garbage in an indiscriminate way. Reasons for this situation can be lack of awareness, lack of public dustbin in areas near the household and non availability of swachh autos in the area where the household is located. Contamination of surface water occurs when solid waste is disposed of in an indiscriminate way.
5. Conclusion
Although there has been an increase in the number of households with tap water supply under Jal Jeevan Mission there are a significant number of households which do not use water supplied by the government but instead rely on groundwater which can be used without purification or on private companies to supply water due to various reasons. Individuals should be made aware of the risk associated with consumption of unpurified ground water, consumption of contaminated water of uncovered water storage containers and also encouraged to wash their hands after defecation and before eating food. The results of this survey suggest that well-crafted health education campaigns can be effective in raising awareness and promoting health enhancing practices. We should take help of Anganwadi workers, ASHA workers, social and mass media to enhance awareness in the masses about benefits of good WASH [Water, Sanitation and Hand washing] in prevention of various waterborne diseases, helminthic and diarrheal diseases, child growth, safety of women by availability of toilets and decrease in spending on household sanitation.

6. Recommendations
- We should modify school curriculum to create awareness among children about the benefits of hand hygiene and washing, drinking safe water; diseases derived from indiscriminate disposal of garbage, to culminate good habits in children.
- The masses should be educated about the hand washing practices before eating food and after defecation by well-crafted health education campaigns and social, electronic and print media.
- We should create efficient systems so that each household can receive clean municipal water supply on a regular basis.

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8. Conflicts of Interest: The authors declare no conflict of interest.

REFERENCES: