

# EXPLORING HEALTH AND HYGIENE PRACTICES IN GHANAHATTI PANCHAYAT OF DISTRICT SHIMLA, HIMACHAL PRADESH

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## ABSTRACT

*The Government of Indian has launched numerous programs for the rural health and hygiene for its citizens. The Department of Drinking Water and Sanitation is for overall policy, planning, funding and coordination of two flagship programs of the Government of India namely the Swachh Bharat Mission (Grameen) [SBM(G)] for rural sanitation and the Jal Jeevan Mission (JJM) for rural drinking water supply. The present study surveyed 37 respondents in Ghanahatti Panchayat of Shimla District, India, to understand their drinking water sources, water supply, rainwater harvesting systems, and water storage methods etc. The results showed that 59.45% of respondents used taps provided by the Department of Public Health, Govt. of Himachal Pradesh, while 13.51% used hand pumps. 27.04% used Bouli for drinking and household usages. Waterborne diseases were also discussed, with 72.97% being aware of these diseases. Health facilities in the study area were also examined, highlighting the importance of proper sanitation and hygiene in the community.*

**Keywords:** *Health, Communicable Diseases, Hygienic Sanitation Practices, Rural Health and Sanitation*

## INTRODUCTION

Rural health is a crucial aspect of rural communities, especially in a country like India, with its widespread village population. The majority of health facilities and resources, about 75 percent, are predominantly located in urban areas, leaving rural regions underserved. Despite the initiation of numerous government programs aimed at improving rural healthcare, delays in implementation have hindered their effectiveness. Furthermore, rural areas continue to grapple with the spread of various communicable diseases, including diarrhea, amoebiasis, typhoid, infectious hepatitis, worm infestations, measles, malaria, tuberculosis, whooping cough, respiratory infections, pneumonia, and reproductive tract infections<sup>2</sup>. Only 29.9% of the world's freshwater resources are sourced from groundwater (Li & Qian 2018)<sup>3</sup>.

The lack of different water resources has emerged as a significant challenge for humanity (Robertson & Sharp 2013)<sup>4</sup>. The provision of safe and enhanced drinking water sources is a fundamental necessity that should be within reach of everyone. Groundwater serves as a vital drinking water resource for approximately half of the world's population, primarily due to the lack of surface water of sufficient quality (Omar et al. 2020)<sup>5</sup>. Worldwide, 844 million individuals did not have access to enhanced drinking water, with 564 million of them residing in India (UNICEF/WHO 2017)<sup>6</sup>.

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<sup>3</sup> Li, P. & Qian, H. (2018). Water Resources Research To Support A Sustainable China. *International Journal Of Water Resources Development*. Vol.34 (3), Pp.327-336.

<sup>4</sup> Robertson, W. M. & Sharp, J. M. (2013). Estimates Of Recharge In Two Arid Basin Aquifers: A Model Of Spatially Variable Net Infiltration And Its Implications (Red Light Draw and Eagle Flats, Texas, USA). *Hydrogeology Journal* Vol. 21(8), Pp. 1853-1864.

<sup>5</sup> Omar, P. J., Dwivedi, S. B. & Dikshit, P. K. S. (2020). Sustainable Development And Management Of Groundwater In Varanasi, India. In: *Advances in Water Resources Engineering and Management: Select Proceedings of TRACE 2018*. Springer, Singapore, pp. 201-209.

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A multidimensional approach that plugs the loopholes across the entire sanitation chain (including treatment, desludging, disposal practices and sustainable hygiene practices) was used for Swachh Bharat Mission (Novotný et al., 2018)<sup>7</sup>. It is essential to have a well-functioning sanitation infrastructure at the individual, community, and city levels, along with incentives for their utilization, in order to promote hygienic sanitation practices (Hueso et al., 2018)<sup>8</sup>. Previous studies have identified insufficient space in households and lack of access to financial resources as significant barriers to constructing toilets in India (Mehta et al., 2021)<sup>9</sup>.

### **NIRMAL GRAM PURASKAR & SWACH BHARAT ABHIYAN (2015-2019)**

The *Nirmal Gram Puraskar* is a creative incentive program designed for Gram Panchayats, blocks, and districts that have achieved 100% sanitation coverage within their respective areas. PRIs receive an award ranging from 50,000 to 500,000 (based on population) for the development of additional sanitation infrastructure and maintenance. The Swachh Bharat Abhiyan was initiated by Prime Minister Narendra Modi in October 2014 at Raj Ghat, New Delhi, with the goal of promoting cleanliness throughout India.

The objective is to ensure access to sanitation facilities, including toilets, waste disposal systems, village cleanliness, and safe drinking water supply to every household by October 2, 2019.

### **STATUS OF RURAL HEALTH AND SANITATION IN HIMACHAL PRADESH**

Himachal Pradesh has become a noteworthy example of success in rural health within India. It is home to the highest proportion of rural inhabitants among all Indian states, with 90 percent of its population residing in rural areas. When compared to states with similar rural populations, Himachal Pradesh demonstrates superior human development indicators on average. Alongside Kerala and Delhi, it is ranked as one of the top states in India in terms of Human Development Index (HDI) and has achieved replacement level of Total Fertility Rate despite its high rural population.

### **REVIEWS**

Tiwari, P. et.al. (2022)<sup>10</sup>, finds that the quality of microenvironment within which a household lives has a significant impact on the incidence of disease. The results imply that the interventions for improved sanitation need to be holistic, emphasizing microenvironment improvement and providing better access to sanitation infrastructure and inculcating more hygienic behavioral practices.

Augsburg, et.al. (2018)<sup>11</sup>, finds that better sanitation coverage results in an increase in the height of children, and girls benefit more from an improved sanitation environment.

Wang and Sung (2014)<sup>27</sup> in these Report Improving sanitation facilities is also conducive to human development, dignity and privacy safety especially for women and children and will promote gender equality.

### **METHOD**

The study was carried out in the Ghanahatti Panchayat of Shimla District. Respondents were selected by using random sampling method from the selected Panchayat i. e, Ghanahatti. This Panchayat was considered as a universe of the study and the total 37 respondents (10% rounded off) from 370 households were considered as sample of the study. The researcher himself collected data and filled the interview schedules i.e. 37 respondents for the study.

### **WATER SOURCES IN THE STUDY AREA**

List of the important natural water in and around the village Panchayat along with their present status

#	Name of the natural water source	Location/ distance from the Panchayat	Number of users dependent on the water source	Current status of the water source (dry or still having water)
1	Ghanahatti khadd	0 km	20-25 families	Still has water
2	Kufrighar	0.5km	10-15 families	Still has water
3	Manghech	3km	18 families	Still has water
4	Parech	3.5km	12 families	Still has water

<sup>7</sup> Novotný J., Ficek F. and Hill, K.W., et al. (2018). Social determinants of environmental health: A Case Of Sanitation In Rural Jharkhand. *Science Of The Total Environment*. Elsevier, 643: 762–774.

<sup>8</sup> Hueso A, Boni A, Fernández-Baldor Á (2018). Embracing The Complexity Of Policy Processes In Sanitation: Insights From India. *Development Policy Review*, Blackwell Publishing Ltd 36(2): 203–219.

<sup>9</sup> Mehta M, Mehta D, Vavaliya J (2021) Urban drinking water security in Gujarat. *Journal of Social and Economic Development* 23(S1): 166–180.

<sup>10</sup> Tiwari, P., Tirumala, R. D., & Shukla, J. (2022). Household Choices Of Sanitation Infrastructure And Impact On Disease In India. *Environment And Planning B: Urban Analytics and City Science*, 49(8), 2054–2071.

<sup>11</sup> Augsburg B, Rodríguez-Lesmes PA (2018). Sanitation And Child Health In India World Development. *Elsevier Ltd* 107: 22–39.

## RESULTS AND DISCUSSIONS

The study has been undertaken from 37 respondents living in Ghanahatti Panchayat of Shimla District. In order to understand the profile of the respondents, the variables used for the profile are gender of the respondents, age of the respondents, educational qualification of the respondents, caste wise, habitat wise and occupational wise profile of the respondents. The data gathered with the help of the interview schedule is discussed as below.

The data shows that 22 (59.45%) respondents were using drinking water from the taps provided by the department of public health, Govt. of Himachal Pradesh, while 5 (13.51%) respondents were using hand pump as sources of drinking water. 10 (27.04%) were using *Bouli* for drinking and household usages. The results shows that 28 (75.67%) respondents were satisfied with the sufficient water supply in their home, but 9 (24.33%) of the respondents had not sufficient water for domestic use. Rainwater Harvesting (RWH) System for Individual Houses in India. Rainwater harvesting techniques have been already been devised and used since ancient time. These were implemented at the community level in areas where rainfall is the only major source of freshwater. The respondents were also enquired about the water storage in the study area. It was observed by the researcher that the respondents had no idea about the rain water harvesting. They were aware about the water storage from the tap and *bouli*s at their own level. The data shows that maximum number of respondent 26 (70.28%) were using water tank for the storage of drinking water and 2 (5.40%) respondents were using bucket for the storage of drinking water whereas 9 (24.32%) were using clay water pots for the storage of drinking water.

The respondents of the study area were aware regarding the treatment of water to make it safer. The respondents had the knowledge about the filtering the water through media to remove particles and most microbes from water. Out of 37 respondents 28 (75.68%) were using the electric purifier filters, and 8 (21.62%) respondents were used to boil the water before the drinking, remaining 1 (2.70%) respondents were using cloth filter for the treatment of drinking water.

The results shows that 26 (70.27%) respondents were of the view that the water they were using was safer for their health. 11 (29.73%) respondents had the doubt about the water. They considered this water unsafe drinking and cooking due to the impurities. So the respondents were using the candle filters and purifiers for the treatment of this water. Some respondents were used to boil this water to make it pure. This shows the awareness among the respondents about the water borne diseases. The study shows that 11 (29.72%) respondents in the study area were feeling some problems regarding their water sources. Large number of the respondents, i.e. 26 (70.28%) out of 37 were found satisfied with their water source and supply in study area. Those respondents who are not satisfied with the water source they have problem with pollution near the sources. The respondents of the study area were found fully aware about the covering of water tanks/vessels.

The toilet facility is a basic facility in the home. Nowadays, no any middle and above middle class family is ignoring this facility during the construction of home. The respondents were enquired about the availability of the toilet at their household level. It was found that all the respondents had a good toilet at their home. Also it was observed they were frequently using this toilet continuously. The respondents in the study area were aware about the open defecation and had a good knowledge about the disease caused by the open defecation. The children of the respondents had also toilets at their school level. The respondents were using the soap and liquid hand wash after the use of the toilet. It was also observed that the respondents of the area were aware about diarrheal diseases. The data shows those 34 (91.90%) respondents using soaps for hand washing and 3 (8.10%) respondents using only water for washing their hands.

The study shows that 26 (70.27%) respondents were using flush toilet and 2 (5.41%) respondents were using pit latrine with slab and only 9 (24.32%) respondents were using pour flush. All the respondents had their toilets at home or nearby their home and were fully aware about the sanitation and open defecate.

The results shows that all the respondents are not aware of the consequences of children feces all the respondents through open their children feces they are not aware about how harmful it is. Children feces not removed from soil and feces seen in a household soil increased the risk of diarrheal diseases. The data show that 4 (10.81%) respondent through openly feces of their children and 21 (56.76%) respondent through it into the dustbin, while 12 (32.43%) respondents rinsed feces into the toilet.

The Pit or Trench Decomposition Method in general refers to the traditional method of decomposition waste where the waste to be decomposed is buried in a pit or trench and allowed to decomposed for a period of 2 to 3 months. The data

shows that 33 (89.18%) respondents had knowledge about the decomposing pit, while only 4 (10.82%) respondents were not aware about the decomposing pit. When the respondents were enquired about the visit of the TSC team in the study area, all the respondents refused about the same.

Waterborne diseases are caused by drinking contaminated or dirty water. Contaminated water can cause many types of diarrheal diseases, including Cholera, and other serious illnesses such as Guinea worm disease, Typhoid, and Dysentery. Water related diseases cause 3.4 million deaths each year. The respondents of the study area were found totally aware about the water borne diseases. The results shows that 27 (72.97%) of the respondents are aware of different water borne diseases while only 10 (27.03%) respondent were not aware about water borne diseases.

With the advancement in medical and healthcare industry, a lot has changed in India. Many fatal diseases have been exterminated with invention of powerful vaccinations and treatment courses. However, the country is still challenged by some killer diseases that just don't seem to declare exodus. The health status of the respondent and his/her family was enquired in the study area. The data shows that 32(86.49%) respondents believed that the quality of health facilities were good in the area whereas the remaining 5(13.51%) respondents believed that the health care facilities in the area were average and not excellent. The respondents were enquired about such diseases and 30 respondents (81.08%) were found aware about the diarrheal diseases, while 7(18.92%) respondents were not aware about it. Field Test Kit (FTK) is a qualitative to semi quantitative method for drinking water quality management, which generally comes in a very handy measurable box. The application of Field Test Kit is much more important especially for the rural areas where the availability of quality drinking water has been the area of serious concern. On the other hand, the need for Water Quality Field Test Kit has emerged as the prominent aspect of capacity development. In the study area there was not any facility of water testing kit. The people /respondents of the area were also not found more aware about the same.

## CONCLUSION

The study surveyed 37 respondents in Ghanahatti Panchayat of Shimla District, India, to understand their drinking water sources, water supply, rainwater harvesting systems, and water storage methods. The results showed that 59.45% of respondents used taps provided by the Department of Public Health, Govt. of Himachal Pradesh, while 13.51% used hand pumps. 27.04% used Bouli for drinking and household usages. Sufficient water supply was found to be satisfactory for 28.67% of respondents, but 24.33% had not sufficient water for domestic use. Rainwater harvesting techniques were also discussed, with 75.68% using water tanks for storage and 5.40% using buckets. Water treatment was also discussed, with 75.68% using electric purifier filters and 21.62% boiling water before drinking. Some respondents used candle filters and purifiers to make water safe for drinking and cooking. However, 29.73% had doubts about the water's safety due to impurities. Problems with water sources were reported by 29.72% of respondents, while large majorities were satisfied with their water source and supply. Proper vessel cleaning was also noted, with 81.08% of respondents aware of this. Sanitation facilities and hygiene were also discussed, with all respondents having good toilets at home and frequently using them. Hand washing with soap was found to be effective in preventing infections. The type of toilet facility used was also discussed, with 70% using flush toilets and 24.32% using pit latrines with slabs. Regarding children's feces, only 10.81% of respondents were aware of its harmful effects. The study found that 89.18% of respondents knew about decomposing pits, while only 10.82% were not. Waterborne diseases were also discussed, with 72.97% being aware of these diseases. Health facilities in the study area were also examined, highlighting the importance of proper sanitation and hygiene in the community.

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