

# Rural Hygiene: Impact on Public Health

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**Abstract—** Hygienic practices in rural India play a very vital role in achieving public health. Unhygienic practices of people in rural area leads to various diseases among them, especially children. This leads to water and air borne diseases like food poisoning, cold, flu, skin infections and similar others. Unhygienic environment includes stagnant sewage water, no inbuilt toilet facilities, unhealthy disposal of garbage, improper storage food products, unclean drinking water and many more leading to health issues among people. These critical factors further leads to increase in mortality and morbidity rate among rural Indian population.

**Index Terms—** Rural hygiene, Public health, Air borne disease, Water borne disease

## I. INTRODUCTION

Health and hygiene plays a very vital role in maintaining good health. In rural India, the unhygienic practices of people are a major cause for health related issues among them. This research study investigates the causes of health related issues and provides an insight to improve hygienic practices among people in rural areas and to help in achieving a clean and hygienic nation. Also, the study aims at reducing mortality and morbidity rate in rural India, and that shall help in increasing the life span of people. The outcome of this is research is hoped to help the present and future generations to follow hygiene practices and lead a healthy life.

The importance of constructing toilet in the house and usage of public toilets is the first and foremost practice required for ensuring hygiene. Open defecation, lack of sewage infrastructure, improper disposal of garbage are major threats to hygiene. Another critical aspect to be looked upon is availability of clean drinking water and quality food products. These are fundamental requisites for healthy living and will minimize health related issues and medical expenditure. Moreover, rural people will have to travel to towns and cities for such hospitalizations leading to additional financial burden. Hospitalization expenses are alarming and affordability is another issue among people, and the size of middle class and lower class is more in India.

## II. AIR AND WATER BORNE DISEASES

A degraded environment filled with air and water pollution continues to affect health of people in India, according to the National Health Report (NHP) released on October 31, 2019. Air and water borne diseases are observed to be prevalence in economies that are yet to address basic cleanliness and hygiene issues and shortfall in health infrastructure and

institutional capacities. Air pollution-linked acute respiratory infections contributed 68.47 per cent to the morbidity burden in the country and also to highest mortality rate after pneumonia. Acute diarrhoeal diseases, caused due to drinking contaminated water, caused the second highest morbidity at 21.83 percent. Cholera cases went up to 651 in 2018 from 508 in 2017, the report showed. Uttar Pradesh followed by Delhi and West Bengal had the highest cases. Cases of typhoid went up to 23, 08, 537 in 2018 from 22, 64, 453 in 2017. The data for 2018 is provisional. Even vector borne diseases or zoonotic disease showed a high morbidity and mortality rate in the country.

In rural India, due to poor hygiene environment people are often affected by air and water borne diseases to a greater extent, along with deficiencies due to malnutrition. Suffering due to food poisoning, tuberculosis, dengue, and fluorosis leads to disabilities or even death. Children in rural areas are more vulnerable to these diseases. The Census considers water supply from hand pumps and tube wells as safe as piped drinking water, but unfortunately these sources are carriers of water-borne diseases.

## III. ESTIMATION AND CAUSAL ANALYSIS

In New Delhi over five years to 2017, water borne diseases such as cholera, typhoid, diarrhea and viral hepatitis caused 10,738 deaths. Diarrhoea remained the leading killer, causing about 60 percent of all deaths, according to report by Jai Prakash Nadda, Minister for Health and Family Welfare on April 6, 2018. India loses 73 million working days due to water borne disease. India registered 69.14 million cases – or as many people as in United Kingdom – of four water borne diseases over five years to 2017, government data shows. Diarrhoea caused 6,514 deaths, the most of water-borne diseases in India, over five years to 2017. Other killers were viral hepatitis (2,143), typhoid (2,061) and cholera (20).

Uttar Pradesh, India's most populous state, recorded the most diarrhoeal deaths--22.21% of deaths nationwide--over five years to 2017, according to the data, followed by West Bengal (14.33%), Assam (12.03%), Odisha (10.63%) and Madhya Pradesh (7.24%). About 65 million people have been suffering from fluorosis, a crippling disease due to high amount of fluoride. The death toll in Bangladesh's floods during July 2020 increased to 119, and 10,684 others injured in the disaster that has affected 21 of the country's 64 districts. Of the total deaths, 96 drowned while 13 died of snakebites, it said, adding that around 5,000 people in flood-hit areas are suffering from diarrhea and other water-borne diseases. Environmental experts have warned of long-term adverse impact due to the flooding in Bangladesh, a delta-nation crisscrossed by hundreds of rivers. The situation has become more severe due to the ongoing coronavirus pandemic.

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According to a recent UN report, millions of people in India, Bangladesh and Nepal have been affected by the widespread flooding. Amongst them, over four million children need urgent life-saving support.

#### IV. DISCUSSIONS

Swachh Bharat Mission- The house hold toilet coverage where across India it's been successful but in some states where the coverage is low like Bihar, Punjab, Manipur, Maharashtra, Tamil Nadu, it is important to speed up the cover these states. Construction of toilet in rural areas is yet to be achieved so as to fulfill the national goal.

National water policy- The important action is to increase the rain water harvesting in all houses. Even though this initiative has been taken up by many states, there exist problems of rainwater harvesting pathways being connected with drainage of house. Therefore, an effective monitoring system is required so as to ensure drainage flows independent from rain water flow.

National urban health mission- It's important to confirm that every rural areas consists of a health consultant. Doctors play a vital role where numbers of hospitals are less. It is very important to operate medical camps frequently in areas where permanent hospitals are yet to be established. There is an emergent need for increasing the number of hospitals in rural areas, as more people live there. This shall contain the number of morbidity and without any delay in treatment.

Reforms are been initiated by the government from time to time whereas, a majority of people are not aware of the policies implemented and are not availing the benefits of the policies. Therefore, the government must create awareness from time to time among rural population about the need for hygiene and its impact on health.

#### V. CONCLUSION

Hygiene plays a very important role in maintaining health of every individual and the society. The impact of various kinds of diseases are high in developing and least developed countries and, health issues faced by rural people in these countries are high. The sufferings and casualty due to Air borne and water borne disease are on an increase, especially in rural parts due to unhygienic practices of people. This could be contained through policy initiatives and subsequent awareness programs. Thus, morbidity and mortality rate could be controlled. Also, the government spending on health facilities and infrastructure shall be enhanced so as to cater to the growing population on India.

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