The Economic Assessment of Swachh Bharat Abhiyan(Gramin) in Uttar Pradesh: A Case Study of Auraiya District

DISSERTATION

Submitted to
Babasaheb Bhimrao Ambedkar University
(A Central University)
Lucknow

In fulfillment for the Award of

MASTER OF PHILOSOPHY

IN

ECONOMICS

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Enrollment No.:059/15 Year 2019

1. Introduction

India's Father of the Nation, Mahatma Gandhi believed sanitation and cleanliness to be far more important than political independence. However, even after several decades we could not change the sanitation situation of India and a large number of people are still living in poor sanitary conditions. They don't even know that how dangerous is this for their life because of lack of knowledge about hygienic conditions such as lack of safe drinking water lack of safe disposal of garbage and proper toilet facility? Worldwide, 2.3 billion people do not access to adequate basic sanitation, about 4.5 billion do not have proper access to safely managed sanitation services i.e. a toilet connected to sewer or pit or septic tank that treats human waste and prevents exposure to disease (WHO, 2018, p.1). Lack of proper and adequate sanitation is the main reason behind deaths and diseases in developing countries. Poor sanitation not only adversely affects the availability and quality of water but also has negative socio-economic impact i.e. on welfare, tourism, and on people's life opportunities in general. Inadequate sanitation has been recognized as the main cause of human illness. Sanitation and cleanliness play an important role in the betterment of the physical environment. Sanitation can be explained as the maintenance and improvement in hygienic condition, promotion of human health through different practices including safe disposal of human excreta, waste water, solid waste, garbage collection, and health and hygiene management. Due to inadequate sanitation, India economy loses Rs.2.44 trillion annually, which implies the per capita annual losses of Rs.2,180. The total economic impact of poor sanitation was equitable of 6.4 percent of gross domestic product of India, and health related economic impact was Rs.1.75 trillion which was the 75 percent of total impact in 2006 (WSP, 2007, p.9).

1.1. Concept of Sanitation and Cleanliness

Sanitation and cleanliness is not only related to personally taking bathe and having clean food and drinking water but also this is the broad subject covering the management of human excreta, hygiene and sanitation practices, the management of domestic, industrial, medical and animal wastes, drainage cleaning, elimination of open defecation and cleaner volunteer's welfare. The World Health Organization (WHO) has defined the term sanitation as the provision of facilities and service for

safe disposal of human urine and excreta. The word sanitation also refers to the maintenance of hygienic conditions, through services such as garbage collection and waste water disposal. Sanitation is broadly defined to include management of human excreta, solid waste, and drainage inspection. Generally sanitation and cleanliness is considered as in same meaning but they have little difference. Cleanliness or cleaning is a process to remove dirt, including dust, strains, bad smells, and clutter on surface. Cleanliness is not guaranteed of bacteria free. However, on the other hand sanitation is a process to make something sanitary i.e. free of germs by sterilizing. And it can be said that the sanitation is cleaning in which bacteria free environment is guaranteed. In sanitation some of disinfectant is also used, while in cleaning we do not use any disinfectant. W.H.O. defines sanitation in two ways. First, the promotion of hygiene and prevention of disease by maintenance of sanitary condition, second, "Sanitation is defined as access to facilities and services for the safe disposal of human urine and excreta. Therefore, sanitation is regarded as the maintenance of sanitary conditions (WSP, 2007, p.6). Basic sanitation means the provision of sufficient hygiene, hazard-free toilet, the effective removal and disposal of household waste and effluent disposal. Good sanitation is important for number of reasons. Total cleanliness and sanitation considers both type of cleanliness- first, Personal Cleanliness (hygiene) i.e. washing hand, bathing and wearing clean clothes. Second, Public Cleanliness (sanitation) i.e. using clean and safe toilets, keeping water sources clean, and disposing of garbage safely etc.

1.2. Impact of Poor Cleanliness and Sanitation

Inadequate sanitation facility includes defecation in open, field bucket or hanging latrines, open pit latrines or those, who is without a slab, flushing in open areas, and disposal of household's waste in open or in water bodies. Shared toilets are also considered unimproved facilities. Poor sanitation always generates bad consequence for human being as well as others such as environment and animal, which negatively influence human development as well as economic development.

Poor sanitation contributes significantly to water pollution. It adds to the cost of safe water for household. It reduces the production of fish in river. The economic costs of poor sanitation are huge, as four countries studied in East Asia in this World Bank calculated GDP losses due to poor sanitation between 1.4 and 7.2 per cent

(UNICEF, 2008, p.2). Poor sanitation reduces the attendance of school children in schools and also affects the work efficiency of people. It also reduces the concentration efficiency of the employee and workers. Furthermore, this requires extra investment in business in form of health security. Poor sanitation and poor cleanliness negatively influence the height of the children, which is called stunting. Malnutrition cases in children happen due to lack adequate sanitation around the environment, some time they have to lose their life as well. Poor sanitation and unhygienic condition increase the occurrence of water-borne diseases such as diarrhoea, cholera, typhoid and malnutrition anemia etc. Mosquito related diseases viz. malaria, dengue also emerge due to lack of cleanliness. By some estimate lack of drinking water, inadequate sanitation, and poor hygiene practices cause 1.1 million deaths from diarrhoea each year, representing the 5 percent of global burden of diarrhoea (2014) Similar to HIV aids(Coffey, D. et.al., 2107, p.14). Open defecation in India may be responsible for approximately 9 percent of total infant mortality or 6.5 percent death per 100 infant per year (Coffey, D. et.al. 2017, p.14). Lacks of sanitation contribute about 10 percent of global disease burden. Indian economy bears and estimate annual total loss (in terms of health education access, time and tourism) of US$ 54 billion due to lack of toilet and poor hygiene.

2. Swachh Bharat Abhiyan (Gramin): An Introduction

Sanitation is the key of being healthy and fit. Cleanliness is most important for physical well-being and healthy environment. It is essential for everyone to learn about cleanliness, hygiene, sanitation and the various diseases that are caused due to poor hygienic conditions. Mahatma Gandhi dreamt of clean India, and stated that we have got political freedom from British government in 1945 but not from non-cleanliness. To get this kind of freedom Indian government and our intellectual class worked on so many projects and programs to make India clean. Swachh Bharat Abhiyan is one of them a nationwide program of sanitation. It was launched in 2nd October 2014 to complete the vision of nation's father Mahatma Gandhi, Sampoorn Swachh Bharat (whole India clean). SBA (Swachh Bharat Abhiyan) is divided into two part to reach every part of India to cover 100 percent cleanliness. Swachh Bharat Abhiyan (Gramin) (SBA (G) is for rural India under the Ministry of Drinking Water and Sanitation, and Swachh Bharat Abhiyan (Urban) (SBA (U), for urban India under

the Ministry of Urban Affairs. The purpose is to improve the general quality of life in rural area and making village Open Defecation Free (ODF), and encouraging the cost effective technology to ecological safe and sustainable development, good liquid and solid waste management by 2019, i.e. 105th birth anniversary of Mahatma Gandhi. However, the central idea of achieving universal sanitation is not very different from the previous initiatives like Total Sanitation Campaign (TSC 1991). SBA was renamed form of Nirmal Bharat Abhiyan which was started in 2012. Its target was to get an ODF India and 100 percent cleanliness in India by 2015. In 2014 when government changed its name, target year was extended to 2019 from 2015. They also included other small programs to complete the goal of 2019 such as Namami Gange Yojana to clean Ganga River and added so many aspects in its guideline. The program is also been taking place through the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in rural India. After completion of five years of SBA-G, The Ministry of Drinking Water and Sanitation declared 100 percent sanitation coverage in villages. India has become 100 percent open defecation free, 100 percent households in rural India access to toilet. The economic survey 2017-18 highlights that because of SBM-G, the number of peoples defecating in open in rural areas has come down 25 crore in January 2018 from 55 crore in 2014, reduction 45 percent (Ministry of Finance, 2018). Under SBA, 99.2 per cent of rural India has been covered in the last four years. Since October 2014, over 9.5 crore toilets have been built all over the country and 564,658 villages have been declared ODF (Ministry of Finance, 2018-19. p.149). The starting of three years of the SBA (G) has shown good progress. Based on the inputs received by the states and the UTs, the rural sanitation coverage has increased from 38.70 percent at the starting of SBA in 2014 to 63.73 percent as on June 2017 (Quality Council of India, 2017, p.5). However, by 1 July 2019, 30 state and union territories (UTs) had declared themselves ODF, while 27 state and UTs had become declared ODF by 18th January 2019 (Government of India, 2019-20). Thus, India's prime minister declared India as the open defecation free on the occasion of 150th birth anniversary of Mahatma Gandhi in 2nd October 2019.

The economic survey established link between sanitation and economic performance and how a healthy sanitation environment boosts the economy as it has been seen across the countries. According to the World Bank estimate, the lack of sanitation facilities, India bears cost of around 6 percent of its GDP. UNICEF (2017)

pointed out that lack of proper sanitation facilities results in death of an estimated 1,00,000 children in India annually. Non-ODF districts also suffered from lower literacy rates and displayed more cases of diarrhea and stunting. But in ODF district behavioral sift was noticed among peoples who often participate in toilet building activities. But on the other hand in second October 2019 is declared that India has become open defecation free. The 100 percent state has been declared Open Defecation Free (Ministry of Drinking Water and Sanitation, 2019). And about Uttar Pradesh all district and Gram Panchayat has been declared open defecation free.

3. Concept of Sanitation Economy

The word sanitation economy refers a robust market place of products and services related to sanitation, flows of renewable resource and data & information that could transform future of cities, communities and businesses. The sanitation economy is smart, sustainable, innovative cost saving and revenue generating way of development. Sanitation economy links three distinct areas for business and social benefit. First, the toilet economy, it expresses toilet and service innovation that provides toilet fit for purpose for all context and income. Second, the circular sanitation economy, the toilet resources that feed or come in to systems which replace traditional waste management with a circular economy approach. It connects the bicycle, using multiple forms of biological waste, recovering nutrients and water, creating value added products such as renewable energy, organic fertilizers, proteins and others. And third the smart sanitation economy, this is nothing but the digitalized sanitation system that optimize data for operating efficiency, maintenance, plus consumer use and health information insights. This includes the smart cities infrastructure, monitoring public toilet use, sewage treatment, detect need for maintenance and repair throughout the system. Thus, all these three economies work and exist together. It is called smart sanitation economy. Business economy can capture significant benefit by accelerating sanitation economy. Toilet Board collation release a business report in 2017 and states that there is a big opportunity of benefits sanitation sector in future by 2030 or 2035, because there is a good scope due to sanitation development as 2.3 billion people globally lack access to basic sanitation as toilet. 60 percent of the global population does not use a safely managed sanitation service. The annual economic losses due to poor sanitation are equivalent to between 1 percent and 25 percent of GDP.

4. Research Questions

Since independence and even before it, number of programs has been implemented to improve the sanitation and cleanliness in India. But, the contribution of India was 58 percent in the total population defecating in open. The study of 1800 respondents in 2014, in Tamil Nadu found 90 percent of respondents to be defecating in open (Geetha, J. & Kumar, S. 2014, pp.537-8). There are number of reasons of open defecation in Indian society but main reason for large number of population still defecating in open are lack of proper awareness about problems related with open defecation. Swachh Bharat Abhiyan (SBA) was formed to tackle these problems in 2014 with the goal of 100 percent sanitation in India. On 2nd October, 2019, Prime Minister of India declared that India has become open defecation free and said all 4041 towns as per Census 2011 are covered under the Swachh Bharat Abhiyan. Though, Uttar Pradesh has been accepted as open defecation free in first round survey of Swachh Bharat Abhiyan (Gramin) but being a high populated state is very poor to coming into the main stream of development, poverty Utter Pradesh having highest population in India is the home of 200 million people, and 60 million people are poor, the poverty reduction in the state has been slower than the rest of the country, 29 percent population is below poverty line (World Bank Group, 2016, p.1). Also utter Pradesh is the slowest growing state in the country and the consumption inequality is below the nation average (World Bank Group, 2016, p.5). The poverty and inequality also a reason leading to non-sanitation. Inequality is in Uttar Pradesh is exit. Uttar Pradesh has low coverage for both household sanitation and drainage service compared to all India level, there is inter-regional disparity in state in the availability of drinking water and sanitation (Tiwari, R. & Nayak, S., 2013, p.1). Table 1.1 shows that Auraiya district of Uttar Pradesh was declared and accepted ODF in 2018-19. In this context the important questions emerge for research are as follows. How could the present government get success to make whole India open defecation free in 5 years? If yes, the open defection free village and 100 percent sanitation really exist in? Whether the quality and quantity of toilet given to the house hold in the village are appropriate or not? How much the change in rural population for toilet use has been taken place? Last but not least, whether the existence of SBM-G is being appreciated by the masses?

Table.1.2 Percentage of Open Defecation Free Village in Auraiya District

Name Of Block	Number of Gram Panchayat	Number of ODF Gram Panchayat	Percentage ODF Villages
Achchalda	106	106	100
Erwa Katra	93	93	100
Ajitmal	105	105	100
Auraiya	147	147	100
Bhagya Nagar	120	120	100
Bidhuna	104	104	100
Shahar	94	94	100
Total	**771**	**771**	**100**

Source: Office of Register General, Ministry of Home Affairs, Government of India , New Delhi, 2011. This can be found from Https://Www. Census2011. Co.In/Censu s/District/ 533-Auraiya.Html.

5. Objectives of the Study

Keeping the above issues in mind on Swachh Bharat Abiyan (Garmin) and my own observations on ground level, the following objectives are developed

- To assess the extent & dimensions of awareness of the sanitation and open defecation in Uttar Pradesh.
- To assess the impact or existence of Swachh Bharat Abhiyan (Gramin) on rural sanitation practices of households.
- To measure the health cost of sanitation in rural Uttar Pradesh.

6. Hypotheses of the Study

Keeping above objectives in mind the following hypotheses are formulated

- The Villages of Uttar Pradesh are not Open Defecation Free.
- Swachh Bharat Abhiyan (Gramin) has changed the sanitation behaviour of people

7. Methodology of the Study

7.1. Data Sources

The analysis is based on both types of data, i.e., primary as well as secondary data. Secondary data has been taken through the relevant report, websites of SBA-G, Ministry Of Drinking Water And Sanitation, WHO/UNICEF and others. Primary data

is collected in one village in Auraiya district in Uttar Pradesh, The data has been taken by asking both open ended as well as close ended questions. However, most of the question is close ended in nature through which the respondent is interviewed. After that the analysis of the data is being done through the use of proper theoretical base with appropriate statistical tool.

7.2. Study Area and Sample Design

The field survey is conducted in (ODF) declared villages in Auraiya district of Uttar Pradesh. There are seven block in Auraiya district viz., Auraiya, Ajitmal, Achhalda, Bhagyanagar, Bidhunna, Erwa Katra and Sahar. In which auraiya is the head office of the district and other offices such as Tehsil, district court, district hospital are existed. Therefore being the head block of the district, and deserving the much attention and development, Auraiya block is chosen. In Auraiya Tehsil Bakhariya village is selected randomly. In which maximum caste and religion diversification is identified. Then one hundred household are surveyed through the prepared schedule on the basis of random sampling. This village is 22 km far from Auraiya city and 3 km far from Agra Delhi Nation Highway 2 (NH 2). Both Muslim as well as Hindu community peoples are living together in the village. Population size of the village is 2000, in which 35 percent are Muslim from general and OBC category. In Hindu, OBC population is much more than general, others are schedule caste.

8. Outline of the Study

Chapter 1 entitled "**Conceptual Development and Review of Literature**" consist of eight sections. First section deals with introduction of sanitation as an important aspect of the life. Second section explore concept related to sanitation and its basic understanding. The third section is consisting with review of literature. Fourth section explores the research question to study .Section five and sixth discus the objective and hypothesis of the study. Section seventh discusses the methodology of research.

Chapter 2 entitled "**Swachh Bharat Abhiyan (Gramin): An introduction**" is divided in three section. Section first gives a brief note of policy Swachh Bharat Abhiyan (Gramin) and other program introduced for sanitation improvement in India. Section second gives a brief view of sanitation history in India. Third Section discusses the budget allocation for SBA (G) in India.

Chapters 3 entitled "**Socio–Economic Profile of Rural Study Area in Uttar Pradesh**". First section of the chapter is the introduction of study is based on secondary data. Second broad section is dealing with socio-economic status such as religion, caste, educational status, and income distribution it the village. The third broad section explains the rural sanitation amenities exist in the study village also discuss the impact of SBAG

Chapter 4 entitled sanitation, "**Defecation Behaviour and Direct Heath Cost**". The chapter is divided in four sections. First section is the introduction of the chapter, second broad section illustrate the impact of SBAG on rural sanitation behaviour of rural population. Third section deals with the direct cost of some water related disease.

Chapter 5 titled "**Major Findings and conclusions**" includes the key findings and suggestions of the study.

9. Findings of the Study

The first chapter entitled "**Conceptual Framework and Review of Literature**" has discussed the basic concept related to sanitation and the impact of poor cleanliness and sanitation on human development, along with some policy implications. Further, it continues with objectives, hypothesis and methods of this study.

The second chapter entitled "**Swachh Bharat Abhiyan (Gramin): An Introduction**" explains the introduction of the program and its essential initiatives to tackle poor sanitation. The chapter also has discussed the historical importance of sanitation developed by the government from time to time. Further, it explains the pattern of public expenditure and budget allocation of Swachh Bharat Bbhiyan (Gramin), it has been found that expenditure on IEC has been low in these year.

Third chapter entitled "**Socio-Economic Profile of the Study Area**" discusses the socio-economic condition and the distribution of sanitation amenities under Swachh Bharat Abhiyan (Gramin) in the study village. Education, health, caste and existence of basic availability facility school drinking water, latrine drainage and bathroom, etc. major observation are as follows.

First, all the people are domicile of Uttar Pradesh since their birth. 84 percent of the households belong to the Hindu religion and rest 16 percent are from the Muslim religion. There is 27 percent of households are in the general category, 43 percent of households are in OBC and 30 percent are in the SC category. Second, gender-wise occupational distribution also differs in the village. In the earning group of a regular salary, 91.21 percents are male population and only 8.79 percent of the female are working in the public & private sector. On the other hand, 91.22 percents are women and only 8.78 percent male members work in domestic work. Most of the populations are students and domestic workers. Third, the mean of cultivated land holdings is 3.68 bigha the village whereas, 17 percent of the households do not have land. However, only 9 percent of households work in non-agriculture sector. Third, 50 percent of households are coming under the income group of up to Rs.2 lakh per annum, where only 8 percent of households are in the income group of 5 to 10 lakh per annum from all the sources of income. Similarly, 42 percent of households are under the category of two to five lakh per annum. The mean income of 100 households is Rs 2,32,194 per year. Whereas the range of households income between Rs 46,000 minimum and Rs 9,20,000 maximum. On the other hand, the mean income of the general category is Rs. 2,55,496.3 per year, for OBC is Rs. 249274 per year and for SC is Rs. 1,93,400 per year. The mean income from agriculture is Rs.7,55,46.57 per year, where most of the households are engaged. The mean income from small businesses is Rs.90,362.95 per year, which involves only 21 people. Livestock's are also have been found as a source of income, of which the mean income Rs.17,849.07 per year. The livestock is still a major source of family income in Uttar Pradesh.

Fourth, 55 percent of households in the village live in Packka house whereas, 32 percent and 13 percent live in Semi-Pakka house and Kachha house respectively. Fifth, Though the government of India has already declared 100 per cent village open defecation free even the study village by saying that all the household has access of sanitary latrines yet only 84 per cent households have the sanitary toilet in the village, and 16 per cent household do not have even toilet. Nearly 90.48 per cent toilets are pit toilet whereas; only 9.52 percent are septic tank toilet in the village. All the septic tank toilets are in the pakka house. Nearly, 85.54 per cent of toilets were constructed after the launch of SBA (G). However, only, 14.46 per cent toilet had constructed before launched of SBAG. The mean amount spent on toilets construction is Rs.

10,798.61 per toilet by the government. However, the total amount spent on the toilet in the village is Rs.7,77,500. The average working day spent by the household on constructing a toilet is 3.55 days. Further, under constructed toilets, only 34.95 per cent of households are fully satisfied with their toilet. However, 37.35 per cent of households are partially satisfied and 27.71 per cent completely dis-satisfied with the present toilet. Most of the dis-satisfied toilets are constructed under the SBA (G). Sixth, it is observed that 73 percent of the households have attached bathroom facility, whereas 9 per cent have detached bathroom. 18 per cent of households do not have the facility of bathroom in the house. 87 per cent of households have a source of water. However, 13 per cent households do not access with an easy sources of water. 49 per cent of household access with water tank supply gets, only 11 per cent enough water for their needs, while 38 per cent of households do not get enough water for drinking purpose.

The Fourth chapter entitled "**Sanitation, Defecation Behaviour and Health Cost**" discuss the impact of SBA (G) on sanitation always with health cost of the rural population. Few of them observation are as follow. First, it has been observed from the literature that opens defecation and unimproved sanitation negatively affects to health as well as the economy. Second, 20.22 per cent populations are still not using the toilet even though they have a toilet in their house in rural areas in which, the male population is higher than that of females. However, 23.41 per cent of the populations have been using the toilet since before 2014. It is shown that SBA (G) has affected significantly. It shows that 56.37 per cent of people have started using the toilet after the launch of SBA (G) in 2014. These 50 per cent people have been started using but 20.22 per cent population still do not use the toilet even they have. Further, more than 50 per cent of households have started using the toilet from this year. Third, the real picture of open defecation is still more than 60 per cent, because only 38.49 per cent toilets are used always to defecate. In which 68.60 per cent are females and only 31.40 per cent are male. On the other side 26.77 per cent population use the toilet just sometimes and 13.94 per cent population use toilet only in critical time while 20.81 per cent population always go to open field. Fourth, though, the lack of toilet has been remain the reason for open defecation the preferences to go open field is the biggest reason for open defecation in the rural area. Sometimes they are not habitual to use the toilet and sometimes lack of water also the reason for open defecation. Fifth,

unawareness is the main reason for not changing the behaviour of the rural population. Those households, who have toilet their cleaning pattern is very poor. Only 10.13 per cent do clean daily however, 60.70 per cent toilets are being cleaned once in a week or occasionally when they feel to do clean. Sixth, Hand washing practice is very poor. 43 per cent of people put the soap and hand cleaner separately to cleaning hand after defecation whereas, 56.25 per cent of people do not keep soap to wash hand. They wash their hand without any subsistence. Sometimes they don't even wash. On the other side, the drainage cleaning activities in the village is poor as 44 per cent and 25 per cent drains are cleaned once in a week and once in a month respectively. Whereas most of the drainages system is open and kachha in nature, keep always stagnant water into it. Seventh, the cases of water-related disease have been observed in the village at very high frequency. In the last six month, the cases of diarrhoea are 29, cholera is 1, malaria is 33, dysentery are 49 and anaemia and intestinal worm are 12 and 12 respectively are found.

10. Conclusions

In the process of development, it cannot be forgotten that sanitation and cleanliness sustain our healthy and happy life. Sanitation is also very important to a healthy life and good character. Un- improved and poor sanitation can bring many kinds of disease such as diarrhoea, malaria, typhoid etc. In Indian history, sanitation and cleanliness have been always an important topic to improve. And due to unimproved sanitation, many of the disasters have happened. Since independence, there has been rolled many central and local government programmes to improve the sanitation condition of the villages as well as in big cities. Swachh Bharat Abhiyan was launched in second October 2014 to cover the 100 per cent sanitation coverage and 100 per cent open defecation free environment by 2nd October 2019 the 150th birth anniversary of Mahatma Gandhi. Though, the Swachh Bharat Abhiyan (Gramin) has been an effective programme all over India and has impact on rural sanitation environment in the five years, for example, many of the people have started using of toilet. They have got some awareness about liquid, solid and agriculture waste management and behaviour has changed the people somehow. But due to some of the seasons, the programme has been unsuccessful in the village area such as the following way the study revealed. Sanitation coverage is very poor as study found 16

per cent households do not to the sanitary toilets, more than 50 per cent population defecate in open (some times and always) 31 per cent people are not satisfied with the present constructed toilet, 13 per cent households do not access with easy source of water for drinking and using purpose, only 5 and 18 per cent drains are being cleaned daily and weekly respectively, Shafai Karmi's irregularity in the village, etc. On the other hand, most important the occurring of water-related disease within the six months is very high 49 cases of dysentery, 29 cases of diarrhoea, others have been found in the village. Approximately 150 cases of water-related disease generated a major part of household income as health cost present that the SBA (G) has been unable to get success at village level in Uttar Pradesh.

11. Limitations of the Study

This study focuses only on the Auraiya district of Uttar Pradesh, which represents only 0.84 percent shares of the total geographical area of the state. So, we cannot generalize the findings of the study on the whole state level. The sample size is very small (100) from which the inferences cannot be justified at the state or country level. The scope of the study is limited, because of the limited time duration of course and income. The study did not explore the maximum part of the state. The study measures the health cost only of water-related diseases occurred within six months. The cost of illness is measured in the form of money expenditure. This cost is measured in the form of medicines and the health centre's service charges. Illness cost is revealed by the respondent and the indirect cost of illness is not considered in the study.

12. Recommendations

The government should first take the step to see the distribution of toilets in the village area of Uttar Pradesh whether they are really open defecation free or not. The amount of incentive should be increased so that the qualitative and long-lasting toilet would be constructed. Though, most of the toilets in the rural area are not good in quality, so the government should provide some maintenance cost to the villagers so that the toilet would be sustained for a long time. More than one sweeper (Safaikarmi) should be appointed at the level of every Grampanchayat to clean drainage. To change sanitation and defecation behaviour, there must be an effective programme to increase awareness in the rural area. The camp must be organized by the government and non-

governmental organization, so that everyone could be aware about the benefit of improved sanitation. The Government should increase the expenditure on Information, Education and Communication (IEC), which will help to improve the awareness as well as using a pattern of the toilet of the villages. The increase in IEC expenditure will indirectly reduce the water-related diseases and also will reduce the health cost of the village. The government should launch such an effective programme to reassess the Swachh Bharat Abhiyan (Gramin) so that the impact of SBA (G) could be sustained in the long run.

13. Further Scope of Study

The study focused on the impact of SBA (G) human sanitation behaviour in the Auraiya district of Uttar Pradesh only. This type of similar observation can be made on the country level or different part of the nation. Likewise, the impact of SBA (G) can be seen on water pollution. Further, the impact of improved sanitation management can be seen on agriculture production. Similarly, lack of sanitation also affects the trend in school going behaviour of children in rural areas as well as tourism and health sector. Therefore, the impact of improving sanitation can be seen in a multiple-way on the factor. Though the study is limited only with the direct cost of the water-related disease, unimproved sanitation also affects human health as well as animal health and environment, which can be further studied.