

A Study on the Impact of Sanitation Program and Its Campaign: With Special Reference to Swachhh Bharat Abhiyan

Pooja Singh Kashia* and Rachana Gangwar

Department of Mass Communication and Journalism, Babasaheb Bhimrao Ambedkar University, Lucknow, India

*Corresponding author: Pooja Singh Kashia, Department of Mass Communication and Journalism, Babasaheb Bhimrao Ambedkar University, Lucknow, India, Tel: +91 9457285446; E-mail: poojakashia@gmail.com

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Abstract

Poor sanitation is the reason for many diseases like diarrhoea, cholera, typhoid, and many more. According to the WHO report, in India, around 600 million people are indulging in defecation in the field. It reports that in India, one in tenth deaths is due the poor sanitation hygiene. To overcome this problem, the prime minister of India has launched Swachhh Bharat Abhiyan, which is an honour to Mahatma Gandhi on his 150th birth anniversary in 2019. There are various factors which hinder proper sanitation, awareness about sanitation, improper facilities due to lack of money and culture etc. Swachhh Bharat Mission caters all the factors. In some culture, the toilet considered as very impure, so it has to be outside the house. This misconception has to be removed. This study did Meta-analysis of various research papers and official reports of WHO and Swachhh Bharat Mission. The study concluded that there should be a proper check on each stage from the sanction of subsidized amount for the construction of toilet building till its practice in use. Safe drinking water should also be provided. Awareness should be provided to the people about their rights. Awareness would be possible only through various media, and participatory approach has to be used because of its high effectiveness.

Keywords: Sanitation; Open defecation; Safe drinking water; Cleanliness; Diseases; Health; Awareness; Media

Introduction

"Sanitation is more important than independence." Mahatma Gandhi.

Poor sanitation is the reason for many diseases like diarrhoea, cholera, typhoid, and many more. To overcome this problem, the prime minister of India has launched Swachhh Bharat Abhiyan, which is an honour to Mahatma Gandhi on his 150th birth anniversary in 2019.

Mahatma Gandhi told that importance of sanitation is much more than independence. He said that he wouldn't let anyone walk through his mind with their dirty feet [1]. Gandhi was the dream of the country where no one spits or cleans their nose on the street as it would get infected to others. The people who spit here and after that chewing betel leaves and tobacco have no consideration for the feelings of others. He suggested that saliva, mucus from the nose, etc., should also be covered using soil [1]. Gandhi participated actively in cleanliness and broke all the walls of casteism. He said that he would be essential if he could die as a sweeper. He launched a mass contact program in villages. "A bunch of people from his party visited along with brooms and camps to the Harijan quarters of the village near the camp [1]." Health and sanitation are the first goals of every concerned authority, and contaminated water is the leading cause of most of the diseases. Water contamination occurs due to the improper disposal of wastewater from domestic sector.

Literature Review

There is a need to prioritize environmental sanitation for the betterment of India [2]. The used 157 million are not connected to clean and safe drinking water and 247 million are not access to improved sanitation in East Africa. Dispenser for Safe Water (DSW) was implemented using the methodology-chlorine dispensers installed directly at the water source, a network of circuit riders provide 3-month chlorine supply to the promoters, use of mobile phone technology by promoters and circuit riders. Spring cleaning program was launched to force flowing water inside pipes to prevent it from getting contaminated with seeping groundwater, seven month supply of water guard, use of chlorination and storage container designed to avoid contamination — Cochrane review conducted for evaluation. The outcome of the research was 1.9 million Kenyans, 625000 Malawians and 1.5 million Ugandan people get access to safe drinking water. The study was very successful, and the target achieved [3]. Preparatory Technical Assistance Projects t (PPTA), which divided into two parts- 1) Awareness program of water tariff including public consultation process 2) Sustainable system of peer-to-peer

training across countries [4]. PPTA was focused mainly on women and children. The effect of the research is that 5864 village access to tap water, 1549 km sewage pipeline added, 74.6 million meters cube domestic wastewater treated, and 387 lengths of flood embankment increased. 8.45 million Rural resident suffered in 2008 and benefiting 303000 rural residents till 2011 which is not up to the mark. The number of institutions, actors, and incentives that influence sanitation is not equal as for water supply [5]. French has set six water agencies to combat water pollution, protect the coastline environment, restore the aquatic environment and manage and distribute water resources. Water agencies funds come from water users. A public consultation is done to know; what general issues are essential to them. The agencies were quite successful, where 41% of the water had achieved good and excellent status. The Centre for Public Impact found a positive environmental impact. The agencies are internationally known for their effective water management structure [6]. The 3R's, i.e. Reuse, Reduce and recycle are very beneficial to make the environment clean. Employment opportunities can be created through waste recycling activities [7]. People of rural used to migrate to urban in search of job opportunities and better health. There is a growth of rapid expansion of smaller urban centres and peri-urban developments. The impact of urbanization results in inadequate sanitation in urban and peri-urban areas are generally in a state of quick transition The unplanned expansion of the peri-urban and rural areas lacks in the provision of infrastructure. On the other hand, the majority of settlements in peri-urban areas mainly those inhabited by poor communities, which do not have access to adequate water supply and sanitation facilities [8]. Sewage water disposal as an environmental issue, magnitude of the sewage water disposal from domestic and treatment processes and the best environmental management practice towards sewage water disposal [9]. Many people worldwide practice open defecation, and many more do not have services that prevent faecal waste from contaminating the environment. The unsanitary conditions almost affect one-quarter of children under five globally. Millions of people contract faecal-borne diseases, most commonly diarrhoea and intestinal worms, with an estimated 1.7 million people dying each year because of unsafe water, hygiene, and sanitation practices. Poor sanitation develops *Culex*¹filariasis [9].

Safe sanitation in health centres is an essential component of quality of care and infection prevention and control strategies, especially for preventing exposure of health service users and staff to infections [9]. Country's capital is facing the problem of sewage were sewers, which previously built for 3 million have to manage around 14 million, which are impossible for the built sewers. India's Tenth Five Year Plans shown three-fourth of the country's surface water is polluted and out of which 80% occur due to sewage. Bangladesh, Mauritania, Mongolia, Nigeria Pakistan, and Vietnam are the countries which achieved higher access to sanitation through having lower per capita income than India in 2006. Around 55% or approximately 600 million people in India do not have

access to any type of toilet. Urban slums and rural people are profoundly affected. India is a prime example global sanitation challenge nearly 60% of the world's open defecation occurs in India. In a study of World Bank's Water and Sanitation Program (WSP), they found that India's less sanitation coverage cost is the equivalent of 6.4% of its 2006 gross domestic product [9].

There is terrible maintenance of the sewage system, which leads to the overflow of raw sewage in urban. The rivers gradually deteriorated due to the domestic and municipal, sewage and other waste, especially with the river which is in the industrial area. The river Tunia of Assam is also facing the same problem. The natural self-purification process of the river is less efficient to reduce their adverse impact and finally initiated an adverse effect on groundwater and soil at the nearby area of the river system [10]. The downstream water sample of a canal, i.e. CW3, is more polluted when compared to the up and mid-stream water.

The water sources need to check at regular interval of time [11]. The condition of urban is not critical in scale, but a crowded environment sanitation problem is very serious. The flow of people causes overcrowding, scarcity of nutritious food and water, and poor sanitation leading to unhygienic conditions. It may result in the spread of various microbial diseases. Diseases like Pulmonary tuberculosis demand great attention because of their ill-effects on the health of humans [12]. The sewage system of more than 20 cities, including megacities, cannot handle the increased load of sewage. In Mumbai, 57% of the population of the city is live in slums and one in six Indian lives in urban slum according to the 2011 census. The data of Ministry of Urban Development (MoUD) recognize that is notified slums (registered by the municipality), 17% of the population is living in without access to improved sanitation, and in the non-notified slum, and the average is 51.5.

There is a relationship between Urban Process and Public Health in the port town [13]. Total Sanitation Campaign (TSC) found that about 60% of people went in open for the toilet, and 80% do not practice hand washing after defecation [14].¹ TSC's main concerned are information, education, and communication, i.e. promotion of facilities, highly efficient support system, training to workers, build material and production centre; education of sanitation and hygiene in school, local leadership, and integrated rewards to encourage participation, promote collective community action. The government presented the award named Nirmal Gram Puraskar at district, block and Gram Panchayat level. It operationalized in 572 districts. The outcome of the campaign was 3.5 million household toilets were built, 1700 women's complexes, 41000 school toilets, and rural sanitary mart at 2.92 billion rupees. Some loopholes in the campaign that are fund not allocated properly, the policy was too broad to measure, people inconvenienced, and the cost was too low [15]. More than 72% of rural people relieve themselves behind bushes, in fields or by roadsides. The share is barely shrinking. Of the 1 billion people in the world who have no toilet, India

¹ *Culex* is a widespread genus of mosquitoes which differentiated by holding the body parallel to the resting surface.

accounts for nearly 600 million. According to the WHO report, in India, around 600 million people are indulging in defecation in the field. It reports that in India, one in tenth deaths is due the poor sanitation hygiene. There is seasonal variation in the characteristics of solid wastes generated. Physical, biological and chemical characteristics checked before and after the test for pH, total suspended particles, Biological Oxygen Demand, and Chemical Oxygen Demand. The provision of a dedicated Solid Waste Management Cell to streamline the design, construction, processing and care processes [5].

Improvement of Quality of Life enhanced due to providing sustainable water supply and sanitation facilities in rural areas [16]. A community-based monitoring mechanism for an ongoing rural water & sanitation program in the target community and comparing it with the status of watsan assets/services in the non-intervention area enhance the sanitation condition [17]. Open defecation is the primary cause of water contamination. In India, poor sanitation amount almost US\$ 54000,000,000 each year [18]. The government had to construct toilets in poor without changing in the practising of the toilet, so these toilets are abandoning because people find it unclean, especially in rural India. Swachh Bharat Abhiyan has particular objectives. There are as follow: Improvement in sanitation coverage in rural areas motivates communities and Panchayati Raj Institutions to follow probable sanitation facilities and practices. Motivate cleanliness and hygiene practices improving the quality of life, complete eradication of open defecation, encouragement of economically feasible technologies for sustainable sanitation, Remove manual scavenging, promotion of solid waste management in communities, and make people aware of sanitation and its relation with public health. The Swachh Bharat Abhiyan has two falls, i.e. Motivate behaviour change in people and to ensure the build and use of the toilet. To make the mission successful, the government has to follow certain steps. The steps are as follows:

Step1 - To discuss the cause of open defecation.

Step 2 - After creating the desire to build toilet the stakeholder of the place design their methods to end open defecation.

Step 3 - Then tell the villagers how to use and maintain the toilets properly.

Step 4 - Tells others that it is a pride, especially to their women.

Step 5 - Vigilant Neighbourhood look after the open defecation practising by putting their yes and starting whistling wherever they find the practices to do them embarrassed.

Step 6 - Each village is then monitored through some independent survey then incentives to well-performing villages every year by the World Bank [18].

The effectiveness of the program predicts the lead to the demand for constructing a toilet in their houses and sustainably used them. It aims to promote better hygiene behaviour among population and cleanliness program by

initiating the Solid and liquid waste management program in the whole country.

India has maximum rural area; having about six lakhs villages where sanitation is a significant issue. Sanitation is not the major issue of only rural India but urban too. 64% of people do not use improved sanitation and almost half of the population of country practice open defecation. The condition of rural is most terrible; 66% of rural India indulges in open defecation. India has the questionable feature of being the country with the largest number of people practising open defecation in the world: 597 million people. It is more than ten times the number of any other single country. India's population is so dense that the human faeces not only come in contact with the ground but the crops, wells, food and children's hand too, which is the leading cause of bacteria generation. The generated bacteria and worms spread diseases, especially of the intestine. Awareness generation campaigns must be organized to publicize the benefits of better sanitary practices and encourage the residents to link to the existing centralized sewerage network or otherwise suitable on-site wastewater treatment systems through economically reasonable techniques and cross-subsidy methods.' The major modifications needed for improving the overall working of the Gram Panchayat Water Supply and Sanitation Committees' (GPWSC) are that paradigm Shift is required for determination of membership to GPWSCs [19]. In the 'India's Sanitation for all' reports of Asian Development Bank (ADB), it has targeted sanitation for all by 2012 under the Total Sanitation Campaign. The paper has discussed six recommendations that address a significant obstacle in the universal sanitation coverage in India. 'These are as follows:

- 1) Successful pro-poor sanitation program must be scaled up.
- 2) Investments must be customized and targeted to the most needed one.
- 3) Cost effective portion must be explored.
- 4) Proper planning and sequencing must be applied.
- 5) Community-based solutions must be adopted where possible innovative partnership must be forged to stimulate investment.

There should be certain intervention strategies related to environmental sanitation and need to prioritize it for the betterment of India.

A custom randomized control trial to measure the effect of 'Total Sanitation Campaign' on the availability of individual household latrines, defecation behaviour and child health of Madhya Pradesh. In which there is a minimal increment in the adoption of improved sanitation and have less impact on open defecation. Open defecation is a persistent behaviour. People who have a latrine at home also practice this [20]. The sanitary conditions could be improved through education and training programs, people's participation and movements, production of needed items through village industries, the transformation of attitude and practice and a Gandhian style of personal involvement [21]. In the first year of the Mission, i.e. from

2.10.2014 to 2.10.2015, 8.8 million toilets were constructed, against an expected outcome of 6 million. Since 2014, more than 11.5 million toilets have been built in the rural areas under Swachh Bharat Mission. There is an increment of sanitation coverage from 40.60% to 48.3% marked by NSSO (National Sample Survey Office). After the Swachh Bharat Abhiyan, there is an increment in sanitation coverage from 40.60% to 48.3% measured by NSSO [22]. In 2016 Sikkim became the first state having 100% sanitation coverage. After Sikkim, Himachal Pradesh is the second one. The government has adopted a 360-degree communication strategy in which it has a regional and state level workshop is being held involving all the main stakeholders like Collectors, Zilla Panchayat and many more. The government is being used Social media [twitter (@swachhbarat), Facebook (Swachh Bharat Mission), HIKE and WhatsApp] for sharing innovative ideas and cross-learning. The drinking and sanitation ministry have launched a Swachh Bharat Mission Grameen app for citizens who are available for android phone, for window phone 10 and window phone 8.1 and earlier. Lungisa, reporting public service issues in Cape Town. Lungisa means to fix it in isiXhosa. It is a mobile app developed to report blocked drains, overflowing bins and broken streetlights. Adapt open - source software for the ticket management system, a regular training session with a grassroots community organization. The technique had resolved rate of 70%. The benefit of the technique, it can complain easily and inexpensively, adequate human resources to verify and follow up complaints. Ticket management system checks the step by step progress of the reported issue [6].

The ministry of rural development of India organized Swachhta parv on 18 April 2018. Various activities were carried out like Swachhta Sabhas Review by District Administrator, visit Gram Panchayat to reinforce focus on sanitation coverage, Shramdaan by cleaning and digging twin pit toilets, Organise Ratri chaupal, Mobilization of constituent and local celebrities/leaders to offer shramdaan, Swachhta rallies- door to door awareness generation, Mobilization of local celebrities, faith leaders and natural leaders, early morning surveillance on people to hinder them not to take part in open defecation, engagement of local and national media through press conference. It organized in the whole country [23]. A National Rapid Action and Learning Unit (RALU) have been constituted to institutionalize learning from the field and provide quick feedback [22]. There is always a difference from words to action. 'Forward mapping', which assumes that the closer one is to the source of policy, the greater the ability to influence

behaviour in the desired direction [24]. Key reasons for the implementation gap are- unclear and ambitious policy objectives, multiplicity of actors involved in the implementation process, problem of communication and coordination, value and interest differences between actors, differences in perspective and priorities of people affect the interpretation and further implementation of the policy and relative autonomy among the implementing agencies [25]. No matter how well decentralization supposedly orchestrated, the devolution of authority and resources to resource-strapped local government remains problematic [25]. The reason behind was the Policy intentions – driven by political will, leadership and sanitation's high profile on the development agenda – generally, have a positive effect. The policy poorly coordinated where there is a gap between the resources and service delivery. Separate sanitation policy is helpful in upgrading the condition of sanitation [26]. Data from the Hungama Survey and Indian Census find a 10 percent increase in open defecation, which was associated with a 0.7 percentage point increase in both stunting and severe stunting. Differences in open defecation can statistically account for 35 to 55 percent of the average difference, which is stunting between districts identified as low-performing and high-performing in the HUNGAMA data [20].

Swachh Bharat Swachh Vidhyalaya campaign was also launched under Swachh Bharat Abhiyan which targeted to build separate toilets for girls and boys in elementary and secondary schools. In 2017, from October 1-15, Gram Samridhi Evam Swachhta Pakhwada was celebrated. It divided into two components, i.e. the village cleanliness and the village well-being. Dasra foundation catalyzed social change in India. It was set up to improve the conditions of the poor and infrastructure of the nation. It came in existence to help adolescent girls who faced gender discrimination in terms of sanitation, governance or other strategic aims. Around 800 million people face poverty. It entirely focused on adolescent girls amongst them 113 million are adolescent girls. Dasra made an association with many social organizations. It launched the Dasra Knowledge hub, an online engagement platform, Dasra Social Impact Accelerator Program for professional to work with girls [27]. More than 50% of Indians, especially in the rural areas continue to defecate in the open. The current status of sanitation in India reflected in the extract below from the Joint Monitoring Programme (JMP) of the WHO and UNICEF [22]:

Table 1.

Table 1: The Sanitation coverage in India during 1990 and 2015.

India	Sanitation Coverage					
	Urban (%)		Rural (%)		Total (%)	
	1990	2015	1990	2015	1990	2015
Access to sanitation	71	90	9	39	25	56
a. Improved facilities	49	63	6	28	17	40
b. Shared facilities	16	21	1	5	5	10

c. Other unimproved	6	6	2	6	3	6
Open defecation	29	10	91	61	75	44

40 to 50% rural people of these states defecate in the open in late 2018 in rural north India [26]. In 2014, the percentage was 70%. There are 23% People who own a latrine but defecate in the open, the same as in 2014. 12,000 SBM subsidies provided for the construction of twin pit. Swachhagrahis recruited in Bihar and Uttar Pradesh. The swachhagrahis convince people to build a toilet and also assist them with filing paperwork whereas in Madhya Pradesh there is no such post recruited. In Rajasthan and Uttar Pradesh, Nigrani committee was formed consisting of sarpanch, secretary, village and health worker, chowkidars and other village officials.

Swachh Bharat Mission (SBM) guidelines suggest a post of full-time sanitation officer per block each but not filled at the block as well as district level. The study found a positive correlation between SBM coercion and sanitation outcome. More SBM coercion, the more people switch to latrine use. Coercion includes harassment, fines, denial of public benefits and detention by police — a random subset of 157 villages taken from 11 districts. Two districts visited in Rajasthan and three in the other states. One thousand three hundred eighty-nine households interviewed in 2014, out of them only 1224 were re-interviewed in 2018, 21% newly added in 2018. Under qualitative analysis, 156 qualitative interviews were done in the same villages and the same block as that of the quantitative interview. In 2017, 505 households in 19 villages and 60 households in census town surveyed. The study showed 25% of people in MP and 60% people in Bihar practice open defecation whereas the Government of India claims that these states are largely provided with latrines and are open defecation free. Local officials are aware of the necessity of twin pit. In Udaipur, twin pit is not popular at all. Only three households constructed twin pit toilets. Awareness about sludge management is low; 60 % of people are entirely unaware of how long it would take to fill their pits. Open defecation is frequent even in latrine owners' household. Local officials put stress on the construction of a latrine rather than the use of a latrine. The contractor constructed latrines are less well constructed as compared to the household latrine. The study encountered corruption at the signature level in all the states. SBM is coercive, and threats and sanctions were most likely to fall on SCs and ST's [26].

Discussion

Latrine use through coercion will sustain a matter of concern. Community-led total sanitation (CLTS) was implemented in rural Indonesia to evaluate its effectiveness. Where there is a limited scope of improvement in sanitation, no proper implantation done, very less social capital; there is toilets construction and villages with low capital built community led toilet [28]. Toilet construction is not enough. The conditions of the toilet were not good; there was an

insufficient amount of toilet. It affects the menstrual management system in girls. The lack of maintenance, cultural elements, and students' participation restrict the usage of a sanitation facility. The study told the importance of the socio-cultural aspect of any society in the aspect of access to the sanitary facility [24]. Children defecation and its faeces disposal practices in households combined with household piped water make it contaminated in rural Odisha emphasize that latrine access is not sufficient to promote people to defecate young children's faeces in the latrine. The study has used longitudinal data collected three-time points for less than five year age of children. Maximum household defecate had access to improved sanitation but children less than three years defecate in to open there. The faeces disposed of unsafely with garbage in the open. Making use of the toilet by children in younger age and change in the behaviour of disposing of the children's faeces in open areas is a must [29]. India has several sanitation schemes, but waste management is still a major matter of concern [30]. Gandhi made use of media to make the people aware of sanitation. He discussed public meeting in media and wrote in the newspaper about cleanliness [1]. In Jabalpur (Madhya Pradesh) and Ghaziabad (Uttar Pradesh), 76% of people in rural and urban slums were not aware of the campaign, and 56% did not realize the importance of making their surrounding clean. Out of the total sample, only 54% people were defecating in the toilet, 8% people did not wash their hand after defecating, 11% people never wash their hand before a meal, and only 33% female was used sanitary pads during menstruation [31]. Immediate awareness and practical necessities should be provided to the communities. The factors which force the people to practice unhygienic conditions are strong beliefs in culture, unconsciousness about sanitation, a delusion regarding the cost involved and the ordinary attitude of the authority towards the implementation [31]. Radio and TV are the best sources of awareness among the people regarding a new message and idea, but in the adoption of the idea, interpersonal sources like extension agents, friends and neighbours and family members are the most effective [26]. The entrance of many channels in India changed the role of Indian broadcasting. Television has transformed from the role of medium devoted to the development of communication or cause of marginalizing to a true middle-class medium. Contemporary TV disassociated from the reality of abject poverty and deprivation and hence presented the distorted view of social reality [32]. There is a positive role of print in creating awareness among the Indian people regarding the sanitation issue [30].

Conclusion

Sanitation is the root cause of maximum diseases. Increasing population and search for employment and better education leads to generate urban slums. These slums are

illegal, so they are not enjoying the same facilities provided by the government as that of other people. Rural and urban slum people are the most affected by poor sanitation. The countries with lower per capita income also perform better in sanitation, which is really a matter of concern. When the word sanitation appears, people linked it up with open defecation only. The reason is that after the launch of the sanitation campaign, the main focus was on removing open defecation from the country. Media has also shown various advertisements which resist in the mind of people. The celebrities also attract people towards the campaign. The government has launched various advertisements related to open defecation. The tagline, 'Jahan soch, wahan shauchalya' is very well-known in this context. The other factors of sanitation like safe drinking water, promoting technologies for sustainable sanitation, manual scavenging, and solid waste management are not discussed equally that of open defecation. There is very less number of people who are aware of twin pit and its benefits. Manual scavenging is still practising. Swachhagrahis played a vital role in the success of the sanitation campaign. Their role begins to convince people to build toilets and use them. Building toilet is not sufficient, but the proper usage is a matter of concern. People think a toilet needed for women. Male used to pee in the open without shame they find bravery in it. So to tell the people that the toilet is important for all not only for women, it is a big task. Fund allocation, corruption, and poorly constructed toilet hinder to achieve the target. There is a misconception that the subsidized pit will fill rapidly, so the male of the families does not use the toilet. Women and the sick person only use these. The culture is also one of the factors. In some culture, the toilet considered as very impure, so it has to be outside the house. This misconception has to be removed. Employment should be provided in their areas so that people will not migrate from rural to urban; which is the main cause of the urban slum. The government should generate more employment through waste recycling activities. There should be a proper check on each stage from the sanction of subsidized amount for the construction of toilet building till its practice in use. Safe drinking water should also be provided. Awareness about safe drinking water should be provided so that people could raise their voice against their rights. Awareness would be possible only through various media, and participatory approach has to be used because of its high effectiveness.

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