

Pollution Reduction for *Swachh Bharat*

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Abstract

The government of India has begun the *Swachh Bharat* Mission, also known as the Clean India Mission on the 2nd of October 2014. The main objective aim is to remove open defecate & improve waste management as well as to make Open Defecation Free (ODF) villages. This large nationwide campaign is a significant step in the direction of protecting the environment, which is deteriorating at a rapid pace. The campaign's goals include doing away with open defecation, replacing unsanitary toilets with pour-flush toilets, doing away with manual scavenging, and, most importantly, changing people's behaviors to promote healthy sanitation habits with ensuring public participation in accomplishing these goals. India continues to be the nation where the greatest number of persons engage in open defecate worldwide. There is little doubt that India will one day become a nation free from open defecation if the *Swachh Bharat* Mission (SBM) is carried out effectively and all of its partners assume their respective duties. A synopsis of this program.

Keywords: SBM, Open Defecation Free, Waste Management, Healthy Sanitation

Introduction

The *Swachh Bharat Abhiyan* (SBA) was conceived by the great Honorable PM of India, Shri Narendra Modi, in Rajghat, New Delhi, on October 2, 2014, the birth anniversary of Mahatma Gandhi. The primary aim of this big initiative is to promote sanitation, hygiene, and cleanliness throughout the whole of India. The *Swachh Bharat* Mission (Urban) and the *Swachh Bharat* Mission (Gramin/Rural) are two of the movement's very clearly defined sub-missions. Among

the objectives of the urban sanitation business are: promoting public awareness of sanitation and its direct correlation to public health; implementing manual scavenging; open defecation; modern, scientific municipal solid waste management; positive behavioral changes related to healthy sanitation practices; and enhancing the ability of urban local bodies (ULBs) to create an environment that somehow encourages private sector participation in capital expenditure (CapEx) and operation.

The residents of India are the main primary stakeholders who somehow will help determine the program's road to success, so many governmental and non-governmental organizations are promoting the *Swachh Bharat Mission* & encouraging people to take part somehow actively. Even though the SBA is such a greatly ambitious initiative that has been effectively improving facilities and infrastructure, all of its somehow goals can be met if people will somehow be familiar with it and have the positive mindset when it comes to waste management and basic sanitation.

Literature Review

ODF is the "deadliest sanitation practice of all," as stated by the WHO (2014). The *Swachh Bharat Abhiyan Toilet Drive* by insight (Sulabhhenvis, 2016) seeks to raise awareness about proper toilet usage and construct toilets for those lacking access to them. According to some authors, inadequate sanitation, including the unhygienic disposal of excreta, unfit drinking water, & poor hygiene conditions, have significant non-health effects, particularly impacting women and girls. These effects include a lack of security and privacy, as well as a violation of basic human dignity (Amnesty International Kenya, 2010). The effectiveness of enhancements to human excreta disposal facilities in preventing diarrheal illnesses has been proven by Asratie HM, Belay GB, et al. (2022).

For maintaining a healthy lifestyle, it is crucial to have access to clean drinking water, practice good hygiene, and adopt healthy habits (Swain and Pathela, 2016). Research indicates that 88 percent of diarrheal infections stem from tainted drinking water, poor sanitation, and inadequate hygiene (UNICEF Report, 2014). Proper hand washing with soap/sanitizer at key moments can decrease respiratory infections by 30% and diarrhea episodes by nearly 50% (WHO and UNICEF, 2009).

Despite advancements in waste management, safe drinking water, and sanitation, rural residents remain uneducated about proper sanitization practices, especially regarding restroom usage (Shuezabdi, Muhammad, 2020). While government efforts aim to enhance sanitization

standards in impoverished nations, improving personal hygiene and education are essential for positive outcomes.

The fifteenth Finance Commission, 2020, highlighted that the open defecation is still persists despite access to toilets, emphasizing the need for sustained efforts to promote sanitary toilet use. Research conducted in 5 northern states of India revealed 40% of households owns functioning toilets have members who still defecate outside (Rani, Yadav et al., 2020).

Addressing Open Defecation in Rural Communities:

Efforts to change attitudes towards adopting better sanitation practices and ending the practice of open defecation are ongoing. The Standing Committee on Rural Affairs in 2018 highlighted the importance of community-wide adoption of sanitary toilet practices for true open defecation-free (ODF) status.

Gautam Buddha Nagar district, with a total area of 1282 square kilometers and a rural population of 40.88% according to the 2011 Census of India, faces challenges in promoting proper sanitation practices. There are 673,806 individuals residing in rural areas, including 359,605 men and 314,201 women across 320 settlements.

The literacy rate in rural areas of Gautam Buddha Nagar district is recorded at 74.77%, with men at 86.32% and women at 61.69%. Among the 421,928 literate individuals, there are 163,268 girls and 258,660 males. Efforts focusing on educating rural residents about sanitization practices remain a priority to ensure community health and well-being.

Objectives of the Study:

A program's effectiveness can only be determined by determining whether participants are sufficiently motivated to engage, have been heard about the program & its goals, & have comprehended and agreed that the information being delivered (Chinchwadka 2017).

The main goal of the current research is to understand and provide a thorough description of respondents' views on many elements, such as awareness level, and perceptions and household-level engagement in the hygiene program.

The following particular goals have been developed within this paradigm, and research has been done to achieve them:

3.1 Does knowledge of SBA correspond with attitudes toward the Sanitation and Hygiene Program?

3.2 Does participation in the sanitation and hygiene program result from one's viewpoint of SBA?

3.3 Does participation in SBA follow awareness of it?

Research Methodology:

4.1 Type of research: This study aims to investigate how perceptions and involvement in sanitation and hygiene programs are influenced by the *Swachh Bharat Abhiyan*. Consequently, the research methodology adopted is "casual."

4.2 Data Sources: Primary & Secondary Data Sources

4.3 Research Instruments: Questionnaires as Research Instruments.

4.4 Gathering Data: A pre-tested and prepared interview schedule was in place before any field prospecting began. As a results, the final questionnaire was used to gather information. Convenience sampling was used to select study participants. All identified respondents gave their consents during the questionnaire administration process, and the chosen respondents were requested to complete a series of MCQs. Males and females above the age of 18; patients who are seriously ill, comatose, and reluctant to participates in the research.

4.5 Sample Size Valuation: 300 respondents were initial included in the sample; however, 100 respondents were removed during data cleaning, leaving 200 respondents as the required sample size!

4.6 Study area & sample respondents: The sampling frame, which represent the region of Jaipur. Age of 18 and above respondent was randomly selected from each household to participate in the study.

4.7 Pilot study & questionnaire: To examine the feasibility of the study, a pilot study was done among. These households were excluded; from the selected sample.

Importance of the Research:

A UN research claims that because there aren't enough toilets in rural India, India leads the world in open deflation. Government estimates state that urban. India produces 1.88 lakh tons of solid garbage daily, or 68.8 million tons a year, of which 16 million tons are expected to be produced by 2041. In cities, one-third of the trash is still untreated? 67.3% of rural families in the nation still lack access to sanitary toilets, with 5.48 crore families (32.7%) having access to facilities as per the 2011 census. According to data from a Baseline survey done in 2012–2013, 40.35% of rural households have access to toilets. Every year, diseases linked to poor sanitation, hygiene, and access to safe drinking water claim the lives of over two million people, the majority of whom are children (WHO AND UNICEF, 2000). The issue is made worse by the fact that 498 Tier I cities produce almost 38 billion liters of sewage each day (2009 data),

26 billion of these are left untreated in the open. India's rural areas produce 0.4 million tons of solid trash annually. India is the world leader in the practice of open defecation, per a UN assessment.

In rural India, poor sanitation, solid waste management, and access to clean water are the main causes of 88% of diseases. Instead of placing litter and dust in dustbins, people in metropolitan areas throw it on the streets, outside of their homes, and on the sidewalk, where it slowly builds up and becomes enormous rubbish? If left unattended, this trash will smell bad and attract illnesses that harm humans! Humans can come into contact with excrement from public defecation in open fields through a variety of waterways, including contaminated fingers, food, field crops, flies, and more (Cairn Cross and Valdmanis, 2006).

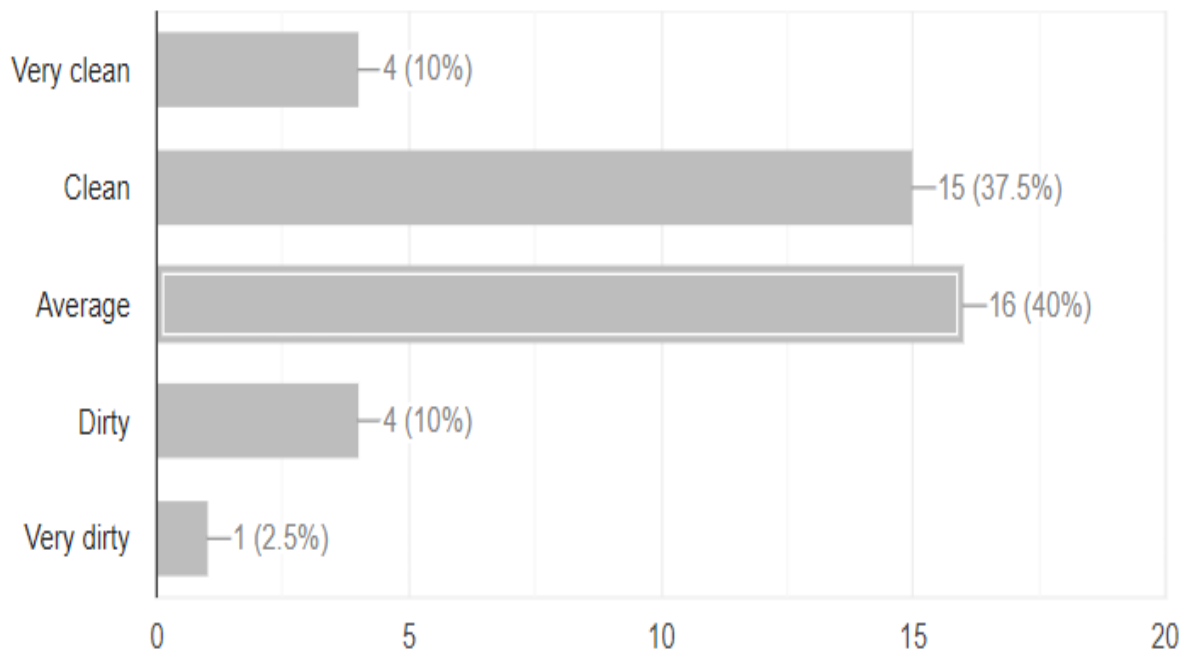
According to the WHO, contaminated water and poor sanitation cause around 600 million cases of diarrhea and 400,000 child deaths annually. In developing nations, contaminated water is thought to be the cause of 80% of all infections and one-third of all fatalities (Rajgire, 2013). Mahatma Gandhi had stated: "Sanitation is more important than Independence" in this regard. However, 600 million of India's 1.2 billion citizens still lack access to latrines.

More than two lakh villages are reportedly free of open defecation, according to a government study from May 2017 (Dash, 2016). On the other hand, open defecation and everyday municipal trash management are challenges in metropolitan settings! The problem in rural areas is the amount of liquid waste produced. Inadequate facilities for processing solid waste and shifting responsibilities of individuals in charge continue to be major obstacles for this flagship initiative! The percentage of respondents to a Local Circles online survey who stated Swachh Bharat hasn't made their cities cleaner increased from 35% to 57%, showing that the cleanliness movement is waning in metropolitan areas. There hasn't been much of an improvement on the ground, despite the government launching a number of measures, such as yearly cleanliness surveys and social media campaigns that emphasize behavior modification. The sluggish development in establishing plants to handle solid waste is one of the primary causes. Currently, 1.7 lakh tons of trash are produced every day, of which around 80% are disposed of without being processed. Even with all the efforts, just 2 lakh tons of compost are used annually. Most of our cities' local government authorities struggle to maintain adequate levels of hygiene, sanitation, and cleanliness. Due to a lack of resources, the government's powerlessness on the sanitation front frequently becomes apparent. The public's sustained and active involvement in the nationwide cleanliness campaign can support the healthy growth of our cities, towns, & villages. Only if sufficient measures are made to raise awareness, spread knowledge, & foster a sense of accountability for our environments would this be achievable.

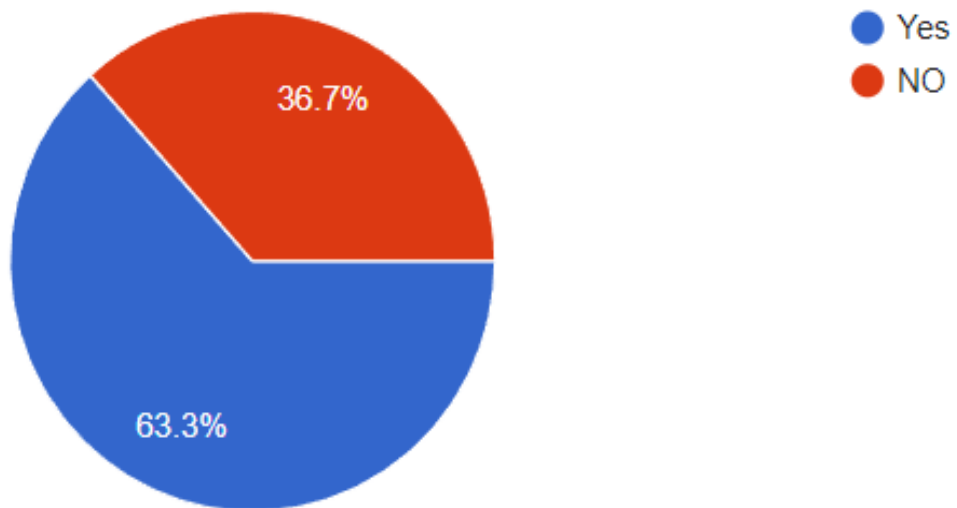
The media can have a significant impact on raising public awareness of the need for cleaning, encouraging individuals to join campaigns, and changing their behavior in favor of cleanliness! It makes sense to conduct this study at this time and with this relevance because a thorough examination of the Indian media's involvement in carrying out its aforementioned responsibilities can yield insightful information for upcoming campaign tactics.

Key Findings

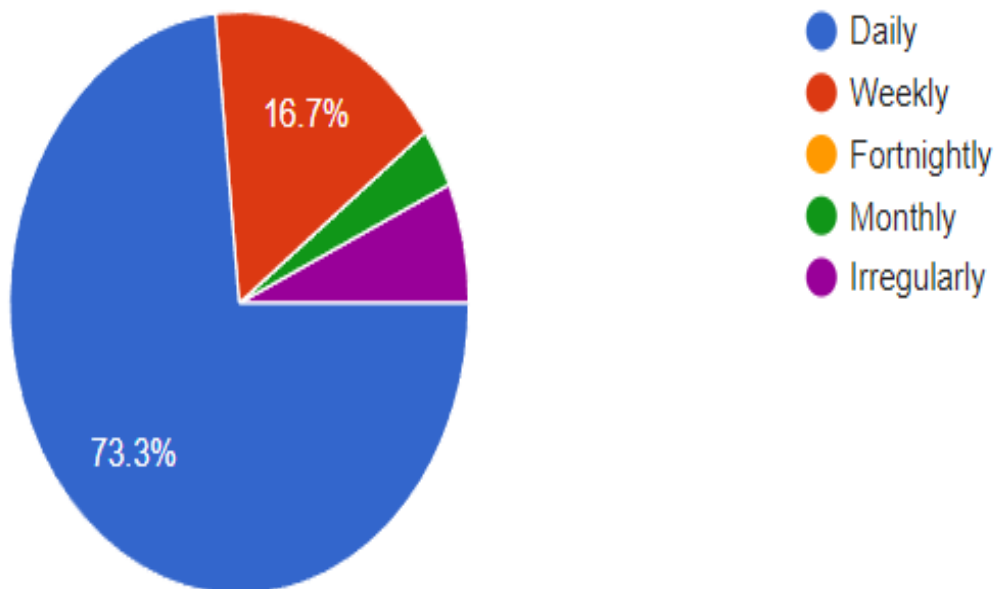
How would you rate the overall cleanliness of your locality?



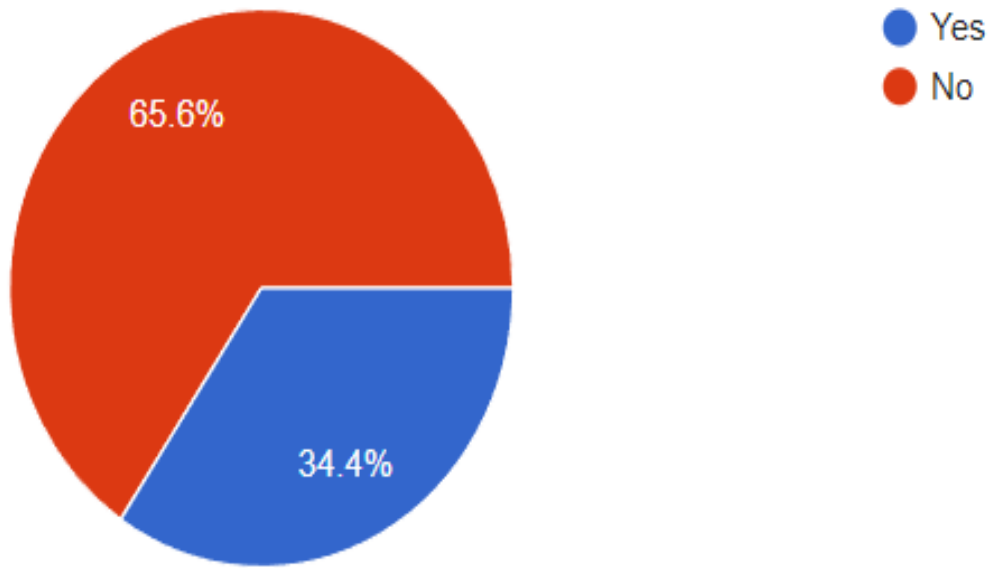
Is there a proper waste management system in place in your locality?



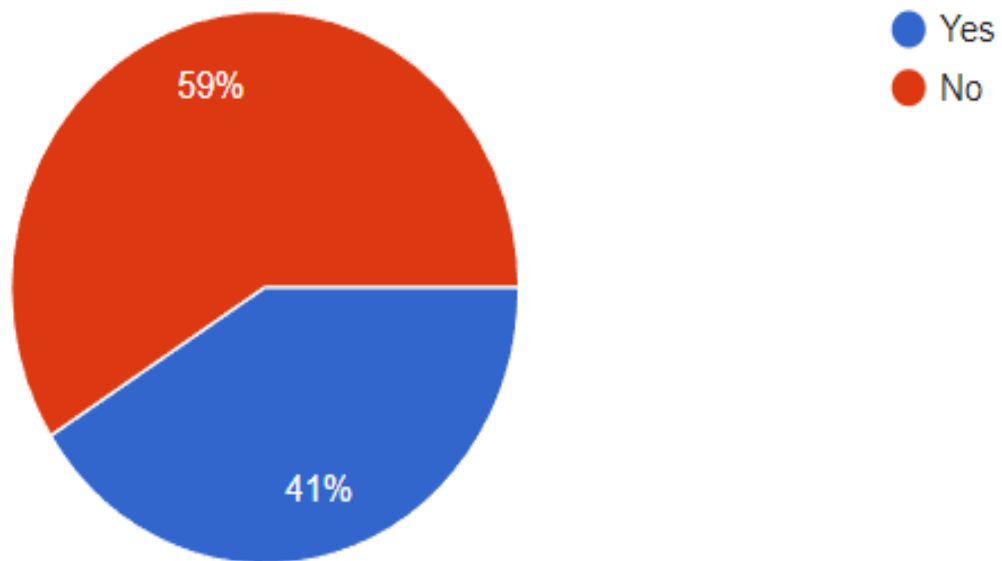
How frequently is garbage collected in your area?



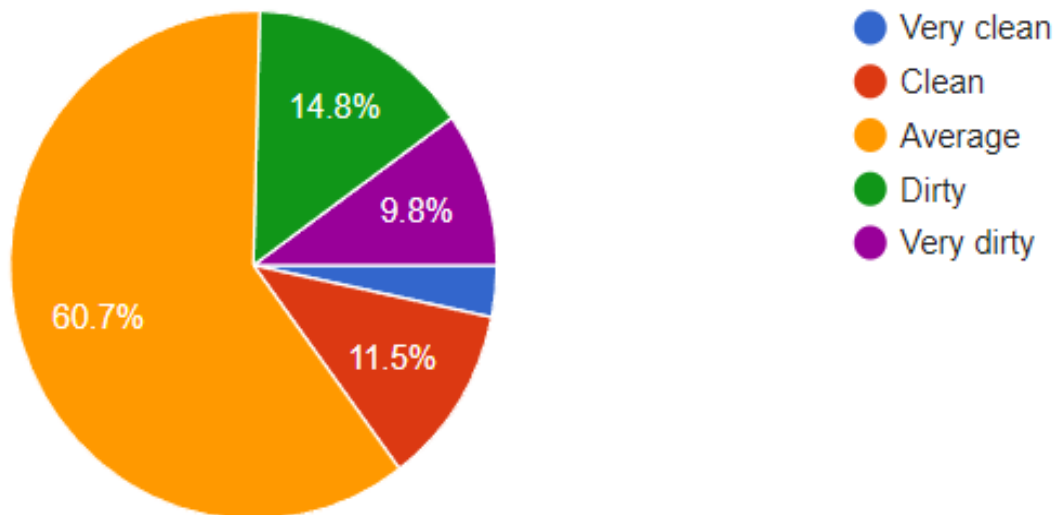
Are there separate bins for biodegradable and non-biodegradable waste?



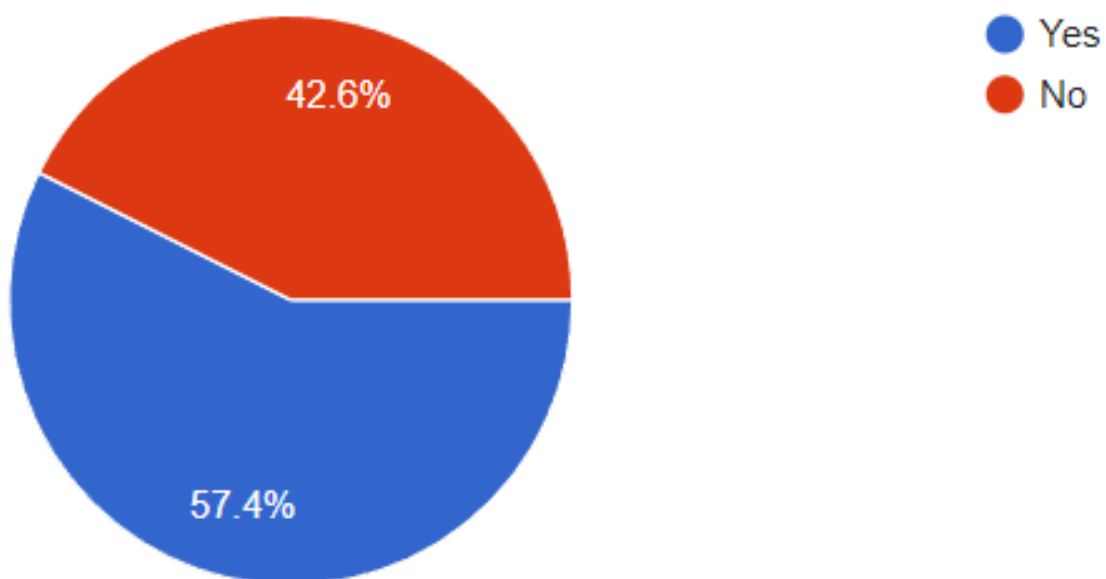
Are there enough public toilets in your locality?



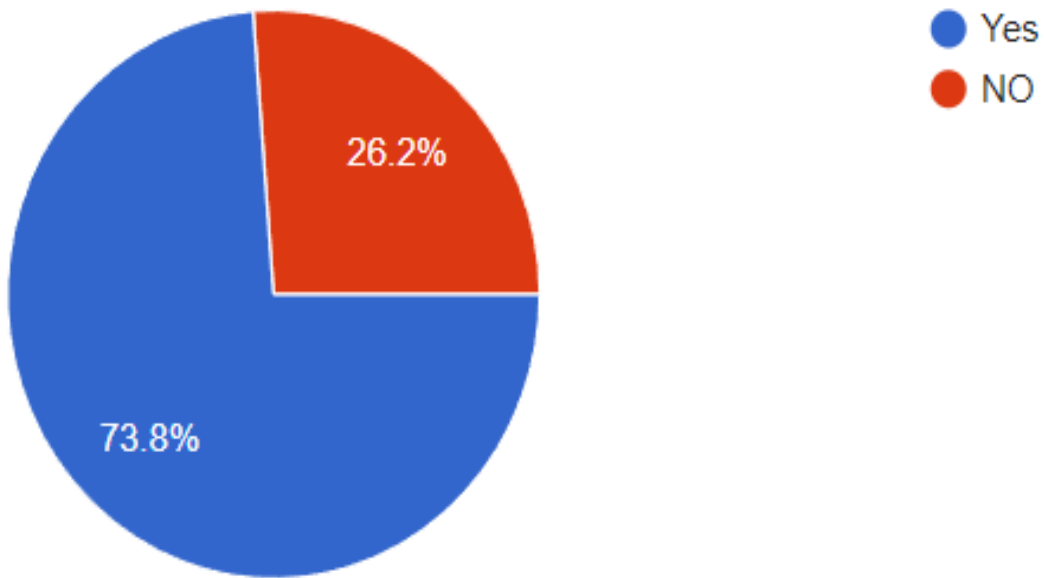
How would you rate the cleanliness and maintenance of public toilets?



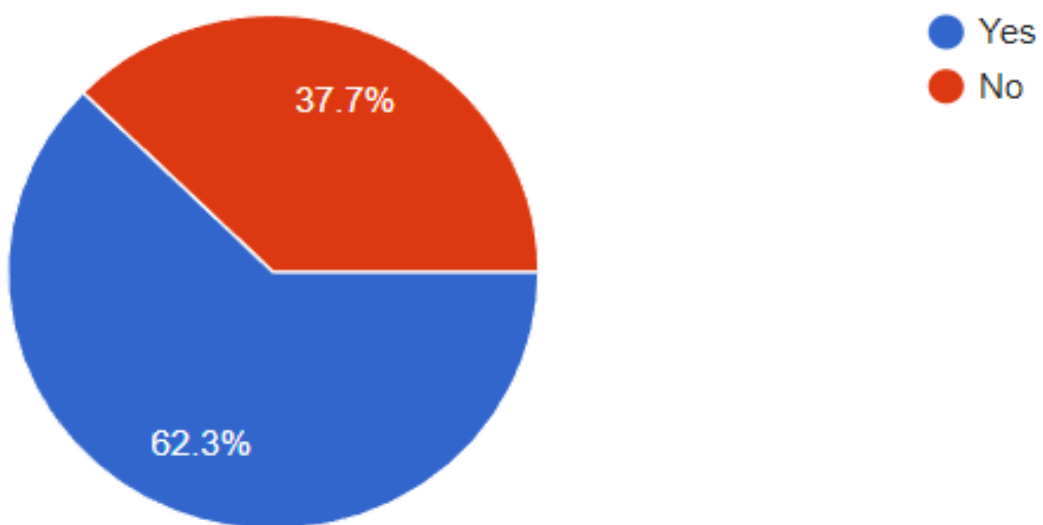
Have you attended any awareness programs or campaigns related to sanitation and hygiene under the *Swachh Bharat Abhiyan*?



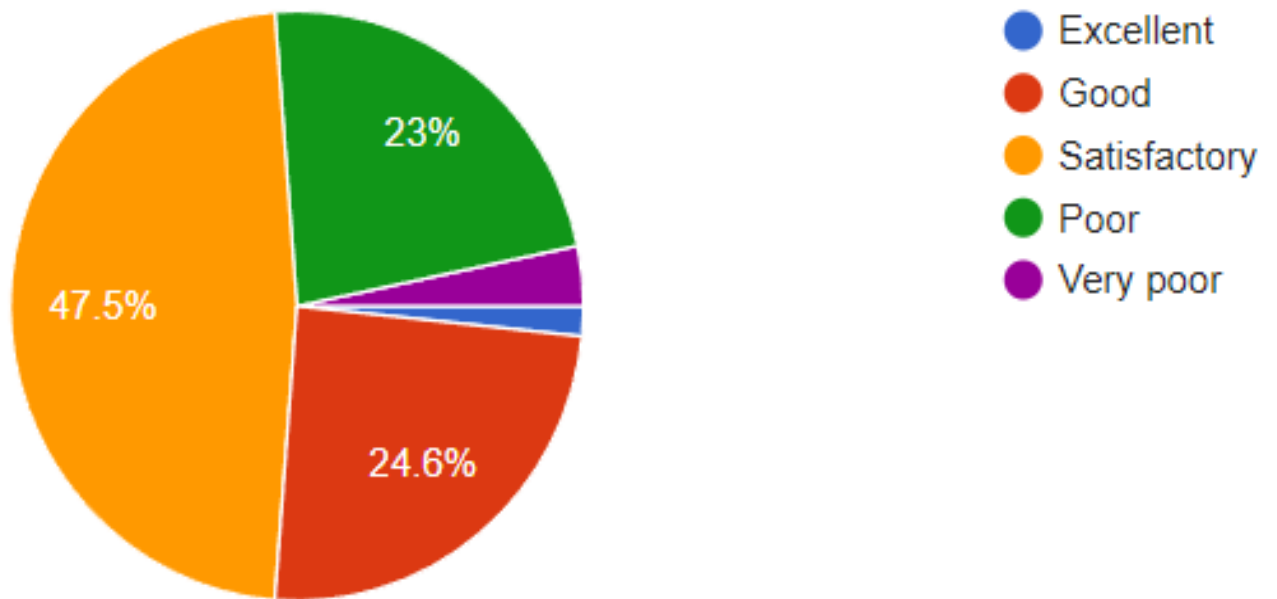
Do you think there is enough emphasis on sanitation and hygiene education in schools and communities?



Do you feel the community is actively involved in maintaining cleanliness in your area?



How do you rate the role of local authorities in implementing and monitoring cleanliness initiatives?



After taking into account the selection criteria outlined in the methodology, a total of 200 contestants were interviewed from society of Jaipur City. The study contestants consisted of 75(37.5%) males & 125(62.5%) females.

In terms of respondents' perceptions of SBA, the majority (82.00%) concurred that the program has helped create a cleaner India and acknowledged the importance of individual contributions to the program's success. This demonstrates that participants view SBA favorably. Since our research was restricted to a single metropolitan location, it is not possible to extrapolate the findings to the entire city.

Conclusion

This study focuses on knowledge, understanding and participation in SBA among urban households in Jaipur. It is concluded that existing knowledge of work, understanding of culture and attitude towards LD encourage people to participate in work to improve their family life. Findings suggest that even if participants had positive attitudes about hygiene and LD behavior, more effort is needed to demonstrate work to protect children and families, such as the publication of material health information from local health departments on how to use restrooms. Additionally, strategies that promote hygiene in low-income communities should focus on behavior change interventions, have personal communication, and be more accepting of their delivery methods. Effective implementation of *Swachh Bharat Abhiyan* is essential to

eliminate OD as the government has said that all cities have completed sanitation programs but OD still persists on the ground. Everyone needs access to a working bathroom to promote hygiene and break the habit of open defecation. *Swachh Bharat's* urinal campaign has been widely accepted for its message, but its potential to help improve sanitation has not yet been considered. Also, in government behavior change programs and in safety and health, healthcare, etc. It is recommended to apply effective measures in its basic use and development. Since our study was limited to one region of city, it is not possible to simplify the findings to the entire city.

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