

Sanitation Assessment of End Usage Products in Beed District, Maharashtra, India

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Abstract— Sanitation includes lot of elements but this study is focusing on toilet infrastructure and its usage. According to government officials whole Beed district is Open Defecation Free (ODF) but research is showing that 12% families in this blocks are not having toilets at all. This 12% family includes newly separated family, families who applied for subsidy for toilet construction but still didn't got, who don't have land and financial support to construct toilet. The research Sanitation assessment is divided in to five major parts to understand and analysis data, namely Socio-economic profile, toilet infrastructure, toilet usage, awareness & attitude towards toilets and who don't construct toilets to get depth knowledge and to assess the real situation at ground level without any biasness. There are lot important aspects regarding sanitation are discovered.

Keywords: Open Defecation Free (ODF), Sanitation Assessment of End Usage Products

I. INTRODUCTION

India a country of 133 crore people, among them 66 per cent people are staying in the villages. If we observe the health issues of villages, they are mostly unexplored and neglected since the past. The facilities of treatment in the rural villages is also very nominal, Tripathy and Khan (2018) while discussing about, the health condition of a rural village of Tamil Nadu named Keelamattiyam they mention that there is not any permanent and regular access to the health center in the village. A VHN (Village Health Nurse) came twice a week for check-up. One day for the pregnant ladies and one day for the vaccinations. On another article Khan and Tripathy (2020) while discussion about the rural villages of Odisha the villages are economically not that much distressed, poor people somehow can manage their life but main problem is that there is no hospital, whenever any people suffer in disease he/she has to go Jaleswar (which is the block head quarter and around 20 km away from the study location) hospital and in case of delivery, it is more difficult to take patient in Jaleswar during his critical situation so according to villagers. In such situation the only way to survive and deal a healthy life is to avoid the unhealthy practices. Tripathy (2020) while talking the Bodo tribes of Assam in his study paper also mentioned that the villages of Assam also not get proper health facility but they have some traditional healer and well managed indigenous sanitation system which keep them and their premises Healthy.

Sanitation is directly connected to health and health has very important role in development sector. Without good health productivity of men can't be in use. In certain stages and levels even though people have constructed toilets for various reasons, they are willing or unwilling to use toilet regularly so there is need of study which will try to

describe various things like component and factors of usage. According to WHO Access to sanitation facilities is a fundamental need of a human. It is vital for the dignity and health of all people. The health and economic benefits (Visible or invisible) of sanitation to households and individuals (and especially to children) it's important. People from rural area are always living in vulnerable condition. There is no fix income for them in this situation health of these people having important role expenditure. If expenditure on health is increasing gradually it will lead to poverty to extreme poverty. Those without access are the poorest and least powerful. Access for the poor is a key factor in improving health and economic productivity and is therefore an essential component of any effort to alleviate poverty.

Inadequate sanitation result not only in more sickness, but also in higher health costs, lower worker productivity, lower school enrollment and retention rates of girls and, perhaps most importantly, the denial of the rights of all people to live in dignity (WHO health perspective). Here despite declaration of open defecation free zones, field visit shows the practice of open defecation. Toilets which are constructed are dysfunctional. Even to those who have sanitation facilities, the usage in the household is limited to the few. Immense need of behavioral change among the communities for effective use of sanitation. The main aim of research "To assess the intended and consequential effects and end use of Sanitation facilities, hygiene practices Knowledge, Attitude and Practices (KAP) and programs at the individual, family and community level in current status."

II. METHODOLOGY

Study area of research is Beed district of Maharashtra state. Study focusing rural context of district. In this research two villages are representing two blocks, namely Tandalwadi village is representing to Dharur block and Undari village is representing to Kaij block are purposively selected. To capture a bird's eye view of sanitation in the location participatory tools are used and for further more in-depth studies questionnaire was prepared.

A. Methods used for Primary data collection:

1) Sample Survey:

In this research sample survey is used by filling up questionnaire. 100 samples are taken for understanding sanitation status of both block through different dimensions like infrastructure, usage of toilet, awareness of use of toilet etc. Sample method is Systematic Sampling (SS) method to choose 100 samples, from 2 villages which belongs from 2 blocks. Reason for choosing Systematic Sample is to check real sanitation status without any biasness and to check or

validate secondary data collected by government or other stakeholders.

Sample size: 100

50 Samples from Tandalwadi village, Kille Dharur Tehsil &

50 Samples from Undari village, Kaij Tehsil.

- Sampling method: Systematic Sampling.
- Formula: Interval (k)=N/n or Interval (i)=N/n
- k = Interval, N = Total number of units in population, n= Sample size

Tandalwadi k = 212/50=4.24=4

Undari k =589/50=11.78=12

2) General Observation (GO):

General observation is one of methods which are very useful to collect primary data. Observation skill is very important to collect primary data. There are lots of proxy indicators which will give you basic and advance idea of certain study area. General observation is very useful for any field work or project. Through general observation we can easily understand development issues, cultural practices, health practices, Sanitation practices like traditions and customs etc.

3) Focused Group Discussion (FGD):

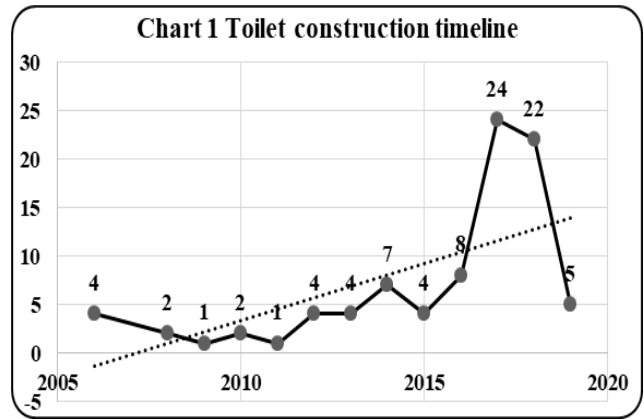
Focused Group Discussion is very easy tool to understand all types of dimensions and development issues. It is giving better understanding of any point which we need in descriptive way. This method will give us different views and ideas of all participants in better manner. There are we can see debate on same subject and different point of view of each person.

4) Secondary data collected from:

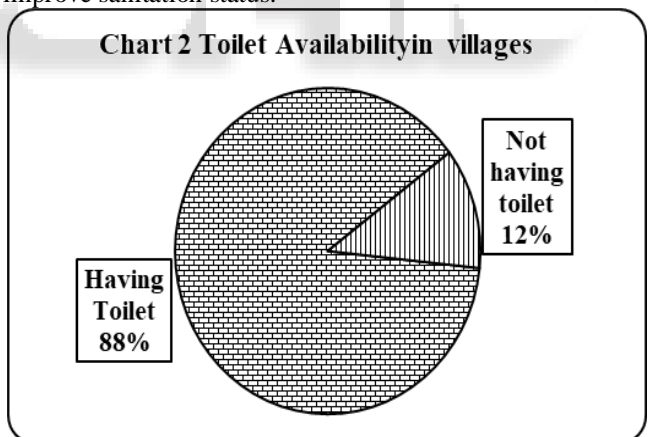
- 1) Zilla Parishad (District Headquarter) and Panchayat Office of Beed district.
- 2) Block Development Office (BDO) office Kille Dharur and Kaij.
- 3) Grampanchayat office – Tandalwadi and Undari village.

III. RESULT AND DISCUSSION

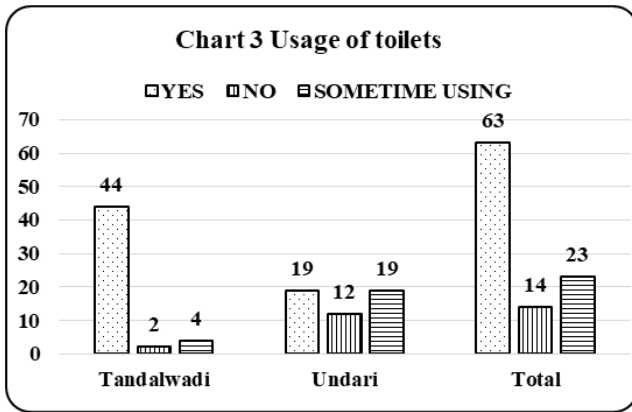
Govt. intervention through SBM to achieve target of ODF India have large influence on awareness regarding construction and usage of toilets. From 2014 construction of toilets is increased up to 79.54% toilets are constructed till 15th June 2019. 88% toilets are available in village (Chart no. 1). Govt. officials delinquency of approving toilets and implementing toilets schemes leads to face problems for villagers to go for open defecation and not having. Govt. is not interfering in issues have to individual like who don't have land for construct toilet. Main reasons of constructing toilet are Subsidy, felt shame and surrounding should be clean, but for good health and lifestyle only 10% constructing means lack of attitude and knowledge amongst villagers is still there.



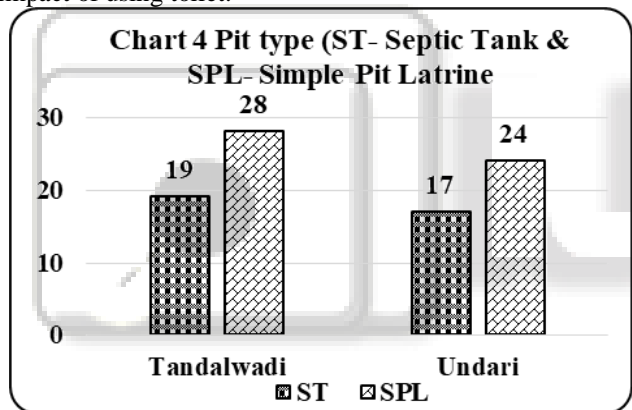
According to research total 88% people are having toilets and 12% are not having toilet at all (Chart 2). Water availability matters a lot for regular use, rich people can get easily access to water sources. Who have regular water availability 80% families are using regular toilet, but who don't have regular water availability only 34% families are using toilet regularly. People still not ready to build toilet inside the house cause of traditional thinking but same time who have built toilet inside the house their usage is regular 87.87% and sometime users 12.12%, that means if person have toilet inside the house either he/she will use regularly or sometimes but he/she will not let that toilet idle in the house. Special places and time for male & female for OD. 68% families are constructing toilets because they are getting help in terms of Subsidy or grant from govt. According to sample survey 81% people are believing that Govt. will help them to improve awareness and to construct remaining toilets, that mean public have beliefs on govt. to improve sanitation status.



There are 61.36% families have electricity connection in toilets means other families are not using toilet at night time. 62% families having regular water supply. In usage part 63% families are using regularly toilet 23% sometime using and 14% families are not using toilet at all (Chart 3). This numbers are really big when govt. fixed target of ODF India before 2nd October 2019. There are different types of pit used by villagers. Mainly two types of pits are popular one is septic tank and simple pit latrine. Usage of pits are given detailed in the chart 4.



Chappals usage and hand washing practices are 100% in both villages main sources of knowledge are TV advertisements. Grampanchayat awareness programs have influence to aware people about sanitation and hygiene thus 44% people got knowledge from GP's awareness programs, then TV and education (19%). It's possible to make people understand advantages and disadvantages through quality programs with voluntary organizations for behavioural change communication. Who all are using toilets amongst them 93% are saying that they felt cause of using toilet their health and safety improved which is showing positive impact of using toilet.



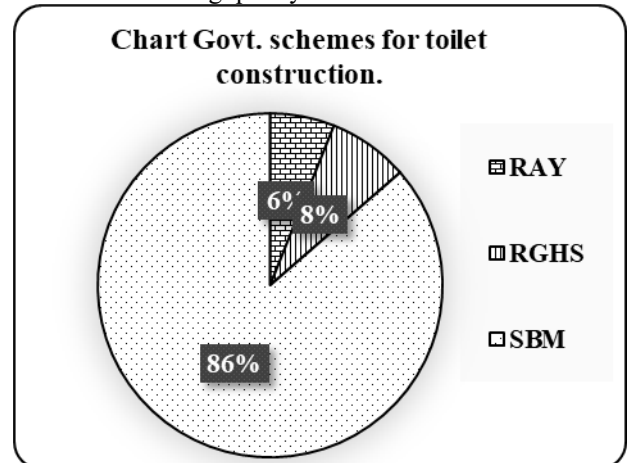
Sr. No.	Average spending on cleaning toilet	Undari Village 1	Tandalwadi Village 2	Average
1	Average	105	105	105
2	Max	300	300	300
3	Min	30	10	20

Table 1: Average spending on cleaning toilet per month

Average money spending on toilet cleaning is same in both villages it is 105/- per family. People are attracted to Harpic toilet cleaner by TV advertisement. Mostly people are preferring Harpic bottle which is going till one month. Which is cost of 65/-. Who are using toilet they are most of them cleaning toilet regularly (Table 1).

Swachh Bharat Mission (SBM) is popular scheme amongst villagers 86% families are using for construction of toilet. There are also another two important schemes namely (Rajiv Gandhi Housing Scheme) RGHS and Ramai Awas Yojana (RAY) these are housing schemes in this both scheme govt. is providing toilet. People don't need direct construction of toilets by third party or people don't want readymade toilet. Main reasons for that are low quality and

doubts of corruption between govt. officials and contractor because it's affecting quality of the toilet.



SBM is popular scheme amongst villagers 86% families are using for construction of toilet. People don't need direct construction of toilets in Undari village main reason for that is low quality and doubts of corruption between govt. officials and contractor. Govt. declared these both villages in 2017-18, and they verified in 2018-19. SBM declaring ODF villages on the basis of 100% construction of toilets and supervision team from ward level will come to check physical status not a usage thus it doesn't indicate end of open defecation, so 100% toilets construction doesn't mean that 100% usage. There is no proper monitoring and supervision system which available that is not working at all. In the span of 35 days' study, no one of govt. officials or supervisors' committee visit to villages. According to people when monitoring is strict maximum people are using toilets that means proper and continuous monitoring / supervising is needed. Govt. officials delinquency of approving toilets application and implementing toilets schemes leads to face problems for villagers to go for open defecation and not having toilet in Undari village. Govt. is not enterprising in issues have to individual like who don't have land for construct toilet. Main reasons of constructing toilet are Subsidy, felt shame and surrounding should be clean, but for good health and lifestyle only 10% constructing means lack of attitude and knowledge amongst villagers is still there.

Cross analysis done to understand important dependent variables are affecting or not on usage part of sanitation. 79.68% families are depended on water availability who are telling water availability is regular and 38.88% sometime users are telling water is not available regularly that means water availability has important role in sanitation status. As well as there are 33.33% people who are saying no water availability but still they are using toilet regularly. If water is not available 38.88% people will not use regularly they will use sometimes means when water is available who are telling water is not available regularly. Who have toilet out of them 69.31% are using regularly, 26.13% sometimes and 4.54% who have toilets but they are not using it at all. But another side who don't have toilet out of them 83.33% are not using and 16.66% who don't have toilet but also using toilet. It is boldly showing that toilet availability is more important for increase toilet usage in

rural area. There is possibility of establish community toilet in this area, if communities demand is more.

Rural area of Maharashtra has different usage of toilets according to gender, so this cross analysis will help to understand which gender is mainly using toilet. 66.12% Male are using regularly toilet and females number quite good is 68.10% using regularly toilet. 13.30% males are not using toilet at all but it is looking low compare to females that is 16.37%. Sometime users of toilet available more in Male 20.56% but it is less in females it is 15.51%. Compare to Undari village, Tandalwadi village has high number regular usage of toilet in both gender. Toilet usage has various compounding factor and distance or toilet availability inside the house or outside the house is one of the important factor which consisting time to travel for toilet and distance of toilet. This compounding factor are more influencing on usage part of sanitation. We can easily recognize that who have built toilet inside the house their usage is regular and 87.87% and sometime users 12.12%, that means if person have toilet inside the house either he/she will use regularly or sometimes but he/she will not let that toilet idle in the house. Another side is that who have constructed toilet outside of house are only using 58.18% regularly and 34.54% sometimes using toilet as well as 7.27% families are avoiding to use toilet means they are not using toilet at all. So connection between toilet availability inside or outside the house is important factor in usage part of sanitation facilities.

Toilet construction is not based only on attitude it is including all other aspects. It is including wish of individual, affordability of construction material, availability of land, credit, land and govt. schemes, accessibility by permission and distance from house and last but important attitude or mentality about toilet negative or positive etc. Undari village have 18% (9) families who don't constructed toilet and in Tandalwadi village 6% (3) families didn't constructed toilet. Compare to Tandalwadi village Undari village is looking more unaware about advantages and disadvantages of toilet usage. According to FGD lots of people are applied for govt. scheme under SBM but after 2 years ago but they didn't get any reply from govt. officials. 100% (12) families who don't have constructed toilet have wish to construct the toilet that means they all are ready. First and important reasons 75% families are not constructing toilet is they don't have land to construct toilet. This situation we can see in Undari village density of population is high in this village so people don't have land to construct toilet. Second important reason is no availability of credit, loan on they don't have money to construct toilet. In Second preference 85% of families who gave second preference are saying that there is no availability of water in village so they didn't construct toilet (Table 2). This reasons are important based on this reasons new intervention can be done in future to increase sanitation program at maximum level.

Sr. no.	Reasons for not constructing toilets	1 st preferred reason	2 nd preferred reason
1	Availability of Credit/loan/money	2	1
2	Availability of water	1	6
3	Don't have land	9	0

Total	12	7
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Table 2: Reasons for not constructing toilets

IV. RECOMMENDATIONS

One of main constrains in usage of toilets water availability & don't know advantages. Study and research for low water level in Undari village for other alternative water sources. Existing NGOs (DHAN foundation, Dilasa & Manav Vikas) can go for awareness programs. Strict monitoring and punishment should continue for open defecator. There is possible to take health camps and special sanitation camps which make them aware and clear all doubts and rumors. It will help to increase awareness and as well as usage of toilets.

Kalanjiam (SHG) also can play major role to increase awareness and usage of toilets, Kalanjiam also can help 12 % families of that villages. 16% families out of not constructed toilet are needed credit or loan facility so here Kalanjiam can play important role by giving them credit as well as it will help to empower women in all aspects. Unity of women means groups of women by group approach Grampanchayat to give land for toilet construction or construct community toilet for who don't have land to construct toilet 75% out of who didn't constructed toilet. It is also possible to take Behavior Change Communication (BCC) program to increase awareness among the target community, along with govt., NGO and other stakeholders should increase participation to give awareness and construction of toilets, which will help to improve ground level sanitation.

Going forward, Beed district might want to look into: Developing an ODF sustainability strategy, focusing on systematic & strict monitoring and supervision, change in ODF declaration method, change steps to avoid delinquency and corruption in Govt. schemes if it's there. Continuously engaging all stakeholders from government and from voluntary sector, civil societies, and community members, towards maintaining sanitation and hygiene as well as to increase awareness. All existing NGOs can play important role to increase awareness and improve sanitation along with govt. through special health camps, BCC and quality awareness programs and quality ODF assessment. Innovative program like solar lights for toilets, Swachh selfie and rain water harvesting for toilet purpose.

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