



Satisfaction of Sanitation Services in Uttar Pradesh with Special Reference to Gorakhpur District of Uttar Pradesh, India

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Abstract

Sanitation is one of the most important aspect for an individuals and also good for the healthy life, and protection from the various diseases. To achieved the complete cleanness in the country, the central and state governments are jointly operating the sanitation related services in the state. This study is an attempt to assess the satisfaction level from the sanitation services in Gorakhpur district of Uttar Pradesh. For this purpose, 285 sample have been selected randomly in both rural (165) and urban (120) habitants of the district. The satisfaction of sanitation services has been measured with respect to three variables that are gender, habitat, and community. For the analysis of data, a descriptive statistics techniques such as Mean, Standard Deviation and ANOVA, have been used. After careful analysis of data, one can find out that the female population (Grand Mean = 8.0446) are less satisfied with sanitation service as compared to male population (Grand Mean = 9.2656). It is also revealed from the data analysis that urban population (Grand Mean = 11.8500) are satisfied with sanitation services as compared to rural population (Grand Mean = 6.2242) of the district. Therefore, the findings of the study advises that a suitable mechanism must be require or available ones need to more straighten to monitored on the sanitation services in rural areas of the district and for better sanitation services government should encourage a women's self-help group to participate in it.

Introduction

Uttar Pradesh is the most populous state in India. According to census 2011, Uttar Pradesh has population of 19.98 crores and out of it the male population was 104,480,510 and female population was 95,331,831. However, in 2001 the total population was 166,197,921 in which male were 87,565,369 and female were 78,632,552. The growth rate of the total population in this decade was 20.23%, while in the previous decade it was 25.80 %.

The present study confined in Gorakhpur district of Uttar Pradesh and according to the 2011 census, 18.83 per cent of the total population lives in urban area while 81.17 per cent population was is rural area. The total population of the district was 836,129 and out of it 439,051 were male and 397,078 were female. The sex ratio of the district was 904 female per thousand males.

In general, public services are provided by the government for their citizen. These services are generally available free for all or available at nominal cost. However, the quality of these services which are provided by the government, some time, is not good and it is less qualitative then the other sector services.

Now a days, government responsibility is to full fill the demand of public services. Therefore, satisfaction of public services is affect by supply of public services. Quality of public services was measured by many of the researchers in their research work. The responsibility of the state government is to maintain the level of supply of public services as well as their quality. Public services are not properly available in East U.P. as compared to West in the proportion of population density. Therefore we can say that implementation of government policy is not properly effective. The research work is confined within the Gorakhpur district. The rationale behind it, the supplies of public services are not sufficiently provided to the district levels as well as to their population. Many of the public services are not equally distributed in rural and urban areas of the district. Out of many public services which are provided by the district administration, only sanitation services are being taken in to consideration for the present study and therefore, it is important to measure the satisfaction level of the public services in both rural and urban area of the district.

Literature Review

There are some studies have been conducted by the various scholar from time to time to analyse the status of sanitation services in different states of India. Mane K. H. (2010) concentrated on the reason for dissatisfaction of passengers in the service of MSRTC. He observed that majority of passengers were not satisfied with hygienic conditions especially in Kalyan and Bhivandi stations. Seventy-seven percent passengers were not satisfied with drinking water facility. However, seventy-one percent passengers were not satisfied with the behaviours of bus drivers and conductors and sixty-three percent passengers were not satisfied with the waiting hall and canteen facilities, the maintenance of buses and seating arrangements. He explained that to appoint sanitation officer to inspect hygienic conditions in bus depots.

Coffey D., et. al. (2014) stated that in rural northern India; there is a large number to preference for defecating in the open. They are stated that with sample covering 323 households spreading across five north Indian states-Bihar, Rajasthan, Uttar Pradesh, Madhya Pradesh and Haryana-results prove that in spite of having toilets, over 40% of the households practiced open defecation. There is having a household toilet is widely seen to damage the purity of the home. They are feeling the open defecation is widely seen to promote purity and strength. Many more in India's rural areas perceive that it was pleasurable, comfortable and convenient to defecate in the open.

Reilly and Louis (2014) examined successful adoption of toilet is conditioned upon three factors. First is politically will govern. Toilets are delivered and mobilize to an awareness programme about the benefits of using toilets. Second is the peer stress, arising from social stigma of defecating in the open area. However, everyone else in the neighbourhood is using toilets. Third, is the political ecology arising from the government bodies guaranteeing supply of water, and ecological factors such as soil quality.-

Ghosh and Cairncross (2014) found with variation in use of toilets between different parts of India. However, it is important to evaluate the reasons for these differences in demand for toilets pan India. In his study investigation is the first scientific attempt deriving demand for toilets. We control for other factors such as gender, geography, religion/caste, institution, female empowerment, wealth and standard of living, which might influence the demand for toilets in the backward area of the country.

Vijaya (2015) focused that Water is a fundamental source to our existence. As population grows, the demand for water is raising, therefore an increase in stress on sanitation and wastewater disposal system. The concept of three processes Reduce, Reuse and Recycle is a

part of clean production process with environmental friendly that concentrates on pollution prevention. In the same way, it is vitally important to treat wastewater in order to save water to protect the environment from pollution.

Kaliski (2015) analyzed in her study that the problem of open defecation in India cannot be resolved for decades yet, through the mere availability of government-built toilets. The report examined that the media, along with the schools, needs to play a crucial role in spreading awareness about the health and economic benefits of using toilets and maintaining hygiene.

Tripathi and Kumar (2016) have analysed about the rural sanitation is huge challenge to the entire world. All over developing countries lack full access of sanitation including India. Poor sanitation facilities are not only attached with sickness but also to health expenditures and adverse impact on livelihood of poor.

Banerjee A. et.al. (2016) analysed on household demand for toilets and study the factors leading to open defecation. World Health Organization (WHO) explains basic sanitation process as the lowest-cost technology ensuring hygienic excreta and disposal. Therefore, clean and healthful living environment both at home is analysed in neighbourhood of users.

Hazra and Dutta (2016) covering 300 households in four villages of Jalpaiguri district of West Bengal. He found that good condition of toilets induces the members to reduce open defecation and availability of water, absence of seepage, strong roof and walls, proper functioning doors with handles, etc. are important factors. It focused the critical availability of masons and plumbers at village level. Who are required to correct construction defects and proper implementing of the existing toilets?

From the above literature survey one can draw the attention that there is are very few studies that have been conducted regarding the satisfaction level from the publica services. However, it seems that so far there is no study have been conducted regarding to satisfaction from the sanitation services in the Gorakhpur district of Uttar Pradesh. Therefore, it is important to highlight the issue related to the measurement of satisfaction level from the sanitation services is needed in Gorakhpur district of Uttar Pradesh.

Objective of the study

The research is based on the satisfaction of sanitation services in rural and urban area of Gorakhpur district of Uttar Pradesh. It concerned with qualitative data analysis based on primary data which we collected with the help of research schedule. The objective of the study is to measure the satisfaction level of sanitation services in both rural and urban areas of the Gorakhpur district.

Methods

The present study was conducted to investigate the effect of gender, habitat and religion on satisfaction level from the sanitation services in Gorakhpur district. For this purpose, 285 sample have been selected randomly in both rural (165) and urban (120) habitants of the district. The satisfaction of sanitation services has been measured with respect to three variables that are gender, habitat, and community. The study was conducted in a 2×2×2 factorial design with two types of gender (male and female), two types of habitat (rural and urban) and two types of religion (Hindu and minority). Thus, there were eight treatment conditions in total. The data collected in the form of interview schedule answered by the respondents from rural, urban area of the district. The information collected was processed and tabulated suitably by highlighting all the parameters. The theoretical information was converted in numbers by ranking the Likert scales. The weight assigns to each item number from four to zero for

favourable statement. Analysing the data with the help of statistical tools like factor analysis, F test, ANOVAs, Grand Mean, Standard Deviation, Correlation Statistics were used with the help of M.S. Excel, and SPSS. For the presentation of the data, tables, charts, bar diagrams are used.

Results and Discussion

In order to carry out the research, On the basis of independent variable like gender, habitat and religion are discussed in detailed to analyse the satisfaction level from the sanitation services in general population of rural and urban area of Gorakhpur district of Uttar Pradesh.

Cleanliness is one of the most needs for a better life, which is good for the health in our lives, and protection of diseases. The central and state governments in the country jointly operate sanitation related services. Government of Uttar Pradesh is committed to provide better sanitation in the state. Gorakhpur district is one of the districts with a large population in Uttar Pradesh, therefore, the level of cleanliness in the district is more important. Although, the state government has tried to maintain the quality of these services in the district. However, the status of the sanitation services in the district are not very satisfactory. The state government maintains cleanliness in the district through sweepers in both rural and urban areas, however, sweepers are do not regularly operate in their registered area. Therefore, the cleanness quality is not very satisfactory for Gorakhpur district.

Table 1. Grand mean values of Sanitation Service Satisfaction score under varying conditions of Gender, Habitat and Religion

Gender	Habitat	Religion	Mean	Std. Deviation	N
Male	Rural	Hindu	6.3043	5.89866	46
		Minority	6.7333	4.65302	30
		Total	6.4737	5.41227	76
	Urban	Hindu	13.0000	2.94746	33
		Minority	13.9474	3.29096	19
		Total	13.3462	3.07988	52
	Total	Hindu	9.1013	5.88914	79
		Minority	9.5306	5.45475	49
		Total	9.2656	5.70879	128
Female	Rural	Hindu	6.2778	5.09316	54
		Minority	5.6000	2.78863	35
		Total	6.0112	4.32880	89
	Urban	Hindu	11.1707	3.62562	41
		Minority	10.0000	2.67467	27
		Total	10.7059	3.31013	68
	Total	Hindu	8.3895	5.11422	95
		Minority	7.5161	3.49586	62
		Total	8.0446	4.55218	157
Total	Rural	Hindu	6.2900	5.45004	100
		Minority	6.1231	3.77702	65
		Total	6.2242	4.84812	165
	Urban	Hindu	11.9865	3.44226	74
		Minority	11.6304	3.51099	46
		Total	11.8500	3.45840	120
	Total	Hindu	8.7126	5.47492	174

	Minority	8.4054	4.55747	111
	Total	8.5930	5.13096	285

Source : Computed by authors.

Table 2. Summary table of ANOVA for Sanitation Service as a function of Gender, Habitat, and religion

Source	Df	Mean Square	F	P
Gender	1	195.176	10.775	.001***
Habitat	1	2183.811	120.559	.000***
Religion	1	.904	.050	.823
Gender * Habitat	1	86.459	4.773	.030**
Gender * Religion	1	42.185	2.329	.128
Habitat * Religion	1	.003	.000	.990
Gender * Habitat * Religion	1	4.149	.229	.633
Error	277	18.114		
Total	285			

a. R Squared = .329 (Adjusted R Squared = .312)
Note: *** =Highly Significant, **= Significant at 5 per cent level

The mean and S.D. values of sanitation service are given in table 1 and mean values are revealed in figure 1 and 2. Table 1 and figure 1 shows that the female population (Grand Mean = 8.0446) are less satisfied with sanitation service as compared to male population (Grand Mean = 9.2656). It may be because, female population are directly interacting with sanitation service. Therefore, lack of female toilets, females population are daily suffering from these problems. Government facilities for female toilets are not sufficient in Gorakhpur city.

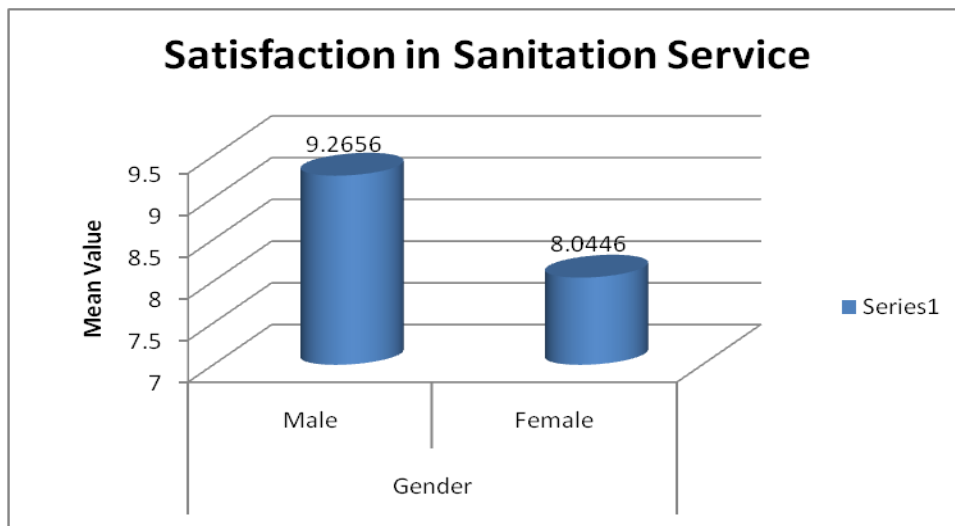


Figure 1. Mean values of Sanitation Service use score under varying conditions of Gender (Based on table 1).

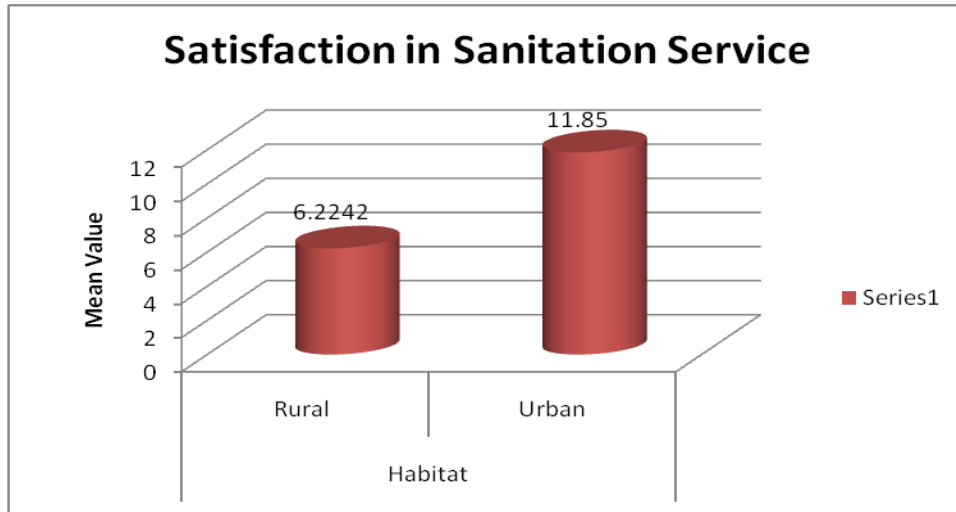


Figure 2. Mean values of Sanitation Service use score under varying conditions of Habitat (Based on table 1).

It is clear that in the table 1 and figure 2 urban population (Grand Mean = 11.8500) are satisfied with sanitation service of Gorakhpur district as compared to rural population (Grand Mean = 6.2242). This may be because; government employs are not fairly work in rural area. Sweepers are not work daily in rural area properly. Toilets available in rural area are not adequate for all population. This is one of the most factors for sanitation service in rural area. Now a days, there are many families are bound to go in open area for toilets due to lack of toilet in their houses. They are ready to build toilets with the help of government financial support, however, inspection officers are not support to them in good time. Household families tell these statements, when, we were surveyed in rural area of the district. Therefore, it is revealed from the results that the government services for sanitation in rural area are not very satisfactorily as compared to urban area of Gorakhpur district. Thus, they are less satisfied of sanitation service in rural area as compared to urban area of Gorakhpur district.

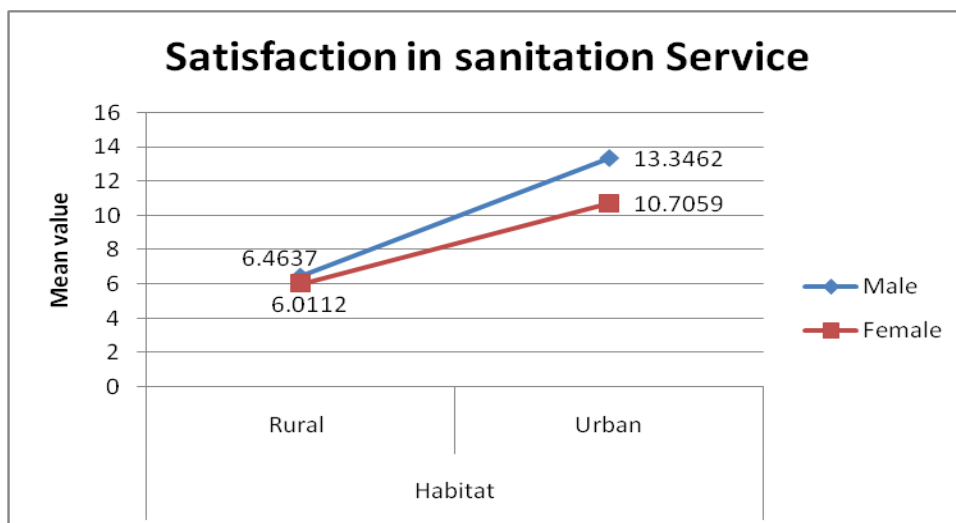


Figure 3. Mean values of Sanitation Service use score under varying conditions of interaction of Gender and Habitat (Based on table 1).

The summary table of ANOVA (Table 2) clearly shows that the main effect of gender ($P < 0.001$) and habitat ($P < 0.000$) are highly significant. The gender \times habitat interaction effect ($P < 0.030$) was also found to be significant. It is clear (figure 3) that urban male (Mean = 13.3462)

population are highly satisfied with sanitation service of Gorakhpur district as compared to rural male (Mean = 6.4737) population. This may be because; the working quality of government sanitation workers in rural areas is not very satisfactory. The male population in the rural area is directly interacting with the Toilet Survey Investigating Officers. He said that the behaviour of those officers is not appropriate for poor families, who are spending government assistance for the built toilets in Gorakhpur district. Urban female (Mean = 10.7059) population is more satisfied with service than rural female (Mean = 6.0112) population. This may be because; the female population in rural areas is directly connected with sanitation and toilets are needed during the rainy season. They are directly suffering from the problem of open defecation, whereas, the government campaigns for the provision of toilets for women in rural areas, but most of the female population is helpless to move to open area for the purpose of toilets. They, therefore, stated that the government, service or campaign for toilets in the rural area is a complete failure, so they are less satisfied with the sanitation service in the rural area provided by the state government of Gorakhpur district.

Conclusion

On the basis of above analysis, we have found that gender and habitat are highly significant for satisfaction in sanitation service in Gorakhpur district of Uttar Pradesh. However, the satisfaction from sanitation services with respect to religion are insignificant. Therefore, the male population are highly satisfied with sanitation service as compared to female population. However, satisfaction level in sanitation service in rural area is very poor as compared to the urban area. But, the satisfaction difference between male-female in rural area is lower as compared to urban area of the Gorakhpur district of Uttar Pradesh. Therefore, the findings of the study advises that a suitable mechanism must be require or available ones need to be more straighten to monitored on the sanitation services in rural areas of the district and for better sanitation services government should encourage a women's self-help group to participate in it.

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Conflict of Interest

The authors declares no conflict of interest

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Compliance with Ethical Standards

Not Applicable.

Ethical Approval

This article does not contain any studies with human participants or animals performed by any of the author.

References

Banerjee, A., Banik, N., & Dalmia, A. (2016). *Demand for household sanitation: The case of India* (No. 154). ARTNeT Working Paper Series. Hajra, G., & Dutta, A. (2017). The

- gap between construction and usage of toilets: An under-identified problem. *Arthaniti-Journal of Economic Theory and Practice*, 16(1-2), 1-26.
- Coffey, D., Gupta, A., Hathi, P., Khurana, N., Srivastav, N., Vyas, S., & Spears, D. (2014). Open defecation: evidence from a new survey in rural north India. *Economic and Political Weekly*, 43-55.
- Ghosh A., Cairncross S. (2014), The uneven progress of sanitation in India. *Water Sanitation Hyg. Dev* 4(1), pp. 15–22
- Hajra, G., & Dutta, A. (2017). The gap between construction and usage of toilets: An under-identified problem. *Arthaniti-Journal of Economic Theory and Practice*, 16(1-2), 1-26.
- Kaliski, J. (2015). *The Past, Present, and Future of Sanitation, with a Case Study of India: Where and Why We Should Give a Sh*t* (Doctoral dissertation, Amherst College).
- Mane, K. H. (2010). Commuters Satisfaction with Reference to Service Provide by MSRTC. *International Referred Research Journal*, 2(18).
- O'Reilly, K., & Louis, E. (2014). The toilet tripod: Understanding successful sanitation in rural India. *Health & place*, 29, 43-51.
- Shegokar, V. V., Ramteke, D. S., & Meshram, P. U. (2015). Design and treatability studies of low cost grey water treatment with respect to recycle and reuse in rural areas. *International Journal of Current Microbiology and Applied Sciences*, 4(8), 113-124.
- Tripathi V. & Kumar S. (2016). Do Government Interventions Moderate Psycho-social Factors and Sanitation Behaviour? Study of Rural Uttar Pradesh in India, *Int. J. Innov. Res. Sci. Eng. Technol*, 5, pp. 9768–9777.