Original Research Article

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20183069

Study to assess knowledge, perception and practices regarding Swachh Bharat Abhiyan among rural people of Nalgonda district in Telangana state

Kishore Yadav J.¹, Navya K. Naidu¹*, Sreeharshika D.¹, Harikrishna B.², Malhotra V.³

Department of Community Medicine, ¹Kamineni Institute of Medical Sciences, Narketpally, ²ESI Medical College, Sanathnagar, Hyderabad, Telangana, ³Adesh Medical College, Bathinda, Punjab, India

Received: 30 April 2018 Revised: 03 June 2018 Accepted: 04 June 2018

*Correspondence: Dr. Navya K. Naidu,

E-mail: navyakrishnanaidu@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Swachh Bharat Mission was launched by our Hon. Prime Minister, Shri Narendra Modi on October 2, 2014 with Mahatma Gandhi as the inspiration, to create a clean India of his dream by 2019, on his 150th birth anniversary. The basic objective is to create sanitation facilities for all and eliminate completely the unhealthy practice of open defecation. This study is conducted to assess knowledge, perception and practices regarding Swachh Bharat Abhiyan among rural people.

Methods: A cross-sectional study was conducted among 328 subjects of rural area with a pre-tested, semi structured questionnaire in order to assess their knowledge, perception and practices regarding Swachh Bharat Abhiyan. Data collected was analysed using SPSS software.

Results: In our study, it was found that 62.2% have heard about SBA and 82.84% of them have identified both the objectives of SBA. 81.8% of the literates felt that people must actively participate in SBA and this was statistically significant. 26.52% were defecating in the open field, 69.81% were using soap and water for hand washing after defecation and 34.75% of the subjects were disposing solid waste in community bins.

Conclusions: Though most of the people were having positive perception only 25.98% have participated in SBA activities and main source of information was found to be television and newspaper. The proportion of people disposing solid waste in community bins and using soap and water for hand washing was significantly higher among people who were aware about SBA.

Keywords: Swachh Bharat Abhiyan, Hygiene, Solid waste, Hand washing, Defecation

INTRODUCTION

Swachh Bharat Abhiyan is a national campaign launched by our Hon. Prime Minister, Shri Narendra Modi on October 2, 2014 to have clean streets, roads and infrastructure in the country. Sanitation has been identified as one of the important determinants of the health since ages. Father of the nation M.K Gandhi stated that "Sanitation is more important than Independence" and dreamt about clean India.1

In India, 53% of households or 600 million people defecate in open, out of which 69.3% belongs to rural areas and 18.6% belongs to urban areas. This unhygienic practice was one of the reasons for high prevalence of diarrhoeal diseases and helminthic diseases in the country. Addressing sanitation issue is the need of the hour which not only helps in reducing the burden of the communicable diseases like diarrhoea but also provides the scope for Gross Domestic Product growth, reduction in health care costs, and a source of employment. With this background, Swachh Bharat Abhiyan was launched with basic objective to create sanitation facilities for all and eliminate completely the unhealthy practice of open defecation.

The campaign of clean India movement is the biggest step taken ever as a cleanliness drive till date. By getting inspired from this Indian campaign, the Indo Nepal Doctors association has launched a campaign called "Swachh Bharat Nepal Swasth Bharat Nepal Asian on 3rd January in 2015. It was started from the Indo–Nepal border region, Sunauli Belihiya.³ According to the Prime Minister, clean India campaign can improve tourism and he stressed the need to provide world class levels of hygiene and cleanliness in India's top 50 tourist destinations.⁴ For the first time after independence Government of India has taken responsibility to achieve objective of national level 'cleanliness' working at local levels.⁵ The estimated cost of implementation of the Swachh Bharat Mission is Rs. 62,009 crore.⁶

It is a known fact that community participation is very much essential for the success of any health related campaigns. To ensure adequate participation, community must be sensitised about the mission objectives and its role in bringing the desired change. Government has been aggressively promoting Swachh Bharat Abhiyan through mass media to motivate people for their active participation. With this background, this study was undertaken to assess knowledge, perception and practices regarding Swachh Bharat Abhiyan (SBA) among rural people of Nalgonda district in Telangana state.

METHODS

Study area

Six villages under rural field practice area of KIMS, Narketpally.

Type of study

Cross-sectional study.

Study period

 1^{st} August $2017 - 1^{st}$ September 2017.

Study tool

A pre-tested structured questionnaire.

Study method

Face to face interview.

Sample size (n): 328

As per pilot study, 55% were aware of SBA and by using the formula

$$n = 4pq/l^2$$
 (where $p = 55$; $q = 45$; $l=10\%$ of $p = 5.5$) $n = 328$

Sampling method

Out of total 11 villages served by rural health centre of KIMS, Narketpally, 6 villages were selected for the study by simple random method. Proportionate sampling method was used to select number of subjects from each village. At village level, every 2nd house was visited till the desired sample was obtained and younger subject available was interviewed in the visited house.

Data analysis

Data entered in Microsoft Excel and analyzed using SPSS version 22.

Ethical clearance

Clearance from Institutional Ethics Committee, KIMS, Narketpally was obtained.

Inclusion criteria

Inclusion criteria were age above 15 years including males and females; physically and mentally sound people.

Exclusion criteria

Exclusion criteria were age below 15 years and above 80 year; ill and moribund patients; not willing to participate in the study.

RESULTS

Most (29.6%) of the subjects falls under 21-30 years age category and were females (56.1%). Majority of the participants were Hindus (96.6), literates (62.5%) and belongs to middle class (38.4%) (Table 1).

26.52% of the subjects prefers open field defecation and 34.75% of the subjects were disposing solid waste in community bins (Table 2).

204 (62.2%) out of 328 participants have heard about SBA and 169 (82.84%) of them were aware about objectives of SBA (Table 3).

85.78% felt that SBA is a useful programme for the community. Majority (77.45%) of the participants felt that people must actively participate in SBA activities. 22.05% of the subjects felt that SBA is propagated for political benefits (Table 4).

Only 25.98% of the subjects have participated in SBA activities. 59.31% of the participants would like to motivate people to participate in SBA activities (Table 5).

Television (84.31%) and newspaper (39.21%) was found to be the main source of information about SBA (Table 6)

Table 1: Distribution of study subjects according to Demographic variables (n=328).

Frequency (%)		
Age in years		
15–20	46 (14)	
21–30	97 (29.6)	
31–40	55 (16.8)	
41–50	58 (17.7)	
51–60	38 (11.6)	
61–80	34 (10.4)	
Sex		
Male	144 (43.9)	
Female	184 (56.1)	
Religion		
Hindu	317 (96.6)	
Muslim	2 (0.6)	
Christian	9 (2.7)	
Literacy status		
Illiterate 123 (37.5)		
Literate	205 (62.5)	
Occupation		
Government job	10 (3)	
Private job	11 (3.4)	
Self employed	56 (17.1)	
Labourer	103 (31.4)	
Student	45 (13.7)	
Home maker	76 (23.2)	
unemployed	13 (4)	
Retired	14 (4.2)	
Socio economic status (BG Pra	asad criteria)	
Upper	21 (6.4)	
Upper middle	57 (17.4)	
Middle	126 (38.4)	
Lower middle	97 (29.6)	
Lower	27 (8.2)	

Table 2: Distribution of study subjects according to the practice of defecation, hand washing and solid waste disposal (n=328).

Practices	Frequency (%)
Subjects preferring open field defecation	87 (26.52)
Subjects using both soap and water for hand washing after defecation	229 (69.81)
Number of houses with toilet facility	252 (76.82)
Subjects using community bin for solid waste disposal	114 (34.75)

Table 3: Distribution of study subjects according to knowledge about SBA.

	Frequency (%)
Heard about SBA (n=328)	
Yes	204 (62.2)
No	124 (37.8)
Total	328 (100)
Objectives of SBA (n=204)	
To eliminate open field defecation	25 (12.25)
To promote proper solid waste disposal	10 (4.9)
Both	169 (82.84)
Total	204 (100)

Table 4: Distribution of study subjects according to their perception regarding SBA (n=204).

Question	Number of subjects who answered Yes (%)
Do you think SBA is an useful programme for the community	175 (85.78)
Do you think all the people must actively participate in SBA activities	158 (77.45)
Do you think SBA is propagated for political benefit	45 (22.05)

Table 5: Distribution of study subjects according to their practices about SBA (n=204).

Question	Number of subjects who answered Yes (%)
Have you ever participated in SBA activities	53 (25.98)
Do you like to motivate people to participate in SBA activities	121 (59.31)

Table 6: Distribution of study subjects according to source of information regarding SBA (n=204).

Source of information regarding SBA	Frequency (%)
Television	172 (84.31)
Newspaper	80 (39.21)
Radio	11 (5.39)
Peers	13 (6.37)
Health workers	16 (7.84)
Local leaders	19 (9.31)

Majority of the males (75%) and literates (80.48%) have heard about SBA when compared with females and illiterates respectively. This association was found to be statistically significant (p=0.000) (Table 7).

Majority (81.8%) of the literates, compared to illiterates felt that people must actively participate in SBA and this was found to be statistically significant (p=0.005) (Table 8).

Active participation in SBA activities was significantly higher among males (33.3%) when compared with females (p=0.016) (Table 9).

Table 7: Association between sex and education status with awareness about SBA (n=328).

Variables	Have you heard about SBA		P value
variables	Yes (%)	No (%)	r value
Sex			
Male	108 (75)	36 (25)	0.000
Female	96 (52.17)	88 (47.83)	0.000
Education	•		
Illiterate	39 (31.70)	84 (68.3)	0.000
Literate	165 (80.48)	40 (19.52)	0.000

Table 8: Association between sex and education with perceptions about SBA (n=204).

Variables		Do you think SBA is an useful programme for the community		nunity P value
		Yes (%)	No (%)	P value
Sex	Male	91 (84.3)	17 (15.7)	0.305
Sex	Female	86 (89.6)	10 (10.4)	0.303
Education	Illiterate	33 (84.6)	6 (15.4)	0.609
Education	Literate	144 (87.3)	21(12.7)	
		Do you think all th	ne people must actively participate in	SBA activities
C	Male	81 (75)	27 (25)	0.405
Sex	Female	77 (80.2)	19 (19.8)	0.403
Education	Illiterate	23 (59)	16 (41)	0.005
Education	Literate	135 (81.8)	30 (18.2)	0.005
		Do you think SBA	is propagated for political benefit	
Corr	Male	26 (24.1)	82 (75.9)	0.502
Sex	Female	19 (19.8)	77 (80.2)	0.502
Education	Illiterate	8 (20.5)	31 (79.5)	1.000
Education Literate		37 (22.4)	128 (77.6)	1.000

Table 9: Association between sex and education status with participation in SBA activities (n=204).

Variables	Have you particip	Have you participated in SBA activities	
Variables	Yes (%)	No (%)	P value
Sex			
Male	36 (33.3)	72 (66.7)	0.016
Female	17 (17.7)	79 (82.3)	0.016
Education	•		•
Illiterate	8 (20.5)	31 (79.5)	0.425
Literate	45 (27.3)	120 (72.7)	0.423

Table 10: Association between sex and education with the practice of open field defecation (n=328).

Variables	Practice of open fi	eld defecation	P value
variables	Variables Yes (%)		
Sex			
Male	37 (25.7)	107 (74.3)	0.802
Female	50 (27.2)	134 (72.8)	
Education status		-	
Literates	57 (27.8)	148 (72.2)	0.521
Illiterates	30 (24.4)	93 (75.6)	0.321

Table 11: Association between awareness of SBA with mode of solid waste disposal and hand washing practice observed among study subjects (n=328).

Aware of SBA	Do you dispose soli	Do you dispose solid waste in community bins	
Aware of SDA	Yes (%)	No (%)	
Yes	95 (46.6)	109 (53.4)	0.000
No	19 (15.3)	105 (84.7)	0.000
	Do you use soap and water for hand washing after defecation		
Yes	170 (83.3)	34 (16.7)	0.000
No	59 (47.6)	65 (52.4)	0.000

No significant difference was observed between sex and education with the practice of open field defecation (Table 10).

The proportion of people disposing solid waste in community bins and using soap and water for hand washing was significantly higher among people who were aware about SBA (46.6% and 83.3% respectively and p=0.000) (Table 11).

DISCUSSION

In the current study, most (29.6%) of the subjects falls under 21-30 years age category and were females (56.1%). Majority of the participants were Hindus (96.6), literates (62.5%) and belongs to middle class (38.4%). In the similar study done by Karan et al in Jharkhand, it was observed that majority (39%) of the study subjects falls into 21-30 years age category and most (76%) of the subjects were females and 34% of the participants were literates.⁷

Knowledge about SBA

In our study, it was found that 204 (62.2%) out of 328 participants have heard about SBA. Swain P et al study which was conducted in Uttar Pradesh and Madhya Pradesh in the year 2015 stated that only 24% of the subjects were aware of SBA which was shockingly low.8 In contrast it was found that 93.62% of the participants were aware of SBA in Karan et al study.⁷ In the present study, out of 204 subjects who were aware about SBA, majority (82.84%) of them have identified both eliminating open field defecation and promoting proper solid waste disposal as objectives of SBA. Present study stated that 95% of the study subjects have identified eliminating open field defecation as one of the objective of SBA which is similar to the findings of Karan et al (93%). 87.7% of the subjects in our study knew that promoting proper solid waste disposal as one of the objectives of SBA, where this is only 62.3% according to Karan et al. Majority of the males (75%) and literates (80.48%) have heard about SBA when compared with females and illiterates respectively. This association was found to be statistically significant (p=0.000).

Perception regarding SBA

Present study found that 85.78% of the subjects felt that SBA is a useful programme for the community. Pradhan study stated that 76.08% of the subjects agreed that SBA helps in the development of the country and also 54.34% agreed that SBA has brought changes on the ground level. In another study conducted by Utpat et al in Pune, it was found that 80.43% subjects thought that there is need of SBA and 72.82% felt that SBA is effective. 10 These findings reflects the positive perception of the community towards SBA. Current study revealed that 77.45% of the study subjects thought that all the people must actively participate in SBA activities. 91.30% of the subjects wanted to participate in SBA according to Utpat et al study. 10 Our study found that majority (81.8%) of the literates, compared to illiterates felt that people must actively participate in SBA and this was found to be statistically significant (p=0.005). This could be due to the fact that literates were having better level of understanding regarding objectives of SBA and importance of environmental hygiene. Though majority of the participants had positive attitude, interestingly 22.05% felt that political benefits is other side of the coin for propagating SBA. Majority of the males and literates felt that SBA was also propagated for political benefits which could be attributed to their interest in current politics, however the association was not found to be statistically significant (p<0.05).

Practices regarding SBA

In our study, only 25.98% of the subjects have participated in SBA activities, however 59.31% of the participants would like to motivate people to participate in SBA activities. Contrast findings were observed in Karan et al report which showed that 94% subjects have participated in SBA. Current study found that active participation in SBA activities was significantly higher among males (33.3%) when compared with females (p=0.016).

Source of information regarding SBA

Television (84.31%) and newspaper (39.21%) was found to be the main source of information about SBA in the current study. Pradhan study stated that most of the

respondents get information and awareness about SBA mostly from Newspapers (54.34%) then from Television (47.82%).

Practice of defecation, hand washing and solid waste disposal

Present study found that 26.52% of the subjects were defecating in the open field which goes along with the findings of Anuradha et al (33.1%), Kuberan et al (17%). In a study conducted by Jeratagi et al in Karnataka state, it was found that open air defecation was observed in 99% of the study subjects. ¹³ Rah et al study conducted in Maharashtra revealed that 74% of the participants were practicing open air defecation. ¹⁴ These findings indicates that it is the need of the hour to sensitise rural people to stop open air defecation. Our study showed no significant difference between sex and education status of the subjects with the practice of open field defecation.

Current study stated that 69.81% of the subjects were using soap and water for hand washing after defecation. Contrasting findings were observed in the studies conducted by Kuberan et al (83%) and Jeratagi et al (8.2%). The proportion of people using soap and water for hand washing was significantly higher among people who were aware about SBA (83.3%) (p=0.000). This reflects the importance of SBA in promoting personal and environmental hygiene. In the present study it was found that 76.82% of the houses were having toilet facility which was on par with the findings of Anuradha et al (62.5%), Kuberan et al (75%) study. In Jeratagi et al study done in Karnataka revealed shocking results that only 0.8% of the households were having toilet facility.

In the present study it was found that only 34.75% of the subjects were disposing solid waste in community bins. Yoada et al in their study reported that 61% of the subjects were utilising community bins. ¹⁵ In our study the proportion of people disposing solid waste in community bins was significantly higher among people who were aware about SBA (46.6% and 83.3% respectively and p=0.000) which indicates the importance of SBA in promoting sanitary methods of solid waste disposal.

CONCLUSION

The present study found that majority of the subjects were aware of SBA and its objectives and most of them were having positive attitude and perception towards SBA. Though most of the people were having positive perception only 25.98% have participated in SBA activities and the main source of information was found to be television and newspaper. 26.52% of the subjects preferred open field defecation and 34.75% of the subjects were disposing solid waste in community bins. The proportion of people disposing solid waste in community bins and using soap and water for hand

washing was significantly higher among people who were aware about SBA.

ACKNOWLEDGEMENTS

The authors were grateful to all the participants of the study. We thank undergraduates for helping us in data collection and sincere thanks to entomologist Mr. Kranthi Prakash for his constant motivation and support.

Funding: No funding sources
Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

REFERENCES

- 1. Alka. Swachh Bharat Mission- Need, Objective and Impact. Int J Res Manag Pharm. 2017;6(5):24-8.
- 2. Veerapu N, Subramaniyan P, Praveenkumar BA, Arun G. Promotion of sanitation and hygiene in a rural area of South India: A community-based study. J Family Med Prim Care. 2016;5(3):587–92.
- 3. Paramjyothi BB, Pavani K, Subhashini N, Indira S. A study to assess the level of knowledge on Swatch Bharat among student nurses at Narayana College of Nursing, Nellore. Int J Appl Res. 2017;3(7):203-5.
- 4. Subbarao PV, Somasekhar S. Swachh Bharat: Issues and Concerns. Int J Acad Res. 2015;2(4):90-3.
- Thakkar, Priyanka. Swachh Bharat [Clean India] Mission–An Analytical study. Rex J. 2015;3(2):168-73.
- Ministry of Urban Development, Government of India. Guideline for Swachh Bharat Mission-Urban, 2017. Available at: http://www.swachhbharaturban. in:8080/sbm/content/writereaddata/SBM_Gui deline.pdf. Accessed on 20 April 2018.
- 7. Karan RK. Report on Impact Assessment of Swachh Bharat Abhiyan Project Implemented by Aarogya Foundation India in Blocks of Jharkhand State. 2015: 16-17.
- 8. Swain P, Pathela S. Status of sanitation and hygiene practices in the context of "Swachh Bharat Abhiyan" in two districts of India. Int J Community Med Public Health. 2016;3:3140-6.
- 9. Pradhan P. Swachh Bharat Abhiyan and the Indian Media. J Content, Community Communication. 2017;5:43-51.
- Utpat NJ, Bogam RR. Effect of 'SMART health education model' on knowledge and attitudes of school students in rural area about 'Swachh Bharat Abhiyan of India' and sanitation practices. Int J Community Med Public Health. 2017;4:582-7.
- 11. Anuradha R, Dutta R, Raja JD, Lawrence D, Timsi J, Sivaprakasam P. Role of community in swachh bharat mission. their knowledge, attitude and practices of sanitary latrine usage in rural areas, Tamil Nadu. Indian J Community Med. 2017;42:107-10.

- 12. Kuberan A, Singh AK, Kasav JB, Prasad S, Surapaneni KM, Upadhyay V. Water and sanitation hygiene knowledge, attitude, and practices among household members living in rural setting of India. J Nat Sci Biol Med. 2015;6:69–74.
- 13. Jeratagi S, Kumar Y, Mallapur MD. Awareness about sanitary toilets in a rural area of north Karnataka, India: a cross sectional study. Int J Community Med Public Health. 2017;4:363-9.
- 14. Rah JH, Cronin AA, Badgaiyan B. Household sanitation and personal hygiene practices are associated with child stunting in rural India: a cross-sectional analysis of surveys. BMJ Open. 2015;5(2):1-10
- 15. Yoada RM, Chirawurah D, Adongo PB. Domestic waste disposal practice and perceptions of private sector waste management in urban Accra. BMC Public Health. 2014;14:697-707.

Cite this article as: Kishore YJ, Naidu NK, Sreeharshika D, Harikrishna B, Malhotra V. Study to assess knowledge, perception and practices regarding Swachh Bharat Abhiyan among rural people of Nalgonda district in Telangana state. Int J Community Med Public Health 2018;5:3399-405.