



## CROSS SECTIONAL COMPARATIVE STUDY OF AWARENESS OF TUBERCULOSIS AMONG URBAN AND RURAL SLUM POPULATION

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### ABSTRACT

The cross sectional comparative study was aimed at assessing the awareness of population from urban and rural locality. AIM:- To Study Awareness of Tuberculosis among the urban and rural population in Navi Mumbai. OBJECTIVES:-1 To compare the level of awareness about knowledge of disease amongst urban and rural population. 2 To compare level of awareness about completion of full course about TB treatment, types of tuberculosis, spread of disease etc among urban and rural population. Total of 200 patients from Urban and Rural area were included. Regarding spread of TB through droplet; awareness was more in urban population than in rural by 14.66%. Our study showed that a 57.14 % of rural and 42.86 % of urban population were aware of extra pulmonary involvement in TB. 59.57% of the rural population & 54.46% of urban population has perception that the treatment should continue for 9 months and 6 months respectively.

**KEYWORDS :** tuberculosis, rural population, urban population

### INTRODUCTION

Tuberculosis has turned out to be one of the major health issues worldwide and more so in India, pertaining to large number of population, overcrowding, poverty, lack of awareness of the disease and seriousness of completion of treatment. According to the WHO Global TB report 2017, the estimated incidence of TB in India in 2015 was around 2.8 million (27%) out of an estimated global incidence of 10.4 million. The estimated number of TB deaths in India (excluding those in HIV-positive people, which are classified as death due to HIV/AIDS in ICD-10) is 478000 in 2017(36/100000 population).and 483000 (37/100000 population) in 2016. In the 2017 global TB report, the estimate for 2017 was 220000 (17 per 100000 population).<sup>1,2</sup>

Despite the efforts, funds, manpower and logistics invested and spent on Revised National Tuberculosis Programme and other information dissemination strategies, the problem of tuberculosis has not been adequately brought under control. It cannot be done so unless the people across the country are aware of the cause, the mode of spread, treatment and prevention of tuberculosis.<sup>3</sup>

Hence the study was aimed at assessing the awareness of population regarding Tuberculosis attending urban health center and primary health center. Such comparative study among rural and urban population regarding knowledge of tuberculosis was never done before. Hence we conducted the study.

### AIM:-

To Study the awareness of Tuberculosis among the urban and rural population.

### OBJECTIVES:-

- 1 To study the demographic determinants of the study population.
2. To compare the level of awareness about knowledge of disease in general, knowledge of spread of disease, types of tuberculosis, duration of treatment in specific amongst urban and rural population.

### METHODOLOGY

The cross sectional study was conducted amongst urban and rural population.

Total of 200 patients from Urban Health Centre and Rural Health Centre were included for this study. The nature of study

was explained to the participants. Informed consent was taken from 200 people before conducting the study.

### Inclusion criteria:

1. All patients attending OPD in UHC and PHC and relatives accompanying them.
2. Participant who were willingly gave consent for the survey.

Each participant was approached individually and all study participants were assured of confidentiality.

### Exclusion criteria:

1. Participants who did not give consent for study were excluded from the study.
2. Patient having active TB as well as history of TB were excluded.

A pretested semi-structured, validated questionnaire comprising of questions regarding the knowledge about the disease, perception, mode of spread, complications were used. Data was entered and analysed using Microsoft excel spread sheet and SPSS version:20.0.0.

### RESULTS AND DISCUSSION

In our study, we selected 100 participants each from rural and urban area for the knowledge, attitude and awareness of tuberculosis in the community.

### Demography of the study population:

We found that total 54 participants were from 20 to 29 years age group. Out of which 51.85% (28) were from rural area and 48.14% (26) were from urban area.

In the age group of 30-39 years, total 53 participants were included in the study. Out of which, 41.50%(22) were from rural area and 58.50%(31) were from urban area. It shows that maximum, that is, 53% participants were from 20-40 years of age.

The sample size in rural (PHC) consisted of 59.82% females and 36.14% males. Whereas urban (UHC) consisted of 40.18% females and 63.86% males.

The participants were of various occupations with maximum consisting of housewives (55.55%) in urban, and skilled workers (60%) in rural. Literates and students were more aware of various aspects of tuberculosis.

**Table – 1: Knowledge of TB Spread**

Knowledge of TB Spread	Rural		Urban		Total		Chi square Test	P-value	Significant at 5% level
	No.	%	No.	%	No.	%			
Air	67	42.67	90	57.33	157	100	19.399	<0.001	Yes
Water/Food	10	58.82	7	41.18	17	100			
Blood/body Fluids	21	87.50	3	12.50	24	100			
Mosquito	2	100	0	0	2	100			
Total	100		100		200				

Table 1 shows the knowledge of spread of tuberculosis. It shows that, 57.33% (90) participants from urban area chose the correct way of transmission of tuberculosis, that is, air compared to 42.67% (67) participants from rural area. The table shows that, more number of participants from rural area think that tuberculosis transmits via water/food, body fluids as well as mosquitoes than via air. Whereas more number of participants from urban area think that TB spread via air. Chi square shows that there is statistically significant difference in knowledge of spread of TB between urban and rural population with urban population being more aware by 14.66%.

A study conducted by Amgain et al in Jutpani VDC of Chitwan district had similar findings.<sup>4</sup>

**Table – 2: Knowledge of Types of TB**

Knowledge of Types of TB	Rural		Urban		Total		Chi square Test	P-value	Significant at 5% level
	No.	%	No.	%	No.	%			
Pulmonary TB	64	46.70	73	53.30	137	100	1.877	0.171	No
Extra pulmonary TB	36	57.14	27	42.86	63	100			

Our study showed that, in Rural, 46.7% participants were aware of only pulmonary TB compared to 53.33% participants in urban study population. 57.14 % of rural and 42.86 % of urban participants were aware of extra pulmonary involvement of the disease. Regarding extra pulmonary tuberculosis, awareness was more in rural study population than urban study population.

Vijaya Krishnan et al found out that though the population is aware of the disease, the knowledge about the disease was unsatisfactory.<sup>3</sup> Lee also had similar findings in his study of types of tuberculosis in Seoul.<sup>5</sup>

**Table – 3: Knowledge of Duration of TB Treatment**

Knowledge of Duration of TB Treatment	Rural		Urban		Total		Test		
	No.	%	No.	%	No.	%	Chi square Test	P-value	Significant at 5% level
3 months	26	50.00	26	50.00	52	100	2.525	0.283	No
6 months	46	45.54	55	54.46	101	100			
9 months	28	59.57	19	40.50	47	100			
Total	100		100		200				

Our study shows that 59.57% of the rural population has perception that the treatment should be continued for 9 months whereas, 54.46% of urban population told us that the treatment should be continued for 6 months. This shows the need for imparting correct knowledge among general

population regarding duration of treatment. Our study revealed that awareness regarding course of TB treatment (6 months) was more in Urban (UHC) as compared to Rural (PHC) by 8.92%. Awareness regarding the duration of treatment of 6 months was less in rural population by 8.92% which shows that further steps regarding dispersion of information is required. Out of 200 participants, 25% (52) thought it was just for 3 months and their attitude towards domiciliary treatment was unfavorable.

A similar study conducted among TB patients DOTS programme in Nepal about 82 % were aware of TB treatment to be 8 months or more.<sup>6</sup>

## CONCLUSION

The burden of tuberculosis is high in developing countries and India happens to be one of the significant of the world's tuberculosis burden. It is present in urban as well as in rural population. Owing to this, we conducted our comparative study of knowledge of tuberculosis among urban and rural population. We found out that, 54 participants were from 20 to 29 years age group. Out of which 51.85% (28) were from rural area and 48.14% (26) were from urban area. Total 53 participants were from the age group of 30-39 years. Out of which, 41.50%(22) were from rural area and 58.50%(31) were from urban area. It shows that more than half of population (53% participants) were from 20-40 years of age. In the rural population, 59.82% female participants and 36.14% male participants took part in the study. Whereas, the study population consists of 40.18% females and 63.86% male participants from urban area. As per as the occupation of the study population is concerned, 55% were the housewives from urban area and 60% skilled workers from rural area participated in the study. It shows that, 57.33% (90) participants from urban area chose the correct way of transmission of tuberculosis, that is, air compared to 42.67% (67) participants from rural area. Chi square shows that there is statistically significant difference in knowledge of spread of TB between urban and rural population with urban population being more aware by 14.66%. Our study shows that 59.57% of the rural population has perception that the treatment should be continued for 9 months whereas, 54.46% of urban population told us that the treatment should be continued for 6 months. Information dissemination strategies specifically targeting the people living in UHC and PHC population should be devised and implemented for the betterment of knowledge and awareness regarding tuberculosis.

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## REFERENCES

- Global Tuberculosis Report 2017 WHO. [http://www.who.int/tb/publications/global\\_report/en/](http://www.who.int/tb/publications/global_report/en/)
- Bhushan Kumar, Sheetanshu Kumar. Pediatric cutaneous tuberculosis: Indian scenario Review Article 2018 vol. 19 issue 3 pgs 202-211
- Vijaya Krishnan G, Shweta Boba, Vishal Venugopal. A study on awareness of TB among the patients attending a rural health centre in Tamil Nadu, India, International Journal of Community Medicine and Public Health 2017 Apr; 4(4):1195-1198
- Kapil Amgain, Mahendra Maharjan, Dillee Prasad Paudel et al, Awareness and attitude of pulmonary tuberculosis patients towards tuberculosis: A cross sectional study from Chitwan district of Nepal. 2014 vol. 3 issue 4 pgs 216-220
- Ji Yeone Lee, diagnosis and treatment of extra pulmonary TB, the international academy of TB and respiratory disease, Tuberc Respir Dis (Seoul). 2015 Apr; 78(2): 47-55.
- CP Bhatt, AB Bhatt, B Shrestha Tuberculosis patients opinion for directly observed treatment short-course (DOTS) Programme of Nepal SAARCJ. Tuber. Lung Dis. HIV/AIDS 2009 VI (1) 39-45. <https://www.nepjol.info/index.php/SAARCTB/article/view/3063>