

Awareness and Knowledge of Tuberculosis amongst Rural and Urban Population: A Cross Sectional Study

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ABSTRACT

Background: Tuberculosis is the most dreaded and common global health issue after HIV and is the leading cause of death. Adequate and timely knowledge about tuberculosis is associated with positive attitude towards healthcare. India accounts for 20% of the total world tuberculosis cases and every year nearly 1.8 million new tuberculosis cases develop here, out of which some are infectious and some are non-infectious. The aim of present study is to evaluate the awareness and knowledge about Tuberculosis amongst urban and rural population and to evaluate the differences in both.

Materials and Methods: The cross sectional study was conducted in Department of Community Medicine, Major S.D. Singh Medical College & Hospital, Farrukhabad, Uttar Pradesh (India) which enrolled 260 subjects. All the patients were required to fill a questionnaire which contained information about their socioeconomic data like age, sex literacy level, and residential status, religion and monthly income. The questionnaire had questions regarding the symptoms of Tuberculosis, its mode of transmission and various methods to prevent its spread. This questionnaire was in patient's vernacular language and helped us in establishing the attitude of the people toward Tuberculosis. All the data obtained from the survey was arranged in Microsoft excel and analysed by SPSS software.

Results: All the participants were aged between 21-62 years of age. The mean age of participants was 42.6 +/- 12.2 years. Only 36.9% of urban population and 31.5% of rural population knew that tuberculosis is associated with cough. There was a significant difference in the awareness about symptoms

between rural and urban population when cough and haemoptysis were concerned. There were 21.5% of urban population and 13% of rural population who had idea that it could be transmitted by droplets in air. Approximately 36.2% of urban population and 27.6% of rural population thought that it was transmitted by close contact. There were 15.4% of urban population and 28.5% of rural population who had no idea about prevention of tuberculosis. Approximately 10% of urban population and 6.9% of rural population knew that it could be prevented by covering mouth.

Conclusion: Our study shows that knowledge and awareness about tuberculosis is not upto the mark with rural population still being unaware of various truths.

Keywords: Infectious, Rural, Tuberculosis, Truths, Urban.

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INTRODUCTION

Awareness and knowledge about any health condition or disease is important for improving the quality of life and optimizing patient's health.¹ Tuberculosis is the most dreaded and common global health issue after HIV and is the leading cause of death.² Adequate and timely knowledge about tuberculosis is associated with positive attitude towards healthcare.³ Tuberculosis is the third leading cause of mortality in developing countries after HIV and Ischemic heart disease.⁴ According to a survey and global TUBERCULOSIS report, there were approximately 8.6 million newly diagnosed cases in 2012 and 1.3 million deaths due to tuberculosis. Even though it is treatable condition, it is the second

leading cause of death. This can be mainly attributed to lack of awareness and knowledge. According to surveys done in the past, there is the evidence that if we improve the knowledge and awareness about tuberculosis amongst the population then it can lead to significant decrease in the Tuberculosis of new cases.⁵

India accounts for 20% of the total world tuberculosis cases and every year nearly 1.8 million new tuberculosis cases develop here, out of which some are infectious and some are non-infectious.⁶ Majority of deaths and tuberculosis occurrences are within the age group of 15-16 years and above 60 years. This younger age group is the future of Indian development and therefore tuberculosis acts

as a hindrance in socioeconomic development of the nation. The major control protocol for tuberculosis is detection in early stages and DOTS regimen. A person can only recognize and detect Tuberculosis if he/ she are aware about the signs and symptoms and if he/she seeks medical advice at the right time. Due to this reason various Tuberculosis awareness programmes have been initiated in the country at rural and urban levels. Awareness amongst younger age group is of particular importance specially in combating the disease.⁷

The aim of present study is to evaluate the awareness and knowledge about Tuberculosis amongst urban and rural population and to evaluate the differences in both.

MATERIALS AND METHODS

The study was conducted in Department of Community Medicine, Major S.D. Singh Medical College & Hospital, Farrukhabad, Uttar Pradesh (India). This cross sectional study enrolled 260 people residing in urban and rural area of the city. Health centres of both rural and urban areas were involved which provided both

preventive and curative treatment. This study was carried out for 3 month duration and individuals aged more than 18 years were enrolled.

All the patients were required to fill a questionnaire which contained information about their socioeconomic data like age, sex literacy level, and residential status, religion and monthly income. The questionnaire had questions regarding the symptoms of Tuberculosis, its mode of transmission and various methods to prevent its spread. This questionnaire was in patient's vernacular language and helped us in establishing the attitude of the people toward Tuberculosis.

Ethical clearance: The survey was approved by the concerned ethical committee and the local authorities. None of the subjects was forced to participate in the survey; it was voluntarily that the people participated.

All the data obtained from the survey was arranged in Microsoft excel and analysed by SPSS software. Z test was applied as the test of significance and p value of less than 0.05 was considered significant.

Table 1: Awareness about symptoms amongst rural and urban population

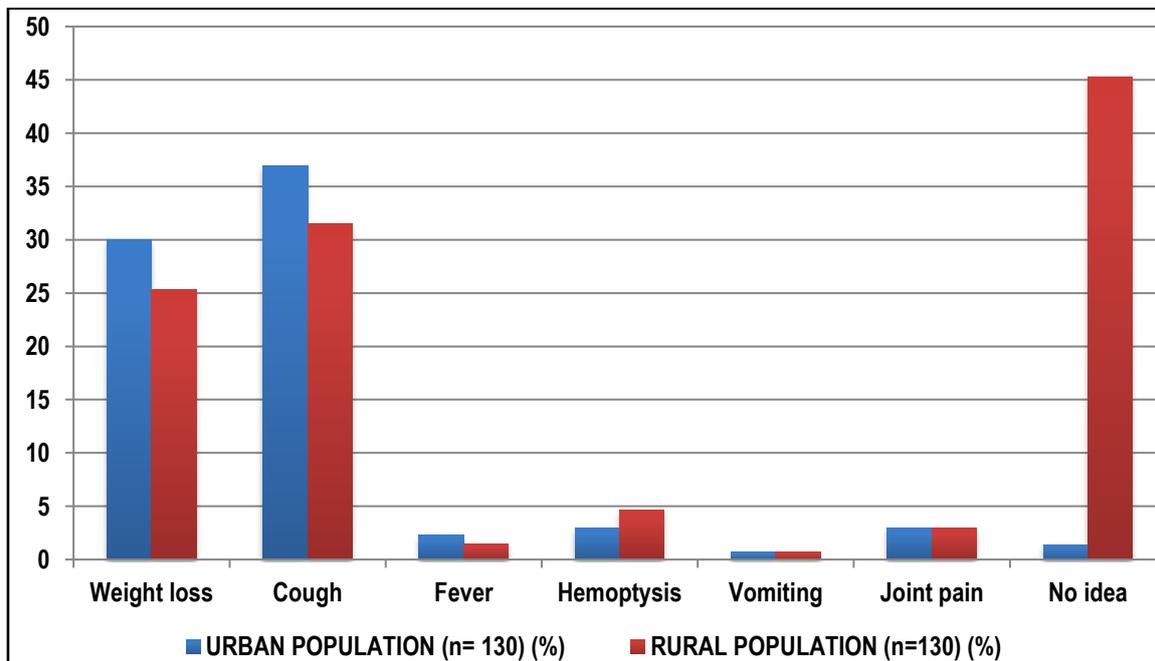
ASSOCIATED SYMPTOMS	URBAN POPULATION (n= 130) (%)	RURAL POPULATION (n=130) (%)	P VALUE
Weight loss	39(30%)	33(25.3%)	>0.05
Cough	48(36.9%)	41(31.5%)	<0.05
Fever	3(2.3%)	2(1.5%)	>0.05
Hemoptysis	29(22.3%)	19(14.6%)	<0.05
Vomiting	1(0.7%)	1(0.7%)	>0.05
Joint pain	4(3%)	4(3%)	>0.05
No idea	24(18.4%)	59(45.3%)	<0.05

Table 2: Awareness about modes of transmission

MODES OF TRANSMISSION	URBAN POPULATION (n= 130) (%)	RURAL POPULATION (n=130) (%)	P VALUE
Air	28(21.5%)	17(13%)	<0.05
Close contact	47(36.2%)	36(27.6%)	<0.05
Smoking	6(4.6%)	3(2.3%)	>0.05
Food	1(0.7%)	2(1.5%)	>0.05
Water	13(10%)	11(8.4%)	>0.05
Witchcraft	1(0.7%)	2(1.5%)	>0.05
No idea	25(19.2%)	54(41.5%)	<0.05

Table 3: Awareness about modes of prevention

MODES OF PREVENTION	URBAN POPULATION (n= 130) (%)	RURAL POPULATION (n=130) (%)	P VALUE
Avoiding contact	36(28%)	20(15.4%)	<0.05
Covering of mouth	13(10%)	9(6.9%)	<0.05
Ventilation	18(13.8%)	11(8.5%)	<0.05
Immunization	4(3.1%)	4(3.1%)	>0.05
Good food	7(5.4%)	6(4.6%)	>0.05
No idea	20(15.4%)	37(28.5%)	<0.05



Graph 1: Awareness about symptoms amongst rural and urban population

RESULTS

In the present cross sectional study a total 260 subjects were enrolled. All the participants were aged between 21-62 years of age. The mean age of participants was 42.6 +/- 12.2 years. In this study there were 146 males and 134 females.

Awareness About Tuberculosis

Table 1 illustrates the knowledge about symptoms associated with Tuberculosis amongst rural and urban population. There were 30% of urban population and 25.3% of rural population who knew that weight loss was one of the symptoms of tuberculosis. Only 36.9% of urban population and 31.5% of rural population knew that tuberculosis is associated with cough. Haemoptysis i.e. coughing out blood was known as a symptom only amongst 22.3% of urban population and 14.6% of rural population. Only 2.3% of urban population and 1.5% of rural population were aware about fever occurring during tuberculosis. There was a vast majority of rural population (45.3%) and some urban population (18.4%) who had no idea about the symptoms associated with tuberculosis. There was a significant difference in the awareness about symptoms between rural and urban population when cough and haemoptysis were concerned.

Table 2 demonstrates the awareness about modes of transmission of Tuberculosis. There were 21.5% of urban population and 13% of rural population who had idea that it could be transmitted by droplets in air. Approximately 36.2% of urban population and 27.6% of rural population thought that it was transmitted by close contact. There were still a few people both in urban (0.7%) and rural area (1.5%) who thought that it was transmitted by witchcraft. Water and food as a source of transmission was known by 10% and 0.7% of the urban population respectively. There were 1.5% and 8.4% of rural population who thought that Tuberculosis was transmitted by food and water. There was a significant difference in the awareness of modes of transmission as far as air and close contact were concerned.

Table 3 shows knowledge about modes of prevention amongst rural and urban population. There were 15.4% of urban population

and 28.5% of rural population who had no idea about prevention of tuberculosis. Approximately 10% of urban population and 6.9% of rural population knew that it could be prevented by covering mouth. Immunization as a mode of prevention was known by 3.1% of rural and urban population. Properly ventilated area could prevent Tuberculosis was known by 13.8% of urban population and 8.5% of rural population. There was a significant difference in knowledge about ventilation, covering mouth and avoiding contact as modes of prevention amongst rural and urban population.

DISCUSSION

Tuberculosis is an infectious disease that primarily affects lungs and various other organs of the body. It is caused by mycobacterium tuberculosis. It is known as pulmonary tuberculosis if it affects lungs and extrapulmonary tuberculosis if it affects any other organ. The major route of spread of Tuberculosis is by aerosol.⁸ Various measures have been taken at the state and centre level to prevent and control the disease. Despite of this, tuberculosis is increasing at an alarming rate and various deaths have been associated with it. Approximately one third of the world's population has tubercular infection.⁹ India ranks highest in the world regarding the number of tubercular cases.¹⁰ The key to controlling any disease is complete and thorough knowledge and awareness about the condition.

In a study conducted by Yadav et al¹¹ on awareness of Tuberculosis, which showed that literate population had higher level of awareness. In a similar study conducted in Delhi, there were 95% of the participants who were aware of tuberculosis.¹² In our study 22.3% of population was aware about haemoptysis, 36.9% population had idea about cough, 30% knew that weight loss is the presenting symptoms of tuberculosis. In a study conducted at Bangladesh, a higher percentage of population had idea about these presenting symptoms.¹³ In a study conducted by R Malhotra et al¹⁴, fever, weight loss, cough and blood in sputum were known by population residing in rural area.

In our study, 63.8% of the population had idea that tuberculosis is spread by contact. In a study conducted by Madhu V et al¹⁵,

96.6% of the patients knew that tuberculosis is a communicable disease and that it is spread by contact. In a study conducted in Bangladesh¹³, 23% of population didn't know that it spread by aerosols. Air as a medium of infection was known by 21.5% of urban population and by 13% of rural population in our study. In a study conducted by K. Amgain et al¹⁶ in Chitwan district of Nepal, only 5.3% of the subjects knew air was mode of transmission of tuberculosis.

In our study, only 3.1% of population knew that tuberculosis could be prevented by BCG vaccine. This percentage was lower compared to a study conducted by Madhu V et al.¹⁵ In their study, 9.1% of population knew about BCG vaccine. There was a vast majority (81.5%) of population in a study K. Amgain¹⁶ who knew that immunization could prevent tuberculosis. There were few limitations of our study. The foremost being that sample size was quite small. A larger sample size needs to be addressed to have an exact idea about knowledge and awareness. The second being that some of the rural population was illiterate so could not participate in the study.

CONCLUSION

Our study shows that knowledge and awareness about tuberculosis is not upto the mark with rural population still being unaware of various truths. There still exists a portion of population who believes in taboos associated with tuberculosis. Various steps need to be taken like health programmes, awareness camps to increase their knowledge and prevent this curable disease.

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