# Socio demographic profile of tuberculosis patients under RNTCP in district Bareilly

**Ratnesh[1,*], AK Singh[2], SB Gupta[3]**

[1]PG Student, [2]Associate Professor, [3]Professor & HOD, Dept. of Community Medicine, SRMS Institute of Medical Sciences, Bareilly, Uttar Pradesh

**\*Corresponding Author:**
Email: ratnesh2806@gmail.com

## Abstract

**Background**: Tuberculosis (TB) is a major global health problem and ranks the second leading cause of death from an infectious disease worldwide. India is the highest TB burden country accounting for more than one fifth of the global burden of tuberculosis. It is caused by Mycobacterium tuberculosis.

**Objective**: The objective of the current study was to find out about the socio-demographic profile of the TB patients registered under RNTCP in district Bareilly.

**Material and Methods**: A cross-sectional study was done on TB patients registered during 1st April 2014 to 31st March 2016 under RNTCP for DOTS in Bareilly. Purposive sampling was done, 10 DMCs were selected in district Bareilly in which a total of 2010 TB patients were interviewed.

**Result and Conclusion**: In the present cross-sectional study, total 2010 TB patients were interviewed, in which maximum number i.e. 489 (24.3%) of the study subjects belonged to the age group of less than 20 years, 1119 (55.7%) were male, 1050 (55.9%) were from urban population, Hindu by religion 1123 (55.9%), OBC caste 1403 (69.8%), married 1358 (67.6%), educated up to primary class 704 (35%), unskilled worker 769 (38.3%) and 777 (38.7%) were from nuclear family.

**Keywords**: Tuberculosis, RNTCP, DOTS.

## Introduction

TB has coevolved with humans for many thousands of years and perhaps for several million years.

It is caused by Mycobacterium tuberculosis. It primarily affects lungs and causes Pulmonary TB (PTB). It can also affect intestine, meninges, bones and joints, lymph glands, skin and other tissues. It is usually chronic with cardinal features like persistent cough with or without expectoration, intermittent fever, loss of appetite, weight loss, chest pain and haemoptysis.[1] TB is transmitted mainly by droplet nuclei generated by sputum-positive patients with PTB.[2]

Tuberculosis (TB) is a major global health problem and ranks the second leading cause of death from an infectious disease worldwide. India is the highest TB burden country accounting for more than one fifth of the global burden of tuberculosis.

In India under RNTCP, TB prevalence per lakh population has reduced from 465 in year 1990 to 195 in 2013. TB incidence per lakh population has reduced from 216 in year 1990 to 167 in 2014. TB mortality per lakh population has reduced from 38 in year 1990 to 17 in 2012.[3]

The objective of the current study was to find out about the socio demographic profile of the TB patients registered under RNTCP in district Bareilly.

## Material and Methods

**Study Design**: Cross Sectional Study

**Study Period**: It was of one year from 1st August 2015 to 31st July 2016.

**Study Tool**: A predesigned, pretested semi-structured questionnaire was prepared in English language; however questions were asked into local language at the time of interview.

**Study Area**: Study was done in district Bareilly.

**Study Population**: TB patients registered under RNTCP for DOTS in Bareilly district for treatment from 1st April 2014 to 31st March 2016. Patients who were not willing to give consent or moved out of the geographical area or were not available for interview on two subsequent visits were excluded from the study.

**Sample Size**: There are 45 DMCs in district Bareilly. Out of these DMCs, 10 DMCs were selected randomly by using lottery method. Interview of the TB patients registered in the DMCs was taken at the health facility or by making home visits for the selected patients who were not able to come to health facility. A total of 2010 TB patients were interviewed during the study period.
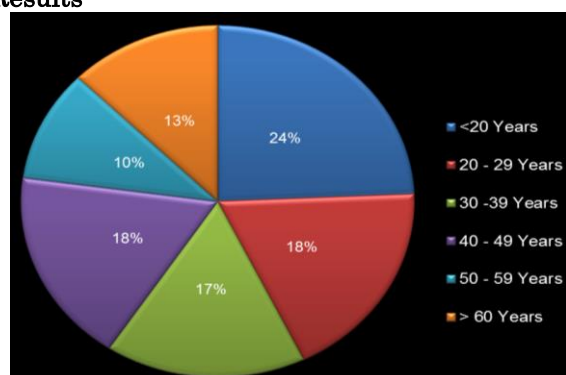
## Results



**Fig. 1: Agewise distribution of study participants**

Fig. 1 shows the socio-demographic characteristics of 2010 subjects who participated in the study in which the age distribution revealed that maximum subjects (24.3%) were in the age group of < 20 years followed by 18.5% belonging to 20 – 29 years, 17.9% belonging to 40 – 49 years, 16.5% belonging to 30 – 39 years, 12.6% belonging to > 60 years and 10.2% belonging to 50 – 59 years age group.
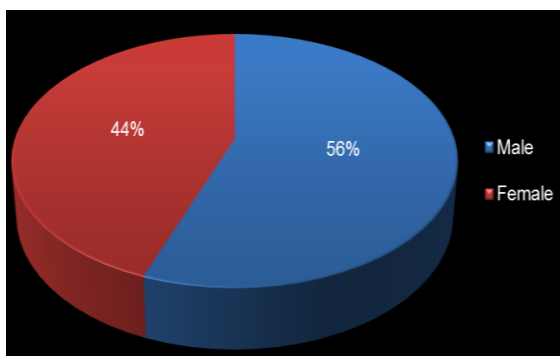


**Fig. 2: Genderwise distribution of study subjects**

Male cases contributed 55.7% of the study population while 33.6% were females. More than half of the study population that is 52.2% was from urban background and rest (47.8%) were from rural area (Fig. 2).

**Tables 1: Socio-demographic profile of the study population**

| Characteristics | Frequency (N=2010) | Percentage |
|---|---|---|
| **Locality** | | |
| Urban | 1050 | 52.2 |
| Rural | 960 | 47.8 |
| **Religion** | | |
| Hindu | 1123 | 55.9 |
| Muslim | 887 | 44.1 |
| **Caste** | | |
| General | 483 | 24 |
| OBC | 1403 | 69.8 |
| SC | 124 | 6.2 |
| **Marital Status** | | |
| Married | 1358 | 67.6 |
| Unmarried | 652 | 32.4 |
| **Education** | | |
| Illiterate | 498 | 24.8 |
| Primary School | 704 | 35 |
| Middle School | 245 | 12.2 |
| High School | 225 | 11.2 |
| Intermediate | 226 | 11.2 |
| Graduate or Above | 112 | 5.6 |
| **Occupation** | | |
| Professional | 50 | 2.5 |
| Skilled Worker | 21 | 1.0 |
| Unskilled Worker | 769 | 38.3 |
| Housewife | 514 | 25.6 |
| Student | 487 | 24.2 |
| Unemployed | 169 | 8.4 |
| **Socio Economic Status** | | |
| Class I | 20 | 1.0 |
| Class II | 59 | 2.9 |
| Class III | 343 | 17.1 |
| Class IV | 1318 | 65.6 |
| Class V | 270 | 13.4 |

Table 1 shows that more than half of the study subjects (55.9%) belonged to Hindu religion while rest of them (44.1%) were Muslims. Majority of the cases (69.8%) belonged to the other backward class (OBC) while general and scheduled caste compromised 24% and 6.2% respectively. More than two third of the study population that is 67.6% were married and the rest (32.4%) were unmarried.

Educational profile shows that 35% were educated upto primary level, 24.8% were illiterate, 12.2% studied upto middle school level, 11.2% were educated upto high school level, 11.2% got their education upto intermediate level, 6.6% were able to read and only 5.2% had an education level of graduate or above. Majority of the study population that is 65.6% belonged to socioeconomic status class IV according to modified BG Prasad scale followed by 17.1% in category III, 13.4% in category IV, 2.9% in category II and 1% in category I.

Maximum number of study subjects (38.7%) was from nuclear families while 37.2% and 24.1% were from joint families and three generation families respectively (Fig. 3).

### Discussion

There were total 2010 TB cases interviewed in the present study. Nearly one fourth of the TB cases i.e. 489 (24.3%) were from the age group less than 20 years of age.

The findings of this study are similar to the findings of Sumer C et al (2012)[4] where most of the TB patients were in the age group of 16 – 24 years (26.95%). Whereas study done by Roy N et al (2011)[5] the 27.84% of study population was in age group of 25 – 35 years.

In the present study out of 2010 TB patients, 1119 (55.7%) of the study participants were male, 1050 (52.2%) of urban area, 1123 (55.9%) Hindu by religion and 1403 (69.8%) OBC by caste, and 1358 (67.6%) were married.

The above finding is similar to Verma AK et al (2007)[6] where out of 130 participants 55.8% were male. And in the study conducted by Gupta S et al (2007)[7] 45.77% of patients were residents of Urban area and 145 (72.14%) were married. Whereas study

done by Varshney AM et al (2010)[8] 74% of the study participants were Hindu by religion.

In the present study it was noticed that 498 (24.8%) cases were illiterate, 769 (38.3%) were unskilled worker, 514 (25.6%) were housewives and 777 (38.7%) were from nuclear family. Nearly two-third of the TB cases i.e. 1318 (65.6%) belonged to Class IV socioeconomic status according to Modified B.G. Prasad Classification April 2016.

The findings of this study are similar to the findings of Sarpal SSS et al (2011)[9] where 73 (13.4%) patients were illiterates and 109 (20%) were housewives. On the contrary Varshney AM et al (2010)[8] study shows that 55% were unskilled workers and 69% having monthly income less than Rs 2500.

## Conclusion

TB is an infectious disease caused predominantly by Mycobacterium tuberculosis. It spreads from one person to another; it has a devastating impact on the economic wellbeing of individual, their families and the entire community.

In the present cross-sectional study, total 2010 TB patients were interviewed, in which maximum number i.e. 489 (24.3%) of the study subjects belonged to the age group of less than 20 years, 1119 (55.7%) were male, 1050 (55.9%) were from urban population, Hindu by religion 1123 (55.9%), OBC caste 1403 (69.8%), married 1358 (67.6%), educated up to primary class 704 (35%), unskilled worker 769 (38.3%) and 777 (38.7%) were from nuclear family.

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