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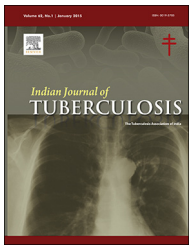

Original Article

# Socio-demographic profile and outcome of TB patients registered at DTC Rewa of Central India

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ABSTRACT

*Background:* Tuberculosis is a specific infectious disease caused by Mycobacterium tuberculosis. The disease is usually chronic with cardinal features such as persistent cough with or without expectoration, intermittent fever, and loss of appetite, weight loss, chest pain and hemoptysis.

*Objective:* (1) To assess the socio-demographic profile of the patients attending DOTS Center. (2) To assess outcome of treatment under DOTS Center.

*Methodology:* This is a Prospective Longitudinal study conducted among the patients attending DOTS center of DTC located at S.G.M.H. campus Rewa Madhya Pradesh Central India, during the last quarter of 2014, Study Duration: One year and two months i.e. starting from 1st September 2014 to 31st October 2015; total study sample size consisted of 137 patients who were newly registered during the last quarter of 2014 (from 1st October to 31st December 2014) at DOTS Center of DTC. After applying inclusion and exclusion criteria, a total of 133 newly registered patients were enrolled that can be considered as total sample size in the present study.

*Result:* Study population comprises a total of 133 patients; out of which 84 (63.15%) were male and 49 (36.84%) were female. In both most common age group are 21–30 year were 41 (30.82%) patients and least common was pediatric TB in age group <10 year were 10 (7.51%) patients, lower socio-economic class (class-V) 53.38% followed by class-IV or Lower middle class 29.32%, only 1.5% were from upper class. 96 (72.18%) patients were of category-I patient and 37 (27.81%) were category-II patient, 51 (38.34%) patients were cured, 70 (52.63%) had their treatment completed, so overall treatment success rate was 90.97%; in that, 2 cases were (1.50%) failure, 4 (3%) defaulters, 2 (1.50%) died during treatment and 4 (3%) were transferred out.

*Conclusion:* Study concluded that most of the patients belonged to lower socioeconomic status and in productive age group so it will increase the economic burden over the family; therefore, after increasing the living standard the outcome of disease becomes favorable.

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## 1. Introduction

Tuberculosis is a specific infectious disease caused by Mycobacterium tuberculosis. The disease primarily affects lungs and causes Pulmonary TB (PTB). It can also affect intestine, meninges, bones and joints, lymph glands, skin and other tissues of the body which is known as extra-pulmonary TB. The disease is usually chronic with cardinal features such as persistent cough with or without expectoration, intermittent fever, and loss of appetite, weight loss, chest pain and haemoptysis.[1] TB has co-evolved with humans for many thousands of years, and perhaps for several million years.[2] The oldest known human remains showing signs of tuberculosis infection are 9000 years old.[3] Phthisis is a Greek term for tuberculosis, around 460 BC, Hippocrates identified phthisis as the most widespread disease of the times involving coughing up blood and fever, which was almost always fatal.[4] It is transmitted from person to person via droplets from the throat and lungs of people with the active respiratory TB disease. TB is also called Koch's disease, after the scientist Koch. The bacillus causing TB, Mycobacterium tuberculosis, was identified and described on 24 March 1882 by Robert Koch.[5] The first genuine success in immunizing against tuberculosis was developed from attenuated bovine-strain tuberculosis by Albert Calmette and Camille Guerin in 1906 it was called ''BCG''.[6]

Tuberculosis is one of the three primary diseases of poverty along with AIDS and malaria.[7] A third of the world's population is thought to be infected with M. tuberculosis, and new infections occur at a rate of about one per second.[8] It is a disease of poverty affecting mostly young adults in their most productive years. The vast majority of TB deaths are in the developing world. Left untreated, each person with active TB disease will infect on average between 10 and 15 people every year and this continues the TB transmission. Overall 5–10% of people who are infected with TB bacilli become sick or infectious at some time during their life. People with HIV and TB infection are much more likely to develop TB. The risk for developing TB disease is also higher in persons with diabetes, other chronic debilitating disease leading to immune-compromise, poor living conditions, tobacco smokers, etc. The WHO declared TB a global health emergency in 1993, because of its toll on the health of individuals and the wider social and economic impact on overall development of country. And the Stop TB Partnership developed a Global Plan to Stop Tuberculosis that aims to save 14 million lives between 2006 and 2015.[9]

Tuberculosis is treatable with a course of antibiotics. The most successful strategy to treat TB patients is DOTS. By keeping this entire thing in mind the present study was conducted at DTC cum DOTS center in Rewa M.P. central India, by considering the objective that to assess the socio-demographic profile of the patients attending DOTS Center and to assess outcome of treatment under DOTS Center.

*Methodology*: This was a prospective longitudinal study conducted among the patients attending DOTS center of DTC, during the last quarter of 2014, Study Duration: One year and two months (i.e. 1st September 2014 to 31st October 2015), *Study population*: Only newly registered patients during the last quarter of 2014 (from 1st October to 31st December 2014.) and were receiving DOTS therapy at this DOTS center were included in this study; a total of 137 new patients were registered during the last quarter of 2014, out of 137 patients, 4 were MDR patients, so these patients were excluded from the study population because treatment out-come of these MDR patients was not supposed to be completed till the completion of the present study. After applying inclusion and exclusion criteria, a total of 133 newly registered patients were enrolled as total sample size in the present study, so the present Study comprised of 133 patients of TB who were newly Registered in the last Quarter of 2014 which also included 1 transferred in patient from the other TU. The data were collected by pre-designed and pre-tested questionnaire, after obtaining informed verbal consent from patient. *Data entry and analysis*: All the data were collected on pretested questionnaires. The collected data were scrutinized for completeness and consistency collected and the data were analyzed by using MS excel; instat Graph pad and Epi-cal info 2000 were used to apply appropriate statistical tests.

## 2. Results

In the present study, Table 1 we distributed the patients according to their age and sex; we observed that study population comprises a total of 133 patients; out of which 84 (63.15%) were male and 49 (36.84%) were female. In both male and female, most common age group are 21–30 year were 41 (30.82%) patients and least common was pediatric TB in age group <10 year were 10 (7.51%) patients. Age-wise distribution was more varying in extreme of age, i.e. this age and sex-wise distribution of patients was found to be statistically not significant ($P \geq 0.05$).

In the present study, out of a total of 133 patients in the study, majority of patients 30.82% belonged to ST category, and least ones were from GN category 16.54%. According to education 38.34% of study population were ill-literate and 61.66% were literate. In their socio-economic status, majority of cases were from lower socio-economic class (class-V) 53.38%, but only 1.5% were from upper class or class-I. Considering the type of family-wise distribution of patients, 53.38% patients belonged to joint families and 39.84% were from nuclear families but the least ones (6.76%) were from extended family. According to occupation, majority (50.37%)

**Table 1 – Age and sex-wise distribution of patients.**

| S.N. | Age in years | Male (84) | Female (49) | Total (133) |
|---|---|---|---|---|
| 1 | <10 | 5 | 5 | 10 |
| 2 | 11–20 | 10 | 9 | 19 |
| 3 | 21–30 | 29 | 12 | 41 |
| 4 | 31–40 | 14 | 10 | 24 |
| 5 | 41–50 | 8 | 7 | 15 |
| 6 | 51–60 | 10 | 3 | 13 |
| 7 | >60 | 8 | 3 | 11 |

Chi square = 5.013, d.f. = 6, $p$ value = 0.5421.

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