ORIGINAL ARTICLE

THE STUDY OF SOCIO DEMOGRAPHIC PROFILE OF TUBERCULOSIS PATIENTS REGISTERED UNDER KARAD TUBERCULOSIS UNIT

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ABSTRACT: BACKGROUND: The Revised National Tuberculosis Control Programme (RNTCP), India. **OBJECTIVE:** To know the socio-demographic profile of tuberculosis patients. **MATERIAL & METHODS:** The present longitudinal study was carried out during January 2008 to June 2009 on patients registered at Karad TU catering 9 PHCs, Sub District Hospital, Krishna Hospital & 6 DMCs with 3 ICTCs. In total 806 patients were study subjects with prior permission of District Tuberculosis Officer. Patients were interviewed using semi structured questionnaires at their residence in defined time period i.e. at the start of treatment, after completion of IP. **RESULT & OBSERVATIONS:** Out of 806 patients 475 (58.93%) males while 331 (41.06%) were females. Maximum 501 (62.15%) patients from economically productive age group i.e. 15 - 44 years of age. Maximum 742 (92.1%) were from Hindu community while 64 (7.9 %) were Muslims. 561 (69.6%) were married, 154 (19.1%) were unmarried, 18 (2.2%) were widower, 43 (5.3%) were widow, 30 (3.7%) were divorced. There was 101 (12.5%) were from nuclear family, 639 (79.3%) were from joint family, 66 (8.2%) were from three generation family. The maximum 694 (86.1%) patients were from lower class (i.e. class V) while 109 (13.5%) were from class IV and 3 (0.4%) patients were from class III. 239 (29.65%) patients were unemployed, 192 (23.8%) patients were working on daily wages, and 184 (22.8%) patients had service. 186 (23.1%) patients were illiterate, 215 (26.7%) were studied up to primary school, 248 (30.8%) to secondary school, 134 (16.6%) to Higher secondary school, 23 (2.9%) to degree. **CONCLUSION:** In the present study majority of patients, 561 (69.6%) were married, 639 (79.3%) were from joint family. Maximum 694 (86.1%) were from class V (lower class). Maximum 501 (62.15%) were from 15-44 years of age group i.e. from economically productive age group. Prevalence of tuberculosis was higher in males than in females at all age groups. Majority of patients were literate.

KEYWORDS: RNTCP, TU, PHC, DMC, ICTC, TB.

INTRODUCTION: Tuberculosis is infectious disease in human beings caused by Tuberculosis. Tuberculosis has existed in India since the earliest days. In 15BC the Rig-Veda described the illness as "Rajayakshma", King of disease". Today INDIA accounts for 26% of new case of TB in the world, a figure that is likely to increase as India's population grows & the HIV epidemic progresses. Tuberculosis is a social disease with medical aspects. The social factors include many non-medical factors such as poor quality of life, poor housing, overcrowding, population explosion, under nutrition, lack of education, large families, early marriages, lack of awareness of causes of illness etc. All these factors are interrelated & contribute to the occurrence and spread of tuberculosis.¹ TB & poverty are closely related. Malnutrition, overcrowding, poor ventilation & sanitation factors associated with poverty increase both the risk of infection & probability of developing clinical disease. Poverty and TB forms a vicious cycle. TB decreases person's work capacity & adds burden of treatment expenses & thereby

ORIGINAL ARTICLE

exacerbating their poverty. Because of more than 80% of patients are in economically productive age group (15-44) years.

AIMS AND OBJECTIVES:

1. To study of the socio-demographic profile of tuberculosis patients in Karad Tuberculosis Unit
2. To know social factors in relation with Tuberculosis.

MATERIAL AND METHODS:

1. **Study Cohort:** All patients registered in Karad Tuberculosis Unit selected from January 2008 to June 2009, 806 patients formed the study cohort. Hence no sampling procedure was used. Before commencement of study permission of District Tuberculosis Officer (DTO) was taken.
2. **Study Period:** January 2008 to June 2009. Data collection from October 2008 to April 2010. Analysis done May 2010 using appropriate techniques.
3. **Type of Study:** Longitudinal (Prospective) Study
4. **Study Plan:** Data Collection: Patients were interviewed using pre-tested semi structured questionnaires at their residence after treatment initiation, after completion of intensive phase and at the end of continuation phase.

Statistical Methods: (Data Analysis) Data was summarized in number and in percentage. Appropriate techniques used. Chi-square test was applied to assess statistical significance between variables.

OBSERVATIONS:

	Male(N=475)	Female(N=331)	Total(N=806)	P value
Age range(years)				0.006
Below15	18(3.8%)	13(3.9%)	31(3.8%)	
15-29	105(22.1%)	106(32.0%)	211(26.2%)	
30-44	169(35.6%)	121(36.6%)	290(36.0%)	
45-59	110(23.2%)	54(16.3%)	164(20.3%)	
60above	73(15.4%)	37(11.2%)	110(13.6)	
Religion				0.041
Hindu	445(93.7%)	297(89.7%)	742(92.1%)	
Muslim	30(6.3%)	34(10.3%)	64(7.9%)	
Marital status				0.000
Married	358(75.4%)	203(61.3%)	561(69.9%)	
Unmarried	87(18.3%)	67(20.2%)	154(19.1%)	
Divorced	12(2.5%)	18(5.4%)	30(3.7%)	
Widow/Widower	18(2.2%)	43(5.3%)	61(7.6%)	
Family type				0.590
Joint	371(78.1%)	268(81.0%)	639(79.3%)	
Nuclear	62(13.1%)	39(11.8%)	101(12.5%)	

ORIGINAL ARTICLE

Three generation	42(8.8%)	24(7.3%)	66(8.2%)	
Education				0.086
Illiterate	114(24.0%)	72(21.8%)	186(23.1%)	
Primary	121(25.5%)	94(28.4%)	215(26.7%)	
Secondary	142(29.9%)	106(32.0%)	248(30.8%)	
Higher secondary	89(18.7%)	45(13.6%)	134(16.6%)	
Degree	9(1.9%)	14(4.2%)	23(2.9%)	
Occupation				<0.001
Unemployed	95(20.0%)	144(43.5%)	239(29.6%)	
Daily wedges	141(29.7%)	51(15.4%)	192(23.8%)	
Self employed	115(24.2%)	69(20.8%)	184(22.8%)	
Service	94(19.8%)	45(13.6%)	139(17.2%)	
Student	30(6.3%)	22(6.6%)	52(6.5%)	
Socioeconomic class				0.639
III	1(0.2%)	2(0.6%)	3(0.4%)	
IV	63(13.3%)	46(13.9%)	109(13.5%)	
V	411(86.5%)	283(85.5%)	694(86.1%)	

Table 1: Sociodemographic profile of patients treated under RNTCP in Karad TU

	Pulmonary TB	Extra Pulmonary TB		P value
Age Group			Total	0.001
Below15	20	11	31	
15-29	148	63	211	
30-44	220	70	290	
45-59	141	23	164	
60&above	91	19	110	
Gender				<0.001
Male	390	85	475	
Female	230	101	331	
Education				0.392
Illiterate	147	39	186	
Primary	168	47	215	
Secondary	189	59	248	
Higher Secondary	102	32	134	
Degree	14	9	23	
Occupation				0.124
Unemployed	88	22	110	
Daily wages	156	36	192	
Self employed	145	39	184	
Service	102	37	139	

ORIGINAL ARTICLE

Student	34	18	52	
Socioeconomic class				0.582
III	2	1	3	
IV	80	29	109	
V	538	156	694	
Table 2: Distribution of type of Tuberculosis				

DISCUSSION: The present study findings have reflected that the prevalence of Tuberculosis disease has been higher in males than in females at all ages and difference has been more marked as the age increased. Higher concentration of cases occurred in higher age group. The proportion of less than 15 years population in India is 35.4% as compared to 3.8% amongst cases of tuberculosis. It indicates that there are significantly more cases of tuberculosis among population more than 15 years and above years of age 68. The sex wise distribution showed that more males were affected with TB. It is usual to find that males commonly avail the health facilities compared to females for various reasons. The observation in the present study that majority of patients are from the economically productive age group (15-44yrs)² has also been seen in various studies conducted by C. T. Kang¹, Ombe² et al³, R. Rajeshwari et al⁴, S. L. Chadha and R.P.Bhagi⁵, M. Yamasaki Nakagawa et al⁶, E.A. Dodor⁷, Mahesh Kumar et al⁸, V. Chandrasekaran et al⁹. The studies conducted by R. Rajeswari et al⁴, M. Yamaski Nakagawa⁶, E. A. Dodor⁷, Mahesh Kumar et al⁸, V. Chandrasekaran et al⁹ also agree with the finding of present study that males are more affected than females. Age distribution of extra pulmonary Tuberculosis has indicated higher disease prevalence in young age. Case distribution with regard to age as well as male: female ratio has demonstrated respectively similar annual trends. The study conducted by V. K. Arora et al¹⁰ have found similar findings in their study.

The proportion of Hindus is significantly more and that of Muslim is significantly less than expected numbers as per population proportions¹¹. Thus it is difficult to elicit the relationship between religion and tuberculosis.

However our study findings are comparable with studies conducted by Shailendra Bhatnagar¹² who have found that out of 1415 patients 723 (51.9%) to be Hindu while 692 (48%) present Muslim community.

Mahesh Kumar et al⁸ who have found that out of 386 patients 264 (68.39%) have been Hindu, 118 (30.56%) were Muslims and 4 (1.03%) from other religions. In present study we have found major differences in distribution of tuberculosis patients between nuclear and joint or three generation families.

Extra pulmonary tuberculosis disease prevalence is higher in females than in males. Similarly finding is seen found in study conducted by V. K. Arora et al¹⁰ that is higher number of females 1615 (57%) than males 1234 (43%) constituting a significantly different male: female ratio of 1:3. Socio-economic status is closely related to tuberculosis. In this study, the socio-economic status of patients indicates that more number of tuberculosis cases have occurred in economically deprived section of society.

The present study findings are more or less similar to the findings of study conducted by Mahesh Kumar et al⁸ who have found that out of 386 cases 25 (6.47%) are from two upper class 254 (65.80%) from middle class and 101 (27.72%) from lower class. In present study we have found that literate people are more affected than illiterate people. The studies conducted by R. Rajeswari et al⁴

ORIGINAL ARTICLE

S. L. Chadha and R. P. Bhagi⁵ and V. Chandrasekaran et al⁹ found that tuberculosis is more common in illiterate people. The daily wages labourers, self-employed workers indulge in outdoor activities they are highly mobile, they seldom have any health records and they usually don't have savings. All these concerns are supported by our study findings.

In our study we have found that majority of patients are from economically productive age group. In the Indian context marriages are universal. It is quite possible that due to more number of patients above 15 years of age, higher proportion of 69.6% of married patients are seen. Present study findings are well in accord with the findings of Sophia Vijay et al¹³ They have also found that out of 271 patients 161 (59.40%) to be unmarried.

CONCLUSION: Out of 806 patients 475 (58.93%) were males while 331 (41.06%) were females. Maximum 501 (62.15%) patients from economically productive age group i. e. 15-44 years of age. Prevalence of tuberculosis was higher in males than in females at all age groups. It was observed that maximum 742 (92.1%) patients were from Hindu community while 64 (7.9 %) were Muslims. Study findings demonstrated that 561 (69.6%) were married, 154 (19.1%) were unmarried 18 (2.2%) were widower, 43 (5.3%) were widow, 30 (3.7%) were divorced. There was highly significant association between marital status & gender of the patients in this study. It was noted that 101 (12.5%) were from nuclear family, 639(79.3%) were from joint family, 66 (8.2%) were from three generation family. The study reflected that maximum 694 (86.1%) patients were from lower class (i.e. class V) while 109 (13.5%) were from class IV and 3 (0.4%) patients were from class III. It was observed that there was significant association found between occupation and type of TB. 239 (29.65%) patients were unemployed, 192 (23.8%) patients were working on daily wages and 184 (22.8%) patients had service. There was observed that there is no significant association between education and type of tuberculosis. The study finding showed that 186(23.1%) patients were illiterate, 215 (26.7%) were studied up to primary school, 248 (30.8%) to secondary school, 134 (16.6%) to Higher secondary school, 23 (2.9%) to degree.

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ORIGINAL ARTICLE

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