THE STUDY OF SOCIO DEMOGRAPHIC PROFILE OF TUBERCULOSIS PATIENTS REGISTERED UNDER KARAD TUBERCULOSIS UNIT
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HOWTOCITETHISARTICLE:
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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 January2008 to June2009 on patients registered at Karad TU catering 9 PHCs, Sub District Hospital, Krishna Hospital&6DMCs with 3ICTCs.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 wedges, 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 from15-44 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.In15BC the Rig-Veda described the illness as “Rajayaksmma”, King of disease”. Today INDIA accounts for26% of new case of TB in the world, a figure that is likely to increasing as India’s population growing &the HIV epidemic progress. 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 vicious cycle. TB decrease person’s work capacity &adds burden of treatment expenses &thereby
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:

| Age range(years) | Male(N=475) | Female(N=331) | Total(N=806) | P value |
|------------------|-------------|---------------|--------------|---------|
| Below 15         | 18(3.8%)    | 13(3.9%)      | 31(3.8%)     | 0.006   |
| 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%)   |         |
| 60 above         | 73(15.4%)   | 37(11.2%)     | 110(13.6%)   |         |

| Religion         | Male(N=475) | Female(N=331) | Total(N=806) | P value |
|------------------|-------------|---------------|--------------|---------|
| Hindu            | 445(93.7%)  | 297(89.7%)    | 742(92.1%)   | 0.041   |
| Muslim           | 30(6.3%)    | 34(10.3%)     | 64(7.9%)     |         |

| Marital status   | Male(N=475) | Female(N=331) | Total(N=806) | P value |
|------------------|-------------|---------------|--------------|---------|
| Married          | 358(75.4%)  | 203(61.3%)    | 561(69.9%)   | 0.000   |
| 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      | Male(N=475) | Female(N=331) | Total(N=806) | P value |
|------------------|-------------|---------------|--------------|---------|
| Joint            | 371(78.1%)  | 268(81.0%)    | 639(79.3%)   | 0.590   |
| Nuclear          | 62(13.1%)   | 39(11.8%)     | 101(12.5%)   |         |
### Table 1: Sociodemographic profile of patients treated under RNTCP in Karad TU

| Education          | Pulmonary TB | Extra Pulmonary TB | Total | P value |
|--------------------|--------------|--------------------|-------|---------|
| Three generation   | 42(8.8%)     | 24(7.3%)           | 66(8.2%) | 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%) |     |

| Age Group | Pulmonary TB | Extra Pulmonary TB | Total | P value |
|-----------|--------------|--------------------|-------|---------|
| Below 15  | 20           | 11                 | 31    | 0.001   |
| 15-29     | 148          | 63                 | 211   |         |
| 30-44     | 220          | 70                 | 290   |         |
| 45-59     | 141          | 23                 | 164   |         |
| 60&above  | 91           | 19                 | 110   |         |

| Gender      | Pulmonary TB | Extra Pulmonary TB | Total | P value |
|-------------|--------------|--------------------|-------|---------|
| Male        | 390          | 85                 | 475   | <0.001  |
| Female      | 230          | 101                | 331   |         |

| Education   | Pulmonary TB | Extra Pulmonary TB | Total | P value |
|-------------|--------------|--------------------|-------|---------|
| Illiterate  | 147          | 39                 | 186   | 0.392   |
| Primary     | 168          | 47                 | 215   |         |
| Secondary   | 189          | 59                 | 248   |         |
| Higher Secondary | 102       | 32                 | 134   |         |
| Degree      | 14           | 9                  | 23    |         |

| Occupation  | Pulmonary TB | Extra Pulmonary TB | Total | P value |
|-------------|--------------|--------------------|-------|---------|
| Unemployed  | 88           | 22                 | 110   | 0.124   |
| Daily wages | 156          | 36                 | 192   |         |
| Self employed | 145        | 39                 | 184   |         |
| Service     | 102          | 37                 | 139   |         |
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) has also been seen in various studies conducted by C. T. Kang’ Ombe’ et al, R. Rajeshwari et al, S. L. Chadha and R.P.Bhagi, M. Yamasaki Nakagawa et al, E.A. Dodor, Mahesh Kumar et al, V. Chandrasekaran et al, The studies conducted by R. Rajeswari et al, M. Yamasaki Nakagawa, E. A. Dodor, Mahesh Kumar et al, V. Chandrasekaran et al 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 al 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 proportions. Thus it is difficult to elicit the relationship between religion and tuberculosis.

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

Mahesh Kumar et al who have found that out of 386 patient 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 al 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 in 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 al 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 al,
S. L. Chadha and R. P. Bhagi and V. Chandrasekaran et al 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 al. 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 wedges 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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