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Original Article

Socio-demographic profiles of the delayed diagnosed patients in RNTCP, Anand District.

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Abstract
Background:
It would be worth to consider socio-demographic characteristics of the patients on DOTS (Directly Observed Treatment Short course), as the therapy requires a long term adherence. **Material & Methods**: **Design:** Cross-sectional study, **Participants**: 100 diagnosed TB patients on DOTS, from all TB units (25 from each TU) of Anand District, who had reported 3 weeks or later to health care center, after the onset of symptoms of TB. Information was filled up in a pre-tested questionnaire and the data was analyzed. **Results**: Among 100 TB patients (68 males and 32 females), 75% of the subjects had an education below 9th standard. 46% of subjects were laborer. 65% were self-dependent. Most of the respondents (75%) preferred government facility. **Conclusion**: The socio-demographic characteristics of DOTS patients are found to be of such levels that could have a pivotal role in the treatment success. They also need to be addressed under the program in such a manner that those characteristics don't prove to be a barrier to treatment success.

Introduction

Tuberculosis is a strange disease because of its varied clinical presentation, host response, chemotherapeutic response, etiology and social implications. Indirectly, every year more than 17 crore work-days are lost due to tuberculosis at the above cost of Rs.12, 000 crore per year.[1] The socio-demographic profile of the patients could have an impact on treatment success of DOTS (Directly Observed Treatment Short course), considering the long term nature of the therapy. The objective of the present study is to assess the major socio-demographic characteristics of the patients on DOTS attending government facility in Anand district.

Method

A cross sectional study was carried out among 100 diagnosed TB patients on DOTS, taking treatment from one of the four TB units of Anand district, namely Petlad, Khambhat, Anklav & Sarsa. The study period was for in total of about a year during 2008-09. A random selection of 25 patients each from all the four TB units was made, to make it to the sample size of 100(purposive sampling, a type of non-probability sampling technique). A pre-tested questionnaire was filled up per subject.

Study population:

After the approval of the project from the institutional review committee, four TB units in the district were approached. From each TB unit, 25 patients were identified, who had diagnosed 3 weeks or later to the health centre, they were considered delayed diagnosed. The patients were visited at their residence to provide appropriate privacy and time for the interview. Consent of the subject regarding their participation in the study was obtained before head. The data were analyzed by making frequency tables and using test of significance.

Results

The study shows that among total 100 patients taking DOTS, 68 were male and 32 were female. The mean age was 34.59 years (8.21- 60.93 years). The minimum age was 15 and maximum 70 years. The educational status of all the patients was as given in Figure 1, with highest frequency of the subjects who had an education between standards 1 to 9 (46%).

Table 1: Educational level of participants in %

Maximum level of Education	**Frequency (%)**
Graduate	6 (6)
Secondary /Higher secondary	19 (19)
Primary/High school	46 (46)
Illiterate	29 (29)
Total	100 (100)

The occupation distribution of the patients surveyed was as below [Figure 2] with almost half of them being laborer. From a total of 100 subjects, 65% depended on their selves for livelihood and 8% depended on parents. The distribution is given in Figure 3.

Table 2: Distribution of types of occupation among DOTS patients

Type of occupation	**Frequency (%)**
Agriculture	6 (6)
Dairy worker	1 (1)
Home based work	16 (16)
Office service	14 (14)
Laborer	46 (46)
Lawyer	1 (1)
Unemployed	14 (14)
Salesman	2 (2)
Total	100 (100)

Table 3: Type of dependency (%)

Type of Dependency	**Frequency (%)**
Self	65 (65)
Parents	8 (8)
Children	3 (3)
Spouse	14 (14)
Others*	10 (10)
Total	100 (100)

*Includes Uncle, Grandson, Distant relatives

Most of the respondents (75) preferred government facility, for treatment. This may be due to their education, occupation and economic condition. Only 16 of them preferred private facility and 9 preferred visiting Bhuva (a traditional quack). For getting DOTS, the patients were inspired mainly by their family members (36%) or health care workers (32%). [Figure 4]

Table 4: Source of inspiration (%)

Source of Inspiration	**Frequency (%)**
Self	18 (18)
Family member	36 (36)
Health care worker	32 (32)
Neighbors	14 (14)
Total	100 (100)

The problem of social stigma affected only 10% of the respondent.

Table 5: Gender wise distribution of social stigma among subjects (p>0.05)

	Social Stigma		Total
Gender	**Yes (%)**	**No (%)**	
Male	6 (60.00)	62 (68.89)	68 (68.00)
Female	4 (40.00)	28 (31.11)	32 (32.00)
Total	10 (100)	90 (100)	100 (100)

Discussion

The study focuses on various factors; demographic, social or cultural of patients on DOTS. Tuberculosis and DOTS have been known for more than a decade now in India, but still a lot many barriers prevent the success of the program in all corners of the society. The possible reasons have been evaluated in many developing countries like China, Thailand etc. [2-6]. The mean age (34.59%) is quite comparable for a disease like TB.

The study shows that 75% of the patients enrolled in the study had not reached beyond 9th standards (including 29% of illiterate subjects). It can be assumed that treatment seeking for such may not be up to the mark, especially considering long term nature of DOTS. A good proportion (46%) of subjects was laborers by occupation, while 14% were unemployed. Regular income has been associated with high treatment success rates, as revealed by a study in Bangkok by Okanurak and co-workers [7]. His study also said that the level of education and knowledge was also significantly associated to treatment success. A study has also showed that unemployment is associated with a longer patient delay [8].

The source of inspiration has largely been either health care provider or the neighbors; while a small proportion (18%) has reported by self. The study reveals the prevalence of social stigma among study subjects was 10%. Although India has entered to development era, such social issue still persists. A study conducted by Quereshi and others among TB patients of Pakistan, showed that the prevalence was on higher side (27%). The differences may be due to the level of socialization between the two countries [9]. The present study identifies many characteristics of the patients that could have an effect on treatment adherence and success. The

present study has got certain limitations, like use of non-probability sampling and inclusion of patients seeking only government facilities for DOTS. Although the impact of the above socio-demographic characteristics on the treatment success of the current study subjects is not evaluated in this study, it could have been achieved by future large scale studies taking appropriate large sample size using probability sampling.

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