

SOCIO-ECONOMIC IMPACT OF PARENTAL TUBERCULOSIS ON CHILDREN

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Summary : The impact of parental pulmonary tuberculosis on children was studied from a larger study of socio-economic effects of the disease. The effect in children was studied in respect of 1) social, economic and demographic characteristics of the parents (who were patients), 2) the child care functions of mothers who were patients and 3) effect on children's education.

In all 276 children of 167 tuberculous parents were studied. The socio-economic and demographic characteristics were generally the same as are commonly seen. The child caring on the part of mothers fell from 64% to 35% for rural females and from 74% to 33% for urban females; 11% of children (8% rural, 13% urban) dropped out of school, significantly higher in families with 5 or more members and children living with both parents compared to single parent; 34% of study parents could not buy school books or adequate food because of loss of income and 20% of the children were obliged to take up jobs in order to supplement income.

Keywords : Parental tuberculosis, Socioeconomic impact, Tuberculosis in mothers, Tuberculosis affecting child care and education

INTRODUCTION

Since tuberculosis affects the economically most productive age group of individuals, hence the economic cost to the nation as a whole is high. The disease also has considerable impact on patients' households: children, health, education and nutrition, particularly, if the patient is a wage earner. Households face substantial immediate expenditure due to tuberculosis: costs of diagnosis and treatment lost earnings and less or no household work done. The impact of tuberculosis is not confined to the patient alone; the illness of an adult can affect the quality of children's lives as well. When women are affected, they being the primary care givers in a household, the disease affects not only them but the whole family and, especially, the health and welfare of children.

The economic impact of tuberculosis comes both from the size of the problem in the community and from the fact that, in developing countries, the majority of such patients come from the most economically productive segment of the population. Tuberculosis accounts for almost 20% of all deaths and 26% of all preventable deaths in the age group of 15 to 49 years. The shopping around for diagnosis, cost of privately purchased drugs, money spent on travelling and care received in the private sector further aggravate the problem. The costs to be

considered are both direct as well as indirect and to avoid the economic loss, the patients tend to delay seeking medical care. Hence delay in diagnosis is common. This is more frequent among women because in view of their domestic responsibilities, they tend to postpone their visit to a diagnostic/treatment facility. Delay in getting medical care among women may have more severe adverse effects as health and welfare of children and other family members is closely linked with that of mother.

OBJECTIVE

The Tuberculosis Research Centre, Chennai had, in a larger study, evaluated the socio-economic impact of tuberculosis in 304 TB patients. The impact of parental illness was sought to be studied in a sub-population of the larger study. The main objectives of the present study were: 1) to assess the impact of social, economic and demographic factors of tuberculosis patients on their children, 2) to assess the impact of tuberculous women on child care functions, and 3) to evaluate the impact of parental tuberculosis on children's education.

MATERIAL AND METHODS

Setting

In order to obtain a representative sample from rural and urban populations, the study was conducted among patients attending government and private

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hospitals/clinics situated in Chennai city and two rural districts - Kancheepuram and Thiruvellore- in Tamil Nadu. In addition, patients receiving treatment from private practitioners in Chennai city were also interviewed.

Tools

- a) *Focus Group Discussion* - These were held as a preliminary step of the study. Each Focus Group consisted of 8 to 10 persons, who were patients taking treatment for tuberculosis, village elders, young men and women. The topics for discussion were (1) health-seeking pattern in general, (2) money spent on investigations and medicine, if any, and (3) impact of the illness on children.
- b) *Interview Schedule*: A semi-structured pre-coded interview schedule was developed based on information collected during Focus Group discussions. The information to be collected through interview schedules comprised socio-economic and demographic factors, particulars of employment, income and the effect of the illness on health-seeking, expenses and care of children.
- c) *Study Population* - Newly detected sputum positive pulmonary tuberculosis patients who were on short course chemotherapy were enrolled in the study. The impact of parental illness of 167 such patients on 276 children below 16 years of age was evaluated. A total of 17 Focus Group discussions were held in rural and urban settings.

FINDINGS

The study comprised 167 patients, of whom 98 were males and 69 were females (Figure-1).

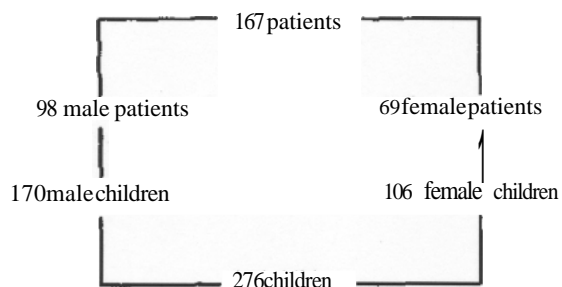


Figure 1: Structure of Study Population

Out of the 167 patients, 84 were from the rural set up and the rest 83 were from cities.

The demographic and social characteristics of the study population are given in Table 1.

Table 1: Demographic and social characteristics of 167 patients

Age	15-25(M25+F39)	64
	26-49 (M40+F19)	59
	50+ (M33+F11)	44
Sex	Male	98
	Female	69
Marital Status	Spouse alive	84
	Others(widowed,notmarried)	83
Family Type	Joint	57
	Nuclear	110
Family Size	1-4	102
	5-6	47
	7+	18
Religion	Hindus	144
	Others	23
community	SC/ST	37
	Others	130
Education	Illiterate	43
	Below middle school	82
	Others	42

Among the study population, 123 patients (65 M + of 58 F) were in the economically most productive age group of 15-49 years. Only 84 were living with their spouses and 57 patients belonged to the joint type of family system. Only 102 patients had a family size of 1-4 members whereas 65 patients' family size was 5 and more; 37 patients belonged to the socially most disadvantaged classes; 43 patients were illiterate.

The distribution of patients based on economic characteristics has been shown in Table 2. In all, 20 males and 49 females were non-earning family members (students, retired, unemployed). Only 72 males and 15 females had a personal monthly income of Rs.500/- and above; 61 males and 46 females had a family monthly income of less than Rs.2000/-; 36% of the patients had a family income of more than Rs.2000/-p.m

Impact of Illness on Children

Effect on child-care : Tuberculosis in women patients expressed inability to feed their children, to affected child care more than other household activities take care of their daily needs and their education.

such as cooking, cleaning, washing and serving food.

Child care fell from 64% to 35% for rural mothers and from 74% to 33% for urban mothers.

Table 2 : Distribution of patients according to socio-economic characteristics

Employment	Male N=98	Female N=69	Total =167
-Wage earners	39	9	48
-Salary earners	19	6	25
-self employed	10	2	12
- Others	30	52	82
(Income in rupees)			
<i>Personal</i>			
- Nil	20	49	69
- <500	6	5	11
- 500+	72	15	87
<i>Family</i>			
- <2000	61	46	107
- 2000+	37	23	60

Caring activities were affected for children of both urban and rural female patients; 58% of female patients expressed inability to feed their children, to affected child care more than other household activities take care of their daily needs and their education.

Effect on Education : In all, 57 patients (34%) reported that due to loss of income on account of their illness, they could not buy adequate food or clothing or books for their children. The most severe impact was discontinuation from school and children taking up employment to compensate for the loss of income. Among the 276 children studied 29 children (11% -8% rural and 13% urban, $P < 0.05$) had dropped out of school as a result of parental illness. These 29 (11 male and 18 female) were children of 16 parents of whom 10 were male patients and 6 were female patients. Of them, 23 children (8%) had to take up some employment to support the family. In all, 52 children, that is almost 1/5 of the total children (276) were affected one way or the other : 42 children (81%) were children of male patients.

The 16 parents of 29 children who discontinued their schooling were compared with rest of the 151 parents, to find out whether demographic,

Table 3 : Comparison between parents of children who continued schooling and who dropped out

Social and Economic Factors	Continuing Schooling N=151	School dropouts N=16	%
Age in years	15-49 50+	109 42	14 5
Sex	Male Female	88 63	10 8
Marital status	Living with spouse Single	71 80	13* 3 4
Family Type	Joint Nuclear	51 100	6 10 9
Family Size	<5 5 and above	99 52	3** 13 20
Habitat	Rural Urban	78 73	6 10 8 13
Employment	Employed Unemployed	77 74	8 8 9 8

* $P=0.02$

** $P<0.001$

social and economic factors were responsible for it. (Table 3).

Only two factors were found statistically significant : marital status and family type. The number of school drop outs was more (15%) among the children where both parents were living together ($P = 0.02$) as well as in families with five and above members ($P < 0.01$).

DISCUSSION

The social and economic impact of tuberculosis follows from its characteristic age distribution". Tuberculosis affects all age groups, but its greatest impact is on economically productive adults. These are parents on whom survival and development of children depend. Thus, tuberculosis has the potential to impede the development of both individuals and society⁷ because :-

- c 34% of the study parents could not afford to buy books, food and clothing for their children due to loss of income.
- c Tuberculosis in mothers affected the entire households on account of loss of their earnings outside the household and additional losses due to the reduction of routine household activities; child care fell from 64% to 35% among rural females and from 74% to 33% in urban females; 58% of the female patients expressed inability to feed their children or take care of their daily nurture and education as reported earlier in respect of tuberculosis by Beena et al of TRC, Chennai and Watts et al⁸ in respect of Guinea

Worm disease in Nigeria. Some cases of acute malnutrition and underweight children were also observed in this study.

The study has clearly documented the impact of parental tuberculosis on their children, specially on their education, and the economic loss of parents needing their children to take up employment. Thus, tuberculosis which is already a social menace leads to another social evil i.e., child labour. Though the number of children forced to become child labourers is relatively small, this can not be ignored, especially when India is working towards eradication of child labour. It is thus time for health care providers and child care workers to work jointly for control of tuberculosis.

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