Journal of Advanced Zoology
ISSN: 0253-7214
Volume 44 Issue 5 Year 2023 Page 1295:1299

Socio-Economic Status of Tuberculosis on Patients and Family In Himachal Pradesh

Urmila Devi[1], Ayushi Kapoor[2], Priyanka Kaushal[3], Shweta Kanwal[4], Saurabh Kumar[5*], Rajesh Sood[6], Manthan Kumar[7], Dr. Parveen Kumar[8]

[1]MPhil, PhD Scholar, Department of Sociology, Career Point University, Hamirpur, Himachal Pradesh
[2]MBBS, Unity Multispecialty hospital, Surat, Gujrat
[3]PhD, Head and Assistant Professor, Department of Division of Language and Social Science, Career Point University, Hamirpur, Himachal Pradesh
[4]MD (Community Medicine), Medical Officer, RHFWTC, Kangra at Chheb
[5]PhD, Associate Professor, Department of Division of Language and Social Science, Career Point University, Hamirpur, Himachal Pradesh
[6]Epidemiologist, Medical Officer of Health, ZH, Dharamshala
[7]MBBS, MMU Solan, Himachal Pradesh
[8]Assistant Professor, Department of Community Medicine, Dr. RPGMC and Hospital, Tanda, Himachal Pradesh

***Corresponding Author:** Dr. Saurabh Kumar*
**PhD, Ex-Head, Department of Sociology, Career Point University, Hamirpur, Himachal Pradesh*

Article History

Received:10/08/2023
Revised:12/9/2023
Accepted:16/10/2023

Abstract:

Introduction: Long-term illnesses like tuberculosis lead to significant morbidity and mortality rates. The tuberculosis problem has not improved, even though the causal bacterium was discovered more than a century ago and nearly 100% effective treatment regimens are now available. The inadequate description of the disease's socioeconomic impact is one of the causes of this. Studies to determine the socioeconomic burden of diseases like tuberculosis have just lately been conducted.
Methods: Approximately 80% of people in India reside in rural areas. Agriculture is the primary occupation, and salaries are paid on a daily basis. Most transportation infrastructure is subpar, and there are many dirt roads. Although there is good rail and road connectivity between urban centers, travel costs are greater there. Compared to a rural setting, the employment profile of the urban population is distinct; most people work for themselves or are salaried. In India, the prevalence of tuberculosis is comparable in rural and urban areas.
Results: Family members on a salary made up 38.46% of the patient population, followed by wage earners (15.3%) and self-employed individuals (46.15%). 17.69% of patients had monthly incomes of less than 1000 rupees, 19.23% had incomes between 1000 and 2000, 43.08% had incomes between 2001 and 6000 rupees, and 20% had incomes exceeding 6000 rupees. Of the patients hospitalized, 60% were to government hospitals and 40% to non-governmental organizations. the percentage of total costs for GH and NGO patients that are made up of direct and indirect

costs. 33.08% of patients were dependent on direct costs, while 66.92% of patients were dependent on indirect costs.
Conclusion: The overall expenses were somewhat substantial, especially the indirect costs brought on by tuberculosis. Three months was the average amount of time lost from pay. Female patients' caregiving efforts drastically dropped, and one-fifth of pupils stopped going to school.

Keyword: TB, Socio economic, Cost identification

Introduction

Prolonged illnesses like tuberculosis result in significant morbidity and mortality. The tuberculosis problem has not improved, even though the causal bacterium was discovered more than a century ago and nearly 100% effective treatment regimens are now available. The inadequate description of the disease's socioeconomic impact is one of the causes of this. Studies to determine the socioeconomic burden of diseases like tuberculosis have just lately been conducted. Planners will be better able to allocate funds with appropriate priority if they have a good grasp of this burden.[1]

Since tuberculosis strikes the most productive age group, society bears a heavy financial burden as a result.[2,3] There hasn't been much written on how tuberculosis affects men and women differently, despite the fact that some research have attempted to quantify the disease's economic effects. Women frequently encounter barriers when trying to access diagnostic centers, conduct investigations, and receive proper treatment.[4] In addition, the triple burden of housework, childcare and employment allows them very little time to access health care and tuberculosis care for themselves. the socio-economic impact of tuberculosis in both men and women. The present study was aimed to evaluate Socio-economic impact of tuberculosis on patients and family in India.

Methods

Approximately 80% of people in India reside in rural areas. Agriculture is the primary occupation, and salaries are paid daily. Most transportation infrastructure is subpar, and there are many dirt roads. Although there is good rail and road connectivity between urban centers, travel costs are greater there. Compared to a rural setting, the employment profile of the urban population is distinct; most people work for themselves or are salaried. In India, the prevalence of tuberculosis is comparable in rural and urban areas.
The intricate network of government (GH), private PVT, and non-governmental organization (NGO) institutions makes up India's health care delivery system. Low-income people can receive free medical care from primary health care (PHC) facilities in rural regions, Taluk hospitals in towns, and tertiary care specialist hospitals in cities, which make up the government health care system. For diagnosis and treatment, a little cost is charged at NGO-run centers. Patients who receive services from private, for-profit healthcare providers are always charged more for their care than those of the other two providers.

Initially, the trial included patients with recently diagnosed sputum-positive pulmonary tuberculosis who were on short-term treatment. Monthly visits were made to each center until the required number of patients were interviewed. Patients were chosen at random according to their availability at the clinics.

The initial part of the study consisted of focus group discussions. A group discussion were held in urban and rural public and private health care facilities. Each focus group consisted of 8 to 10 persons comprising patients, village elders and young men women. The topics of discussions were health-seeking behavior in general, with reference to respiratory infection, costs involved in diagnosis and treatment, and the impact on the family.

Results

Baseline Characteristics

The baseline characteristics of the study population are given in Table 1. The mean age was 39.54±13.23 years. Among the study population, 60% of males and 84% of females were in the economically productive age group

(15 to 49 years). 73.38% of the population were married. 66.92% of the population belongs to the nuclear family.

Economic Status

The distribution of patients based on economic characteristics is described in Table 2. 38.46% of patients were salaried family members, 15.3% of patients were waged, and 46.15% of patients were self-employed. 17.69% of patient's monthly income was <1000 rupees, 19.23% of patients income was 1000-2000, 43.08% of patients income was 2001-6000 rupees, and 20% of patients income was >6000 rupees.

Type of health facilities

Table 3 shows that 60% of patients were admitted to a govt. hospital, 40% of patients was admitted to an NGO.

Cost proportion

Table 4 describes the proportion of direct and indirect cost components of total cost in GH and NGO patients. 66.92% of patients were depends upon indirect cost and 33.08% of patients were depends upon direct cost.

Discussion

The social and economic burden of tuberculosis follows from its unique age distribution. Tuberculosis affects all age groups but has its greatest impact on productive adults. It is well known that adults aged 15 to 59 years are the most economically productive individuals; they are also the parents on whom the survival and development of children depend. Thus, tuberculosis has the potential to impede the development of both individuals and society.[5]

The mean age was 39.54±13.23 years. Among the study population, 60% of males and 84% of females were in the economically productive age group (15 to 49 years). 73.38% of the population were married. 66.92% of the population belongs to the nuclear family. In a study by **Rajeswari et al** the mean age was 37.8±14.9. Among the study population, 69% of males and 84% of females were in the economically productive age group (15 to 49 years).[6] In a study **Ananthakrishnan et al** the majority of the patients (54%) belonged to the 25–54 years age group and the study group included 186 (62%) males and 114 (38%) females.[7]

The distribution of patients based on economic characteristics is described. 38.46% of patients were salaried family members, 15.3% of patients were waged, and 46.15% of patients were self-employed. 17.69% of patient's monthly oncome was <1000 rupees, 19.23% of patient's income was 1000-2000, 43.08% of patients income was 2001-6000 rupees, and 20% of patients income was >6000 rupees. In a study by **Ananthakrishnan et al** economic impact was also felt by higher proportion of female patients (32.5%), those with an education of higher secondary and above (33.3%), unemployed (32.5%), and those with monthly per capita income less than US$ 24.4 (39.2%).[7] The financial impact resulted from direct and indirect costs of seeking and attending treatment, TB also caused a loss of income for the entire family due to caring responsibilities and treatment requirements, such as travel to the hospital.[8]

60% of patients were admitted to a govt. hospital, 40% of patients were admitted to an NGO. The proportion of direct and indirect cost components of total cost in GH and NGO patients. 66.92% of patients depend upon indirect cost and 33.08% of patients depends upon direct cost. In a study by Rajeswari et al, direct costs are compared with indirect costs among the 159 working patients, both rural and urban. Indirect costs were Rs.3610/, and Rs.4100/, respectively, for urban patients, and direct costs were Rs.2280/ and Rs. 2852/. While indirect costs were higher than direct costs for both rural and urban patients, both costs were higher among urban patients.[6]

Conclusion

The total costs, and particularly indirect costs due to TB, were relatively high. The average period of loss of wages was 3 months. Care giving activities of female patients decreased significantly, and a fifth of schoolchildren discontinued their studies.

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Table 1: Baseline Characteristics

Baseline Characteristics	**Frequency (n=130)**	**Percentage (%)**
Age Group (Years)		
≤20	21	16.15%
21-30	50	38.46%
31-40	30	23.08%
>40	29	22.31%
Mean Age	39.54±13.23 years	
Gender		
Male	78	60%
Female	52	40%
Marital Status		
Married	98	75.38%
Unmarried	32	24.62%
Region		
Rural	112	86.15%
Urban	18	13.85%
Type of Family		
Nuclear	87	66.92%
Joint	44	33.85%

Table 2: Economic Status

Economic Status	**Frequency (n=130)**	**Percentage (%)**
Occupation		
Salaried	50	38.46%
Waged	20	15.38%
Self employed	60	46.15%
Patients' income (Rupees)		
<1000	23	17.69%
1000-2000	25	19.23%
20001-6000	56	43.08%
>6000	26	20.00%
Family Income		
<1000	13	10%
1000-2000	17	13.08%
20001-6000	69	53.08%
>6000	31	23.85%

Table 3: Type of health facilities

Type of health facilities	Frequency	Percentage (%)
NGO	52	40%
Govt Hospital	78	60%

Table 4: Cost

Cost	Frequency	Percentage (%)
Indirect	87	66.92%
Direct	43	33.08%