

# Health Seeking Behaviour and Sociodemographic Characteristics Among New Adult Tuberculosis Patients in Sonitpur District, Assam: A Cross Sectional Study

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## ABSTRACT

**Introduction:** As India endeavours to eliminate TB by 2025, detection of TB cases plays a major role in marching towards that goal. Health seeking delay increases the TB burden as those who remain undetected spreads TB; hence it is essential to describe the pattern of health seeking behaviour and socio-demographic profile of the TB patients.

**Methods:** A community based cross-sectional study conducted among new adult TB patient 18 years and above registered in government health facilities of sonitpur district, Assam. Health seeking delay, the first place of care seeking, Reason for the delay and socio demographic characteristics was collected by a pre tested and structured schedule, entered in MS excel and analysed in epi-info.

**Results:** 54% reported health seeking delay, 42% pharmacy as first place of health seeking and 70% had misperception of TB symptoms to be mild and will resolve by self-medication.

**Conclusion:** More than half of the study participants reported health seeking delay implying a poor knowledge of TB symptoms requiring improvement of health literacy and active involvement of pharmacy workers and traditional medicine healers in TB case detection.

**Keywords:** [Tuberculosis, Health seeking, Socio-demography, Assam, Sonitpur]

## INTRODUCTION

According to Global TB report 2021, Tuberculosis is the second leading cause of death by any infectious disease, only after covid-19<sup>1</sup>. India accounts for 26% of the total cases globally and 4.93 lakh deaths was estimated due to TB for the year 2020. As per National Strategic Plan 2017-25 India plans to achieve TB elimination by 2025. The strategic pillars of NSP are Detect-Treat-Prevent-Build<sup>2</sup>. The process of detection begins by early identification of presumptive cases. Though

programmatically active case finding is mooted through the community health workers, it is only through passive case detection whereby most of the TB cases are detected.

The passive case detection depends on the persons with presumptive TB recognising their symptoms and attend the health facilities seeking remedy for their symptoms. Thus, any action undertaken by individuals who perceive themselves to have a health problem or to be ill for the

purpose of finding an appropriate remedy is defined as health or care seeking behaviour. The interplay of these factors results in a care seeking option that can be single or a series of options often reflecting a pattern in care seeking. This pattern depends on the availability, cost, and physical accessibility of the health services. A health care seeking model typically involves recognition of symptoms, perceived nature of illness followed initially by appropriate home care and monitoring which can necessitate seeking care at health facility, medication, and compliance.

“Tuberculosis is a social disease with a medical aspect” as said by Sir William Osler (1849-1919)<sup>3</sup>, the socio-demographic factors play a predominant role in making people susceptible to TB, hence it is essential to study the socio-demographic characteristics of PLWTB. The health seeking behaviour also depends on the awareness, socioeconomic and socio-cultural factors. On literature search no previous studies has been done in this part of Assam. Hence this study is done to describe the health seeking pattern and socio-demographic characteristics among the new adult TB patients registered in the government health facilities of Sonitpur district, Assam.

## **MATERIALS & METHODS**

A community-based cross-sectional study conducted among new adult TB patients registered in government health-facilities of Sonitpur district, Assam from August 2021 to July 2022. The divided sonitpur district comprised 4 Tuberculosis units namely Tezpur TU, Dhekiajuli TU, Balipara TU and North Jamuguri TU under the sonitpur District Tuberculosis centre of NTEP.

### **Inclusion criteria:**

New TB-patients 18 years and above, in intensive phase of their treatment including both pulmonary and extra-pulmonary TB patients were included in the study. Sample size was calculated using the formula  $n = 4 pq/d^2$  with 7% margin error based on the

prevalence of health seeking delay reported in Sonowal CJ study conducted in Dibrugarh, Assam<sup>4</sup>. The sample size was calculated to be 130 which was rounded off to 150 considering the non-response and the study was conducted during Covid19 period.

Exclusion: those who were currently infected with COVID19.

Health seeking behaviour of the participants was assessed by face-to-face interview using the predesigned pretested structured interview schedule.

Socio-demographic profile of the patients was collected by face-to-face interview using the predesigned pretested structured interview schedule and observation.

### **Data collection Tools:**

Pre-designed and Pretested structured schedule. The schedule was pre tested in TB patients of TMCH DOTS centre. Then it was accordingly modified and translated to Assamese and the schedule contained questions on, Health seeking behaviour and sociodemographic profile.

Socio-economic status was assessed using Modified B.G Prasad scale – May 2021.

## **STATISTICAL ANALYSIS**

The data was entered in Microsoft excel and analysed in Epi info 7. The Graphical representation was done using Graph pad prism 9

## **RESULT**

### **Patient characteristics:**

Twenty six percent of the study participants belonged to 19 to 28 years age group and 65.3% were males. 90% from rural areas, 82% from Hindu religion and 60% belonged to Other backward castes; 58% reported unemployment and among those employed 34% were Tea Garden labourers. Around 26% were illiterate and 40% were educated up to primary level. 53.3% lived in kutcha houses, 37% had overcrowding in their houses and 48% belonged to social class v of modified BG prasad classification.

### Health seeking behaviour:

More than half (54%) of the study participants reported health seeking delay and 42% visited pharmacy as their first place of health seeking, 9.3% had visited traditional medicine practitioners and 9.4%

had visited private practitioner. Health seeking delay was higher among females 55.8% and 70.4% had reported perceiving their symptoms as mild and will resolve by taking OTC drugs as reasons for their health seeking delay.

**Table 1 Health seeking behaviour of new adult TB patients in Government health facilities of Sonitpur district, Assam 2021. N = 150**

Characteristics	Frequency	Percentage (%)
Health seeking delay		
Yes	81	54
No	69	46
First Place of health seeking Health facility	59	39.3
Traditional medicine*	14	9.3
Pharmacy	63	42.0
Private practitioner	14	9.4

**Table 2 Health seeking behaviour by Gender of new adult TB patients in Government health facilities of Sonitpur district, Assam 2021. N = 150**

Characteristics	Health seeking delay		Total n (%)
	Yes	No	
Male	52(53.1)	46(46.9)	98(100)
Female	29(55.8)	23(44.2)	52(100)

**Table 3 Reason for Health seeking delay among new adult TB patients in Government health facilities of Sonitpur district, Assam 2021. N = 150**

Reason for delay	Frequency	Percentage
Mild illness & OTC drugs	57	70.4
Covid lockdown	5	6.2
Family or work-related issues	6	7.4
Lack of money	6	7.4
Traditional medicine	7	8.6

**Table 4 Socio-demographic characteristics of new adult TB patients in Government health facilities of Sonitpur district, Assam 2021. N = 150**

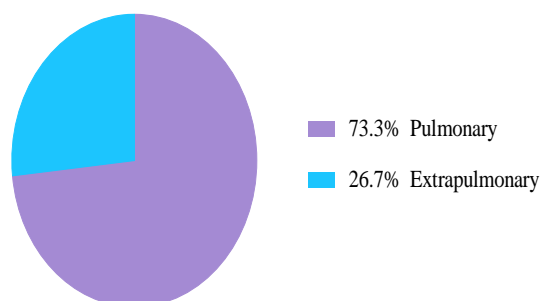
Characteristics	Frequency	Percentage (%)
<b>Age group</b>		
19-28	39	26.0
29-38	34	22.7
39-48	31	20.7
49-58	21	14.0
>58	25	16.7
<b>Sex</b>		
Male	98	65.3
Female	25	34.7
<b>Religion</b>		
Hindu	123	82.0
Muslim	15	10.0
Christian	12	8.0
<b>Caste</b>		
General	33	22.0
OBC	90	60.0
SC	13	8.7
ST	14	9.3
Rural	137	91.3
Urban	13	8.7
<b>Employment status</b>		
Employed	44	29.3
Unemployed	87	58.0
Others*	19	12.7
<b>Occupation**</b>		
Government	6	13.6
Non-Government employee+	15	34.1
Non-Government employee++	15	34.1
Self-employed	8	18.2

\*Retired, housewives, students, + Tea Garden labourers, ++others

**Table 4.1 Socio-demographic characteristics of new adult TB patients in Government health facilities of Sonitpur district, Assam 2021. N = 150**

Characteristics	Frequency	Percentage (%)
<b>Education status</b>		
Illiterate	40	26.7
Lower Primary	60	40.0
Upper Primary	8	5.3
Secondary	30	20
Senior Secondary	11	7.3
Graduate/Post Graduate	1	0.7
<b>Type of house</b>		
Pucca	61	40.7
Kutchha	80	53.3
Semi-pucca	9	6.0
<b>Overcrowding</b>		
Yes	56	37.3
No	94	62.7
<b>Marital status</b>		
Currently married	120	80.0
Never married	22	14.7
Widowed	8	5.3
<b>Family size</b>		
<5	70	46.7
≥ 5	80	53.3
<b>Social class</b>		
I	7	4.6
II	13	8.7
III	19	12.7
IV	39	26.0
V	72	48.0

**Pie chart - distribution of study participants by Type of TB based on the anatomical site. (N = 150).**



**DISCUSSION**

Majority of the study participants (26%) were from 19 - 28 years age group and a decreasing trend in composition is observed in the age group up to 58 years. The median age of the study participants was 39.5 years with IQR (28 -52 years). The median age of Females was 40 with IQR (27.0-50.0 years), the median age of males was 38.5 with IQR (30.0 – 55.0 years). The age distribution was similar in Chandra A et al study<sup>5</sup> conducted in a similar study setting. Majority of the study participants (91.3%) were from rural areas. Sonitpur district has a 90% of its

population residing in the rural areas and by NFHS-5 prevalence of TB is more in the rural areas. Higher proportion of study participants were unemployed (58%). Among the employed category (29.3%), majority of them belonged to the non-government sector, mainly the Tea industry. The unemployed proportion reported in this present study is more than the unemployment reported in Kumar R et al study<sup>6</sup>, Chandra A et al<sup>5</sup>, and Raghuraman S et al study<sup>7</sup>. The higher proportion of unemployment observed in the results of the present study can be because of COVID-19 pandemic.

Most of the study participants belonged to the OBC category 60%, 22% from general category, 8.7% from Scheduled castes and 9.3% were from scheduled tribes. More than half of the study participants (53.33%) were living in kuccha houses, 37% of the study participants were living in overcrowded houses and Many of the study participants belonged to the low socioeconomic status social class v of the modified B.G. Prasad socio-economic scale (May 2021)<sup>8</sup>. The poor living conditions, overcrowding and low socioeconomic factors are key factors in

precipitating TB incidence and eliminating these factors have led to decrease in TB as it has been observed in the high income countries post industrialisation.<sup>9</sup>

### Health seeking behaviour

The prevalence of health seeking delay was 54%. The prevalence of health seeking delay was more among females (55.8%). In this present study only the patient delay or the consultation delay was studied, which signified duration of delay from the onset of symptoms to the first contact with health facility.

Of the first place where the study participants sought treatment, most had first visited the pharmacy, followed by government health facilities, around 10% went to private practitioner and 10% visited traditional medicine practitioner, including herbal medication, alternative medicine, and superstitious remedies.

The reasons for health seeking delay as reported by study participants were, majority thought that the symptoms will resolve by taking pharmacy drugs, and perceived TB symptoms as just a mild illness, covid lock down, family issues, lack of money, black magic, traditional medications, working out of station, did not take treatment properly (on and off.)

Prevalence of more than 50% of health seeking delay and a majority having misconception of the constitutional TB symptoms as mild and will resolve by taking medication similar to the result reported in Mistry et al study<sup>10</sup>, implies that the effectiveness of health education imparted at the community level by the community health workers needs to be addressed and improved to improve health literacy pertaining to TB symptoms.

More than 50% have chosen pharmacy or traditional medicine as their first place of choice for seeking care; Some of the study participants reported they did not choose health facilities such as sub health centres/HWCs, PHCs and Tea-garden dispensaries as first place for seeking care, despite these facilities being in the vicinity

of their home, as they felt discomfort in the way they were attended to by the health facility employees during their previous visits. A few of the study participants had visited hospitals located more than 100 kms away or had chosen to visit the traditional medicine practitioners, mostly on the advice of their neighbours or well-wishers in their neighbourhood.

### LIMITATIONS

The study was carried out during the time of covid with a sample size of 150 considering the vast terrain to cover in the district. As the study participants were selected consecutively and were included in the study depending on their availability to reach through phone and their willingness to participate in the study, it may affect the generalisability of the study finding.

### CONCLUSION

The prevalence of more than 50% health seeking delay and around 50% had pharmacy or traditional medicine practitioners as their first point of contact to seek care imply that there is an unmet need among the patients that needs to be addressed which can be due to the way they were treated at these facilities or through their sphere of influences which needs further research in this regard. Conversely the pharmacists and traditional medicine practitioners can also be involved in the intensified case detection bringing them under the ambit of the programme like conferring them with titles such as “TB detectives” and this study provides an overview of the sociodemographic profile of the PLWTB in Sonitpur district, Assam.

### Declaration by Authors

**Ethical Approval:** Approved. Ethical clearance was obtained from the Institutional Ethics Committee (H) of Tezpur Medical College and Hospital, Tezpur. Written informed consent was obtained from the study subjects prior to the onset of the study after explaining the purpose and details of the study.

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**Conflict of Interest:** The authors declare no conflict of interest.

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