

# A Qualitative Study To Identify The Challenges Of Drug Noncompliance Among TB Patients From Selected Urban Areas Of Pune City

Dr. N Sujita Devi<sup>a\*</sup> Mr. Hrishikesh Ubale<sup>b</sup>, Ms. Shital Kuranjekar<sup>b</sup>, Ms. Sandhya Yadav<sup>b</sup>

<sup>a</sup>Associate Professor, Bharati Vidyapeeth (Deemed to be University), College of Nursing, Pune.

<sup>b</sup>S.Y. P.B.B.SC, Students of Bharati Vidyapeeth (Deemed to be University), College of Nursing, Pune.

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## ABSTRACT

**Introduction:** The patient's refusal or inability to follow medical professional instructions on TB medications. Non-adherence to anti-TB medicine has emerged as one of the key obstacles to TB control. It is the primary cause of TB treatment program failures, which leads to high death rates, more TB treatment outcomes that are unsatisfactory, including the spread of TB in the community, continuous infectiousness, expensive TB therapy requirements, and MDRTB cases.

**Aims of the Study:** to identify the challenges of drug noncompliance among TB patients from selected urban areas of Pune city.

**Methodology:** This qualitative study used a descriptive observational design to explore the challenges of drug non-compliance among tuberculosis (TB) patients in selected urban areas of Pune City. A purposive sample of 10 TB patients undergoing treatment was selected. Data were collected using a semi-structured interview guide Thematic analysis was conducted to identify key patterns and insights from participant narratives.

**Results:** The findings highlighted multiple interrelated factors contributing to drug non-compliance. Initial neglect of symptoms and reliance on self-medication delayed diagnosis and treatment. Emotional responses such as fear, anxiety, and depression were common post-diagnosis. Patients reported challenges such as side effects, long treatment duration, and tablet burden, which led to inconsistent medication intake and, in some cases, premature discontinuation. Non-adherence resulted in relapse and risk of drug resistance. Socioeconomic pressures, job obligations, and healthcare access issues further impacted treatment continuity.

**Conclusion:** The study underscores the need for improved counselling, better patient education, emotional support, and potential adjustments in treatment protocols to enhance adherence and outcomes for TB patients.

**Keywords:** qualitative study, identify, challenges, drug non-compliance, TB patients, urban areas.

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## INTRODUCTION

The expensive expense of the drugs, Poor communication or a lack of confidence between the patient and their healthcare provider can also contribute to noncompliance; many people are usually ignorant of the benefits of treatment or see undisclosed unfavourable consequences. It is the primary cause of TB treatment program failures, which leads to high death rates, more TB treatment outcomes that are unsatisfactory, including the spread of TB in the community, continuous infectiousness, expensive TB therapy requirements, and MDRTB cases. To reach a good result or a cure, it is meant that tuberculosis (TB) patients would follow their treatment programs at a pace of more than 90%.

The World Health Organisation (WHO) admits in its worldwide plan to eliminate tuberculosis (TB) that Multidrug-resistant TB has become nearly universal in almost every nation as Mycobacterium TB strains resistant to standard first-line anti-TB medication combinations have emerged. One of the most critical puzzles and challenges for TB treatment programs is an individual who, for any reason, fails to finish TB treatment. 2.3% of new TB infections and 17.8% of treated TB cases were diagnosed with MDRTB, as indicated by the most recent national TB resistance to drugs monitoring report. Despite the fact that all public-sector hospitals in Ethiopia offer free TB treatment services at the fundamental healthcare level, the medication completion rate remains below 90%.

The mapping of TB treatment outcomes in Ethiopia revealed that 5.5% of patients failed to attend follow-up appointments and 0.7% experienced treatment failure. The most probable causes of poor TB treatment outcomes were non-adherence to therapy and lack of follow-up, which were typically shared (9.0%). Pune, a city in India, is experiencing a unique challenge in controlling tuberculosis due to its high

population density, socio-economic disparities, and limited access to healthcare for impoverished individuals, as it is rapidly urbanizing.

#### **Need of the study:**

Non-compliance with TB treatment refers to patients not adhering to the prescribed medication regimen, either by skipping doses, discontinuing treatment prematurely, or following irregular treatment schedules. Prolonged sickness, increased transmission rates, and The proliferation of multi-drug-resistant tuberculosis (MDR-TB) and exceptionally drug-resistant tuberculosis (XDR-TB) are the most severe consequences of this behaviour. Understanding the causes of drug noncompliance helps one to design strategies that really enhance adherence and therapeutic results. The initiative came close to achieving its twin goals of case discovery and national level cure rates. In the first quarter of 2009, national level has maintained its advancement. Though we have a 70% case identification rate and an 85% cure rate, we can only treat 59% of patients. What about the other 41% of community cases? Treating just 59% of patients will not help RNTCP to meet its goal.

The complex and multifaceted behavioural problem of TB patients following their treatment plan calls for more study. At present, one major barrier to following treatment is the lack of a thorough and all-encompassing knowledge of the elements enabling and hindering it. Increased treatment completion under DOTS is provided by treatment providers' regular home visits and direct observation. It happens soon after the first infection in primary TB, which affects 1-5% of people. However, the majority of latent infections don't show any obvious signs. Five to ten percent of these latent cases become active tuberculosis, which is frequently years after infection.

The World Health Organisation (WHO) Global TB Report 2023 ranks TB among the most lethal infectious diseases in the world. In 2022, almost 10.6 million people worldwide got TB. Besides the 1.3 million fatalities among HIV-negative TB patients, there were 167,000 more deaths among TB-HIV co-infected individuals Though compliance is still challenging, the worldwide tuberculosis treatment success rate in 2021 was 86%. During the posting in the public health, researcher come across many cases of non-compliance of TB medication. So researcher is interested to identify the challenges of drug complications among TB patients.

#### **Aim of the Study**

The aim of the study is to identify the challenges of drug noncompliance among TB patients from selected urban areas of Pune city related to Patient-related challenges, Therapy-related challenges, Socio economic challenges & Healthcare system.

### **MATERIALS AND METHODS**

The researcher employed a qualitative methodology using descriptive exploratory design with an objective is to identify the challenges of drug among TB patients in selected urban areas of Pune City. The accessible population included TB patients undergoing treatment who were facing issues with medication adherence. The sampling technique used was non-probability purposive sampling technique to select sample for data collection, and data collection continued until saturation was reached. The data collection tool had two parts: Section A gathered demographic details, while Section B included a semi-structured interview guide with open-ended questions. The tool's content validity was ensured through expert review by the different department, achieving a high Scale-Content Validity Index (SCVI) of 0.97. For final data collection, with total 6 samples data saturation was achieved.

### **RESULTS**

#### **Section-I Analysis of the demographic variables in form of frequency and percentage distribution.**

Majority of the participants were aged between 26-43 years (33.33%), with equal representation also seen in the 18-25 and 44-50 age groups. The sample had an equal gender split, with 50% male and 50% female. In terms of occupation, 33.33% were employed in government or private sectors, while 16.67% were homemakers or business owners. Educationally, half of the participants were graduates, 33.33% had primary or secondary education, and 16.67% held postgraduate or higher degrees. None had no formal education.

**Section II - Analysis related to the identification of challenge of drug non-compliance.****Table No – 2 Analysis related to the identification of challenge of drug non-compliance**

Codes	Sub themes	Themes	Verbatim
delayed medical consultation. progressive illness self-medication from a medical store	-Symptoms and Initial Reactions	Health Progression and Symptoms	lakshane soumya hoti, jyanna tyane normal manle. Pan veloveli, paristhiti vaait jhali ani tyala satat khokla, taap, thakva ani ulatya hou lagalyan. Haluhalu vajan kami hona ani bhook kami hona he dekhil ekam gahir arogya samasya che sanket hote.
			Suruvatila, lakshane minor vatli, jyamule veleva vaidik sala ghetla nahi. Chinta, thakva, khokla ani taap haluhalu vadhle, jyamule ek pragatisheel aazar suchit jhala. Medical storevarun swa-aushadhopcharavar lavkar avlamban kelyamule yogya nidhan ani upchar denyat vilamb jhala.

Codes	Sub themes	Themes	Verbatim
	Medical Consultation and Diagnosis		Samples ne dirghkalik lakshan anubhavalyanantar ek private clinic madhe vaidik madat ghene start keli. Prarambhik medications ne temporary relief dili, pan lakshane punha ubhavi. "Punha, pramukh hospital madhe vaigyanik parikshan kele, jithe tyala tuberculosis (TB) che diagnosis jhale, jyamule chinta ani emotional distress vadhale."
Early symptoms Challenges in diagnosis The importance of adherence to medication	Medical and Informational Value		Suruwatikal lakshane hote "(taap, kamjori, bhook kami hon)", Diagnosis madhe challenges hote, ani maine tests karanyasathi hichkicha keli. Upcharat kathinai hote (side effects, lamba kal, missed doses). "Mi medication var adhikaran che mahatva olakhato, pan kasa samjhau te kahi kalat nahi."

Codes	Sub themes	Themes	Verbatim
Shock and fear depression and worry, anxiety, fear, mental stress of the disease Counseling by doctors	Psychological and Emotional Impact	Emotional and Psychological Impact	Tyacha TB diagnosis shiknyanantar, mala chinta, udasi, ani bhay anubhavla tyacha bhavishya ani tyacha kutumbache well-being baddal. He emotional response te bhari arogya vikaransathi sambandhit manasik bojh darshavta.
			TB diagnosis mule shock ani bhay jhal, jyamule udasi ani kutumbachi javabdarichi chinta vadhali. Rogache manasik stress aarthik kathinaionne adhik vadhavle. Doctorsne kelelya counseling ne continued treatment sathi protsahan dene mahatvache role kela.
Faced difficulties work stress burden of taking four tablets daily nausea vomiting headache lose motion inconsistence in taking medication	Initial improvement Discontinuation of medication long treatment duration. loss of appetite, Incorrect dosing	Treatment Challenges & Adherence Issues	TB treatment suru kelayach, pan kaamache stress, divasbhari 4 tablets ghevnyacha bojh, ani side effects jaise nausea, bhook kami hona, headaches, ani loose motions mule, regimen follow karanyat kathinai zali. Velanuser, tyala treatment kadhi thakwat zala, jyamule inconsistent medication intake jhali ani doctor la vicharanyachya vidhinche, treatment band keli.

Codes	Sub themes	Themes	Verbatim
	Initial improvement false belief Discontinuation of medication long treatment duration.		Medication nantar prarambhik sudharana mule, TB cure jhala asahi mithya vishwas jhala. Medication discontinuation (1.5 varshanantar) mule: Lamba treatment duration mule frustrayion. Side effects jaise bhook kami hona, nausea, headaches, ani loose motions. Kaamache stress ani medication regular ghyayala time cha kami. Dhyanchi kami mule galat dosing (khup kam or khup jast) jhala.
Prematurely stopping treatment, treatments ineffective relapse of symptoms	Recurring health problems inconsistent medication intake prevent drug resistance	Consequences of Non-Adherence	TB treatment thambavnyamule health problems punha ubhavyat. Samples ne samjhavla ki inconsistent medication intake mule, purvichya treatment la asar nahi hota ani lakshane punha

			ubhavi. Drug resistance thambavanyasathi ani recovery sathi continuous ani complete TB treatment cha mahatvache ahe.
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Codes	Sub themes	Themes	Verbatim
gained knowledge incomplete treatment	Realization of health effect importance of medication adherence	Awareness and Behavioral Changes	TB seminars attend karun ani online awareness videos baghun, mala TB management v medication adherence che mahatva samajhla. Tyalya kalale ki incomplete treatment mule complications hou shakte, ani tyane thanyat treatment regimen strictly follow karayacha tharla.
committed to taking his TB medication maintaining a disciplined approach renewed determination psychological support	Promise, obligation, responsibility, maintaining a instructed method restored ,purpose emotional care	Personal Resolution and Commitment	Ata tyane regular TP medication ghayachi commitment keli ahe, tyachi health priority var thevli ahe, ani treatment sathi ek disciplined approach maintain keli ahe. Tyachya naveen determination mule, chronic illnesses manage karanyasathi health education ani psychological support che mahatva darshavle.
High cost of treatment Free treatment at government hospitals Job responsibilities and family pressures	More cost of treatment government hospital scheme Job obligations and family pressures	Financial and Social Barriers	Treatment cha high cost additional stress yarat hota. Sarkari hospitalmadhe free treatment ne rahat dila ani continued care sathi sahayak zala. Job responsibilities ani kutumbachya pressures mule medication adherence var asar padla.

Codes	Sub themes	Themes	Verbatim
Financial concerns and job security Family influence Healthcare hesitation	Monetary worries effect on work Relatives impact Healthcare uncertainty	Socioeconomic and Cultural Factors	“Diagnosis nantar employment baddal chinta TB cha socioeconomic impact darshavte.” “Majhi bhagnee mahattvache role kela, jithe tyane aage medical attention sathi protsahan dila, ani family support treatment adherence madhe mahatvache thevte.” “Initial tests sathi paisa kharch karayachya avaghaadekaranche reluctance lower-income settings madhe ek common issue ahe.”

TB seminars and watching awareness videos importance of completing treatment incomplete treatment can make TB return and medications ineffective	Education and awareness significance of completing medication adverse effect of incomplete treatment medications ineffective.	Learning and Awareness	TB seminars attend karun ani awareness videos baghun understanding improve jhali. Treatment complete karanyache ani medications stop karanyadanpurvi doctors la vicharayache mahatva samajhla. Incomplete treatment mule TB punha yeu shakte ani medications ineffective hou shakte, he kalale.
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Codes	Sub themes	Themes	Verbatim
Reduce the number of tablets Shorten treatment duration Ensure better patient counseling	Short span of treatment Education and awareness Counselling	Recommendations for TB Treatment Improvement	Divasbhari tablets chi sankhya 4 pasun 1 paryant kami kara, adherence improve karanyasathi. Treatment duration, medical riti ne sambhav asel tar, thoda kami kara. Treatment discontinuation prevent karanyasathi, patients la yogya counseling dya.
strict medication obedience Positive and poised self-alertness and accountability	medication adherence Optimistic and confident self-awareness and responsibility	Current Status	Ata strict medication adherence follow karto ahe ani health la priority de to. TB la puri riti ne jinkanyachya vishayach optimistic ani confident ahe. Treatment ani well-being sathi increased self-awareness ani responsibility vadhali ahe.

Healthcare professionals should underline the need of medication compliance and offer therapy to those in emotional pain. Simplified TB treatment plans are required. possibly reducing the number of tablets taken daily. Employers should support TB patients by allowing flexible work arrangements to accommodate their treatment schedules. Continuous public awareness campaigns are necessary to educate people on the significance of completing TB treatment. Completing treatment is valuable but could be strengthened by including a broader message on awareness and support for TB patients. While the ending is positive, more details on how the patient overcame challenges (such as setting reminders or receiving support) would strengthen the conclusion. Discussing strategies for better medication adherence, such as seeking medical advice on managing side effects & on how the patient now manages medication adherence (e.g., setting reminders, support from family or employer).

## DISCUSSION

The findings of this study confirm those of earlier studies, especially Cylia Nkechi Iweama. Many patients failed to follow their tuberculosis treatment plans. Therefore, it is crucial to provide patient-specific adherence education, minimize potential causes of TB drug non-adherence, and provide ongoing resource support to TB patients to enhance their treatment results.

The current study findings revealed that the patient first struggled with delayed medical consultation and self-medication, which worsened the condition. Emotional distress following the TB diagnosis, including anxiety and depression, further affected treatment adherence. Medication issues arose due to work stress, side effects, and long treatment duration, leading to inconsistent intake and premature discontinuation. Financial stress and job pressures added barriers, while family support played a key role in encouraging continued treatment. Awareness gained from TB seminars and online resources led to a commitment to

follow the prescribed regimen. To improve treatment outcomes, simplifying regimens, offering better counselling, and providing emotional support are recommended. Employers should allow flexible work arrangements, and public awareness campaigns should emphasize the importance of completing TB treatment. Currently, the patient adheres strictly to medication, remains optimistic about recovery, and is committed to their health.

### INTERPRETATION

The study highlights challenges TB patients face, including treatment adherence, emotional stress, and social barriers. It emphasizes the need for early care, support, and awareness. Solutions include simpler treatment, flexible jobs, and better education to improve outcomes.

### CONCLUSION:

This study identifies the challenges faced by TB patients in terms of symptoms, treatment adherence, emotional distress, and the impact of external factors such as financial and social barriers. The findings revealed that the patient first struggled with delayed medical consultation and self-medication, which worsened the condition. Emotional distress following the TB diagnosis, including anxiety and depression, further affected treatment adherence. Medication issues arose due to work stress, side effects, and long treatment duration, leading to inconsistent intake and premature discontinuation. Financial stress and job pressures added barriers, while family support played a key role in encouraging continued treatment. The patient needs awareness which can be from TB seminars and online resources led to a commitment to follow the prescribed regimen. The findings highlight the crucial role of early medical intervention, psychological support, and a well-structured treatment plan in ensuring successful recovery. The path of the patient emphasizes the need of finishing the whole term of treatment to prevent relapse and problems. It also emphasizes the need for greater awareness, improved patient education, and better support systems to help patients adhere to treatment regimens. The study suggests practical solutions such as simplifying treatment regimens, offering flexible work arrangements, and increasing public awareness campaigns.

### DECLARATION BY AUTHORS:

**Ethical Approval:** The study was approved by the institutional ethics committee of Bharati Vidyapeeth (Deemed to be University), Pune. The study participants were briefed about the purpose and nature of the study and written informed consent was obtained before data collection.

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

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