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Research Article

Knowledge on Nikshay Poshan Yojana for the Treatment of Tuberculosis Among the Beneficiaries of Dots Therapy of a Selected Community Area- A Survey

Anamika Dewan[1], Sumathi M[2]

[1,2]MSc Nursing, Tutor, RCON, Jamia Hamdard, New Delhi, India
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I N F O

Corresponding Author:
Sumathi M, RCON, Jamia Hamdard, New Delhi, India
E-mail Id:
Sumathi.m@jamiahamdard.ac.in
Orcid Id:
https://orcid.org/0009-0007-7919-2656
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A B S T R A C T

Introduction: Nikshay Poshan Yojana (NPY) is a flagship Direct Benefit Transfer (DBT) financial aid scheme launched by the Government of India in April 2018 under the National Tuberculosis Elimination Programme (NTEP). Designed to provide nutritional support to all notified tuberculosis (TB) patients across India, the programme recognises that adequate macronutrient and micronutrient intake is vital for optimising treatment outcomes and achieving disease recovery.

Objective: To assess the knowledge on Nikshay Poshan Yojana for the treatment of tuberculosis among the beneficiaries of DOTS therapy in a selected community area.

Method: A quantitative research approach with a non-experimental descriptive research design was used. A total of 100 participants was chosen utilising a non-probability purposive sampling technique from TB patients aged 18 to 46 years and above at a selected localised DOTS facility in New Delhi. A validated structured knowledge questionnaire was successfully administered to quantify comprehensive knowledge regarding Nikshay Poshan Yojana (NPY) parameters. Data analysis was executed via descriptive statistics.

Results: Demographic appraisal indicated that 52% of subjects fell into the age group of 18–25 years, 53% were male, and 47% were female. Educational documentation indicated that 32% had finished secondary school, while 42% generated a monthly household income of below Rs. 10,000/-. Quantitative scoring of baseline system awareness revealed that only 19% of the registered patients possessed adequate knowledge, whereas a substantial 56% demonstrated moderate knowledge and 25% manifested poor knowledge.

Conclusion: The evaluation demonstrates a distinct lack of comprehensive programme understanding among the target beneficiaries, with 81% presenting suboptimal (moderate to poor) functional awareness. Targeted educational Counseling by frontline health care providers and communi-

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ty health nurses must be systematically enhanced to Counselling scheme utilization and minimize treatment defaults.

Keywords: Nikshay Poshan Yojana (NPY), DOTS, Direct Benefit Transfer (DBT)

Introduction

"Nutrition support is one of the essential factors for envisioning Tuberculosis (TB) elimination."

Ministry of Health & Family Welfare

Tuberculosis (TB), an infectious pathology precipitated by the airborne pathogen *Mycobacterium tuberculosis*, continues to represent a leading engine of global mortality from a single infectious agent. It spreads actively through microscopic droplets generated when infected individuals cough, sneeze, or spit and predominantly involves the pulmonary parenchyma, though extra meningeal variants regularly affect the spinal column, kidneys, central nervous system, and lymphatic network. In spite of massive international diagnostic strides, a total of approximately 1.23 million individuals globally succumbed to tuberculosis in 2024. Multi-drug resistant strains (MDR-TB) represent a critical structural public health crisis, further complicated by low therapeutic capture; only about two in five individuals diagnosed with drug-resistant profiles successfully accessed standard targeted treatment regimens in 2024.[1]

A cross-sectional study was conducted by to assess the early implementation challenges of Nikshay Poshan Yojana among patients suffering from Tuberculosis in Delhi. The objective of the study was to evaluate the coverage of the scheme and identify barriers faced by beneficiaries in receiving financial assistance. Data were collected from TB patients registered under the National TB Elimination Programme through interviews and record reviews. The study revealed that although a large number of patients were registered under the scheme, only about half of them received the nutritional support during their treatment period. The major challenges identified were lack of awareness among patients, absence of bank accounts, errors in bank details, and administrative delays in fund transfer. The findings also highlighted that patients who received financial support were more likely to adhere to treatment and maintain better nutritional intake. The researchers concluded that strengthening monitoring systems, improving patient awareness, and simplifying the payment process are essential for effective implementation of the scheme.[2]

conducted a cross-sectional study in selected tuberculosis units of North India to assess the utilization of benefits provided under Nikshay Poshan Yojana. The study included TB patients registered under the national program and receiving anti-tuberculosis treatment. Information was collected regarding awareness of the scheme, receipt of financial assistance, and the way beneficiaries utilized the funds. The findings revealed that a majority of patients who received the financial incentive utilized it to improve their dietary intake during the treatment period. Many participants reported purchasing nutritious food items such as milk, fruits, pulses, and eggs using the provided financial assistance. The study also found that nutritional support helped reduce financial burden on patients and encouraged them to continue treatment regularly. The researchers concluded that the scheme plays an important 4 role in improving the nutritional status and treatment compliance of tuberculosis patients.[3]

conducted a study in a designated microscopy centre in Bengaluru to evaluate the coverage, awareness, and utilization of Nikshay Poshan Yojana among tuberculosis patients. The study adopted a descriptive research design and included TB patients registered at the centre for treatment. Data were collected through structured interviews and review of treatment records. The results showed that most patients were aware of the scheme and were registered to receive the financial assistance. However, some patients experienced delays in receiving the funds due to issues such as incorrect bank details, technical errors in the Nikshay portal, and administrative delays. Despite these challenges, the study found that patients who received the financial assistance were able to improve their nutritional intake and maintain better adherence to treatment. The researchers recommended strengthening the monitoring system and ensuring timely fund transfer to maximize the benefits of the scheme.[4]

conducted a cross sectional, descriptive study on enrolment on Nikshay Poshan Yojana among tuberculosis patient in Safdarjung Hospital, Delhi. A total of 188 TB patients were approached at a DOTS center and interviewed for the purpose of the study and data was collected using pre designed, semi structured, validated questionnaires. The findings showed that only 81.4% of all TB patients were enrolled under the NPY scheme of which only 10% received the benefits. The reason for the nonenrolment by the 21 participants were lack of awareness, lack of time or lack of bank account. The study found that although most of the patients were attending the DOTS treatment under the scheme, 90% were not receiving any of the incentive.[5]

conducted a mixed-methods study at Tuberculosis Units (TUs) under the District Tuberculosis Officer (DTO) in Pune district, Western Maharashtra, from August 2020 to September 2022. A total of 4398 TB patients were notified under Nikshay between November 2020 and June 2021, out of which 3373 patients met the inclusion criteria for the study. The findings of the study revealed that the overall

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coverage of DBT was quite high, which is encouraging when compared to previous studies that reported limited coverage. However, despite good coverage, delays in fund disbursement and several implementation challenges were identified. The study highlighted that the primary source of information regarding the scheme for most beneficiaries was healthcare staff, indicating the crucial role of health workers in program awareness. At the same time, lack of awareness among patients and social stigma associated with tuberculosis were significant barriers affecting the effective utilization of the scheme. Further, the study identified multiple operational challenges faced by both healthcare providers and patients. The study concluded that although DBT coverage under Nikshay Poshan Yojana was satisfactory and promising, its effectiveness is hindered by delays, administrative inefficiencies, and awareness gaps. Therefore, there is a need for improved sensitization of newly diagnosed TB patients, strengthening of administrative and technical systems, and better coordination between stakeholders to ensure timely and effective delivery of benefits.[6]

A breakdown of planetary burden metrics illustrates that the largest proportion of incident cases occurs within the WHO South-East Asia Region (34%), followed closely by the Western Pacific Region (27%) and the African Region (25%). Around 87% of absolute new cases manifest in thirty designated high-burden nations. Crucially, India leads the global landscape, bearing 25% of the total cumulative case volume. This clear epidemic concentration indicates that the domestic success of public health interventions in India profoundly affects planetary elimination milestones.

Clinical management paradigms emphasize that nutritional integrity is structurally linked with the pathogenesis and mitigation of active tuberculosis. The interactive dynamic between malnutrition and active TB forms a classic synergistic cycle: active disease status suppresses systemic appetite, induces mal absorption, and escalates metabolic breakdown, thereby aggravating structural cachexia. Concurrently, pre-existing states of severe under nutrition directly impair cellular immunity, accelerating the clinical transition from latent tuberculosis infection to active infectious disease. Modern programmatic calculations demonstrate that an estimated 55% of the total tuberculosis incidence inside India is cleanly attributable to the secondary physiological effects of underlying under nutrition. This risk multiplier significantly exceeds alternative clinical co-factors such as tobacco smoking (11%), type-2 diabetes mellitus (9%), or Human Immunodeficiency Virus (HIV) co-infection (5%). Consequently, optimizing nutritional states through direct intervention could produce structural improvements in down-regulating systemic TB incidence.

Results and table

Table 1.Distribution Matrix of the Level of Knowledge Scores

Knowledge Level Category	Calculated Knowledge Score Range
Adequate Knowledge	15 – 20 Points
Moderate Knowledge	08 – 14 Points
Poor Knowledge	01–07 Points(or 0)

Content Validity and Data Collection Procedure

Content validity was established by submitting the questionnaire to a panel of seven independent experts in the subject matter. Their feedback was used to refine sentence structures and ensure comprehensive item coverage. Data collection was initiated after securing formal political and institutional

In accordance with international directives, the World Health Organization (WHO) recommended integration of structured nutritional support into the regular clinical management profiles of patients in 2013. This paradigm is embedded within the pillars of the global "End TB Strategy," which emphasizes patient-centered care models as vital tools for success. Improving baseline dietary access within afflicted households directly intersects with the core frameworks of the first three United Nations Sustainable Development Goals (SDGs), explicitly targeting Poverty Reduction (SDG 1), Zero Hunger (SDG 2), and Good Health and Well-being (SDG 3). Furthermore, verified clinical research demonstrates that structured nutritional protocols significantly lower aggregate mortality.

Improve the precise internal pharmacokinetics of core baseline antitubercular chemotherapies, accelerate overall weight gain, and secure treatment completion timelines.

Need of the Study

Despite expanded infrastructure investments by governmental and non-governmental entities, tuberculosis remains a primary public health challenge in India. The persistence of extensive baseline malnutrition systematically lowers short-term protection, worsens drug-induced hepatic toxicity, and slows anatomical recovery. While the Nikshay Poshan Yojana represents a well-designed financial

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mechanism intended to mitigate these issues, its practical success depends on complete operational understanding among individual beneficiaries.

Many patients enrolled in active Directly Observed Treatment Short-course (DOTS) lines across dense urban areas demonstrate an incomplete understanding of Nikshay Poshan Yojana (NPY) logistics, eligibility rules, and structural banking configurations. This lack of functional knowledge often leads to under-utilized support services, prolonged household food insecurity, and increased default rates. In complex metropolitan settings like New Delhi, sharp variations in individual educational attainment, localized socio-economic status, and health information access create severe inequities in system awareness. Therefore, conducting systematic clinical assessments of beneficiary knowledge profiles is vital for uncovering programmatic communication gaps. The resulting data will enable community health nursing teams and clinical supervisors to launch targeted public health literacy campaigns, optimize resource distribution, and support national tuberculosis elimination goals.

Methodology

This chapter presents the specific research methodology utilized to evaluate baseline knowledge profiles regarding the Nikshay Poshan Yojana among active DOTS consumers in a dense metropolitan area.

Research Approach and Design

A quantitative research approach combined with a non-experimental descriptive research design was used for this study. This design allowed for the precise identification, categorization, and statistical profiling of knowledge distributions regarding Nikshay Poshan Yojana (NPY) without active manipulation of external environmental variables.

Setting of the Study

The operational locus of the investigation was centered at the established, high-volume localized Directly Observed Treatment Short Course (DOTS) center operating within Kalkaji, New Delhi. This facility serves an adverse demographic population presenting varied socioeconomic and educational backgrounds.

Population, Sample, and Sampling Technique

The target population comprised adult individuals diagnosed with active tuberculosis who were systematically accessing standard anti-tubercular drug courses at the Kalkaji DOTS center. A sample size of exactly 100 tuberculosis patients matching the inclusion criteria was recruited via a non-probability purposive sampling technique. The investigators met consecutively with arriving patients as they attended the clinic to secure their prescribed medication supplies.

Sampling Criteria Inclusion Criteria

- Individuals residing within the designated community cluster of New Delhi.
- Patients aged 18 years and above up to 46 years and older.
- Beneficiaries officially documented and registered on the active digital Nikshay Portal.
- Patients who provided formal, written, informed, and voluntary consent to participate.

Exclusion Criteria

- Patients refusing to participate or complete the evaluation.
- Individuals physically or cognitively unavailable at the scheduled points of data collection.

Description Tools

The primary instrumentation tool consisted of a Structured Knowledge Questionnaire developed following an intensive review of national tuberculosis control guidelines and authenticated validation literature. The final data collection tool contained two key operational components:

- **Section A: Demographic Profile Sheet:** Formulated to capture individual variable distributions, tracking chronological age, biological gender, formal education levels, occupational status, marital status, and average household monthly income.
- **Section B: Structured NPY Knowledge Questionnaire:** Comprising twenty precise multiple-choice questions assessing foundational knowledge of NPY objectives, cash values, distribution rules, portal requirements, and tracking procedures.

To maintain high precision, a binary scoring architecture was implemented: every correct response received 1 point, while incorrect answers or blank returns received 0 points, yielding a possible tool score range of 0 to 20. The final scores were categorized according to a structured knowledge matrix (Table 1).

clearances from the MLA office of Kalkaji alongside administrative approval from the Dean and Principal of the Rufaida College of Nursing, Jamia Hamdard.

The questionnaire was deployed via formatted digital forms to reduce data entry errors. The researchers explained the study goals to each participant and secured signed informed consent documents. All collected data profiles were kept strictly confidential and used exclusively for academic analysis.

Analysis and Interpretation of Data

This section displays the systematic data analysis and statistical interpretations derived from the study sample (N=100).

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Section A: Demographic Profile Variables

The baseline demographic distribution of the study is presented in Table 2, outlining the social and economic characteristics of the participants.

Profile Variables (N=100)

The demographic analysis indicates that the sample was predominantly composed of young adults, with 52% of the participants falling into the 18–25 age range. Stated income indices highlight severe economic vulnerability across the cohort: a substantial 82% of the surveyed patients subsisted on household incomes below Rs.20,000/-per month, with 42% earning less than Rs.10,000/-per month. This concentration underscores the critical importance of the NPY cash transfers for enabling basic nutritional access.

Section B: Baseline Knowledge Levels Regarding Nikshay Poshan Yojana

The quantitative distribution of knowledge scores across the sample population is documented in Table 3.

The result shows that 81% of the target users lacked the necessary information to navigate the system effectively, which could lead to missed installments or improper utilization of funds.

Table 2.Frequency and Percentage Distribution of Subjects According to Demographic

S.No	Demographic profile identifier Category	Absolute Frequency(F)	Percentage Distribution(%)
ChronologicalAge Breakdown			
1	18 – 25Years	52	52%
	26 – 35Years	30	30%
	36–45Years&Above	18	18%
Biological GenderProfile			
2	Male	53	53%
	Female	47	47%
EducationalAttainment Level			
3	Primary Schooling Complete	29	29%
	Secondary Schooling Complete	32	32%
	Graduate Degree Secured	24	24%
	Others/NoFormalEducation	15	15%
Occupational Profiling			
4	Homemaker Cohort	28	28%
	Private Sector Employment	32	32%
	Government Sector Employment	1	1%
	Others/Unemployed/DiverseLines	39	39%
Marital Status			
5	Married	52	52%
	Unmarried	46	46%
	Divorced / Separated /Widowed	2	2%
StatedMonthlyHouseholdIncome			
6	BelowRs. 10,000/-	42	42%
	Rs. 10,000/- to Rs. 20,000/-	40	40%
	Rs. 20,000/- to Rs. 40,000/-	16	16%
	Above Rs. 40,000/-	2	2%

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Table 3.Frequency and Percentage Distribution of Knowledge Levels Regarding NPY Among the Cohort (N=100)

S.No	Quantified level of Scheme Knowledge	Associatedscore Thresholds	Absolute Frequency(F)	Percentage Distribution(%)
1	Adequate Knowledge	15 – 20 Points	19	19%
2	Moderate Knowledge	08 – 14 Points	56	56%
3	Poor Knowledge	0 – 07 Points	25	25%

Discussion

This descriptive study demonstrates that a large proportion of active tuberculosis patients in urban communities face barriers to maximizing the benefits of the Nikshay Poshan Yojana due to limited knowledge. Specifically, 81% of the sample presented moderate to poor understanding of Nikshay Poshan Yojana (NPY) logistics. While most patients understood that the scheme provides monthly financial assistance, they lacked awareness regarding administrative requirements, such as updating active portal accounts, correcting bank validation flags, or tracking delayed transfers.

These findings align with recent public health literature. Kartik Chadhar et al. (2025) reported that while general awareness of Nikshay Poshan Yojana (NPY) reached 84.8% inside regional clinics, deep knowledge gaps regarding direct benefit mechanics prevented most users from successfully receiving all planned payments. Similarly, Suraj Prakash Singh et al. (2022) observed low programmatic enrollment due to simple barriers like a lack of baseline awareness, time constraints, or a total lack of valid bank accounts. Samir Barve (2025) also identified partial utilization issues, noting that despite general awareness, only 71% of surveyed beneficiaries systematically spent the cash in fusions on targeted dietary items, with the remainder redirecting funds toward general family expenses or childcare costs.

These persistent knowledge gaps highlight the need for improved institutional communication. Because proper nutrition is essential for successful anti-tubercular therapy, providing clear, actionable guidance on scheme mechanics is a critical requirement for patient care.

Conclusion

The following conclusions are drawn from the study's findings: Only 19% of tuberculosis patients receiving DOTS therapy demonstrate an adequate understanding of the Nikshay Poshan Yojana. Given that 82% of the sample reports low monthly incomes (below Rs. 20,000/-), enhancing system awareness is essential. Frontline health workers and nursing teams must deliver clear, actionable counseling to ensure that these financial resources are directly used to improve nutritional intake and support recovery.

Implications

Nursing Practice: Community health nurses should regularly assess patient knowledge regarding NPY during active home visits and routine drug distribution. Delivering clear health education regarding eligibility rules, required document updates, and the direct connection between high-protein nutrition and sputum conversion will significantly support treatment adherence.

Nursing Education: Nursing curriculums should include practical components detailing national health informatics platforms, such as the Nikshay Portal and DBT networks. Training students to guide vulnerable families through registration processes during clinical and community rotations will enhance their effectiveness as public health advocates.

Nursing Research:

- The study provides baseline data for conducting other research studies.
- The study will be motivation for budding researchers to conduct the same study on a larger scale.
- Funding and resources should be allocated to this area of study by government organizations in order to raise public awareness regarding Nikshay Poshan Yojana (NPY) and Direct Benefit Transfer (DBT).

Nursing Administration: Healthcare administrators should create accessible, multilingual educational materials (such as posters and simple checklists) for distribution across DOTS centers. Close coordination with District TB Officers (DOTS) will help streamline system issues and resolve portal data flags quickly.

Limitations

- It was limited to a community in New Delhi.
- It was a descriptive survey, and no intervention was done to improve the knowledge of the TB patients.
- Non-probability purposive sampling technique.

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Recommendations

- Replicate this research model with a larger, multi-center sample across both rural and urban areas to improve the generalizability of the findings.
- Conduct longitudinal clinical studies to evaluate whether structured educational programs directly improve a patient's nutritional recovery and body mass index (BMI).
- Perform qualitative research to explore the specific behavioral and administrative challenges patients face when navigating direct benefit transfer systems.

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