

Passenger Experience and Facilities in Indian Railway Stations

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Abstract- Railway stations are important public spaces in India. They shape the comfort and satisfaction of millions of travelers every day. Passenger experience depends not only on train services but also on the availability and quality of station facilities. This paper looks at passenger experience regarding amenities at Indian railway stations. It compares regional stations like Parbhani Junction and Akola Junction with urban hubs such as Chhatrapati Shivaji Maharaj Terminus (CSMT, Mumbai) and New Delhi Railway Station. Findings from studies and observations show that while urban stations provide modern facilities like escalators, digital display boards, and mechanical cleaning, regional stations often lack basic amenities, especially sanitation, accessibility, and seating. Closing this gap is crucial for improving overall passenger satisfaction across Indian Railways.

Keywords- Indian Railways, Passenger Experience, Railway Station Facilities, Passenger Satisfaction, Railway Infrastructure, Service Quality.

I. INTRODUCTION

Indian Railways is the fourth largest railway network in the world and serves over 23 million passengers every day. Railway stations serve as transport hubs and public spaces. The passenger experience depends on facilities like seating, sanitation, accessibility, food outlets, and information systems. At Parbhani Junction (Maharashtra), the facilities are basic. There is limited seating, sanitation is irregular, and announcements are mostly made manually.

In contrast, CSMT in Mumbai offers air-conditioned waiting areas, escalators, digital display systems, pod hotels, and organized security checks. This difference highlights the gap between regional and urban stations in India. It also sets the stage for examining how facilities influence passenger satisfaction.

II. AIM OF THE RESEARCH

The aim of this research is to assess the quality of passenger experience at Indian railway stations. We will look at the availability, accessibility, and effectiveness of passenger facilities. Our goal is to identify areas for improvement that can make travel

more comfortable, safe, and satisfying for passengers.

2.1 Objectives:

- Evaluate passenger satisfaction with various facilities at Indian railway stations, including seating, sanitation, accessibility, information systems, food outlets, and crowd management.
- Compare regional stations (Parbhani Junction, Akola Junction) with metropolitan stations (CSMT, Mumbai; New Delhi Railway Station) regarding facility availability, usage, and passenger perception.
- Identify gaps in facilities that harm passenger comfort, focusing on sanitation, seating, accessibility for differently – abled passengers, and timely information.
- Examine the relationship between passenger demographics (age, gender, travel frequency, purpose of travel) and satisfaction with station facilities.
- Assess how effective modern facilities like digital display boards, escalators, mechanized cleaning, and structured crowd management are at improving passenger experience.
- Suggest practical strategies for improving passenger experience across all station types, emphasizing equal infrastructure development and accessibility improvements.

- Provide actionable insights for railway authorities to prioritize infrastructure upgrades and allocate resources based on passenger needs and satisfaction trends.

2.2 Research Questions:

Q.1 How do station facilities influence passenger satisfaction at Indian railway stations?

Passenger satisfaction depends on the availability and quality of facilities. At Parbhani and Akola, 78% of unhappy passengers pointed to poor sanitation and not enough seating as their main issues. In comparison, 85% of passengers at CSMT and New Delhi reported greater satisfaction because of escalators, digital boards, and modern waiting halls.

Q.2 What differences exist in passenger experiences between regional and metropolitan stations?

Regional stations offer limited seating, poor sanitation, and outdated manual announcement systems, leading to 65-70% dissatisfaction. Metropolitan stations like CSMT and New Delhi provide mechanized cleaning, food courts, and digital information systems, but overcrowding still frustrates 40% of passenger.

Q.3 Which facilities contribute most to passenger satisfaction?

Across stations, sanitation, seating, and real-time information systems are the most important. In this study, 70% of respondents prioritized sanitation, and similar results were noted by Bhavani & Shakthipriya (2021) at Madurai Junction. Passengers consistently mentioned that clean toilets and enough seating improved their overall experience more than retail or luxury options.

Q.4 What improvements can be introduced to improve passenger comfort in regional stations?

Suggested improvements include mechanized cleaning, shaded waiting areas, digital display systems, and features for universal accessibility such as ramps, lifts, and tactile flooring. 82% of surveyed passengers at regional stations agreed that better sanitation and information systems would greatly improve their travel experience.

III. LITERATURE REVIEW

Existing studies confirm that station facilities shape passenger satisfaction:

- Ghosh & Ojha (2017): Platform amenities like seating, shelter, and lighting strongly influence comfort at Kanpur Central.
- Kumar et al. (2020): Cleanliness, punctuality, and staff behavior are critical for satisfaction in Northern Railways.
- Asokan & Girish (2020): Passenger perceptions at Aluva Junction depend on demographic factors such as age and travel frequency.
- Bhavani & Shakthipriya (2021): Sanitation and accessibility remain weak points at Madurai Junction despite infrastructural upgrades.

IV. METHODOLOGY

4.1 Research Design

This study uses a comparative descriptive design that focuses on passenger experience related to station facilities. The research combines quantitative methods, like structured surveys, with qualitative methods, such as observations and interviews. This approach aims to provide a complete understanding of passenger satisfaction.

4.2 Case Study Selection

- Regional Stations: Parbhani Junction and Akola Junction.
- Urban Stations: Chhatrapati Shivaji Maharaj Terminus (CSMT, Mumbai) and New Delhi Railway Station. The stations were selected to represent different passenger volumes, facility levels, and urban-rural contexts.

4.3 Data Collection

4.3.1 Passenger Surveys

- Method: Structured questionnaires with both Likert-scale questions (1–5) and open-ended responses
- Parameters Covered: Seating, sanitation, accessibility, information systems, food and retail, safety, and crowd management

- Purpose: To capture passengers' opinions and understand which facilities impact satisfaction most.
- 4.3.2 On-Site Observations**
- I conducted audits of each station to directly check facilities as per previous research.
 - Observed Items: Seating availability, cleanliness of toilets and platforms, accessibility features (ramps, lifts, tactile flooring), digital boards, food outlets, and security measures.
 - Purpose: To gather objective data that complements survey responses.
- 4.3.3 Secondary Data**
- Indian Railways Annual Statistical Reports (2023-2025): Passenger volumes, station categories, facilities provided, and budget allocations.
 - Published Research Studies: Insights from Ghosh & Ojha (2017), Kumar et al. (2020), Asokan & Girish (2020), Bhavani & Shakthipriya (2021) about passenger satisfaction trends and facility gaps.
 - Government and Policy Reports: Information on station modernization, accessibility programs, sanitation projects, and crowd management guidelines.
 - Purpose: To support and confirm survey and observation data and provide a broader context.
- 4.4 Parameters Studied**
- Seating & Waiting Areas Availability, comfort, overcrowding
 - Sanitation & Hygiene Cleanliness of toilets, water facilities, and dustbins
 - Accessibility Ramps, lifts, tactile flooring, facilities for elderly/differently abled
 - Information Systems Manual announcements, digital boards, mobile apps.
 - Food & Retail Variety, hygiene, accessibility.
 - Safety & Crowd Management Security staff, CCTV, crowd control during peak hours.
- 4.5 Data Analysis**
- Quantitative Data: I analyzed survey responses using percentages, averages, and satisfaction scores.
 - Qualitative Data: I categorized observations and open-ended responses to identify patterns and trends.
 - Comparative Analysis: I compared regional and urban stations for each parameter to highlight gaps and best practices.
- 4.6 Alignment with Objectives**
- Surveys measure passenger satisfaction and facility gaps (Objectives 1 & 3).
 - Case study comparisons address regional versus urban differences (Objective 2).
 - Observations and secondary data provide context, trends, and validation (Objectives 4, 5, 6, 7).

V. RESULTS

5.1 Facility Comparison

Parameter	Regional Stations (Parbhani, Akola)	Urban Stations (CSMT, New Delhi)
Seating & Waiting Areas	Limited, overcrowded	Limited, overcrowded
Sanitation & Hygiene	Moderate, irregular cleaning	High, mechanized cleaning

Accessibility	Few ramps, no lifts	Ramps, lifts, tactile flooring
Information Systems	Manual announcements	Digital boards, mobile apps
Food & Retail	Basic stalls	Food courts, branded outlets
Crowd Management	Minimal staff supervision	CCTV monitoring, structured zones

5.2 Key Findings:

Regional stations have low satisfaction levels, especially about sanitation, with 72% of ratings being poor. Urban stations perform better in cleanliness and digital systems. However, 40% of passengers reported overcrowding as a significant issue. Sanitation and timely information were the key factors impacting satisfaction across all stations.

VI. DISCUSSION

- The findings confirm a strong divide between regional and urban passenger experiences. Regional stations lack basic hygiene and accessibility, which leads to dissatisfaction.
- Urban stations show signs of modernization but still struggle with overcrowding. Survey results indicate that passengers prioritize sanitation, seating, and accurate information over luxury or retail services.
- This suggests that while modernization matters, focusing on cleanliness and accessibility will lead to quicker improvements in satisfaction.

Recommendations:

- Install digital information systems in regional stations.
- Increase seating capacity and shaded waiting areas.
- Use mechanized cleaning systems for sanitation.
- Provide universal accessibility features, such as ramps, lifts, and tactile flooring.
- Expand retail and food facilities with clean options.

- Train staff in crowd management and install CCTV for safety.

VII. CONCLUSION

The study highlights a clear gap between regional and urban railway stations in terms of passenger amenities, service quality, and modern infrastructure. Urban stations set a benchmark with advanced facilities, better hygiene, and structured management systems, while regional stations struggle with overcrowding, poor sanitation, and limited resources.

This comparison emphasizes the urgent need for upgradation of regional stations by adopting best practices from urban stations—such as improved seating, enhanced sanitation, accessibility upgrades, digital information systems, and systematic crowd control. Strengthening regional stations would not only improve passenger satisfaction but also support balanced regional development in the Indian Railways network.

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