

**A Study Related to Emerging Issues at Platforms with respect to  
Amenities  
provided at Railway Stations of Gujarat State**

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## **Abstract:**

In this study, the researcher has basically made an attempt for the identification of the key issues that have been faced by the passengers at the railway stations of the Gujarat State. It has been seen that the major goal of the study was to define the key issues that have been faced by the passengers at the railway stations. To achieve this objective, the researcher has collected 100 responses in total those who have somehow or other faced the difficulty level at the railway station of the Gujarat State. The study has used the non-probabilistic convenient sampling to collect the responses from the passengers from the selected cities of Gujarat State railway platform. The data analytical tools and techniques that have been applied are the frequency analysis, descriptive analysis, cross tabulation and chi square test as a part of proving the hypothesis of the study. The result has been shown that almost all the profiles railway passengers from the Gujarat state are having the significant difference of opinion for the different types of problem that have been faced by them at the railway stations of the Gujarat State.

## **Introduction:**

### **1. Introduction**

#### **1.1. History of Indian Railway**

The East India Railway was established in 1848 and opened its first railway line between Thane and Bombay in 1853. The numerous networks steadily expanded and grew in size during this early stage, which was entirely a result of British influence. The primary in India is provided by Indian Railways. Conveyance method for both passengers and goods. It has had a role in the nation's social, political, and economic life. India has become a country in large part because to the Indian Railways transportation network. People from all throughout the nation are connected into this network, in addition to marketplaces. It has boosted the nation's economy and assisted in advancing industry and agriculture.

#### **1.2. Works done under Five Years Plans**

- First Five Years Plan: Reconstruction and replacement of outdated assets as a result of the Second World War and the division of the nation.
- Second Five Years Plan: A special focus is being placed on preparing the railroads to accommodate the traffic created by the steam plants and the increasing coal production.
- Third Five Years Plan: Constructing more capacity in order to meet the demand for traffic and avoid bottlenecks.

- Fourth Five Years Plan: System modernization to boost operational effectiveness.
- Fifth Five Years Plan: Enhancing current capacity is more important than expanding the railway network, and maximising railway operating effectiveness.
- Sixth Five Years Plan: Increased local production of essential commodities, modernisation of equipment, and improved use of existing resources.
- Seventh Five Years Plan: Development of freight terminals should be given first priority in order to allow for the free and easy transit of waggons. Steam locomotive conversion to diesel and electric traction should also proceed quickly.
- Eighth Five Years Plan: The replacement and renewal of outdated assets, the expansion of terminal and rolling stock capacity, gauge conversion, and electrification were the focus areas for this strategy.
- Ninth Five Years Plan: Along with rehabilitation, personnel planning, and human resource development, energy conservation safety, financial sustainability, and customer pleasure via dependable and higher-quality services, capacity growth was given priority.
- Tenth Five Years Plan: The Tenth Plan's principal goal was to increase the railway system's capacity as the primary transporter of long-distance bulk freight and passenger traffic.

## 2. Literature Review

**Shah, J., et.al. (2013)** defined that due to improvements in socioeconomic conditions over the past two decades, India has seen increasing levels of mobility in both the urban and intercity segments. Even while roads account for the vast bulk of intercity travel, many heavily industrialised lines see a disproportionately high number of train passengers. Passengers are gathered and dispersed on train stations through stairways and foot over bridges. To achieve the appropriate level of service and safety in an emergency, these crucial components must be designed with pedestrian flow behaviour in mind. According to published research, a variety of pedestrian characteristics, including age, gender, physical characteristics, amount of luggage carried, group size, activity while walking, and purpose, as well as other factors like space availability, movement direction, and train schedule, affect the characteristics of pedestrian flow. India makes very little effort to examine pedestrian flow behaviour in this environment.

The timing of the train's arrival and departure determines how quickly people move on foot, especially during peak hours when there is a high volume of traffic. The pedestrian cannot travel with luggage in a crowd at the necessary speed due to the restricted capacity of pedestrian facilities, particularly staircases. There are reports of faster walking downstairs than upstairs and slower walking when pedestrian density rises. The majority of pedestrian facilities, particularly stairways, are created using general design principles that are mostly dictated by ideal pedestrian behaviour. However, depending on the aforementioned elements, the behaviour of each individual pedestrian and, therefore, the flow at rail transit stations, are dynamic on stairways. The current study aims to emphasise the findings from a study on pedestrian flow behaviour that was conducted at Vadodara Railway Station in Gujarat, India. By using videographic technology, a total of 3411 pedestrian data points are recovered. To demonstrate how the behaviour of the pedestrian stream on stairways of various diameters behaves, flow models of speed-flow, speed-density, and flow-density are constructed.

**Patra, M., et.al. (2017)** mentioned at whatever stage of a nation's growth, rail networks are essential for moving people around. Infrastructures at railway stations must be carefully planned and managed to provide for platform switching and evacuation. Understanding pedestrian flow characteristics on horizontal and vertical mobility facilities will require a thorough investigation. This study evaluates and compares the escalator, stairs, and hallway within a train station to gain a thorough understanding of the variations in pedestrian traffic dynamics. Compared to a tunnel, stairs have a higher pedestrian speed. Younger people walk more quickly than middle-aged people do, whereas older people walk more slowly. Luggage- carrying pedestrians move more slowly than those without it. Regarding the characteristics of age, baggage, gender, and direction, there are substantial disparities in speed. It's interesting to see that both passageways with and without centre rails have the same flow. Typically, pedestrians migrate and integrate with the flow to the side of the corridor that is connected to the stairway neck.

**Chadha, U., et.al. (2022)** examined that the Indian economy and the population, who chose the railroads as a mode of transportation, are both heavily reliant on it. The railways are also an essential component of daily life. The railway industry is quite large. It boasts one of the largest workforces in the world and is the greatest employer across a range of industries, including catering, ticketing, engineering, and cleaning services. Indian

Railways has been putting in place intelligent systems or a new method of working that is meant to increase productivity or customer happiness. The complexity of the workplace environment, which ought to be the least, affects the official's motivation as well. Passenger happiness is influenced by a number of elements, including station cleanliness, IRCTC services, changes to rail technology, routine maintenance of locomotives or coaches, and many others. Since a sizeable percentage of the Indian population, including people with low, middle, and even high incomes, chooses to travel by train. The current advances in many areas of the Indian railroads (stations, offices, IRCTC, locomotive sheds & workshops), the current needs that need to be met, and the relevant future directions for research and development in the railroads are all presented in a straightforward manner in this study.

**Chintala, V. (2023)** proven that the third-largest railway system in the world, Indian Railways (IR), is a cost-effective means of transportation in India. According to a recent assessment by the Central Pollution Control Board, Government of India, the majority of IR stations were unable to adhere to solid waste management standards, particularly those pertaining to the handling of plastic trash. In order to enhance plastic waste management at Indian Railway Units (IRUs), this study aims to analyse possible plastic trash resources and generation throughout IRUs and offer eco-smart energy solutions. Significant issues with the collection, sorting, and treatment of mixed plastic garbage from railroads were resolved. The report emphasised recent efforts by IR to clean up the plastic waste in IRUs. Eco-friendly options including financial incentives, price reductions on train tickets, priority reservations when purchasing rail tickets, and recycling unsegregated garbage into useful materials like bricks, pavement, and platform tiles were suggested. Finally, the study offers a thorough understanding of the conversion of plastic waste into plasto-oil, plasto-char, and plasto-gas products.

### **3. Research Methodology**

#### **3.1. Problem Identification**

Based on the literature review that have been studies by the author to identify the services that have been provided to the passengers at the railway station platform and the difficulties that have been attached as a part of the passenger's services from the railway staff point of view and from the passengers as well that have been depicted in their report. But nobody

has studied the issues related to the platform enmities that have been attached with it in terms of the

### 3.2. Objective of the Study

- To study the profile of the train passengers from the different cities of Gujarat State.
- To find out the key problems and issues that have been faced by the passengers of the selected cities of Gujarat State,
- To see the significant difference of opinion among the different profiles of the passengers of the Gujarat State.

### 3.3. Sample Size

To define the significant problems that have been faced by the passengers of the different cities of Gujarat State, the author has taken the total sample size 100 in order to identify the problems that have been faced by them at any point of time in their life while travelling through the trains.

### 3.4. Sampling Technique

In this particular study, the researcher has collected their samples from the passengers from the selected cities of Gujarat state from those who are having the idea about some or other around for the various facilities which are necessary from the authority of the railway to provide their passengers for the smooth travelling and against these what are the facilities that they are findings lacking in the selected railway platform from which they have travelled once upon in their life.

## 4. Data Analysis and Interpretations

**Table 1: Demographic Profile of the Passengers of the Railway Stations in Gujarat State.**

Demographic Profile	Frequency	Demographic Profile	Frequency
<b>Gender</b>		<b>Marital Status</b>	
Male	72	Married	82
Female	28	Unmarried	18
<b>Educational Qualification</b>		<b>Occupation</b>	
Graduation	24	Business	24
Post-Graduation	44	Private Jobs	36
Doctorate	12	Government Jobs	24

Professional Degrees	20	Professional	16
Age		Frequency of Travelling in Train	
Less than 30 Years	24	Once in a Week	16
30 – 45 Years	39	Twice in a Week	23
46 – 60 Years	21	Everyday	44
More than 60 Years	16	Rarely	17
Class of Travelling		Cities of Passengers	
General	44	Ahmedabad	38
Chair Car	24	Vadodara	21
Sleeper Class	18	Surat	29
Three Tier AC	10	Rajkot	12
Two Tier AC	02		
First Tier AC	02		

(Sources: Research Result)

From the above table and Charts for the identification of the profile of the Passengers for the different railway stations at the Gujarat State, it has been noted that with the consideration of the gender profile, the highest level of profile is belonging to the Male passengers i.e., 72 out of the 100 passengers followed by the female passengers i.e., 28. For the marital status, the highest level of passengers is falling into the married category i.e., 82 followed by the unmarried category i.e., 18. For the Educational Qualification profile, the highest level of passengers are falling into the category of Post-Graduation followed by the Graduation among the passengers. For the Occupation wise, the highest level of passengers is falling into the category of Private jobs i.e., 36 followed by the Business and Government Jobs. For the Age wise bifurcation, the maximum number of passengers are falling into the category of age group of 30 – 45 Years followed by the Less than 30 Years. With the consideration of the frequency of the travelling, the majority of the passengers are falling into the category of Everyday i.e., 44 followed by the Twice in a Week. With the consideration of the Class of Travelling, the highest number of passengers are falling into the either general class i.e., 44 or Chair Car i.e., 24 and with the bifurcation of the selected cities of Gujarat State, the highest number of passengers are falling into the cities of Ahmedabad followed by the Surat.



**Table 2: Issues faced by the Passengers at the Railway Platforms of Gujarat State**

Issues Faced by the Passengers at the Railway Platforms of Gujarat State	Frequency
Delayed in the Arrival and Departure of the Trains	3.24
Insufficient Ticket booking Counters	<b>4.10</b>
Poor Sanitary Conditions	3.63
Poor attempt to handle the queries related to the passengers	4.25
Improper behaviour of railway staff	3.56
Slow issues of Railway Tickets at the Counters	<b>3.92</b>

(Sources: Research Result)

From the above table for the Issues faced by the Passengers at the Railway Platforms of Gujarat State, it has been noted that the major problems that have been faced by the passengers on the railway platforms of selected cities of Gujarat State i.e., Ahmedabad, Surat, Vadodara and Rajkot are the Insufficient Ticket booking Counters followed by the Slow issues of Railway Tickets at the Counters and Poor Sanitary Conditions.

**Table 3: Significant Association between the Demographic Profile of the Passengers at the Railway Platform from the Selected Cities of Gujarat State**

Demographic Profile *	Gender	Age	Education	Occupation	Cities
Physical Problems faced by the Passengers at the Railway Platform					
Delayed in the Arrival and Departure of the Trains	0.000*	0.001*	0.200*	0.004*	0.000*
	Sig Asso.	Sig Asso.	No Sig Asso.	Sig Asso.	Sig Asso.
Insufficient Ticket booking Counters	0.120	0.000*	0.000*	0.010*	0.042*
	No Sig Asso.	Sig Asso.	Sig Asso.	Sig Asso.	Sig Asso.
Poor Sanitary Conditions	0.044*	0.002*	0.000*	0.000*	0.000*
	Sig Asso.	Sig Asso.	Sig Asso.	Sig Asso.	Sig Asso.
Poor attempt to handle the queries related to the passengers	0.001*	0.145	0.164	0.752	0.141
	Sig Asso.	No Sig Asso.	No Sig Asso.	No Sig Asso.	No Sig Asso.
Improper behaviour of railway staff	0.000*	0.000*	0.000*	0.000*	0.000*
	Sig Asso.	Sig Asso.	Sig Asso.	Sig Asso.	Sig Asso.
Slow issues of Railway Tickets at the Counters	0.001*	0.000*	0.000*	0.010*	0.000*
	Sig Asso.	Sig Asso.	Sig Asso.	Sig Asso.	Sig Asso.

(Sources: Research Result)



From the above table and Charts for the significant association between the demographic profile of the passengers at the selected cities of Railway stations of Gujarat State, it has been noted that there is a significant difference of opinion among the passengers based on their Gender profile for the Delayed in the Arrival and Departure of the Trains, Poor Sanitary Conditions, Poor attempt to handle the queries related to the passengers, Improper behaviour of railway staff and Slow issues of Railway Tickets at the Counters. For the Age wise bifurcation, the significant association between the Delayed in the Arrival and Departure of the Trains, Insufficient Ticket booking Counters, Poor Sanitary Conditions, Improper behaviour of railway staff and Slow issues of Railway Tickets at the Counters. For the Education profile of the passengers at the Railway stations, the significant difference of opinion for the issues for Insufficient Ticket booking Counters, Poor Sanitary Conditions, Improper behaviour of railway staff and Slow issues of Railway Tickets at the Counters. For the Occupation profile of the passengers of the railway stations, there is a significant difference of opinion for the issues Delayed in the Arrival and Departure of the Trains, Insufficient Ticket booking Counters, Poor Sanitary Conditions, Improper behaviour of railway staff and Slow issues of Railway Tickets at the Counters and for the City wise, the significant difference of opinion for the issues faced for the Delayed in the Arrival and Departure of the Trains, Insufficient Ticket booking Counters, Poor Sanitary Conditions, Improper behaviour of railway staff and Slow issues of Railway Tickets at the Counters.

## **5. Findings, Conclusions and Suggestions of the Study**

From the above study for the different types of issues that have been faced by the passengers at the Railway station of the selected cities of Gujarat state, it has been noted that the majority of the passengers are facing the issues related to the Insufficient Ticket booking Counters and Slow issues of Railway Tickets at the Counters. The all the types of profile of the passengers from the Railway station of Gujarat State, there is a significant difference of opinion among the all the issues that have been covered under this particular study are Gender, Age, Educational Profile, Occupation and Cities of Gujarat State. This study is basically focusing on the major issues that have been faced by the railway passengers for the using the different facilities which are not up to the mark as per the expected standards of the passengers. Hence, this study is also going to help into the identification of the areas of improvement for the railway authority to improve their services and things which are required at their end and at the

same time, the passengers will also understand the quality of the services that have been provided by the railway authority in their respective railway platforms.

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