



COMMUTER SATISFACTION TOWARDS SERVICE QUALITY OF INDIAN RAILWAYS - A STUDY WITH SPECIAL REFERENCE TO PALAKKAD DIVISION

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Abstract

Indian Railways is the fourth largest railway network in the world. A majority of India's population depend upon railway services to cover long, medium and even short distances. This paper is an attempt to analyse the satisfaction level of commuters on various services provided by Indian Railways both inside the train and on platform. Further, this study has even tried to find out the services in which commuters are most and least satisfied. For this purpose data was collected by using a well-structured questionnaire from 100 respondents, who were selected randomly. Satisfaction level of commuters was measured by using a Five Point Likert Scale. Findings of the study indicate that, among the various services provided inside the train, both regular and occasional commuters are most satisfied in seating arrangement facility; where as regular commuters are least satisfied in availability of drinking water and occasional commuters are least satisfied on window condition. In case of services provided on platform, regular commuters are more satisfied in responsiveness of employees at enquiry counter and least satisfied in facilities for physically challenged persons and in case of occasional commuters they are more satisfied in frequency of announcement and least satisfied in availability of medical services.

Keywords: Indian Railways, Commuter, Satisfaction, Service Quality

Introduction

Indian Railway is the fourth largest railway network in the world. For the effective management of railway services, Indian railway is divided into 17 zones, which is further divided into several divisions. More than 13,000 passenger trains run in India daily. Further, on an average daily around 30 million (2.3% of total population of India) passengers travel in these trains. Thus, on daily basis more than 2300 passengers travel in one passenger train.

Provision of Quality services to commuter is an important task of Railway authorities. Service Quality measures how well a service is delivered. If services meet or exceed customer's expectation, then it is considered to be having high quality. So, if Indian Railway services meet or exceed passenger's expectation then only it can be considered of high quality. And only high quality services will enable Indian Railway to retain and increase the number of passengers, which will eventually lead to more profit to railways.

Literature Review

The relevant studies conducted so far in the related area are briefly given below.

Geetika and Nandan (2010) have conducted a case study to find out the most important determinants which makes passengers satisfied of quality of services provided by railways on platforms. For this purpose, data was collected from Allahabad Junction which is part of North Central Railway (NCR). 16 variables were taken to measure customer satisfaction. A five point Likert scale was used for measuring level of satisfaction. Findings of the study indicate that refreshment and behavioural factors are the most important determinants which make passengers satisfied of services provided on platforms.

Hundal and Kumar (2015) have made an attempt to find out the factors which make passengers satisfied of service quality of Northern Railways. Five constructs of service quality SERVQUAL was taken for study. These include reliability, empathy, responsiveness, tangibility and assurance. A Seven Point Likert scale was used to measure the level of satisfaction of passengers. Data was collected from 100 respondents from Punjab region for a period ranging from January 2015 to February 2015. Results indicate that the major factors which determine the



satisfaction level of passengers are basic facilities, punctuality, safety & security and employee behaviour towards passengers.

Maruvada and Bellamkonda (2010) examined the passenger's satisfaction degree on railway services in general and also to measure the passenger's importance degree with respect to services offered by South Central Railway (SCR). For measuring these, RAILQUAL model is used which is developed after modifying the SERVQUAL model. A five point Likert scale is used to measure both satisfaction and importance degree. Data was collected from staffs of various government departments and institutions situated in Secunderabad. Findings indicate that the passenger's most important dimension is reliability whereas the least important is responsiveness. In terms of satisfaction, passengers are most satisfied in tangibles dimension and least satisfied in responsiveness dimension.

Rajeshwari and Elangovan (2014) tried to find out the satisfaction level of passengers on service quality of Indian Railways with special reference to Salem Division. Data was collected from 500 passengers selected on the basis of stratified random sampling. Study suggest that factors like responsiveness of railway staffs, digital display, availability of power, individualised attention to passengers and safety & security are considered as the major factors by the passengers

Rajeswari and Kumara (2014) attempted to measure the quality of services provided by Indian Railways. For this purpose they have analysed the perception of those passengers who are frequent travellers on non-stop trains operated from Delhi to Mumbai, Hyderabad, Bangalore, Chennai and Kolkata. Questionnaire was developed by using a modified SERVQUAL instrument. Questionnaire includes eight dimensions which are tangible, punctuality, assurance, safety, responsiveness, catering, empathy and information. A five point likert scale was used. Data was collected from 500 respondents, from which 442 were selected for analysis. Findings of the study indicate that the quality of services provided by Indian Railways is not enough to meet the passenger's expectation.

Sheeba A.A and Kumuthadevi (2013) have tried to find out the factors that make passengers satisfied of services provided within the train. For this purpose, 16 variables were considered. They found that basic facilities and hygiene are the most important factors which make passengers satisfied of railway services. Thus, from the survey of available literature, it is found that there had been so systematic study on commuter satisfaction from the services of Indian Railways with special reference to Palakkad division in Kerala. Hence the present study has been undertaken.

Problem Statement

Indians depend upon railway services to cover long, medium and even short distances. As majority of India's population is depending on Railway services, it is the duty of Railway authorities to make their journey safe, peaceful and completely satisfied one. For this purpose railway authorities are providing a wide range of services both inside the train and on platform. Such services include catering services, medical services, safety & security, seating facility, mobile charging facility, services of railway porters, vehicle parking facility near station etc. Moreover, in every budget the Central Govt. earmarks a sizeable amount for the satisfaction of Commuters. At this juncture, it is quite relevant to examine the satisfaction of commuters from the services of Indian Railways both inside the train and on platform. The present paper is an attempt in this direction.

Objectives of the Study

The specific objective of the present paper is to examine the satisfaction level of commuters on services provided by Indian Railways inside the train and on platform based on their profile.

Hypotheses

The following null hypotheses were formulated and tested.

1. There is no significant difference between the profile of commuters and their satisfaction level on services provided inside the train.
2. There is no significant difference between the profile of commuters and their satisfaction level on services provided on platform.



Research Methodology

The Present study is both descriptive and analytical in nature. Data were collected from both secondary and primary sources. Secondary data were collected from various books, journals, websites etc. The primary data were collected from commuters of Indian Railways from Kozhikode District in Palakkad Division. In order to ensure a large sample size 100 commuters were selected at random from Palakkad division. A well-structured questionnaire was used to collect data from commuters. For measuring the satisfaction level a five point liker scale ranging from highly satisfied to highly dissatisfied was used. For the purpose of analysis both mathematical and statistical tools like mean, standard deviation, independent sample t-test and ANOVA were employed. The following variables were analysed for fulfilling the objectives of the Paper.

Profile of the Commuters

1. Gender
2. Age Group
3. Education Qualification
4. Job Status
5. Frequency of Travel

Commuter Services inside the Train

1. Cleanliness
2. Safety
3. Safety of Women
4. Punctuality
5. Seating Arrangement
6. Seat Condition
7. Availability of Seats for Female
8. Spacing between Seats
9. Spacing for movement
10. Window Condition
11. Lighting in Coach
12. Fans / AC in Coach
13. Mobile Charging Facility
14. Luggage Storage Facility
15. Safety of Luggage
16. Timeliness of Catering Services
17. Quality of Food Supplied
18. Availability of Drinking Water
19. Cleanliness of Washrooms
20. Sanitation Facility
21. Medical Services
22. Availability of Doctors
23. Facilities for Physically Challenged Persons
24. Responsiveness of Railway Police

Commuter Services on Platform

1. Parking Facility near Station
2. Safety
3. Safety of Women
4. Cleanliness
5. Seating Arrangement
6. Condition of Seats
7. Waiting Room Arrangement
8. Display of Reservation Charts



9. Frequency of Announcement
10. Clarity of Announcement
11. Accuracy of Announcement
12. Availability of Refreshment
13. Quality of Refreshment
14. Availability of Drinking Water
15. Cleanliness of Washrooms
16. Sanitation Facility
17. Availability of Medical Services
18. Facilities for Physically Challenged Persons
19. Behaviour of Railway Porters
20. Responsiveness of Railway Police
21. ATM Facility
22. Mobile Charging Facility
23. Responsiveness of Employees at Ticket Counter
24. Responsiveness of Employees at Enquiry Counter

Results and Discussion: The results of the analysis based on above variables are given below:

Table 1: Profile of Sample Respondents

Variables	Response	No. of Respondents	Percentage
Gender	Female	60	60
	Male	40	40
Age Group	Below 20	10	10
	21 - 30	60	60
	31 - 40	14	14
	41 - 60	12	12
	Above 60	4	4
Education Qualification	School Level	8	8
	College Level	92	92
Job Status	Employer	14	14
	Govt. Sector Employee	28	28
	Private Sector Employee	17	17
	Student	35	35
	Others	6	6
Frequency of Travel	Regular	46	46
	Occasional	54	54

Source: Primary Data Among the 100 respondents selected 60 per cent are female. 60 per cent belong to the age group of 21-30. A majority of respondents have educational qualification up to college level. Further, 46 per cent of respondents travel by train regularly.

Table 2: Satisfaction Level of Commuters on Services Provided inside the Train based on their Profile

Variables	Responses	Mean	Standard Deviation	F Value	P Value	t Value
Gender	Female	67.90	14.13	1.917	0.169	0.216
	Male	67.25	15.55			
Age Group	Below 20	80.80	9.67	3.16	0.017	-
	21 - 30	67.46	15.09			
	31 - 40	60.43	12.82			
	41 - 60	66.00	11.54			



	Above 60	67.50	16.74			
Education Qualification	School Level	64.00	11.03	0.465	0.497	-.731
	College Level	67.96	14.92			
Job Status	Employer	69.57	15.29	3.019	0.022	-
	Govt. Sector Employee	60.00	12.64			
	Private Sector Employee	72.76	17.43			
	Student	70.34	12.27			
	Others	68.50	17.24			
Frequency of Travel	Regular	66.17	15.68	0.089	0.766	-.924
	Occasional	68.89	13.72			

Significant at 0.05 level
 Source: Primary Data

Table-2 shows the results of both independent sample t-test and ANOVA. The result of the analysis indicates that in case of gender, educational qualification and frequency of travel, as the P-value is above 0.05, the null hypothesis cannot be rejected. It means that, there is no significant difference among gender, educational qualification & frequency of travel of commuters and their satisfaction level on services provided inside the train. Whereas, there is significant difference in the satisfaction level of commuters belonging to different age group and job status on services provided inside the train. In order to find out this difference, Duncan Multiple Range Test (DMRT) was conducted. Its results are presented in table 3 and 4.

Table 3: Result of DMRT Showing Age Group-Wise Difference in Commuter's Satisfaction on Services provided Inside the Train

Age Group	N	Subset for alpha = 0.05	
		1	2
31-40	14	60.4286	
41-60	12	66.0000	
20-30	60	67.4667	67.4667
Above 60	4	67.5000	67.5000
Below 20	10		80.8000
Sig.		.322	.051

From the results of DMRT presented in table-3, it is clear that, the satisfaction level of commuters who belong to the age group of below 20 differ significantly from other commuters.

Table 4: Result of DMRT showing Job Status wise difference in Commuter's Satisfaction on Services provided inside the Train

Job Status	N	Subset for alpha = 0.05	
		1	2
Government Sector Employee	28	60.0000	
Others	6	68.5000	68.5000
Employer	14	69.5714	69.5714
Student	35	70.3429	70.3429
Private Sector Employee	17		72.7647
Sig.		.080	.475



Table-4 indicates that, among the five categories of job status, the satisfaction level of government sector employees significantly different compared to other groups.

Table 5: Satisfaction Level of Commuters on Services provided on the Platform based on their Profile

Variables	Responses	Mean	Standard Deviation	F Value	P Value	t Value
Gender	Female	77.70	12.25	.055	.814	1.304
	Male	74.50	11.69			
Age Group	Below 20	85.4	4.59	4.82	0.001	-
	21 - 30	78.0	11.83			
	31 - 40	73.28	10.86			
	41 - 60	66.16	10.5			
	Above 60	72.0	16.16			
Education Qualification	School Level	70.00	12.38	.020	.887	-1.58
	College Level	76.98	11.95			
Job Status	Employer	75.86	9.60	0.531	0.713	-
	Govt. Sector Employee	74.57	15.30			
	Private Sector Employee	75.94	12.29			
	Student	77.43	10.37			
	Others	81.83	10.19			
Frequency of Travel	Regular	76.39	13.86	5.354	.023	-.021
	Occasional	76.44	10.44			

Significant at 0.05 levels

Source: Primary Data

Table-5 shows the results of both independent sample t-test and ANOVA. The result of the analysis indicates that in case of gender, educational qualification and job status, as the P-value is above 0.05, the null hypothesis cannot be rejected. It means that, there is no significant difference among gender, educational qualification & job status of commuters and their satisfaction level on services provided inside the train. Whereas, there is significant difference in the satisfaction level of commuters based on age group and frequency of travel. In order to find out this difference in satisfaction level, Duncan Multiple Range Test (DMRT) was conducted. Its result is presented in table 6.

Table 6: Result of DMRT Showing Age Group-Wise Difference in Commuter's Satisfaction on Services Provided On Platform

Age Group	N	Subset for alpha = 0.05		
		1	2	3
41-60	12	66.1667		
Above 60	4	72.0000	72.0000	
31-40	14	73.2857	73.2857	
20-30	60		78.0000	78.0000
Below 20	10			85.4000
Sig.		.195	.275	.152

From the results of DMRT presented in table-6, it is found that, the satisfaction level of those commuters who comes under the age group of 41 - 60 and below 20 differ significantly from those commuters who comes under the age group of 21 – 30, 31 – 40 and above 60.



Table 7: Table Showing Mean and Standard Deviation of Regular and Occasional Commuters on Services Provided Inside the Train

Commuter Services inside the Train`	Regular Commuters		Occasional Commuters	
	Mean	Standard Deviation	Mean	Standard Deviation
Cleanliness in Train	2.7391	1.20064	2.5926	1.10775
Safety in Train	2.6522	1.01582	2.5556	1.20794
Safety of Women in Train	2.5652	1.06775	2.4815	1.00453
Punctuality of Train	2.5217	1.11034	2.6296	.91726
Seating Arrangement	3.5217	.72232	3.6667	.77703
Seats Condition	3.3913	.93043	3.2593	1.01285
Availability of Seats for Female	2.8261	1.01772	2.9259	.90807
Spacing between Seats	2.8261	1.25263	3.4074	.83595
Spacing for moving on Train	3.3478	.92418	2.9630	.97057
Window Condition	3.1739	1.14123	3.1852	1.06530
Lighting in Coach	3.3913	.97703	3.2963	.98344
Fans / AC in Coach	3.2174	.89226	3.3333	.99052
Mobile Charging Facility	2.7826	.84098	3.1111	.96479
Luggage Storage Facility	2.9130	1.07137	3.0000	1.02791
Safety of Luggage	2.6087	.93043	2.3704	.99615
Timeliness of Catering Services	3.0000	1.03280	3.4444	.83929
Quality of Food Supplied	2.3478	1.05867	2.7778	1.04008
Availability of Drinking Water	2.3043	1.05134	2.8889	1.00314
Cleanliness of Washrooms	1.8696	1.08748	2.2963	1.05740
Sanitation Facility	1.8261	.97307	2.4074	.87993
Medical Services	3.1739	6.48864	2.4074	1.14131
Availability of Doctors inside Train	1.7826	.94076	2.3333	1.06399
Facilities for Physically Challenged Persons	2.1304	1.08748	2.4444	1.20794
Responsiveness of Railway Police in Train	3.2609	.85465	3.1111	1.23879

Source: Primary Data

The above table indicates that the satisfaction level of regular commuters on various services provided inside the train is in the order of rank. Seating arrangement ranks first, followed by seat condition, lighting in coach, spacing for moving on train, responsiveness of railway police etc. The availability of doctors inside the train, sanitation facility, cleanliness of washrooms, facilities for physically challenged persons, availability of drinking water, quality of food supplied etc., ranked the last in the order of preference.

In the case of Satisfaction level of occasional commuters, seating arrangement, timeliness of catering services, spacing between seats etc. were found to be the services where satisfaction level is better. However the satisfaction level is low in the case of the services like availability of doctors within train, cleanliness of washrooms, safety of luggage, medical services, window condition, sanitation facility and facilities for physically challenged persons.



Table 8: Table Showing Mean and Standard Deviation of Regular and Occasional Commuters on Services Provided on Platform

Commuter Services on Platform	Regular Commuters		Occasional Commuters	
	Mean	Standard Deviation	Mean	Standard Deviation
Parking Facility near Station	3.6087	.97703	3.4444	.96479
Safety on Platform	3.0435	1.21026	2.8148	1.06530
Safety of Women on Platform	2.4783	1.06956	2.4815	1.29936
Cleanliness on Platform	3.0870	1.22612	2.9630	.97057
Seating Arrangement on Platform	3.3043	.96309	3.0741	1.02519
Condition of Seats on Platform	3.1304	1.00241	2.8889	.96479
Waiting Room Arrangement	3.5652	.77895	3.2222	.88310
Display of Reservation Charts	3.1739	.87697	3.5185	.79481
Frequency of Announcement	3.9130	.83868	5.1111	5.57849
Clarity of Announcement	3.9130	.78390	3.7778	.79305
Accuracy of Announcement	3.6522	.87477	3.9630	.75143
Availability of Refreshment	3.3478	1.09985	3.3333	.95166
Quality of Refreshment	2.9130	1.11208	3.0370	.84592
Availability of Drinking Water	3.0870	1.02905	2.9259	.82076
Cleanliness of Washrooms on Platform	2.5652	1.25879	2.5185	.96622
Sanitation Facility	2.5652	1.22297	2.5185	.96623
Availability of Medical Services	2.5652	.93457	2.6667	.99052
Facilities for Physically Challenged Persons	2.6522	.87477	2.5185	.96624
Behaviour of Railway Porters	2.9130	1.02905	2.9259	1.02519
Responsiveness of Railway Police on Platform	3.3478	.76645	3.4444	.74395
ATM Facility on Platform	3.0000	.98883	3.2222	.74395
Mobile Charging Facility on Platform	3.1304	1.12761	3.0000	.82416
Responsiveness of Employees at Ticket Counter	3.4348	1.25879	3.7407	.93537
Responsiveness of Employees at Enquiry Counter	4.0000	.98883	3.3333	1.16554

Source: Primary Data

Responsiveness of employees at enquiry counter, clarity of announcement, frequency of announcement, accuracy of announcement are found to be the areas where regular commuter satisfaction is more. However, safety of women on platform, cleanliness of washrooms, sanitation facility, availability of medical services etc., ranked the least in terms of commuter satisfaction.

In the case of occasional commuters, in the order of rank, satisfaction level is more in services like Frequency of announcement, accuracy of announcement, clarity of announcement, responsiveness of employees at ticket counter etc. however, the level of satisfaction is low in services like safety of women on platform, facilities for physically challenged persons, sanitation facility, cleanliness of washrooms etc



Major Findings

1. In case of services provided inside the train, there is no significant difference between the profile like gender, educational qualification, frequency of travel of commuters and satisfaction level of commuters. However, significant difference is seen in this case in the profile of age group, job status.
2. In case of services provided on platform, there is no significant difference between the profile variables like gender, educational qualification, job status of commuters and satisfaction level. But there is significant difference in case of age group, frequency of travel.
3. In case of services provided inside the train, regular commuters are more satisfied in services like Seating arrangement, seat condition, lighting in coach etc. and they are least satisfied in services like availability of drinking water, facilities for physically challenged persons and cleanliness of washrooms; whereas, occasional commuters are more satisfied in services like Seating arrangement, timeliness of catering services, spacing between seats etc. however satisfaction level is found low in services like window condition, medical services and safety of luggage.
4. In case of services provided on platform, the regular commuters ranked the first the service of Responsiveness of employees at enquiry counter, followed by clarity of announcement, frequency of announcement etc. and least satisfied in services like facilities for physically challenged persons, availability of medical services and sanitation facility; whereas, occasional commuters are more satisfied in services like frequency of announcement, accuracy of announcement, clarity of announcement etc. and the services like availability of medical services, cleanliness of washrooms, sanitation facility etc., ranked the least in terms of their satisfaction.

Conclusion and Implications

From the foregoing analysis it is clear that both the regular and occasional commuters experience problems in the services provided within the train and on the platform. In order to make commuters satisfied from the services of Indian Railway, railway authorities may give due attention in improving the quality of services especially in services like availability of drinking water, facilities for physically challenged persons, availability of medical services, cleanliness of washrooms, sanitation facility, window condition, safety of women etc. If quality of these services improves, it will also help the authorities to attract more regular commuters. But the attempt of railway authorities to improve such services should not be a one-time approach; rather they should consider it as an on-going approach to retain satisfaction.

Direction for Future Research

The following areas are found relevant for further research:

1. A comparative study on commuter satisfaction in Palakkad and Salem divisions.
2. Plights of Commuters in Indian Railways with special reference to Palakkad division.

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