

A STUDY ON PROBLEMS FACED BY THE PASSENGERS OF INDIAN RAILWAYS – WITH SPECIAL REFERNCE TO TIRUCHIRAPPALLI JUNCTION

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Abstract: Rail Transportation is an essential facet for the overall economic development of the nation and has an effect on mobility in general. This a descriptive study based on survey method. The sample passengers are mobile population confined only to Tiruchirappalli junction railway station (TPJ). Multi-stage sampling technique was adopted and the sample size for the study is 544. The findings of the study revealed that availability of hygienic quality of food/ catering service, drinking water and refreshments facilities was most effective obstacle faced by the passengers.

Keywords - Indian Railways, Tiruchirappalli junction, Multi stage sampling, Problems encountered.

1.1 INTRODUCTION

Rail Transportation is an essential facet for the overall economic development of the nation and has an effect on mobility in general. People call Indian Railway as “Lifeline of the Nation” since it is playing an inimitable role in meeting the transportation needs of the common man. It is a gigantic pillar being in existence for more 160 years. Today the Indian railway is confronting a biggest challenge of incapability to meet the requirement of its customers, both freight and passenger. It has undergone from considerable under-investment for more than a few years. As a result, resources were inadequate for recuperating satisfaction of customer and so has the quality of service delivery. With the stepping up of rejuvenation, now the Railway passengers are anticipating further than it did in the preceded years. Hence the present study has made an attempt to analyse the problems faced by the passengers of Indian railways in general.

1.2 LITERATURE REVIEW

1. **G. Rajeshwari, D. Elangovan (2014)** highlights the problems faced by the passengers while reserving tickets, on boarding the train and while travelling in the train in Salem division of Southern railway zone. The findings of the study state that bulk booking by agencies, heavy crowd in the platform and the problem of theft were considered as the high priority of the problems faced. Moreover the author suggested strengthening the railway police force to improve security, introduce better infrastructure to avoid congestion in the station and also to improve ticket reservation facilities.
2. **M. Gomatheeswaran, B. Sivakumar (2014)** in their article examined the growth and development of Indian Railways. The main objective of the study was to analyse the passenger satisfaction of railway services in Coimbatore junction and also the benefits and problems faced by the passengers during their journey. The result discloses that passengers’ are highly satisfied with the facilities for reservation, cancellation of reservation and tatkal reservation facilities. The major problem that the passenger faced where pantry car service, poor maintenance of compartment, water facility, parking area, security and unauthorized vendors and beggars. Finally the authors concluded to satisfy the passengers and solve all problems faced by them to make a happy journey in future.
3. **Premsanthi. P, M. Sivakami (2016)** in their article investigated the satisfaction level and the problems faced by the passengers in ticket reservation at erode junction. The findings of the study shows that there is a significant association between overall satisfaction level about the reservation system and marital status, type of family and family size also have a significant association with the problems faced during the reservation in counter.

1.3 OBJECTIVES OF THE STUDY

- i) To analyse the problems faced by the passengers on boarding and while travelling in the train
- ii) To determine the linkage between passenger satisfaction and obstacles faced by the passengers
- iii) To rank factors that cause problems to the rail passengers
- iv) To offer suggestions to improve the services of Indian Railways, if any.

1.4 RESEARCH METHODOLOGY

Research is the search of knowledge through systematic procedure to solve the research problem. The present study is a descriptive study based on survey method. The sample passengers are mobile population and hence multi-stage sampling technique was adopted. The sample size for the study is 544. It is confined only to Tiruchirappalli junction railway station (TPJ) of Tiruchirappalli division under Southern Railway Zone. Both primary and secondary data are used in the present study. The primary data are collected using pre-tested and well-structured questionnaire. To measure the responses Rensis likert five point scale was used in which point 1 scale indicates the highly dissatisfied level and 5 indicates the highly satisfied level. The required primary data have been collected through a survey made on railway passengers from a period between June to December 2017. The secondary data are collected through annuals reports of Indian Railways, various journals, books and websites. The problem faced by the passengers were analysed using various statistical tool and chi-square test was used to identify the significant association between factors of services quality and level of satisfaction of passengers.

1.5 DATA ANALYSIS AND INTERPRETATION

In order to analyse the objectives of the study, the following hypotheses were framed and various tools were used to test the hypotheses. The following table show the results of chi-square in terms of chi-square value and P value.

HYPOTHESES 1: Obstacles faced by the passengers vs. Level of Satisfaction

H₀ : There is no association between level of passenger's satisfaction and obstacles faced by the passengers

H_a : There is an association between level of passenger's satisfaction and obstacles faced by the passengers

Table 1: chi-square test for association between level of passenger's satisfaction and obstacles faced by the passenger

level of passenger's satisfaction	obstacles faced by the passenger			total	chi square value	p value
	low	moderate	high			
low	93 (52.2%) [52.0%]	66 (37.1%) [29.3%]	19 (10.7%) [13.6%]	178 (100.0%) [32.7%]	251.742	<0.001**
moderate	68 (31.9%) [38.0%]	132 (62.0%) [58.7%]	13 (6.1%) [9.3%]	213 (100.0%) [39.2%]		
high	18 (11.8%) [10.1%]	27 (17.6%) [12.0%]	108 (70.6%) [77.1%]	153 (100.0%) [28.1%]		
total	179 (32.9%) [100.0%]	225 (41.4%) [100.0%]	140 (25.7%) [100.0%]	544 (100.0%) [100.0%]		

source: primary data

note: 1. the value within () refers to row percentage

2. the value within [] refers to column percentage

3. ** denotes significant at 1% level

Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Based on the row percentage under the low level of passenger's satisfaction, 52.2% have low level of obstacles faced by the passengers, 37.1% have moderate level of obstacles faced by the passenger and 10.7% have high level of obstacles faced by the passenger. Under the moderate level of passenger's satisfaction, 31.9% have low level of obstacles faced by the passenger, 62.0% have moderate level of obstacles faced by the passenger and 6.1% have high level of obstacles faced by the passenger. Under the high level of passenger's satisfaction, 11.8% have low level of obstacles faced by the passenger, 17.6% have moderate level of obstacles faced by the passenger and 70.6% have high level. Hence it is concluded that there is an association between level of passenger's satisfaction and level of obstacles faced by the passengers.

table 2: friedman test for significant difference among mean ranks towards obstacles faced by the passengers

obstacles faced by the passengers	mean rank	chi-square value	p value
adequate maintenance of basic and additional amenities	9.68	999.086	<0.001**
user friendly ticket and parcel booking	9.43		
availability of hygienic quality of food/ catering service, drinking water and refreshments facilities	10.20		
adequate facilities are available in waiting and retiring rooms	9.84		
cloak rooms are very safe to keep our luggage	9.78		
electrical fittings, windows, doors, magazine racks and water bottle facilities inside the coach are properly maintained	8.21		
immediate response for refunding of cancellation of tickets	5.72		
pantry car services are easily accessible	5.85		
punctuality in arrival and departure of trains	7.28		
safety and security arrangements at stations and in coaches are adequate	7.55		
seats and berths, luggage racks, flooring and ventilation inside the coach are comfortable	6.91		
provision of good quality of bedding facility, curtains, screens etc	7.66		
accurate information transmission about time schedule of train, platforms, sign board display, announcement, reservation charts, signals etc	9.69		
assistance and information provided to senior citizens and disabled passengers	9.20		
allocation of extra coaches during peak and festival seasons	9.44		
pleasant and cordial travel with co-passengers make a memorable journey	9.54		

source: primary data

note: ** denotes significant at 1% level

Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Hence it is concluded that there is significant difference among mean ranks towards obstacles faced by the passengers. Based on mean rank Availability of hygienic quality of food/ catering service, drinking water and refreshments facilities (10.20), is most effective Obstacle faced by the passenger, is followed by Adequate facilities are available in waiting and retiring rooms (9.84), Cloak rooms are very safe to keep our luggage (9.78), Accurate information transmission about time schedule of train, platforms, sign board display, announcement, reservation charts, signals etc (9.69), Adequate maintenance of basic and additional amenities (9.68), Pleasant and cordial travel with co-passengers make a memorable journey (9.54), Allocation of extra coaches during peak and festival seasons (9.44), User friendly ticket and parcel booking (9.43), Assistance and information provided to senior citizens and disabled passengers (9.20), Electrical fittings, windows, doors, magazine racks and water bottle facilities inside the coach are properly maintained (8.21), Provision of good quality of bedding facility, curtains, screens etc (7.66), Safety and security arrangements at stations and in coaches are adequate (7.55), Punctuality in arrival and departure of trains (7.28), Seats and berths, luggage racks, flooring and ventilation inside the coach are comfortable (6.91), Pantry car services are easily accessible (5.85) and Immediate response for refunding of cancellation of tickets (5.72)

table 3: kaiser-meyer-olkin test and bartlett's test for obstacles faced by the passengers

kaiser-meyer-olkin measure of sampling adequacy.	0.741	
bartlett's test of sphericity	chi-square value	3207.71
	p value	<0.001**

source: primary data

note: ** denotes significant at 1% level

The Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy is a statistic that indicates the proportion of variance in variables that might be caused by underlying factors. The Kaiser-Meyer-Olkin value of 0.741 which is greater than 0.50 indicate that a factor analysis is useful with our data. Bartlett's test of Sphericity tests the hypothesis that correlation matrix is an identity matrix, which would indicate that variables are unrelated and therefore unsuitable for structure detection. Since P value is less than 0.01, the hypothesis is rejected and indicate that variables are related a factor analysis and is useful with our data.

table 4: factor loading, eigen value and percentage of extraction using principle component method based on obstacles faced by the passengers

factor	statement for obstacles faced by the passengers	factor loading	eigen values	% of variance	cumulative %
i	provision of good quality of bedding facility, curtains, screens etc	0.817	4.176	26.102	26.102
	seats and berths, luggage racks, flooring and ventilation inside the coach are comfortable	0.805			
	availability of hygienic quality of food/ catering service, drinking water and refreshments facilities	0.785			
	pantry car services are easily accessible	0.712			
	electrical fittings, windows, doors, magazine racks and water bottle facilities inside the coach are properly maintained	0.697			
	safety and security arrangements at stations and in coaches are adequate	0.676			
ii	assistance and information provided to senior citizens and disabled passengers	0.819	2.045	12.780	38.882
	adequate maintenance of basic and additional amenities	0.788			
	user friendly ticket and parcel booking	0.669			
iii	cloak rooms are very safe to keep our luggage	0.739	1.507	9.417	48.299
	punctuality in arrival and departure of trains	0.620			
	pleasant and cordial travel with co-passengers make a memorable journey	0.495			
iv	immediate response for refunding of cancellation of tickets	0.773	1.437	8.980	57.279
	adequate facilities are available in waiting and retiring rooms	0.577			
v	accurate information transmission about time schedule of train, platforms, sign board display, announcement, reservation charts, signals etc	0.839	1.403	8.768	66.047
	allocation of extra coaches during peak and festival seasons	0.533			

source: primary data

It is noted that 5 factors have been extracted, based on our criterion that only Factors with Eigen values of one or more should be extracted. We see from Cumulative Percentage of Variance explained in the above table that the 5 Factors extracted together account for 66.047 percent of the total variance from the information contained in the original 16 variables.

This is a pretty good result, because we are able to economize on the number of variables (from 16 we have reduced them to 5 underlying factors), while we lost only about 33.953 percent of the information content (66.047 percent is retained by the 5 Factors extracted out of the 16 original variables). This represents a reasonably good solution for the problem.

Also from the above table of the rotated factor matrix, notice that five variable have loadings of 0.817, 0.805, 0.785, 0.712, 0.697 and 0.676 on factor I with eigen value of 4.176 and their percentage of extraction is 26.102. This suggests that Factor 1 is a combination of these 5 original variables which are “Provision of good quality of bedding facility, curtains, screens etc”, “Seats and berths, luggage racks, flooring and ventilation inside the coach are comfortable”, “Availability of hygienic quality of food/ catering service, drinking water and refreshments facilities”, “Pantry car services are easily accessible”, “Electrical fittings, windows, doors, magazine racks and water bottle facilities inside the coach are properly maintained”, and “Safety and security arrangements at stations and in coaches are adequate”. At this point, the researcher’s task is to find a suitable phrase which captures the essence of the 5 original variables which form the underlying concept or “factor”. In this case, Factor I could be named as “facilities inside the coach”.

Similarly three variables have loadings of 0.819, 0.788 and 0.669 on factor II with eigen value of 2.045 and their percentage of extraction is 12.780. This suggests that Factor 2 is a combination of these 3 original variables which are “Assistance and information provided to senior citizens and disabled passengers”, “Adequate maintenance of basic and additional amenities”, and “User friendly ticket and parcel booking”. At this point, the researcher’s task is to find a suitable phrase which captures the essence of the 3 original variables which form the underlying concept or “factor”. In this case, Factor II could be named as “necessity requirements”.

Similarly two variables have loadings of 0.739, 0.620 and 0.495 on factor III with eigen value of 1.507 and their percentage of extraction is 9.417. This suggests that Factor 3 is a combination of these 3 original variables which

are “Cloak rooms are very safe to keep our luggage”, “Punctuality in arrival and departure of trains”, “Pleasant and cordial travel with co-passengers make a memorable journey”. At this point, the researcher’s task is to find a suitable phrase which captures the essence of the 3 original variables which form the underlying concept or “factor”. In this case, Factor III could be named as “affordability in-service”.

Similarly two variables have loadings of 0.773 and 0.577 on factor IV with eigen value of 1.437 and their percentage of extraction is 8.980. This suggests that Factor 3 is a combination of these 2 original variables which are “Immediate response for refunding of cancellation of tickets and Adequate facilities are available in waiting and retiring rooms”. At this point, the researcher’s task is to find a suitable phrase which captures the essence of the 2 original variables which form the underlying concept or “factor”. In this case, Factor IV could be named as “Provision of service”.

Similarly two variables have loadings of 0.839 and 0.533 on factor V with eigen value of 1.403 and their percentage of extraction is 8.768. This suggests that Factor 3 is a combination of these 2 original variables which are “Accurate information transmission about time schedule of train, platforms, sign board display, announcement, reservation charts, signals etc” and “Allocation of extra coaches during peak and festival seasons”. At this point, the researcher’s task is to find a suitable phrase which captures the essence of the 2 original variables which form the underlying concept or “factor”. In this case, Factor V could be named as “Information transmission”.

1.6 FINDINGS OF THE STUDY

1. Chi- square test revealed that there is an association between level of passenger’s satisfaction and level of obstacles faced by the passengers at 0.01 percent level of significance.
2. Friedman test revealed that “Immediate response for refunding of cancellation of tickets” (10.20) is most effective factors and the lowest rank was “Availability of hygienic quality of food/ catering service, drinking water and refreshments facilities” (5.72). All the factors were statistically significant at 0.01 percent level of significance.
3. The factor analysis yielded five factors accounting for 66.047 % of total variance. In factor I, Provision of good quality of bedding facility, curtains, screens etc is the most important item. Similarly for Factor II, Assistance and information provided to senior citizens and disabled passengers, for Factor III, Cloak rooms are very safe to keep our luggage, for Factor IV, Immediate response for refunding of cancellation of tickets and finally for Factor V, Accurate information transmission about time schedule of train, platforms, sign board display, announcement, reservation charts, signals etc is the most important item.

1.7 SUGGESTIONS

1. More booking counters are required during rush and peak hours and particularly during vacations and festival days. The reservation should be speeded up in short period of time.
2. Escalators are required to be installed in each platform so that passengers with heavy baggage’s can move easily.
3. People plan to travel by railways for their convenience and time. It is found that, the express trains lag behind punctuality (actual arrival time of train) at destination. Authorities must take necessary steps to avoid delay in arrival and departure time of trains.
4. People spitting, shit on railway tracks, water leakage, dirt, beggars and deformed people lying in the platform, dog roaming in platform are noticed. Authorities make sure to provide neat and hygienic environment.

1.8 CONCLUSION

Indian Railways play an important role by providing means of mobility plying over 23 million travellers from 7349 stations daily. It provides various services to the passengers yet they face some hurdles. The satisfaction of the passengers need is vital for Indian Railways to compete with other modes of transport or else they may switch over easily. On the basis the main intention of the study is to know the obstacles faced by the passengers on the service provided by Indian Railways. If suggestions are considered certainly, Indian Railway would excel better and best than before.

1.9 REFERENCES

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