Service Quality of Southern Railways – Satisfaction on Facilities: Kerala Passengers Perspective.

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ABSTRACT*: Passenger satisfaction is one of the influencing factors with regard to the service quality of Southern railways. Compared to other transportation, Indian Railways are convenient mode of transportation, affordable etc. The passengers really depend on rail mode of transportation with many of reason of which safety, convenience and economy service factors of railways are prominent. The study is empirical, and a survey among passengers was conducted. 3 Facility factors and its 16 variables have taken in to consideration to analyze the passenger satisfaction. Based on the analysis it was founded out that Amenities provided the railways presently in trains are not at all satisfied by the passengers. So the study analyzed those facility factors including Amenities provided south Indian Railways and its variables to determine the satisfaction of the passengers.*
KEYWORDS*: Service Quality, Amenities, Health and Hygiene, Essential Needs, Passenger satisfaction.*

I.   INTRODUCTION

Indian Railways are one of the largest and oldest with 162 years of rail transportation systems in the world. Indian Railways are most cost efficient and convenient mode of transport system. Moreover, passengers are preferred to choose rail mode transportation to make their journey. The growth population, urbanization, employment potential etc. caused to move the people from one place to another place. In a present competitive market situation, each and every area has competitive one. Therefore service providers in areas have to equip with best marketing strategies to satisfy the passengers. By realizing and considering the service factors based on the preference of the passengers in the study, the researcher gives further insight to Railways to develop and make better service for its passengers.

II   LITERATURE REVIEW

Deviprasad and Rajashekhar (2010)[1]. The study investigate how reservation and ticketing, Railway platform amenities, in train services, employee service, punctuality, safe and security in the journey determine Railway passenger's service quality.   This study presented a model of individual dimensions of Railway passenger's service quality. Hermen Jan Van Ree (2009)[2]   the study disclosed the service quality indicators that are both customers and suppliers of cleaning, catering and security services.   The important findings and relevant conclusions for both academics and practitioners interested in service quality as well as various valuable implications for customer's organizations and especially supplier organizations pertaining to improve customer perceived service quality. Garima Malik (2012)[3] The study identifies components of service quality of Indian Metro Railways.   The finding reveals that out of the various factors considered, inconvenience due to construction has affected negatively on satisfaction level of customers with Delhi Metro as a whole. Hauser, Simester & Wernerfelt1994)[4]. Satisfaction of customer is used for indication of future possible revenue. (Lin & Wu, 2011[5].The customers who are unsatisfied with the received services would not be expected to have long run relationships with the service provider**.** Dr. Kalpana Dabe (2012)[6]   this survey review the facilities provided to the passengers right from ticket booking to the on board travel experience in the trains. The survey assess the facilities provided in trains were adequately and effectively maintained or not.   It identifies the priority areas so that these can be strengthened to optimize passenger satisfaction. It also assesses overall travel experience of the passengers in the Indian railways and their perception of the organization.

III.   STATEMENT OF PROBLEM

The Southern Railways while delivering it services to passengers, the authority will have to taken in to consider many of factors suitable for passengers in Kerala. With this view the researcher identify the problem of this study as,
1.   Are the facilities provided by Indian Railways are determining the satisfaction of the passenger on service quality of Southern Railways?

IV.   OBJECTIVES OF THE STUDY

1. To analyze the facility factors and level of satisfaction on service quality provided by Southern Railways.
2. To suggest suitable measures based on the findings of the study.
3.

V.   AREA OF STUDY

Kerala state in Southern Railways was selected for this study. From this, the researcher selected three district and each districts again categorized as three areas across Kerala. (1). Northern, (2).Central and (3)Southern etc. Accordingly, Kozhikode from the Northern, Ernakulum from the central and Thiruvananthapuram from south areas were selected for this study.

VI.   RESEARCH METHODOLOGY

The study was conducted across Kerala during November- December 2014. The focus group for this research work was mainly railway passengers preferably in Kerala. A total of 228 customers were randomly selected by the authors from 3 districts in the study areas. This is believed to be a fair representation of the entire population. The study adopted self-administered questionnaires as its data collection instrument. Total 228 questionnaires with 3 factors with 16 attributes with regarded to the passengers in trains were incorporated. Out of 228 questionnaires distributed, 200 were retrieved (87.719 %) properly and 28 numbers of them (12.280%) were not responded properly. Therefore, 28 questionnaires were rejected. Each consumer was asked to respond all the variables in a questionnaire on a five-point Likert scale where **1 *highly dissatisfied, 2= dissatisfied , 3= neutral , 4= satisfied , 5= highly saisfied***. The questions were based on passenger's perspective with regard to the facilities provided by Southern Railways-Kerala.

Analysis- Passenger Satisfaction Table-I Service Quality Attributes

Sl:No	Factors	Statements
1		**Platform facilities**
2		**Catering Services**
3		**Behaviour of Staff**
4	**Amenities**	**Procedures for ticket reservation and cancellation**
5		**Punctuality of Railways**
6		**Information Service regarding arrival and departure**
7		**Medical facilities**
8		**Comfort ability of Waiting Room**
9		**Availability of Parking Space**
10	**Health And Hygiene**	**Less polluted journey**
11		**Safety and security**
12		**Hygienic conditions in train**
13		**Toilet facilities**
14	**Essential Needs**	**Basic facilities-drinking water, Light and fan.**
15		**Availability of seats**
16		**Arrangements and neatness of seats**

Customer satisfaction and retention is one of the key determinants to measure the quality of products or services and hence the Indian Railway performance. Due to the growing importance of quality in our life, customers desire to enjoy a relatively better quality of products or availing superior quality services has been increased. In this section we investigate satisfaction of the passengers on reservation and ticketing, railway platform amenities, in-train-service, employee service, punctuality, safety and security etc. Based on psychometric scale development approaches, we developed 3 factors with 16 attributes of satisfaction model, which is a measuring satisfaction of Indian Railway Passenger Services. Further, 3 attributes categorized under **Essential Needs factors**, 4 attributes under **Health and Hygiene** and remaining 9 attributes comes under **Amenities** factor Both exploratory factor analysis and confirmatory factor analysis were used to evaluate the model.

Table II Model fit Indices

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.768
Bartlett's Test of Sphericity	Approx. Chi-Square	13296.505
	df	120
	Sig.	<0.001

Firstly exploratory factor analysis is performed on 16 items to group the variables. The 16 items of the satisfaction scale was analyzed using principal component analysis (PCA) method from SPSS. Prior to performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.3 and above. The Kaiser-Meyer-Olkin value was 0.768, exceeding the recommend value of 0.6 and the Barlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix. To aid in the interpretation of these two components, varimax rotation was performed.

Table III Factor loading

Factor	Variables	Factor loading	Eigen value	%of variation explained
Amenities	Platform facilities	0.821	4.685	29.281
	Behavior of Staff	0.712		
	Procedures for ticket reservation and cancellation	0.478		
	Punctuality of Railways	0.651		
	Information Service regarding arrival and departure	0.756		
	Medical facilities	0.565		
	Comfortability of Waiting Room	0.733		
	Availability of Parking Space	0.783		
Health and Hygienic	Safety and security	0.763	3.479	51.026
	Hygienic conditions in train	0.763		
	Catering Services	0.825		
	Less polluted journey	0.786		
	Toilet facilities	0.834		
Essential facilities	Basic facilities-drinking water, light and fan.	0.913	1.907	62.948
	Availability of seats	0.805		
	Arrangements and neatness of seats	0.923		

Next, confirmatory factor analysis was used to confirm the factor structure of the model and to find out the dominating factor. In this case the default model itself is found to be saturated model which satisfies all the fit indices. In Table IV we present the regression coefficient of the fitted model.

Table IV The regression Coefficients

Dependent Variable	Independent Variable	Regression Coefficient
Service Quality	Amenities	0.400
	Health and Hygienic	0.869
	Essential facilities	0.835

From the table one we can observe that the most contributing factor is Health and Hygienic and Essential facilities. If we improve these two factors by one percent more the satisfaction will increase by 1.7 percent.

The regression model of satisfaction on Service Quality Model is shown below Service Quality = Satisfaction with 0.4 Amenities + 0.869 Health and Hygienic + 0.835 Essential facilities.

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Figure : 1 **Service Quality Model based on Satisfaction**
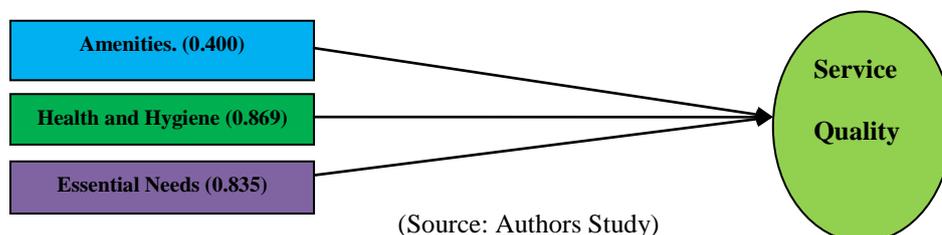
(Source: Authors Study)

VII. RESULTS OF THE STUDY

- ➢ From the study, it was analyzed that the most contributing factors serially are
- ➢ (1). Health and Hygienic
- ➢ (2). Essential facilities
- ➢ (3). Basic Needs
- ➢ The most important factor determining satisfaction on service quality was analyzed as Amenities since the Eigen value and percent of variation explained by this factor are 4.685 and 29.231 respectively.

- ➢ The next factor identified is Health and Hygiene. Its respective Eigen values and percent of variation explained are 3.479 and 51.026.
- ➢ The next two factors identified are essential facilities. Their respective Eigen valu1.907 and percentage of variation explained as 62.948.

VIII. SUGGESTIONS

- ✓ Indian Railways has to focus on core areas where most of the passengers prefer from railways Comprehensive attempt to implement the qualified services to the customers.
- ✓ Passengers prefer rail mode of transportation because of variety of reason on which economy, safety, convenient are vital. Even though the Railway authorities not it maintain or develop its service on these areas, the passengers cannot avoid the train journey. This is because of safety and economy mode of services provided by the Railways. In this situation, the Railways would strictly focus the core areas where their services are to be rendered continuously to satisfy the passengers.   .
- ✓ For last one year ladies compartment in train passes thorough Kerala was not at all safe for lady passengers. Even day time they victimized for harassment, attack from male passengers and commission of murder. Therefore, Railways are taken steps to deploy RPF and preferably lady staff at night.
- ✓ Compared to other states, Sothern Railways especially Kerala are keeping punctuality. Most of the people satisfied with such service as qualified one. Therefore, South Indian Railways, Kerala has given much emphasis on this factor continuously to retain this quality for long lasting

IX. LIMITATIONS OF THE STUDY

The study is on *Service Quality of Southern Railways –Satisfaction on Facilities Kerala Passengers Perspective* is a study conducted at selected areas in Kerala state. Therefore, the result of the study is limited in itself and several other factors come under core areas are not taken in to account for this study. Likewise, further studies in demographic, social backgrounds in Kerala scenario are important to consider for analyzing the service quality of Southern Railways.

X. CONCLUSION

The study of service Quality of southern Railways in Kerala passengers' perspective is tried to analyze the factors with its attributes for understanding satisfaction of passengers on service quality. From this study the researcher contribute many service factors which are best suitable for Railways to consider in future for satisfying the passengers in Kerala. Since the quality of services is questionable, Railways try to improve the core areas and deliver quality of services to the passengers. This attempt from the part of railways will definitely retain the passengers in enjoying its services in future.

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