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A STUDY ON PERCEPTION AND SATISFACTION OF CHENNAI METRO RAIL PASSENGERS

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ABSTRACT

This study aims to provide the transportation plays an important part in the development of a country and is an index of social and artistic life of its citizens. Status of people in a state with respect to Education, Employment and Health gets affected by prevailing transportation system. So it's veritably important for any megacity to have an effective public transportation system and the same has to be managed to face forth coming, unborn challenges and to insure effectiveness in their operations. The preface of the Chennai Metro requires the identification of the changes brought out by it in the transport sector of the frugality. Most importantly, Chennai metro contributes to the diversion of a veritably high proportion of current passenger business from road to Metro and serves part of the growing passenger business demand in Chennai. As a result, there will be a reduction in the number of Motor cars, passenger buses and other vehicles carrying passengers on Chennai roads with the preface of the Metro. The Metro also brings about a reduction in air pollution in Chennai because of the negotiation of electricity for petrol and diesel and reduced traffic on the roads. The main end of this exploration papers is to throw light on the experience trip of the commuters on metro train transportation system and also to study the ways and ways followed by CMRL to retain being passengers and also to attract new passengers in ultramodern Chennai megacity.

Keywords: Chennai Metro Rail, Passenger Perception, Passenger Satisfaction, Public Transportation, Metro an overview.

INTRODUCTION

The metro road services which has come as a boon for the people of the India is expanding in hops and bounds. Growing metropolises, growing population and growing business has always called for a shift from private modes of vehicle to public transport. A regard at the world's developing nations indicates that well planned Mass Rapid Transit Systems MRTS live successfully. India still has lagged behind though its first metro, the Kolkata Metro, started working nearly 25 times agone. While inquiries show that the ideal modal share of public transport should be around 70, still it's in tune to only 35 – 40 in India's metro metropolises. India is looking to produce a world class structure with its existent Kolkata and Delhi Metros with the addition of Mumbai, Bengaluru, Hyderabad, Chennai, Jaipur, and Kochi metros in the coming many times while proffers for MRTS for Pune, Chandigarh, Ahmedabad, Kanpur, Ludhiana, Bhopal, Indore and Faridabad are being chalked out.

The Chennai metro Rail is a rapid-fire conveyance system serving the megacity of Chennai, Tamil Nadu, India. The system commenced profit service in 2015 after incompletely opening the first phase of the design, which comported of two colour- enciphered lines covering a length of54.1 kilometres (33.6 mi). Chennai Metro will be the 3rd largest metro system in India after Delhi Metro and Kolkata Metro completion. The Chennai metro route is divided into 2 corridors connecting the gateways of the megacity road stations, Mofussil machine boundary and the field together and stretches to a 45 km network. There are 35 stations planned of which 17 are elevated and the rest are underground.

The total cost of erecting the metro is estimated at Rs.14500 Crore. The rider- boat grounded on the business modelling for 2022 is estimated to carry 700,000 people which at 5.4 would grow to1.24 million by 2026. The Metro rail Asia – Asia's premier rail event with a special focus on India proves to be a high- value networking and knowledge- sharing of crucial metro authorities and drivers with conversations over India's expansive metro growth. The primary ideal of the study is to identify the gap between the prospects and factual gests of the commuters with respect to colourful attributes of metro rail services in ultramodern Chennai megacity. (**Dr. SG Balaji**)

Passenger Perception

Perception or perceptivity varies from person to person. Different people make out different goods at a similar situation. A passenger is a term vastly used to describe any person who travels in a vehicle, but bears little or no responsibility for the tasks demanded for that vehicle to arrive at its destination. Passenger perceptions are developed over time through a variety of sources, including Passengers formerly experience relations with Metro and other forms of transport. Their recommendations from buddies and associates reviews by secure sources.

Passenger Satisfaction

Passenger satisfaction is a measure of how satisfied passengers are with a company's products, services, and features. Passenger satisfaction information, such as surveys and reviews, helps companies determine how best to improve or change their products and services. The organization's main focus must be passenger satisfaction. This applies to industrial enterprises, retail and wholesale companies, government agencies, service companies, non-profit organizations, and all subgroups within organizations.

METRO – An Overview

Chennai Metro is a rapid transit system serving the city of Chennai, India. As of 2023, the operating network consists of two color-coded lines spanning 54 kilometres (34 miles), making it the fourth longest metro system in India. Chennai Metro Rail Limited (CMRL), a joint venture between the Government of India and the Government of Tamil Nadu, builds and operates the Chennai Metro. The system uses standard gauge and has a mix of underground and elevated stations. Planning for the metro began in his 2007/08 year and construction began in February 2009. Testing began in 2014, and the Metro Rail Safety Board approved operation in January 2015.
Commercial operations began on June 29, 2015 between Alandur and Koyambedu stations on the Green Line, and on September 21, 2016, Green Line operations began between Chennai Airport and Little Mt. Commercial operations began on the first underground section between Thirumangalam and Nehru Park on May 14, 2017 and were extended to central Chennai on May 25, 2018. The Blue Line between Saidapet and AG-DMS began operations in May 2018, and the extended underground section of the Blue Line from AG-DMS to Washermanpet began operations on February 10, 2019. Phase 1 of the subway has been completed. As of 2023, three more lines spanning 116.1 kilometers (72.1 miles) are under construction in the second phase, with the Chennai Metro scheduled to take over the Chennai Urban Rapid Transit System.

LITERATURE REVIEW

The following is some literature that has been reviewed from the reputed journals of both National and International Journals about Green Marketing and its related issues. The literature has also been reviewed from Textbooks, Magazines, & Websites.

Mandhani, J. et.al., (2023) explores the absence of a well-defined framework for understanding the interplay of service factors from the perspective of elderly and physically disabled passengers adds complexity to this challenge. Hence, the present study seeks to establish connections among service quality factors and pinpoint improvements for elderly and physically disabled passengers and analysis satisfaction data from 254 individuals using Delhi Metro. Employing an integrated Bayesian networks and partial least squares path modeling approach, the study yields noteworthy results. Notably, a one-unit increase in satisfaction with the "safety & security" factor is associated with a substantial 68 per cent increase in overall service quality satisfaction. Furthermore, an importance performance map analysis highlights the crucial areas for improvement, emphasizing that Delhi Metro should prioritize enhancements in "safety and security," "passenger ease," and "seamless connectivity" to create a more elderly and physically disabled friendly transit service.

Verma, M. et.al., (2022) discusses in the study that zeroes in on understanding the elements affecting service quality satisfaction and commuters' intention to persist in using Bengaluru Metro services. Through factor analysis and subsequent regression modeling, the perceptions and satisfaction survey of 700 metro passengers are examined. Principal component analysis identifies 35 indicators, categorized into seven factors: passenger ease, overall service quality satisfaction and loyalty intention, smooth transition, Metro operation and safety, anxiety, amenities, and service availability. The developed model underscores that 'Metro operation and safety along with passenger ease' wield the most significant influence, while 'anxiety' exerts a negative impact on the overall service quality satisfaction and loyalty intention of Bengaluru Metro. The insights garnered from this study provide authorities with a roadmap to comprehend service gaps in the existing metro rail transit, enabling them to address these gaps and enhance the overall appeal of metro

services to commuters. Moreover, the model crafted in this study can serve as a tool for conducting service quality assessments for other metro systems across India.

Lee, S. J. (2021) focused on examining the impact of the COVID-19 epidemic on travellers' travel habits, specifically in the first half of 2020. The researchers used paired t-tests to compare the passenger volume of private automobiles in Seoul before and after the epidemic, aiming to determine if COVID-19 had affected how passengers utilized transportation. To understand changes in monthly utilization rates for each mode of transportation, the study also compared and analysed the passenger occupancy rates of other transportation modes during comparable time periods. The results indicated that compared to the pre-epidemic period, the utilization rates for private cars and shared bicycles had either increased or recovered. On the other hand, the rates for train and bus passenger transportation had declined compared to the year prior to the epidemic. Furthermore, the study found that current rail and bus customers had switched to using private automobiles as a mode of transportation due to the impact of COVID-19. These findings shed light on the post-epidemic traffic patterns of travellers and the implications for pandemic response.

Shiwakoti, N. (2021) conducted in the Tehran metro train system aimed to understand the impact of the COVID-19 pandemic on travellers' perception of crowding and their preferences for different travel conditions. This research is valuable for building a robust transport infrastructure that can adapt to the challenges posed by pandemic viruses like COVID-19. Two surveys were carried out, one before the COVID-19 outbreak and one during the pandemic. The researchers used mixed logic models with a log normal distribution to analyse the preference data obtained from these surveys. The findings of the study indicated that the value of crowding increased during the COVID-19 epidemic. This suggests that passengers became more sensitive to crowded conditions due to the need to maintain a safe distance from others to prevent virus transmission. The study further revealed that poor comfort ratings were observed at higher crowding levels, where seats were taken, and the standee density was high, making it difficult for passengers to maintain social distance. As a result, the perception of crowding became increasingly detrimental to rail travelers during the COVID-19 pandemic. Additionally, the value of having a seat while traveling has risen in importance for passengers during the pandemic, likely because having a seat allows them to maintain a safe distance from other passengers.

Cho, S. H., & Park, H. C. (2021) aims to address the decline in travel demand and the need for new transportation regulations in public transit due to the features of mass transportation and the impact of the COVID-19 pandemic. It specifically focuses on comparing the crowding impedance of passengers before and after the pandemic to suggest transport policies. To assess the crowding impedances, the study utilizes data from two surveys conducted before and after the COVID-19 epidemic. A random parameter mixed logic model is employed to analyse the behavioural variations observed in passengers before and after the pandemic. The results of the analysis indicate that crowding impedances after the COVID-19 pandemic are approximately 1.04 to 1.23 times greater than before the pandemic. The study further contrasts the behavioural differences using crowding multipliers. Based on the findings, the study offers transportation strategies for transit officials and operators to address the challenges posed by infectious diseases in public transportation. These strategies likely involve measures to manage and mitigate crowding, ensuring the safety and comfort of passengers while considering the need for social distancing and reducing the risk of contagion.

OBJECTIVES OF THE STUDY

1. To know the demographic profile of the respondents.
2. To analyse the satisfaction of the metro passengers.
3. To compare the convenience of metro transport with the road transport.

RESEARCH DESIGN AND METHODOLOGY

Non probability convenience sampling method was used to collect primary data from 124 respondents on perception and satisfaction of Chennai Metro Rail Passengers. Data were collected using well-structured questionnaire. Secondary data were collected from journals, thesis and websites.

Statistical tools used

The following tools used to enrich the study;

1. Simple Percentage analysis
2. Chi Square test
3. Kendall's Taub
4. One-way ANOVA
5. Correlation

Research Hypothesis

1. There is no significance association between socio economic profile and the overall satisfaction of the Chennai Metro Rail passengers.
2. There is no significance difference between socio economic profile and weighted score of services comparison of Chennai Metro Rail with other modes of transport.

Limitations for the study

1. Time duration for the study is limited to carry on the research.
2. The sample size is limited to 124 respondents which is less on overall population.

Analysis and Interpretation

Socio-Economic Profile of the Respondents

The point of view of the respondents may vary based on the socio-economic profile of the respondents. Table 1 shows the socio-economic profile of the respondents.

Table - 1

Socio-Economic Profile of the Respondents

S. No.	Demographic factors	Classifications	No of respondents	Percentage
(a)	Gender	Male	85	68.5
		Female	39	31.5
		Total	**124**	**100**
(b)	Age	Upto 18	22	17.7
		18 – 35	77	62.1
		35 – 60	25	20.2
		Above 60	0	0
		Total	**124**	**100**
(c)	Occupation	Student	58	46.8
		Self Employed	4	3.2

		Private Sector	50	40.3
		Public Sector	6	4.8
		Other	6	4.8
		Total	**124**	**100**
(d)	Marital Status	Single	89	71.8
		Married	35	28.2
		Total	**124**	**100**
(e)	Educational Qualification	Schooling	3	2.4
		Under Graduate	47	37.9
		Post Graduate	61	49.2
		Professional	13	10.5
		Total	**124**	**100**
(f)	Source of Income	Salary	76	61.3
		Business Income	0	.0
		Professional Income	0	.0
		Other Sources	48	38.7
		Total	**124**	**100**
(g)	Annual Income	Low Income Group	115	92.7
		Middle Income Group	6	4.8
		High Income Group	3	2.4
		Total	**124**	**100**

Source: Primary Data

It is clear from Table 1 that most respondents are male (68.5 per cent). Subsequently, 62.1 per cent of the respondents belong to the age group between 18 and 35. Additionally, 46.8 per cent of the respondents are students. Nearly, 71.8 per cent of respondents are single. It is inferred from the above table that most respondents have completed post-graduation as their educational qualification (49.2 per cent). 61.3 per cent of respondents' major source of income is salary and 92.7 per cent of the respondents come under the low-income group.

Table - 2

Reasons to travel by Chennai Metro Rail

Factors	Count	Percentage
Business purpose	10	8.1
Personal	60	48.4
Entertainment	15	12.1
Holiday	10	8.1
Others	29	23.4
Total	**124**	**100**

Source: Primary Data

It is inferred from the table 2 that the maximum number of the respondents are travelling in Chennai Metro Rail for personal reasons (48.4 per cent). Subsequently, 23.4 per cent of the respondents are travelling in Chennai Metro Rail for other reasons. Additionally, 12.1 per cent of the respondents are travelling in Chennai Metro Rail for entertainment purposes.

Table - 3

Using Chennai Metro Rail to avoid Traffic issues

Opinion	Count	Percentage
No	21	16.9
Yes	103	83.1
Total	**124**	**100**

Source: Primary Data

Table 3 shows that the majority of the respondents are using Chennai Metro Rail to avoid traffic issues while travelling on road (83.1 per cent).

Table - 4

Frequency of travelling in Chennai Metro Rail

Factors	Count	Percentage
Daily	30	24.2
Weekly	25	20.2
Monthly	33	26.6
Yearly	36	29.0
Total	**124**	**100**

Source: Primary Data

It is evident from table 4 that the maximum number of the respondents are travelling yearly once in the Chennai Metro Rail (29 per cent). Subsequently, 26.6 per cent of respondents are travelling monthly once in the Chennai Metro Rail. Additionally, 24.2 per cent of respondents are travelling daily in the Chennai Metro Rail.

Table - 5

Type of ticket and payment method used to travel in Chennai Metro Rail

S. No.	Factors	Classifications	No of respondents	Percentage
(a)	Type of a ticket	Corner Commuters	80	64.5
		Singara Chennai Card	11	8.9
		Travel Card Recharge	33	26.6
		Total	**124**	**100**
(b)	Payment method	By Cash	85	68.5
		QR Code Pay	24	19.4

		Chennai Metro Train App	7	5.6
		Whats App Ticket	8	6.5
		Total	**124**	**100**

Source: Primary Data

It is clear from the table that the majority of the respondents (64.5 per cent) use corner commuters which is the ticket consumed at the counter. Subsequently, 68.5 per cent of the respondents used a payment option of cash to buy a Chennai Metro Rail ticket.

Table - 6

Level of Satisfaction with the services provided by Chennai Metro Rail

	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
Factors	Count	%	Count	%	Count	%	Count	%	Count	%
Online Payment	18	14.5%	32	25.8%	37	29.8%	4	3.2%	33	26.6%
Howdy Bikes	12	9.7%	16	12.9%	65	52.4%	21	16.9%	10	8.1%
M Auto Pride Electric Auto	17	13.7%	20	16.1%	58	46.8%	21	16.9%	8	6.5%
Smart Bikes	18	14.5%	19	15.3%	45	36.3%	30	24.2%	12	9.7%
UBER special pickup and drop services	13	10.5%	33	26.6%	44	35.5%	24	19.4%	10	8.1%
Other Services	17	13.7%	34	27.4%	38	30.6%	13	10.5%	22	17.7%

Source: Primary Data

It is evident from table 6 that the maximum number of the respondents agree and strongly agree (41.1 per cent) that satisfied with other services. Subsequently, 40.3 per cent of the respondents agree and strongly agree that satisfied with the online payment services. Additionally, 37.1 per cent of the respondents agree and strongly agree that satisfied with UBER special pickup and drop services.

Table - 7

Level of satisfaction on Chennai Metro Rail Stations and Platforms

Factors	Highly Dissatisfied		Dissatisfied		Neutral		Satisfied		Highly Satisfied	
	Count	%	Count	%	Count	%	Count	%	Count	%
Information	0	.0%	0	.0%	10	8.1%	30	24.2%	84	67.7%
Cleanliness	0	.0%	1	.8%	10	8.1%	35	28.2%	78	62.9%
Available Assistance	0	.0%	3	2.4%	22	17.7%	48	38.7%	51	41.1%
Refreshment Facilities	2	1.6%	7	5.6%	26	21.0%	36	29.0%	53	42.7%
Toilet Facilities	0	.0%	3	2.4%	31	25.0%	37	29.8%	53	42.7%
Waiting Rooms	1	.8%	9	7.3%	33	26.6%	41	33.1%	40	32.3%

Factors	Highly Dissatisfied		Dissatisfied		Neutral		Satisfied		Highly Satisfied	
	Count	%	Count	%	Count	%	Count	%	Count	%
Information	0	.0%	0	.0%	10	8.1%	30	24.2%	84	67.7%
Cleanliness	0	.0%	1	.8%	10	8.1%	35	28.2%	78	62.9%
Available Assistance	0	.0%	3	2.4%	22	17.7%	48	38.7%	51	41.1%
Refreshment Facilities	2	1.6%	7	5.6%	26	21.0%	36	29.0%	53	42.7%
Toilet Facilities	0	.0%	3	2.4%	31	25.0%	37	29.8%	53	42.7%
Waiting Rooms	1	.8%	9	7.3%	33	26.6%	41	33.1%	40	32.3%
Design and Overall Environment Feeling	0	.0%	0	.0%	19	15.3%	43	34.7%	62	50.0%

Source: Primary Data

It is clear from table 7 that the majority of the respondents were satisfied and highly satisfied (91.9 per cent) with the information given in the Chennai Metro Rail. Subsequently, 91.1 per cent of the respondents were satisfied and highly satisfied with the cleanliness. Additionally, 84.7 per cent of the respondents were satisfied and highly satisfied with the design and overall environment feeling in the Chennai Metro Rail.

Table - 8

Level of satisfaction with the Ticketing process

Factors	Very Poor		Poor		Neutral		Good		Excellent	
	Count	%	Count	%	Count	%	Count	%	Count	%
Number of Ticket Counters	0	.0%	4	3.2%	15	12.1%	56	45.2%	49	39.5%
Attitude of ticketing staff	3	2.4%	1	.8%	22	17.7%	52	41.9%	46	37.1%
Efficiency of ticketing staff	1	.8%	5	4.0%	18	14.5%	56	45.2%	44	35.5%
Self Service	0	.0%	0	.0%	26	21.0%	44	35.5%	54	43.5%
Information provided by ticketing staff	1	.8%	6	4.8%	17	13.7%	43	34.7%	57	46.0%

Source: Primary Data

It is evident from table 8 that the majority of the respondents are satisfied as they convey good and excellent (84.7 per cent) about the number of ticket counters. Subsequently, 80.7 per cent of the respondents are satisfied as they convey good and excellent about the efficiency of ticketing staff and the information provided by ticketing staff.

Table - 9

Service comparison of Chennai Metro Rail with other transport

Factors	Very Poor		Poor		Neutral		Good		Excellent	
	Count	%	Count	%	Count	%	Count	%	Count	%
Comfort	0	.0%	0	.0%	7	5.6%	47	37.9%	70	56.5%
Temperature	0	.0%	2	1.6%	14	11.3%	49	39.5%	59	47.6%
Punctuality	0	.0%	1	.8%	14	11.3%	45	36.3%	64	51.6%
Cleanliness	0	.0%	0	.0%	7	5.6%	47	37.9%	70	56.5%
Storage facilities	2	1.6%	3	2.4%	16	12.9%	57	46.0%	46	37.1%
On board information	0	.0%	0	.0%	15	12.1%	48	38.7%	61	49.2%
Train staff	0	.0%	3	2.4%	16	12.9%	51	41.1%	54	43.5%
Food and beverage stores	5	4.0%	13	10.5%	24	19.4%	41	33.1%	41	33.1%

Source: Primary Data

It is inferred from table 9 that the maximum number of the respondents are satisfied as they convey excellent (56.5 per cent) about comfort and cleanliness in Chennai Metro Rail when it is compared with other modes of transport. Subsequently, 49.2 per cent of the respondents are satisfied as they convey excellent about on board information in Chennai Metro rail when it is compared with other modes of transport.

Table - 10

Overall Satisfaction of the Respondents

Opinion	Count	Percentages
Low Level Satisfaction	2	1.6
Neither satisfied nor dissatisfied	65	52.4
High Level Satisfaction	57	46.0
Total	**124**	**100**

Source: Primary Data

It is evident from table 10 that majority of the respondents are (52.4 per cent) neither satisfied and nor dissatisfied with the overall Chennai Metro Rail services. Subsequently, 46 per cent of the respondents are highly satisfied with the overall Chennai Metro Rail services.

Table - 11a

Relationship between age with the overall satisfaction of Chennai Metro Rail services

Test used: Correlation

		Age of the Respondents	Overall Satisfaction on Chennai Metro Rail
Age of the Respondents	Pearson Correlation	1	-.069
	Sig. (2-tailed)		.443
	N	124	124
Overall Satisfaction on Chennai Metro Rail	Pearson Correlation	-.069	1
	Sig. (2-tailed)	.443	

		Age of the Respondents	Overall Satisfaction on Chennai Metro Rail
Age of the Respondents	Pearson Correlation	1	-.069
	Sig. (2-tailed)		.443
	N	124	124
Overall Satisfaction on Chennai Metro Rail	Pearson Correlation	-.069	1
	Sig. (2-tailed)	.443	
	N	124	124

Source: Computed Data

To determine the relationship between age and overall satisfaction on Chennai Metro Rail, correlation is used. Table 11a shows that the level of significance is 0.443 which is not less than 0.05 and hence there is no significant relationship between the age of the respondents and overall satisfaction of Chennai Metro Rail.

Table - 11b

Relationship between annual family income with the overall satisfaction of Chennai Metro Rail services

		Annual Income of the Respondents	Overall Satisfaction on Chennai Metro Rail
Annual Income of the Respondents	Pearson Correlation	1	-.098
	Sig. (2-tailed)		.278
	N	124	124
Overall Satisfaction on Chennai Metro Rail	Pearson Correlation	-.098	1
	Sig. (2-tailed)	.278	
	N	124	124

Source: Computed Data

To determine the relationship between annual family income and overall satisfaction on Chennai Metro Rail, correlation is used. Table 11b shows that the level of significance is 0.278 which is not less than 0.05 and hence there is no significant relationship between the annual family income of the respondents and overall satisfaction of Chennai Metro Rail.

Table - 12

Association between educational qualification and Weighted score of services comparison of Chennai Metro Rail with other modes of transport

Test used: Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	57.724[a]	34	.007
Likelihood Ratio	65.649	34	.001
Linear-by-Linear Association	.037	1	.847
N of Valid Cases	124		
a. 47 cells (87.0%) have expected count less than 5. The minimum expected count is .10.			

Source: Computed Data

The p value is 0.000 which is higher than 0.05 and hence null hypothesis is accepted and alternative hypothesis is rejected, that is, there is no significant association between educational qualification and weighted score of services comparison of Chennai Metro Rail with other modes of transport.

Table -13

Association between educational qualification and Weighted score of services comparison of Chennai Metro Rail with other modes of transport

Test used: Kendall's Tau_b

Symmetric Measures					
		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	-.032	.067	-.476	.634
N of Valid Cases		124			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					

Source: Computed Data

The p value is 0.000 which is higher than 0.05 and hence null hypothesis is accepted and alternative hypothesis is rejected, that is, there is no significant difference and the value is 0.634 So, there is no difference between educational qualification and Weighted score of services comparison of Chennai Metro Rail with other modes of transport.

Table - 14

Significance difference between Occupation and weighted score of services comparison of Chennai Metro Rail with other modes of transport

Test used: One-way ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	56.996	17	3.353	2.841	.001
Within Groups	125.101	106	1.180		
Total	182.097	123			

Source: Computed Data

To determine the difference between Occupation and weighted score of services comparison of Chennai Metro Rail with other modes of transport, One-way ANOVA is used. Table 14 shows that the level of significance is 0.001 which is less than 0.05 and hence there is a significant difference between Occupation and weighted score of services comparison of Chennai Metro Rail with other modes of transport.

FINDINGS

1. Most of the respondents are male (68.5 per cent).
2. 62.1 per cent of the respondents belong to the age group between 18 and 35.
3. 46.8 per cent of the respondents are students.
4. 71.8 per cent of respondents are single.

5. Most of the respondents have completed post-graduation as their educational qualification (49.2 per cent).
6. 61.3 per cent of respondents' major source of income is salary.
7. 92.7 per cent of the respondents come under the low-income group.
8. Maximum number of the respondents are travelling in Chennai Metro Rail for personal reasons (48.4 per cent).
9. Majority of the respondents are using Chennai Metro Rail to avoid traffic issues while travelling on road (83.1 per cent).
10. Majority of the respondents are (52.4 per cent) neither satisfied and nor dissatisfied with the overall Chennai Metro Rail services.
11. There is a significant difference between Occupation and weighted score of services comparison of Chennai Metro Rail with other modes of transport.

SUGGESTIONS

- Despite having many issuing counters, tickets were issued only at one counter, so the token placement (counter) needs to be modernized. This will helpful to avoid frustration among passengers queuing up.
- To provide services, Chennai Metro Rail needs to hire more employees.
- Regular passengers of Chennai Metro Rail can get a parking pass for a nominal fee.
- Passengers need Wi-Fi connectivity at subway stations.
- Provide reserved wheelchair spaces in subway stations for passengers with disabilities.
- Metro authorities should focus on maintaining elevators and escalators, private atmosphere and reasonable costs. These are the factors that influence passengers' use of Chennai Metro Rail services.
- Storage facilities for travel passengers can be maximised.
- Ticket fare felt too costly and government can take initiative to bring it down.

SCOPE FOR FURTHER RESEARCH

The following research can be done in the future,

- A Study on Chennai Metro Rail Operational efficiency
- A Study on Chennai Metro Rail Cost and maintenance

CONCLUSIONS

Chennai Metro Rail, a reliable transportation system helping the city of Chennai with a network consist of three colour line covering a length of 45 kilometres and the aim of the venture is to offer fast, reliable, appropriate, well-organized, contemporary and cost-effective approach of public transport. The present study aimed at measuring the level of fulfilment of passengers towards services provided by Chennai Metro Rail, various factors contributing to passengers' satisfaction. While travel is a basic need, commuters have expectations of such services and service providers. The extent to which user expectations are met indicates user satisfaction with the service and service provider. Based on this study, several suggestions were made. Considering the impressive measurements taken by the Chennai Metro Rail, it is expected that Indian Railways will shine and bring greatness to our country in the near future.

REFERENCE

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