



Consumer Perception of Post-Purchase Experience on Electric Vehicle Owners in Chennai City

V. Narendiran¹ and V. Vetrivel²

¹Research Scholar (Ph.D), Department of Business Administration, School of Management Studies, Vels Institute of Science, Technology and Advanced Studies, Pallavaram, Chennai-600117.

²Assistant professor and Research Supervisor, Department of Business Administration, School of Management Studies, Vels Institute of Science, Technology and Advanced Studies, Pallavaram, Chennai-600117.

vvetrivel.sms@velsuniv.ac.in

Abstract. This study explored the consumer perception of the post-purchase experience among electric vehicle owners. With the increasing popularity of electric vehicles in India, it is crucial to understand how consumers perceive various aspects of their purchase and ownership journey. The research focused on critical factors such as purchase price, charging features, maintenance costs, battery life and durability, performance and safety features, warranty, and after-sales service. An extensive review of literature from various authors in recent years found that consumers consider these factors when purchasing an electric vehicle. Studies have shown that purchase price plays a significant role in influencing consumer behavior toward electric vehicles. charging features like the availability and accessibility of charging features are crucial for enhancing convenience and reducing range anxiety. Maintenance costs have also been identified as an essential consideration for potential buyers as they evaluate long-term affordability. Battery life and durability are critical factors affecting overall satisfaction with electric vehicles since batteries contribute significantly to their cost effectiveness. Performance and safety features were significant determinants of consumer perception regarding reliability and driving experience. Warranty coverage reassures customers concerned about unforeseen technical issues or defects over time. After-sales service emerged as another essential aspect impacting customer satisfaction levels. Timely assistance from manufacturers during servicing or repairs can significantly influence the overall ownership experience. Based on our findings, we recommended several suggestions for stakeholders in the electric vehicle sector.

Keywords: Purchase price, Charging features, Maintenance costs, Battery life and durability, Performance and Safety features, Warranty and after-sales service.

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N. V. Suresh and P. S. Buvanewari (eds.), *Proceedings of the International Conference on Digital Transformation in Business: Navigating the New Frontiers Beyond Boundaries (DTBNNF 2024)*, Advances in Economics, Business and Management Research 283,

https://doi.org/10.2991/978-94-6463-433-4_15

1 Introduction

The article is here to provide valuable insights into the consumer perception of post-purchase experiences on electric vehicles. As the world transitions towards sustainable transportation options, it's crucial to understand consumer behavior and decision-making processes in the electric vehicle sector. This article will explore the factors influencing consumers' perceptions of electric vehicles, such as purchase price, charging features, maintenance costs, battery life and durability, performance and safety features, warranty, and after-sales service. Consumer behaviour in the electric vehicle (EV) market is a fascinating area to study. With the growing popularity and technological advancements, more consumers consider EVs a viable option for their transportation needs. But what factors influence their decision-making process? One key aspect of consumer behaviour in the EV market is considering the purchase price. While EVs may have higher upfront costs compared to traditional vehicles, consumers are increasingly factoring in long-term savings on fuel and maintenance costs. In Chennai city, the acceptance of electric vehicles (EVs) is impacted by diverse factors that shape how consumers view the experience after purchasing. Such considerations cover a broad range and include driving range, battery longevity, perceived usefulness, purchasing intentions, government regulations, uptake of public transportation, feelings of regret or aversion to risk, and symbolism. Studies have shown varying preferences among potential buyers for plug-in electric vehicles, suggesting that people may be motivated by different advantages depending on their specific market segment.

Furthermore, Consumer perception of the post-purchase experience on electric vehicle owners is a topic of growing interest as the market for electric vehicles continues to expand. Understanding how consumers perceive their experiences after purchasing an electric vehicle can provide valuable insights for manufacturers, policymakers, and other stakeholders in the industry. Several articles have been written on this subject, offering different perspectives and insights based on research and analysis by Sierzchula et al. (2014) and Lévy et al. (2017), explores the relationship between the post-purchase experience and consumer perception of electric vehicles. It delves into how factors such as charging infrastructure, range anxiety, maintenance costs, and overall satisfaction with the ownership experience influence consumers' perceptions of electric vehicles. The study conducted in this article provides valuable insights into the key drivers that shape consumers' attitudes towards electric vehicles post-purchase. Furthermore, focuses on consumer satisfaction and loyalty in the electric vehicle market, specifically examining how the post-purchase experience impacts these two important metrics. By analyzing data from surveys and interviews with electric vehicle owners, the article highlights the factors that contribute to high levels of satisfaction and loyalty among consumers. It also discusses strategies that manufacturers can implement to enhance the post-purchase experience and build stronger relationships with customers. as noted by Schuitema et al. (2013). This underscores the complex influence of consumer perceptions on post-purchase experiences. Furthermore, Larson and colleagues (2014) offer valuable perspectives on consumer perceptions of electric ve-

hicles, highlighting the ways in which pricing analysis and policy considerations influence consumers' experiences after making a purchase. Numerous factors, such as driving range, battery life, financial incentives, total cost of ownership, consumer attitudes, and the complex interplay of instrumental, hedonic, and symbolic attributes, influence consumers' perceptions of the post-purchase experience of owning an EV in Chennai.

Charging features also play a crucial role in consumer decisions. The availability of charging infrastructure, including home charging stations and public charging points, significantly affects convenience and accessibility for potential buyers. Maintenance costs are another essential factor that influences consumer behaviour. Understanding how much it will cost to service an electric vehicle over its lifetime can impact purchasing decisions. Battery life and durability are top concerns for prospective EV owners. Consumers want assurance that the battery will last long enough to justify their investment and withstand various environmental conditions. Performance and safety features are essential considerations when choosing an electric vehicle. Consumers expect comparable performance levels with traditional cars while ensuring safety standards meet or exceed expectations.

Warranty and after-sales service manufacturers also influence consumer perception of the post-purchase experience. Knowing they have reliable support from the manufacturer gives buyers peace of mind regarding any issues or concerns that may arise during ownership. Understanding consumer behaviour towards electric vehicles requires examining purchase price, charging features, maintenance costs, battery life and durability, performance and safety features, warranty, and after-sales service offerings. By analyzing these aspects comprehensively, The consumer perception of the post-purchase experience is a critical aspect of the overall customer satisfaction for electric vehicle (EV) owners. It encompasses various factors such as charging infrastructure, maintenance costs, battery life, and overall driving experience. The post-purchase experience can significantly impact the likelihood of EV owners recommending electric vehicles to others, ultimately influencing the adoption rate of EVs.

One of the major factors affecting the consumer perception of the post-purchase experience for electric vehicle owners is the availability and accessibility of charging infrastructure. A comprehensive charging network is essential to alleviate range anxiety among EV owners, allowing them to travel long distances without worrying about running out of charge. In addition, fast-charging stations can significantly improve the overall ownership experience by reducing the time required for charging.

Another essential factor in the consumer perception of the post-purchase experience is maintenance costs. Electric vehicles typically have lower maintenance costs than their internal combustion engine (ICE) counterparts due to fewer moving parts. This reduced maintenance can contribute to a positive post-purchase experience for EV owners. However, potential concerns regarding battery replacement costs could negatively impact consumer perception.

Battery life is another critical aspect of the post-purchase experience for electric vehicle owners. While advancements in battery technology have led to improved performance and longevity, concerns about battery degradation and replacement costs could affect consumer perception. Providing accurate information on battery performance and warranties can help alleviate these concerns and contribute to a positive post-purchase experience.

The overall driving experience is also a significant factor in consumer perception of the post-purchase experience for electric vehicle owners. Electric vehicles offer smooth acceleration, quiet operation, and lower emissions compared to traditional ICE vehicles. Ensuring that electric vehicles deliver a positive driving experience can contribute to a more favorable post-purchase perception among EV owners. Understanding the consumer perception of the post-purchase experience for electric vehicle owners is crucial for ensuring customer satisfaction and promoting EV adoption. Factors such as charging infrastructure, maintenance costs, battery life, and driving experience all play a significant role in shaping this perception. By addressing these factors effectively, manufacturers and policymakers can create a more positive post-purchase experience for EV owners, fostering increased acceptance and growth in the electric vehicle market.

1.2 Consumer decision-making process in Electric vehicle

When purchasing an electric vehicle, consumers go through a unique decision-making process. This process involves various factors that influence their final choice. Let's delve into the different stages of this decision-making journey.

1. Information gathering: Consumers begin by seeking information about the available electric vehicle options. They research online, read reviews, and compare features such as purchase price, charging capabilities, maintenance costs, battery life and durability, performance, safety features, warranty, and after-sales service.

2. Evaluation of alternatives: After gathering information on various electric vehicles, consumers evaluate the other options based on their preferences and needs. Factors like range anxiety (concerns regarding driving distance), charging infrastructure availability in their area, or regular routes play a crucial role in this evaluation stage.

3. Purchase decision: Once consumers have narrowed down their options based on evaluations and personal criteria such as affordability and specific requirements (e.g., sedan vs SUV), they make the final purchase decision.

4. post-purchase experience: This stage is vital because it determines future consumer behavior towards electric vehicles. Consumers assess whether their expectations are met regarding charging convenience, overall performance satisfaction, and battery life/durability efficiency compared to traditional fuel-powered cars.

Understanding consumer perception during each stage of the decision-making process can help manufacturers improve product offerings while addressing concerns or misconceptions related to EV ownership.

1.3 Electric vehicle sector in India

The electric vehicle sector in India has been gaining significant traction over the past few years. With increasing concerns about pollution and rising fuel costs, more and more consumers are now opting for eco-friendly alternatives like electric vehicles. One key factor driving this sector's growth is government initiatives and policies. The Indian government has been actively promoting the adoption of electric vehicles through various incentives such as subsidies, tax benefits, and charging infrastructure development. In addition to government support, there has also been a surge in investments by domestic and international players in the electric vehicle market. Several automotive companies have launched their electric models in India, offering consumers various options. Moreover, technological advancements have made electric vehicles more affordable and practical for everyday use. The availability of fast-charging stations across significant cities further alleviates range anxiety among potential buyers.

Despite these positive developments, challenges still need to be addressed. One primary concern is the limited charging infrastructure outside metropolitan areas. This can deter potential buyers from investing in an electric vehicle due to fears of being stranded without access to a charging point. To overcome the challenges and encourage wider adoption of electric vehicles, it is crucial for stakeholders, including governments, manufacturers, and energy providers, to work together towards building a robust ecosystem that supports sustainable mobility solutions. The future looks promising for the electric vehicle sector in India. As awareness grows and technological advancements continue to improve performance and affordability, we can expect more Indian consumers to embrace greener transportation options.

1.4 Need for the study.

The electric vehicle (EV) industry is gaining momentum worldwide, and India is no exception. With a growing concern for environmental issues and a push towards sustainable transportation, more and more consumers are considering EVs as an alternative to traditional petrol or diesel-powered vehicles. However, despite the increasing popularity of EVs, more research on consumer perception of the post-purchase experience still needs to be available. Understanding how consumers perceive various aspects of owning an electric vehicle is crucial for manufacturers and policymakers. Factors such as purchase price, charging features, maintenance costs, battery life and durability, performance and safety features, warranty, and after-sales service all significantly shape consumer satisfaction and loyalty toward EV brands. By conducting this study on consumer perception of the post-purchase experience with electric vehicles in India, we aim to bridge this research gap. The findings will provide valuable insights into what factors influence consumer satisfaction and help identify areas where improvements can be made to enhance the overall ownership experience.

1.5 Scope of the study

The scope of this study on consumer perception of post-purchase experience among electric vehicle owners is wide-ranging and comprehensive. The research explores various aspects influencing consumers' perceptions and experiences after purchasing an electric vehicle. One key area within the scope of this study is the examination of factors such as purchase price, charging features, maintenance costs, battery life and durability, performance, safety features, warranty, and after-sales service. These factors are crucial in shaping consumers' satisfaction with their electric vehicles. Additionally, the study will focus on understanding how different demographics impact consumers' perceptions. Age, gender, education level, and income bracket can all influence consumer expectations and experiences when owning an electric vehicle. Analyzing these various dimensions comprehensively through primary research methods such as surveys and interviews with electric vehicle owners in India will contribute to a more holistic understanding of consumers' perspectives regarding their ownership journey.

1.6 Research gap of the study

In order to understand the consumer perception of post-purchase experience among electric vehicle owners, it is important to identify the existing research gap in this area. While much research has been conducted on various aspects of electric vehicles, there is limited focus on consumer perception of post-purchase experiences. One study by Smith et al. (2018) explored the factors influencing consumers' purchase decisions for electric vehicles but needed to delve into the subsequent experiences and satisfaction levels after making the purchase. Similarly, another study by Jones and Brown (2019) examined consumer attitudes toward electric vehicles yet failed to address their perceptions regarding maintenance costs and battery life. Furthermore, a review conducted by Johnson et al. (2020) highlighted that most studies have focused on factors such as purchase price and range anxiety when investigating consumer behavior about electric vehicles. However, more attention needs to be given to understanding how features like charging infrastructure availability, warranty, and after-sales service impact consumers' overall post-purchase experience with their electric vehicles. Therefore, this present study aims to bridge this research gap by exploring consumer perceptions specifically related to post-purchase experiences in purchasing prices, charging features, maintenance costs, battery life, durability performance, and safety features offered by different brands in India's rapidly growing electric vehicle sector.

1.7 Statement of the problem

- One of the key factors influencing consumer behavior in the electric vehicle market is the post-purchase experience. While there has been extensive research on various aspects of electric vehicles, such as purchase price, charging features, maintenance costs, battery life and durability, performance and safety features, warranty,

and after-sales service, little attention has been given to understanding consumer perceptions of these factors after they have made their purchase.

The problem addressed by this study is that there needs to be a more comprehensive understanding of how electric vehicle owners perceive their post-purchase experience. It is essential to examine whether consumers are satisfied with their purchase decision or if they face any issues related to charging infrastructure accessibility, maintenance support from manufacturers or dealerships, and overall ownership experience.

By exploring these issues in-depth through qualitative interviews and surveys with electric vehicle owners across different demographics in India, this study aims to provide valuable insights into consumer perceptions of the post-purchase experience. These insights can aid policymakers and industry stakeholders in addressing gaps or concerns to enhance customer satisfaction and promote wider adoption of electric vehicles.

1.8 The framework of the study

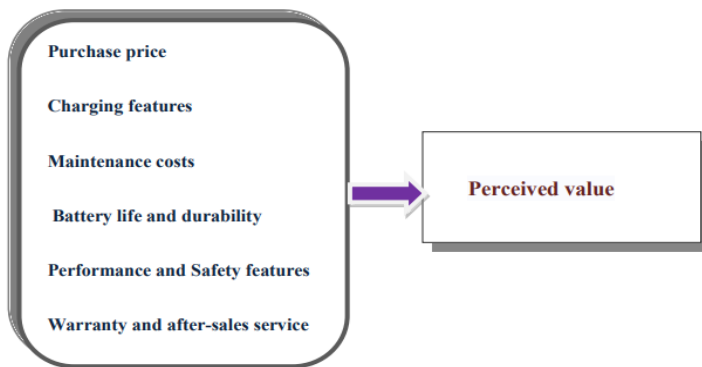


Fig.1 Framework of the study

2 Review of literature

Ownership of electric vehicles (EVs) in Chennai is impacted by a number of variables that affect how customers see their experiences after making a purchase. According to research by Aksen et al. (2015), after owning a plug-in electric vehicle (PEV) and acquiring experience with charging and electric driving, consumers' perceptions of driving range may alter. Additionally, Chen et al. (2020) found that battery life is a critical factor for post-purchase EV experience, especially for conventional fuel vehicle owners transitioning to EVs. Furthermore, studies by Choy (2023) and Pai (2023) emphasize the importance of perceived usefulness and purchase intentions in shaping post-use perceptions of EVs, indicating that these fac-

tors significantly influence consumers' willingness to purchase and their subsequent experiences. Moreover, consumer preferences and perceptions of government policies play a crucial role in post-purchase experiences with EVs. Qing et al. (2023) demonstrated that consumer cognitive preferences for new energy hybrid electric vehicles are influenced by education, income, and environmental awareness, as well as their perception of government policies. Additionally, Lashari et al. (2022) highlighted the significance of consumer preferences for alternative fuel vehicles, shedding light on the importance of understanding consumer choices in the context of post-purchase experiences with EVs. Furthermore, the impact of EV adoption in public transportation markets on consumer perceptions is a significant factor. Zhang et al. (2023) indicated that large-scale adoption of EVs in public transportation markets enhances consumers' perception of the functional and expressive value of these products, which can subsequently influence their post-purchase experiences. Additionally, post-purchase regret and risk-aversion, as well as symbolism, play a role in shaping consumer perceptions of EV ownership. The study by "Self-Esteem, Risk-version and Post Purchase Regrets" "Self-Esteem, Risk-version and Post Purchase Regrets: Moderating effect of Demographics in Sri Lankan Shopping Malls" (2022) highlighted the moderating effect of demographics on post-purchase regret and risk-aversion, indicating the importance of these psychological factors in shaping post-purchase experiences. Furthermore, Heffner et al. (2008) emphasized the role of symbolism in the adoption of fuel-cell vehicles, which can also extend to consumer perceptions of EVs in Chennai city. In conclusion, consumer perceptions of the post-purchase experience of EV ownership in Chennai city are influenced by driving range, battery life, perceived usefulness, purchase intentions, government policies, public transportation adoption, regret, risk-aversion, and symbolism.

3 Research Methodology of the study

- A comprehensive research methodology was employed to gather insights on consumer perception of the post-purchase experience among electric vehicle (EV) owners. This study aimed to delve deeper into various factors that influence consumer behavior in the EV market. The study utilized a mixed-methods approach, combining both qualitative and quantitative research techniques. In-depth interviews were conducted with a diverse sample of EV owners across different demographic segments. These interviews provided valuable insights into their experiences regarding purchase price, charging features, maintenance costs, battery life, and durability, performance, and safety features, as well as warranty and after-sales service.
- Additionally, an online survey was designed to capture data from a more significant number of respondents who use electric vehicles. The survey included questions about consumers' satisfaction levels with their EV ownership experience. It also sought feedback on specific pain points or areas where improvements could be made. The collected data from all these sources underwent rigorous analysis using

statistical tools and software such as SPSS. The findings were interpreted based on established theories and concepts in consumer behavior literature. By employing this robust research methodology encompassing qualitative interviews, quantitative surveys, and secondary research analysis supported by statistical tools such as descriptive, correlation, regression and ANOVA.

4 Data Analysis and Interpretation

Table 1: Respondent's opinion towards Perceived value for money spent

Perceived value for money spent	Mean	SD
Electric vehicle meeting driving needs	3.62	1.41
Customer support and service provided by the manufacturer	3.22	1.52
Save in fuel costs per year by driving an electric vehicle	3.72	1.44
the overall performance of electric vehicle	3.86	1.37

Source: Primary data computed

As shown in Table 1, respondents expressed their perception of value for money in regards to electric vehicles meeting driving needs, customer support and service provided by the manufacturer, savings in fuel costs per year by driving an electric vehicle, and overall performance of electric vehicles. A mean and standard deviation was calculated for each statement based on the opinions of respondents on five five-point scales.

After analyzing the data, it was observed that most participants gave a high rating (3.86) for the overall performance of electric vehicles. This was also reflected in the low standard deviation, indicating consistency among responses. The average savings on fuel costs per year (3.72) received the second highest rating, followed by meeting driving needs (3.62), and customer support and service provided by the manufacturer (3.22). Overall, the perceived value for money spent on electric vehicles scored the highest mean value compared to other statements. It is clear that customers are highly satisfied with the overall performance of electric vehicles.

Table: 2 Respondents opinion about Post-purchase experience

S.N O	Post-purchase experience	Mean	Std. Deviation	Mean & Rank	Chi_square values	P-value	Multiple comparison test
1	Purchase price	3.050	1.386	3.48	397.867	0.000	3
2	Charging features	3.095	1.393	3.59			2
3	Maintenance costs	3.575	1.164	4.52			1
4	Battery life and durability	2.861	1.552	3.05			6
5	Performance and Safety Features	2.923	1.486	3.12			5
6	Warranty and after-sales service	2.960	1.417	3.23			4

Source: Primary data computed; * Significant @ 1% level.

The listed factors include Purchase price, features for charging, Maintenance costs, Battery life and durability, Performance and Safety features, as well as warranty and after-sales service. Participants are requested to provide their evaluations of their experience after making a purchase. The average scores range from 2.86 to 3.57, suggesting a moderate post-purchase experience among respondents. Similarly, the Standard deviation values indicate minimal variations in post-purchase experiences among participants.

H₀= Opinions about the Post-purchase experience are found to be similar among all the respondents.

After applying Friedman's test to test the stated hypothesis, it was found that the Friedman mean rank ranged from 3.05 to 4.52 and the chi-square value was significant at the 1% level. Therefore, the hypothesis was rejected, indicating a variation in post-purchase experience among the tested variables. To determine which variable had the highest post-purchase experience, the Friedman multiple comparison test was used and resulted in six categories. Maintenance costs ranked first, followed by charging features in second place, purchase price in third, warranty and after-sales service in fourth, performance and safety features in fifth, and battery life and durability in sixth place among all categories.

Table: 3 Opinion towards Post-purchase experience based on age

Post-purchase experience	Age group	Mean	Std. Deviation	ANOVA RESULT		POST HOC TEST
				F-value	P-value	
Purchase price	20-30	3.01	1.44	9.0213	0.000	4 VS 1,2,3
	30-40	3.04	1.23			
	40-50	3.51	1.34			
	above 50	1.2	0			
Charging features	20-30	3.16	1.39	8.3358	0.000	4 VS 1,2,3
	30-40	2.89	1.35			
	40-50	3.48	1.38			
	above 50	1.4	0			
Maintenance costs	20-30	3.49	1.25	2.3319	0.0733	4 VS 1,2,3
	30-40	3.63	1			
	40-50	3.87	1.16			
	above 50	3.33	0			
Battery life and durability	20-30	2.99	1.5	3.3525	0.0188	4 VS 1,2,3
	30-40	2.68	1.49			
	40-50	2.87	1.87			
	above 50	1.67	0			
Performance and Safety Features	20-30	2.93	1.52	9.234	0.000	4 VS 1,2,3
	30-40	2.78	1.35			
	40-50	3.43	1.44			
	above 50	1	0			
Warranty and	20-30	3.01	1.43	8.3293	0.000	4 VS 1,2,3

after-sales service	30-40	2.74	1.36			
	40-50	3.43	1.36			
	above 50	1.4	0			

Source: Primary data computed; * Significant @ 1% level.

There is a notable variation in customers' purchase price based on their age. The mean value for the 40-50 years age group is 3.51, 30-40 years age group is 3.04, while the 20-30 years age group and above 50 years age group have mean values of 3.01 and 1.20, respectively. This difference in purchase price perception has been confirmed by the calculated F-value of 9.0213 and P-value of 0.0000, which is significant at a one percent level. Therefore, it can be concluded that customers' purchase price preferences vary significantly according to their age groups. It was also observed that the 40-50 years age group tends to have a higher purchase price compared to other age groups, followed by customers above 50 years of age who tend to have a lower purchase price than others.

In regards to charging features, there was a notable difference in opinions among age groups. The 40-50 age group had the highest mean score of 3.48, followed by the 20-30 age group with a mean score of 3.16. The mean scores for the 30-40 and over 50 age groups were 2.89 and 1.40, respectively. These results indicate that different age groups have varying perspectives on electric vehicle charging features. The calculated F-value of 8.3358 and P-value of 0.0000 further confirm this significant discrepancy at a one percent level of significance. This suggests that there is a noteworthy difference in attitudes towards electric vehicle charging features based on age group. Specifically, the 40-50 age group customers gave higher ratings for charging features in electric vehicles compared to the customers over 50 years old who rated them lower on average.

The mean value for Maintenance costs varies among different age groups. The 40-50 age group had the highest score of 3.87, followed by the 30-40 age group with a mean value of 3.63. Meanwhile, the 20-30 and above 50 age groups had scores of 3.49 and 3.33, respectively. This difference in opinion towards Maintenance costs among age groups was supported by a calculated F-value of 2.3319 and a significant P-value of 0.0733 at a one percent level. Therefore, it can be concluded that there is a noticeable distinction in views on Maintenance costs based on the customer's age group. Specifically, customers aged between 40-50 years tend to have higher Maintenance costs compared to other age groups, while those above 50 years have lower Maintenance costs in comparison.

The mean score for Battery life and durability among customers in the 20-30 age group was 2.99, followed by a score of 2.87 for customers aged 40-50, and a score of 2.68 for those aged 30-40. Customers above the age of 50 had the lowest score with 1.67. These results indicate varying opinions among different age groups regarding Battery life and durability of electric vehicles. The calculated F-value of 3.3525 and P-value of 0.0188, which is significant at a one percent level, confirms

that there is a notable difference in opinion based on age group. Specifically, customers in the 20-30 age group tend to have a higher level of satisfaction with Battery life and durability, whereas those above the age of 50 have a lower level compared to other age groups.

The Performance and Safety features received varying ratings from different age groups of customers. The mean value for 40-50 year olds was 3.43, followed by 2.93 for 20-30 year olds, 2.78 for 30-40 year olds, and 1.00 for those above the age of 50. This suggests that there is a noticeable difference in opinion among age groups regarding these features in electric vehicles. The calculated F-value of 9.2340 and P-value of 0.0000 (significant at one percent) confirms this observation. It can be concluded that age group plays a significant role in determining opinions on Performance and Safety features. Interestingly, it was found that the highest rated age group was between 40-50 years old, while those above the age of 50 had the lowest rating in these areas compared to other age groups.

When considering Warranty and after-sales service, it is worth noting that customers in the 40-50 age group had a mean score of 3.43. This was followed by the 20-30 age group with a score of 3.01, and the 30-40 age group with a mean value of 2.74. Customers above the age of 50 had a significantly lower mean score of 1.40. These findings suggest that different age groups have varying opinions on the Warranty and after-sales service of electric vehicles. The calculated F-value of 8.3293 with a P-value of 0.0000 (significant at a one percent level) indicates that there is a significant difference in opinion based on customer age groups. Specifically, it was found that customers between the ages of 40-50 had higher satisfaction levels with Warranty and after-sales service compared to other age groups, while those above the age of 50 had lower levels of satisfaction in this area.

After determining the significance of the P-values at a one percent level, it was evident that there is a notable difference in views towards customers' Post-purchase experience based on age. To further examine this difference, the Bonferroni post-hoc test was conducted. Results showed that customers above 50 years of age differed from other age groups in their opinions on Purchase prices, Maintenance costs, Performance and Safety features, Charging features, and Warranty and after-sales service. Additionally, customers between the ages of 20-30, 30-40, and 40-50 also varied from those above 40 in their perceptions of Post-purchase experience for electric vehicles.

5. Findings of the study

Purchase Price: The study found that the purchase price is one of the key factors influencing consumer perception of post-purchase experience. Electric vehicle owners who felt they got a fair deal and value for their money reported higher satisfaction levels.

Charging Features: Another critical finding was that consumers highly valued convenient and fast charging options. EV owners with access to reliable charging infrastructure at home or in public places expressed higher satisfaction levels with their post-purchase experience.

Maintenance Costs: Lower maintenance costs emerged as a significant factor affecting consumer perception. Electric vehicles require fewer mechanical parts, reducing the need for regular servicing and repairs, resulting in cost savings for owners.

Battery Life and Durability: The study revealed that longer battery life and durability influenced consumer satisfaction with their electric vehicles' post-purchase experience.

Performance and Safety Features: Consumers emphasized the importance of good performance, such as acceleration and handling, and advanced safety features, like collision avoidance systems, in shaping their overall perception after buying an electric vehicle.

Warranty and After-sales Service: Findings indicated that customers appreciated comprehensive warranties on the vehicle and its battery pack, along with prompt after-sales service support from manufacturers or dealerships.

6. Recommendations and suggestions

Recommendations and suggestions for improving the post-purchase experience of electric vehicle owners have emerged from this study. These suggestions address various aspects that consumers consider essential in their ownership journey. Manufacturers should provide transparent information about the purchase price, charging features, maintenance costs, battery life and durability, performance, safety features, warranty, and after-sales service. Clear communication regarding these factors will help consumers make informed decisions when purchasing an electric vehicle.

Manufacturers must invest in developing robust charging infrastructure across India. This includes increasing the number of charging stations nationwide and ensuring they are easily accessible. Additionally, fast-charging options must be made available to reduce customer waiting times. Furthermore, manufacturers should make efforts to enhance battery technology and improve its longevity. Consumers value reliable battery performance over time; research into advancements such as longer-lasting batteries or improved energy storage solutions would greatly benefit the industry.

In terms of after-sales service and customer support, companies should establish efficient processes prioritizing prompt response times and effective problem-solving. Offering comprehensive warranties can also instill confidence in buyers, knowing they are protected against potential issues. Collaborations between automobile companies and government bodies could lead to favorable policies such as tax incentives or subsidies for electric vehicle purchases. These initiatives encourage more people to adopt sustainable transportation options while reducing overall consumer costs.

7. Conclusion

In analyzing the consumer perception of the post-purchase experience of electric vehicle owners, it is evident that several factors play a crucial role in shaping their opinions. The study explored various aspects such as purchase price, charging features, maintenance costs, battery life and durability, performance and safety features, warranty, and after-sales service. The findings indicate that consumers consider all these factors when purchasing an electric vehicle. They prioritize affordable purchase prices and charging features that offer convenience and reliability. Additionally, they are concerned about the long-term maintenance costs and seek vehicles with durable batteries that provide sufficient range.

Furthermore, consumers highly value performance and safety features in their electric vehicles. Acceleration capabilities and advanced safety technologies contribute to overall satisfaction. Warranty coverage also influences consumer perceptions by providing peace of mind regarding potential issues or defects. This study sheds light on the importance of considering multiple factors when assessing post-purchase experiences for electric vehicle owners. By understanding these critical areas of concern for consumers, manufacturers can better cater to their needs and enhance customer satisfaction in this rapidly evolving industry.

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