

A Study on the Factors Influencing Consumer Buying Behaviour towards Electric Vehicles among University Students in Anand City

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Abstract

This study aims to investigate the different factors influencing consumer buying behaviour towards Electric Vehicles (EVs). The research was mainly based on primary data and selected populations as university students of Anand, Gujarat and also used secondary data sources to collect information regarding EVs. This study bridges the research gap and selects 225 respondents to the convenience sampling method. Frequency distribution, percentage, mean, standard deviation and various statistical methods such as the reliability test, KMO and Bartlett's test, factor analysis, and non-parametric test were carried out. The result extracted six influencing factors for consumer buying behaviour towards EVs such as high maintenance, reliability, EV features, inflation, environment, and cost-benefit. The use of EVs by the majority of respondents confirms that there is a potential for future expansion. The present study helps customers/consumers know about purchasing EVs benefits and the EVs industry. It is believed that the findings make an important contribution to EV industries, policymakers, future researchers, and those who want to purchase EVs.

Keywords: Consumer Buying Behaviour, Electric Vehicles (EVs), Environment, Transportation

1. Introduction

Nowadays people are more concerned about their health, and that's one of the reasons they are using those types of products which are environmentally friendly, specifically in the transportation sector. The transportation sector consumes more fossil fuels, in comparison to other sectors and it's a major problem for the environment to emit carbon dioxide and greenhouse gases, which are directly connected to the problem of climate change (Ju *et al.*, 2021; Krishnan & Koshy, 2021). Automobile industries are thinking about innovation and helping the environment, and Electric Vehicles (EVs) manufacturing it's a part of saving our environment and powered by renewable energy sources. EVs are an appealing alternative to traditional combustion engine vehicles because of their potential to improve the environment and quality of air

and reduce the use of fossil fuels (Egbue & Long, 2012; Sovacool, 2009). Adopting EVs improves society's social lifestyle and economic and environmental benefits (Rastogi *et al.*, 2021). Awareness of the impact on the environment of fossil fuel vehicles and the benefits of EVs influence their intention to choose sustainable forms of transportation (Burgess *et al.*, 2013).

“Nearly 10% of global electric cars were sold in 2021” (Global EV Outlook 2022-Data product-IEA, 2022). In the year 2022, “65% of the global revenue of the EVs market was attributed to China and the USA” (Statista, 2023). “The Indian automobile industry is the fifth largest country in the world and is expected to become the third largest by 2030” (India Brand Equity Foundation, 2022). The Indian government also concentrated on the

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green environment and gave society many economic benefits to increase the demand for EVs (Ju *et al.*, 2021; Krishnan & Koshy, 2021). The CEO of Droom company said that consumer awareness and demand for EVs have picked up in the last year, he also added that EVs demand going up 4x in 3 years (Aggarwal, 2022). In India retail sales of EVs clocked at 390399 units in the first half of 2022, representing a 333% year-to-year growth, in the same period last year, 90102 units sold (Electric Vehicles Sales, 2022). In India, in the year 2023, more than 1.5 million EVs were sold and out of them majority related to electric two-wheelers were sold approximately 782 thousand units, electric three-wheelers were sold 410 thousand units, and electric four-wheelers were sold 54.3 thousand (ET Auto, 2023). The EV sales growth was also seen in Gujarat state. At the end of 2019, 950 EVs were registered in Gujarat, in the year 2020, 1119 EVs were registered and at the end of the year 2021, 9780 were registered, the above-mentioned data shows a 956% rise in the registration of EVs in Gujarat (Bureau, 2022).

Researchers selected this topic to serve the green environment. Trends in EVs are increasing because EVs are environmentally friendly, reduce noise pollution, and have many more benefits. Transportation facilities consume more fossil fuels which is one of the reasons for to increase in pollution in the environment. That's the reason the government also focuses on and is interested in increasing the demand for EVs and giving consumers subsidies and tax benefits. Researchers try to discover why consumers prefer EVs and are denied.

The aim of this study was “to determine the key factors influencing consumer buying behaviour towards EVs among university students, in Anand city”. By identifying the factors, the research intends to offer insights that can assist manufacturers, policymakers, marketers, and customers (especially young generations) in devising strategies to stimulate the widespread use of EVs, for the current study researchers selected university students as the population because students are the future of India, and their perceptions are more important.

2. Literature Review

2.1 Factors Influencing Consumer Buying Behaviour Towards EVs

Researchers concentrated on the main objective and reviewed many studies on this topic, among the few most relevant literature reviewed, those literature discussed in the following:

Chawla *et al.* (2023) collected 477 responses from clients in India “to analyse factors influencing the adoption of EVs”. The study extracted six factors such as “charging time, innovation, perceived quality, affordability, awareness, and comfort”. Ali and Naushad (2022) randomly selected 366 respondents across India “to ascertain the primary factors that influence the adoption of EVs”. The study found that pricing substantially impacts the factor of EVs. (Kim *et al.*, 2022) found that “higher government subsidies” and “visiting charging services” were the main factors affecting to purchase of EVs in Suwon City. Xia *et al.* (2022) collected 357 opinions through an offline survey and the results indicated that consumers adopted EVs because of the main three reasons “perceived compatibility, perceived complexity, and perceived relative advantage”. Results also suggested that economic, functional, and social factors also affected consumers’ adoption of EVs. Digalwar *et al.* (2021) analysed the literature on EVs and developed seven factors: technology, social, cultural, economic, political, geographical, and environmental among them a total of 67 variables have been developed. Researchers found that the technology factor is the most important. Krishnan and Koshy (2021) collected 383 samples to evaluate “the factors influencing the purchase intention of EVs from households in India”. Researchers found two main factors affecting attitudinal and impeditive factors. Attitudinal factors (“perceived benefits, social influence, price acceptance, performance, technological consciousness and marketing, distribution and after-sale services”) were related to positive factors and impeditive factors (“perceived barriers, policy attributes, perceived usefulness, and ease of use”) were related to negative ones. Rastogi *et al.* (2021) concentrated on identifying the social factors responsible for the slow adoption of

EVs in India. Researchers concluded that mainly two barriers were associated with that, battery cost and purchase cost. Sanguesa *et al.* (2021) mentioned factors like price reduction and climate and environmental awareness. Varghese *et al.* (2021) collected 114 responses to analyse “the consumer perception and purchase intention of EVs in India”. The study found that money factors, driving range, and infrastructure positively influenced consumers’ purchase decisions. This study also found that the popularity of EVs leads to the excess usage of batteries. Bhattacharyya and Thakre (2020) conducted 38 expert semi-structured open-ended interviews. Researchers found that “specific technological and psychological preferences” were the reason they switched products. Navalagund *et al.* (2020) collected 384 respondents’ opinions to understand the attitudinal and behavioural factors of EVs in the state of Karnataka. This study found that the EV ecosystem was an important attribute. Moreover, the literature shows the demographic factors influencing more on consumers’ purchase behaviours (Ghose & Chandra, 2018; Juyal, 2013; Kumar, 2019; Rani, 2012; Rani S, 2010; Verma *et al.*, 2018), based on this researcher framed hypotheses as follows:

- **H₀₁**: There is no association intention to buy EVs concerning gender.
- **H₀₂**: There is no significant difference in mean scores of factors influencing consumer attitudes towards EVs between male and female respondents.
- **H₀₃**: There is no significant difference in mean scores of factors influencing consumer attitudes towards EVs among the respondents’ age.
- **H₀₄**: There is no significant difference in mean scores of factors influencing consumer attitudes towards EVs for the student respondents having different educations.

2.2 Research Gap

The literature review shows that many research studies have carried out on EVs and it was found that many research studies have been done on an international level, but there are very few research studies have been carried in in India. Researchers also show that very few research studies address youngsters. So, in this research paper, researchers want to study the influencing factors

of consumer buying behaviour towards EVs among university students in Anand City.

3. Research Methodology

The present study is based on descriptive, descriptive research design is “a research method that aims to describe a population, situation, or phenomenon by observing and collecting data without manipulating variables”. The non-probability convenience sampling method draws the sampling unit from the population. For this research, researchers were chosen as students pursuing their UG or PG education (university students). Researchers selected university students as the population because youngsters are more likely to adopt new technology including EVs. Moreover, students are the future of the country so, their perceptions are also important in this context. Furthermore, university students are typically more aware of environmental issues. The study mainly focused on primary data. Primary data was collected from university students in Anand City, Gujarat, India, with the use of google forms. A total of 235 respondents filled up the questionnaire, out of which 10 responses were excluded because of unfitted for statistical analysis and 225 were finally used in the data analysis. The questionnaire should be close ended. The questionnaire has two parts, in first part includes demographic profiles as name, gender, age group, and education pursued, and in the second section, a total of 27 questions were asked using the Likert scale method about the factors influencing EVs. For the techniques of data analysis, researchers used reliability tests, frequency, and factor Analysis, and non-parametric tests. Researchers used factor analysis techniques for the present study because this test easily identifies the major factors influencing the adoption of EVs.

4. Data Analysis and Interpretation

The section focused on the interpretation of the tables with a clearer presentation of the result. The result is shown in Table 1.

Table 1 shows that of the total 225 respondents, 123(54.7%) were male and 102(45.3%) were female.

In the age category of 17-29 years 221(98.2%), and 30-44 years 4(1.8%). As per the education category respondents belong to 5(2.2%) - pursuing a diploma, 161(71.6%) - pursuing graduation, 48(21.3%) - pursuing post-graduation, and 11(4.9%) - Ph.D. pursuing, which shows that the majority of the students pursuing their graduation.

Table 2 shows that of the total 225 respondents, 153(68%, Male = 91 and Female = 62) of respondents are ready to purchase EVs in the future and 72(32%, Males = 32 and female = 40) of respondents are denied the purchase of EVs.

“Cronbach’s alpha value is above 0.6 considered high reliability and acceptable index” (Nunnally and Berstein, 1994; Pallant, 2001). Table 3 shows that Cronbach’s alpha value was 0.879, indicating that all 27 statements’ reliability was quite high.

4.1 Exploratory Factor Analysis (EFA)

“The statistical data reduction technique is factor analysis, simplifying the correlation relationship

Table 1. Profile of respondents

Demographic Factor		(N=225)	Per cent
Gender	Male	123	54.7
	Female	102	45.3
Age Group	17-29	221	98.2
	30-44	4	1.8
Education (Pursuing)	Diploma	5	2.2
	Graduate	161	71.6
	Post-graduate	48	21.3
	Ph.D.	11	4.9

Source: SPSS 25 Output

Table 2. Plans to purchase EVs in the future

Category	Male	Female	Frequency (N=225)	Percentage
Yes	91	62	153	68.0
No	32	40	72	32.0

Source: SPSS 25 Output

Table 3. Reliability test

Cronbach's Alpha	Number of Statements
.879	27

Source: SPSS 25 Output

between several continuous variables” (Rao and Sharma, 2008). Variable reduction procedure through principal component analysis. Many times, shows that many variables are not required or unnecessary for the study, but some variables are correlated with each other, all that reduction and correlation measured through the principal component analysis. EFA is used to investigate the relationships between variables. The principal component analysis is virtually followed when conducting an EFA (Machhar, 2016). There is a significant conceptual difference between these two procedures.

“A KMO value of more than 0.7 indicates that the sample is adequate to apply factor analysis” (Hair *et al.*, 2010). Table 4 gives a KMO value of 0.827, which is more than the recommended value (0.7) and can be used for further analysis. Table 4 also indicates that Bartlett’s test of sphericity was significant (p -value < 0.05), which was a prerequisite for factor analysis.

Communalities means “the amount of variance in each variable that is accounted for” (Communalities – IB; Hair *et al.*, 2010). “The Variance of proportion in any one of the original variables that are captured by the extracted factors is known as communalities” (Nargundkar, 2003). Comrey and Howard (2013) “suggested that anything above 0.44 could be considered as a salient, with increased loading which is more vital in determining the factor”. Rao and Sharma (2008) suggested that in their research study rotation was necessary for the extraction technique when factors were two or more. The rotated component matrix extracted six factors influencing consumer buying behaviour towards EVs, those factors are discussed below:

The first factor (11.408%: total variance) contains a total of five variables such as “Lack of Charging

Table 4. KMO and Bartlett’s test

KMO result		.827
Bartlett's Test result	Chi-Square	1873.554
	df	351
	Significance	.000

Source: SPSS 25 Output

Table 5. Factors analysis

Factors	No.	C	FL	EGV	VE (%)	CVE (%)	CA	CR
High Main tenances	HM1	0.452	0.547	3.080	11.408	11.408	0.751	0.791
	HM2	0.563	0.708					
	HM3	0.640	0.738					
	HM4	0.534	0.662					
	HM5	0.534	0.618					
Reli ability	RE1	0.563	0.586	2.719	10.071	21.478	0.737	0.755
	RE2	0.585	0.611					
	RE3	0.457	0.576					
	RE4	0.573	0.629					
	RE5	0.580	0.682					
EV Features	EF1	0.504	0.615	2.658	9.844	31.322	0.726	0.765
	EF2	0.587	0.690					
	EF3	0.600	0.637					
	EF4	0.595	0.627					
	EF5	0.536	0.566					
Inflation	IN1	0.587	0.724	2.479	9.181	40.504	0.684	0.713
	IN2	0.556	0.611					
	IN3	0.548	0.559					
	IN4	0.477	0.576					
Enviro nment	EN1	0.690	0.770	1.843	6.825	47.329	0.611	0.706
	EN2	0.567	0.707					
Cost-benefit	CB1	0.630	0.706	1.821	6.743	54.072	--	0.629

Source: SPSS 25 Output

Note: “C – Communalities; FL – Factor Loading; EGV – Eigen Value; VE – Variance Explained; CVE – Cumulative Variance Explained; CA – Cronbach’s Alpha; CR – Composite Reliability”

Station” (loading = 0.547), “Temperature issues” (loading = 0.708), “Maintenance, repairs, and service cost high” (loading = 0.738), “Re-sale value” (loading = 0.662), “Not more useful on driving on-ramp” (loading = 0.618). All these were related to the high maintenance of EVs.

The second factor (10.071%: total variance) contains a total of five variables such as “Design” (loading = 0.586), “Adapt well to new technology” (loading = 0.611), “Trustworthiness” (loading = 0.576), “Top Speed” (loading = 0.629), “Longest distance covered per full charge” (loading = 0.682) and is named as Reliability.

The third factor (9.844%: total variance) contains a total of five variables such as “Comfortable” (loading

= 0.615), “Performance” (loading = 0.690), “After Sale Benefit” (loading = 0.637), “Battery Cost” (loading = 0.627), “Excessive Charging time” (loading = 0.566), named as EV features.

The fourth factor (9.181%: total variance) contains a total of four variables such as “Subsidy benefits” (loading = 0.724), “Tax benefits” (loading = 0.611), “Low Price of EVs” (loading = 0.559), “EV are future proof” (loading = 0.576), all the variables are related to the economic benefits and future that’s the reason the appropriate name of this factor is given Inflation.

The fifth factor (6.825%: total variance) contains a total of two variables such as “Eco-friendly/Save environment/Environment Friendly” (loading = 0.770), and “Reduce noise pollution” (loading = 0.707), both variables are related to the environmental concern, name this factor as Environment.

The last and sixth factor explains 6.743% of the total variance and this factor contains only one variable “Fuel price hike/Petrol-Diesel expensive compared to charging” (loading = 0.706) and named as cost-benefit because this variable is directly connected with the cost-benefit.

A total of six factors were recovered and the Eigenvalue was greater than 1. The eigenvalue represents “the partition of the total variation in the multivariate sample”. Table 5 shows that the Eigenvalues of the six factors are 3.080, 2.719, 2.658, 2.479, 1.843, and 1.821.

Reliabilities means measuring internal consistency. Composite Reliability (CR) also measures internal consistency. A value is more than 0.6 is acceptable and reliable (Fornell and Larcker, 1981). Table 5 shows that the first-factor High maintenance has five statements (CA - 0.751; CR - 0.791), the second-factor Reliability has five statements (CA - 0.737; CR - 0.755), the third-factor EV features have five statements and (CA - 0.726; CR - 0.765), the fourth-factor Inflation has a four statement and (CA - 0.684; CR - 0.713), and the fifth factor Environment has a two statement (CA - 0.611; CR - 0.706). The sixth factor Cost benefit has one statement (CR -0.629). Above all factors is more than the recommended value of 0.6 (Table 5).

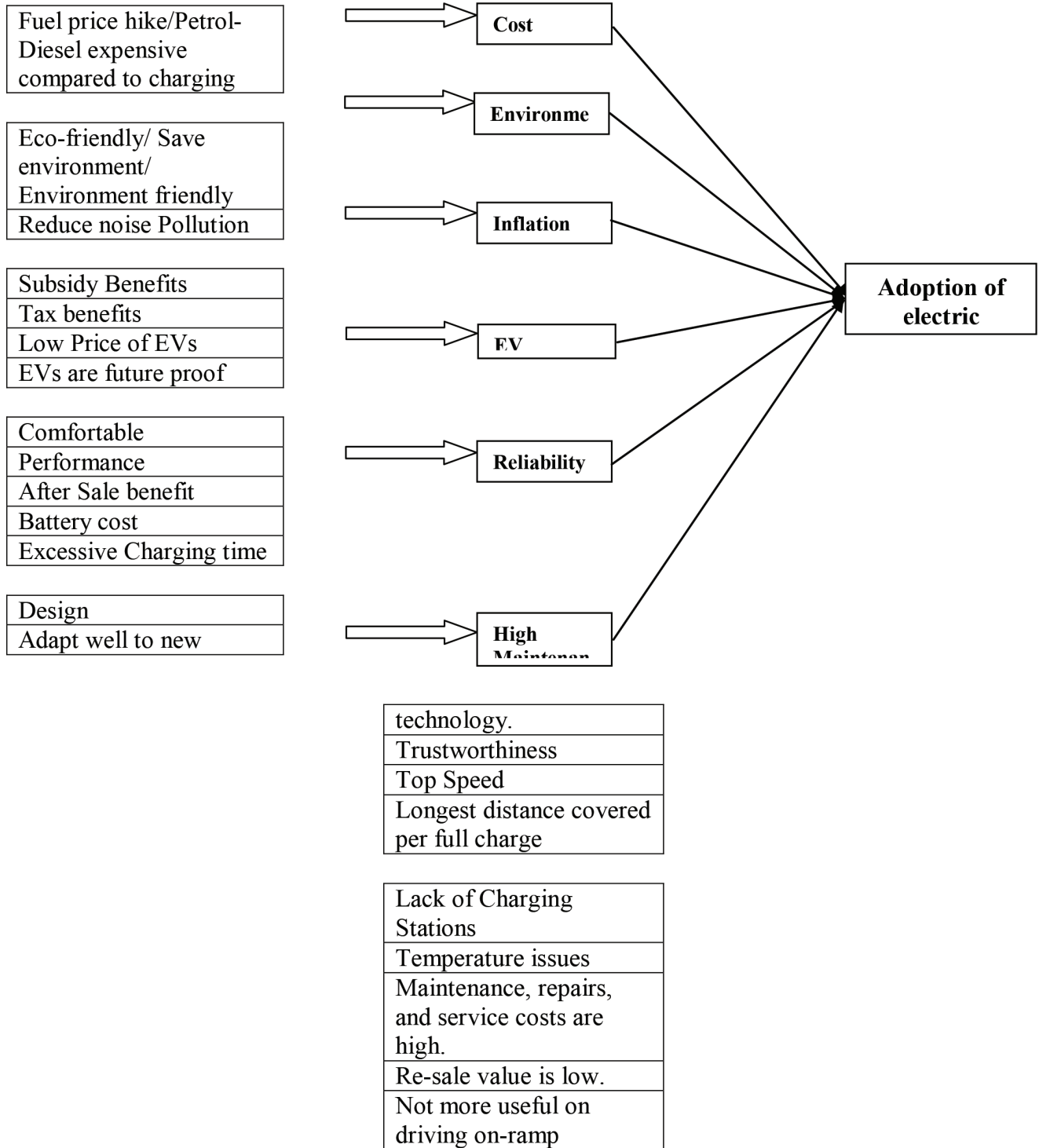


Figure 1. Model of consumer buying behaviour towards EVs.

Source: Authors Compilation

4.2 Hypotheses Testing

Table 7 shows that Environment (Mean = 4.6178, SD = 0.6996) was the main important factor followed by Inflation (Mean = 4.1978, SD = 0.7704), EV features

(Mean = 4.1796, SD = 0.7150), Reliability (Mean = 4.0996, SD = 0.7545), Cost Benefit (Mean = 3.9822, SD = 1.2989) and High Maintenance (Mean = 3.8809, SD = 0.8542).

Table 6: Chi-Square

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.465	1	.035		
Continuity Correction	3.879	1	.049		
Likelihood Ratio	4.458	1	.035		
Fisher's Exact Test				.044	.025
Linear-by-Linear Association	4.445	1	.035		

Source: SPSS 25 Output

H0₁: Table 6 shows that the "Pearson Chi-Square" row shows that $\chi (1) = 4.465$, $p = 0.035$ (p -value < 0.05). This tells us that there is a statistically significant association between gender (Male and Female) and the intention to buy EVs.

Table 7. Descriptive statistics

Sr. No.	Factor	No. of Statements	Mean	SD
1.	High Maintenance	5	3.8809	0.8542
2.	Reliability	5	4.0996	0.7545
3.	EV Features	5	4.1796	0.7150
4.	Inflation	4	4.1978	0.7704
5.	Environment	2	4.6178	0.6996
6.	Cost Benefit	1	3.9822	1.2989

Source: SPSS 25 Output

Table 8. Demographic analysis

Factors	Gender		Age		Education (Pursuing)		
	Mann-Whitney U Test	Sig.	Mann-Whitney U Test	Sig.	Kruskal-Wallis Test	Df	Sig.
Environment	6058	0.604	273	0.125	0.986	3	0.805
Inflation	5473	0.095	358	0.507	2.873	3	0.412
EV Features	5891	0.428	342	0.434	1.553	3	0.670
Reliability	5616	0.172	377	0.609	2.517	3	0.472
Cost Benefit	5048	0.007	441	0.990	13.376	3	0.004
High Maintenance	5006	0.009	328	0.374	6.372	3	0.095

Source: SPSS 25 Output

The present study data was not normal, so researchers selected non-parametric tests, and they gave data on factors based on the compared mean score.

H0₂: Table 8 shows that the p-value of Cost-benefit (0.007) and High Maintenance (0.009) which is less than 0.05 means a significant difference in mean scores of factors and gender.

H0₃: Table 8 shows that the p-value of all factors is more than 0.05 which means there is no significant difference in mean scores of factors and age.

H0₄: Table 8 shows that the p-value of Cost-benefit (0.004) which is less than 0.05 means there is a significant difference in mean scores of factors and education.

5. Discussion

The main objective of the research study was "to identify the significant factors influencing consumer buying behaviour towards EVs". The result of

the EFA extracted six factors - high maintenance, reliability, EV features, inflation, environment, and cost benefit. Comparing the mean and SD of these factors, the Environment is the most important variable followed by inflation, EV features, reliability, cost benefits, and high maintenance. Nowadays Indian consumers are using environmentally friendly products, especially in transportation and EVs have the main features to support the green environment by reducing noise pollution and different environmental benefits. The next important variable found that inflation which includes the government giving subsidy benefits, tax benefits, and low prices of EVs and EVs is future-proof, the government also support the increase in demand for EVs. Environment and inflation have been considered important factors in the views of university students. These results agree with earlier studies (Anjam *et al.*, 2020; Digalwar *et al.*, 2021; Ranatunga & Gunawardan, 2021).

The third factor is EV features, EVs have different features like comfort, performance, after-sale benefits, battery cost, and excessive charging time. When

consumers decide to purchase an EV, they search for relevant information about EVs and at that time the features of EVs are the most important part of it. The EV features included in previous studies (Bhalla *et al.*, 2018; Digalwar *et al.*, 2021; Ju *et al.*, 2021; Kim *et al.*, 2022; Ranatunga & Gunawardan, 2021; Rastogi *et al.*, 2021). Reliability consists of a fourth factor that influences the buying behaviour of EVs. Reliability includes the design, adapting new technology, trustworthiness, top speed and the longest distance covered per full charge. Before purchasing EVs consumers also show the above-mentioned reliability variables. These results agree with earlier studies (Dash, 2020; Digalwar *et al.*, 2021; Ju *et al.*, 2021; Kim *et al.*, 2022; Ranatunga & Gunawardan, 2021).

The fifth factor is cost-benefit. We can see that the fuel price hike (Petrol and diesel are expensive compared to charging). These results agree with earlier studies (Anjam *et al.*, 2020; Digalwar *et al.*, 2021; Ranatunga & Gunawardan, 2021). The last and sixth factor is high maintenance. High maintenance of EVs like the lack of charging stations in India, temperature issues, maintenance, repairs, and service costs are high, re-sale value is low and not more useful on driving on the ramp. When consumers are purchasing EVs they are first shown the maintenance cost of EVs. These results agree with earlier studies (Digalwar *et al.*, 2021; Kim *et al.*, 2022; Ranatunga & Gunawardan, 2021).

Additionally, the influencing of demographic variables is also examined, in the present study researchers select university students as a population, and the age group has no significant association is found. Gender differs in their responses in the case of cost benefits and high maintenance. Education (Pursuing) in the university is found that only for cost-benefit. Plans for purchasing EVs found that statistically significant association between gender.

6. Conclusion

In the present research study, six important factors were found - high maintenance, reliability, EV features, inflation, environment, and cost benefit. These are the main factors influencing consumer buying behaviour

while purchasing an EV. Environment and inflation are the two important factors in consumers' choice of EVs for university students' views. EVs are environment friendly and inflation indicates that the government supports the increasing sale of EVs.

Nowadays many consumers are adopting EVs, thus the EV industry should put its soul into producing good environmentally benefitted EVs. Policymakers also encourage university campuses to establish EV charging stations so, the adoption rate would be increased. The government also try to encourage students by offering some incentives and implementing environmental education programs on university campuses. The present study helps consumers know about purchasing EVs benefits.

This study was limited only to university students of Anand city of Gujarat. In future research, if data is collected from another area the result might be changed. For the literature review, researchers used only english language research papers, which might be another language paper also important contribution in this area. The study used factor analysis techniques to identify the appropriate factors for purchasing EVs. Future researchers used these factors and checked through statistical tests such as correlation, regression, and structural equation modelling.

7. References

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Annexure-1

Factors	Statements	No.	References
Factor 1 High Maintenance	Lack of Charging Stations	HM1	(Kim <i>et al.</i> , 2022; Ranatunga & Gunawardan, 2021)
	Temperature issues	HM2	(Kim <i>et al.</i> , 2022)
	Maintenance, repairs and service costs are high	HM3	(Digalwar <i>et al.</i> , 2021; Kim <i>et al.</i> , 2022)
	Re-sale value is low.	HM4	(Digalwar <i>et al.</i> , 2021; Ranatunga & Gunawardan, 2021)
	Not more useful on driving on-ramp	HM5	(Kim <i>et al.</i> , 2022)
Factor 2 Reliability	Design	RE1	(Ranatunga & Gunawardan, 2021)
	Adapt well to new technology.	RE2	(Digalwar <i>et al.</i> , 2021; Ju <i>et al.</i> , 2021; Krishnan and Koshy, 2021; Lashari <i>et al.</i> , 2021)
	Trustworthiness	RE3	(Lashari <i>et al.</i> , 2021; Ranatunga & Gunawardan, 2021)
	Top Speed	RE4	(Dash, 2020; Kim <i>et al.</i> , 2022)
	Longest Distance covered per full charge	RE5	(Digalwar <i>et al.</i> , 2021)
Factor 3 EV Features	Comfortable	EF1	(Bhalla <i>et al.</i> , 2018; Digalwar <i>et al.</i> , 2021)
	Performance	EF2	(Digalwar <i>et al.</i> , 2021; Kim <i>et al.</i> , 2022; Krishnan and Koshy, 2021)
	After Sale benefit	EF3	(Digalwar <i>et al.</i> , 2021; Krishnan and Koshy, 2021; Ranatunga & Gunawardan, 2021)
	Battery cost	EF4	(Ju <i>et al.</i> , 2021; Kim <i>et al.</i> , 2022; Rastogi <i>et al.</i> , 2021)
	Excessive Charging time	EF5	(Kim <i>et al.</i> , 2022; Ranatunga & Gunawardan, 2021)

Annexure-1 Continued...

Factors	Statements	No.	References
Factor 4 Inflation	Subsidy Benefit	IN1	(Anjam <i>et al.</i> , 2020; Bhalla <i>et al.</i> , 2018; Digalwar <i>et al.</i> , 2021; Ju <i>et al.</i> , 2021; Kim <i>et al.</i> , 2022; Krishnan and Koshy, 2021)
	Tax benefits	IN2	(Anjam <i>et al.</i> , 2020; Bhalla <i>et al.</i> , 2018; Digalwar <i>et al.</i> , 2021; Ranatunga & Gunawardan, 2021)
	Low Price of EVs	IN3	(Kim <i>et al.</i> , 2022; Krishnan and Koshy, 2021)
	EVs are future proof	IN4	(Anjam <i>et al.</i> , 2020; Ju <i>et al.</i> , 2021; Krishnan and Koshy, 2021)
Factor 5 Environment	Eco-friendly/Save environment/ Environment friendly	EN1	(Anjam <i>et al.</i> , 2020; Ju <i>et al.</i> , 2021; Denyse and Bhagat, 2018; Khandelwal <i>et al.</i> , 2016; Krishnan and Koshy, 2021; Lashari <i>et al.</i> , 2021; Machhar, 2018; Ranatunga & Gunawardan, 2021; Rusyani <i>et al.</i> , 2021; Tara <i>et al.</i> , 2015; Veena and D'Souza, 2017)
	Reduce noise Pollution	EN2	(Anjam <i>et al.</i> , 2020; Digalwar <i>et al.</i> , 2021)
Factor 6 Cost-benefit	Fuel price hike/Petrol-Diesel expensive compared to charging	CB1	(Anjam <i>et al.</i> , 2020; Digalwar <i>et al.</i> , 2021; Ranatunga & Gunawardan, 2021)