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A STUDY ON CONSUMER BEHAVIOUR OF ELECTRIC CARS WITH REFERENCE TO COIMBATORE CITY

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ABSTRACT:

In this project, we study into the area of consumer behavior towards Electric cars specifically focusing on with reference to Coimbatore city. An Electric Car is an automobile that is propelled by one or more electric motor, using electrical energy stored in batteries or another energy storage device. Our investigation aims to understand the factors that influence consumer behavior and their level of satisfaction.

INTRODUCTION:

As we navigate through the intricate web of challenges and opportunities presented by electric cars, the overarching goal is to unravel the future landscape of transportation-one where sustainability converges with innovation and electric vehicles propel us into a new era of cleaner, smarter and conscientious mobility. AEVs (all-electric vehicles) are powered by one or more electric motors. They receive electricity by plugging into the grid and store it in batteries. They consume no petroleum-based fuel and A major feature of EVs is that drivers can plug them in to charge from an offboard electric power source. This distinguishes them from hybrid electric vehicles, which supplement an internal combustion engine with battery power but cannot be plugged in.

OBJECTIVES :

- To evaluate the levels of awareness and preference among people towards Electric Cars.

SCOPE OF THE STUDY:

- This study tells the levels of awareness and acceptance among people towards electric cars.

STATEMENT OF PROBLEM:

The main purpose of this study is to know why there is not much EV's in our country as much as there in foreign and to know, even when there is lot of options in our hands to reduce pollution why we are not making use of it.

LIMITATION OF THE STUDY:

Gathering information for Review of literature was a big task. Even though the concept of electric cars was old, people is not that much aware of it and this was difficult for me to circulate the questionnaire.

REVIEW OF LITERATURE:

- **Mr Omkar Tupe, Prof Shwetha Kishore, Dr, Arlo PH Johnvieira (2020)** With the current depletion of fossil fuels and its price hike, there is a need for another energy resource to run the vehicle. Electric vehicles are being looked at by the automotive industry as a potential answer for India's economy and ecology. However, despite governments implementing EV policies, the current market penetration of EVs is relatively low. This report will examine the potential market for electric vehicles in India and analyze consumer attitudes towards them.

- A**jex Thomas Varghese, V.S. Abilash and Sini V. Pillai (2021)** The primary purpose of this study is to analyze the consumer perception and purchase intension of electric vehicles in india.
- **According to Probhas Bose and Dipak Kumar Mandal (2021)** In addition to zero emission and noiseless operation, EV offers some more additional advantages which are much desired requirements of users. These are very high pickup, very low running cost and maintenance cost. Technically, it has a simple power train with forward and reverse gear eliminating the gear box of a conventional car. It is estimated that for a range of 600 km, the running cost of EV is only 30 to 33% of that of a gasoline vehicle. Energy conversion from chemical energy to mechanical work for IC engine vehicles is 29-32% for gasoline engine and 34-36% for diesel engine remaining energy is lost due to heat loss, noise, friction etc. For EV 85 to 90% energy of the battery is converted to mechanical work at the wheel.

- **Amir H.B Nasution (2021)** This study examines the influence of environmental concerns, social norms and product attributes on consumer intensions to purchase EVs finding that environmental concerns and product attributes had the greatest impact.

- **Rachel Finn and Charles Graham (2022)** This study explores the interplay between government policies and industry strategies in promoting EV adoption, finding that government policy can stimulate industry investment in EV technology.

ANALYSIS AND INTERPRETATION OF DATA:

PERCENTAGE ANALYSIS:

Simple Percentage Analysis refers to a special kind of rates, percentage are used in making comparison between two or more series of data. A percentage is used to determine relationship between the series.

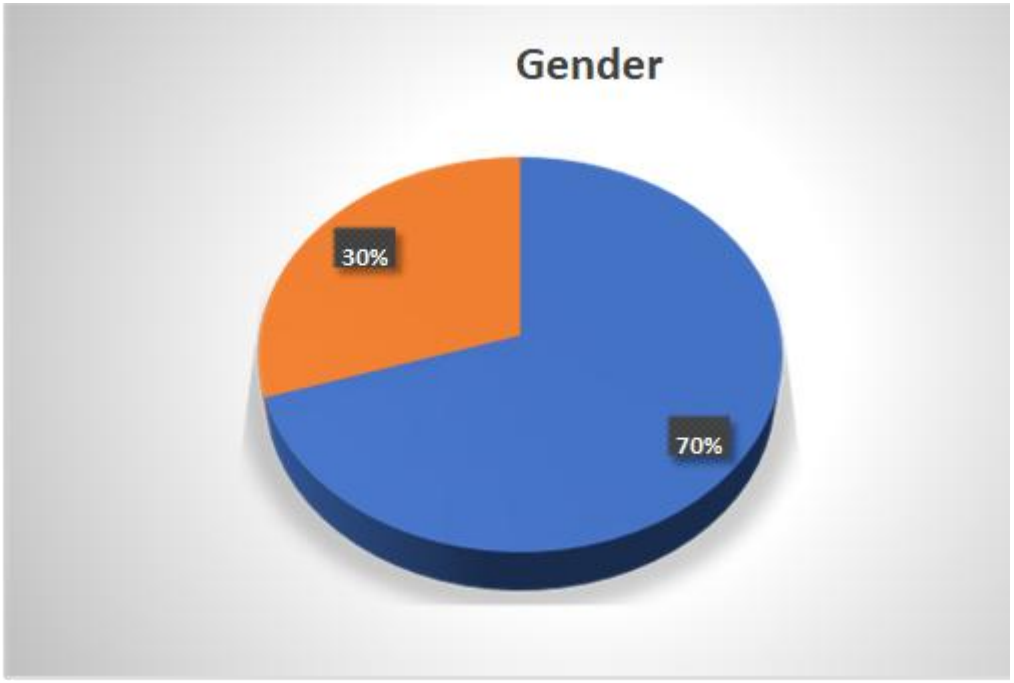
GENDER OF RESPONDENTS

GENDER	FREQUENCY	PERCENTAGE
Male	105	70%
Female	45	30%
Total	150	100%

INTERPRETATION:

The above table depicts that 70% of the respondents are Male and 30% of the respondents are Female.
Majority of the respondents are male with 70%.

GENDER OF RESPONDENTS



AGE OF THE RESPONDENTS

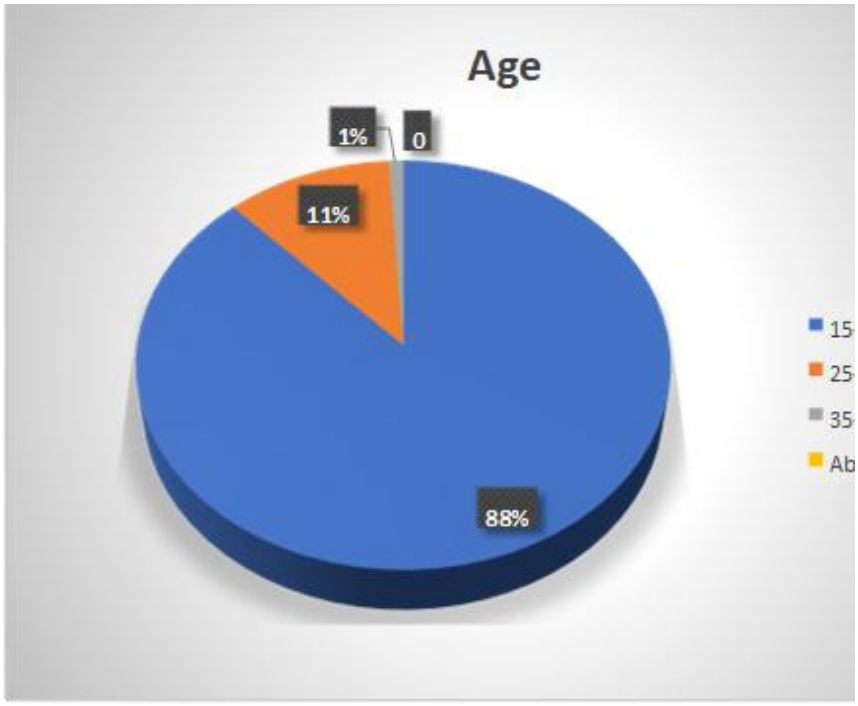
YEARS	FREQUENCY	PERCENTAGE
15-25 Years	132	88%
25-35 Years	17	11%
35-45 Years	1	1%
Above 45 Years	0	0
Total	150	100%

INTERPRETATION:

The above table shows that 88% of the respondents are under the group of 15-25 years, 11% of the respondents are under 25-35 years, 1% under 35-45 years and 0 respondent under the age of above 45 years.

Majority of the respondents are at the age between 15-25 years with 88%.

AGE OF THE RESPONDENTS



EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

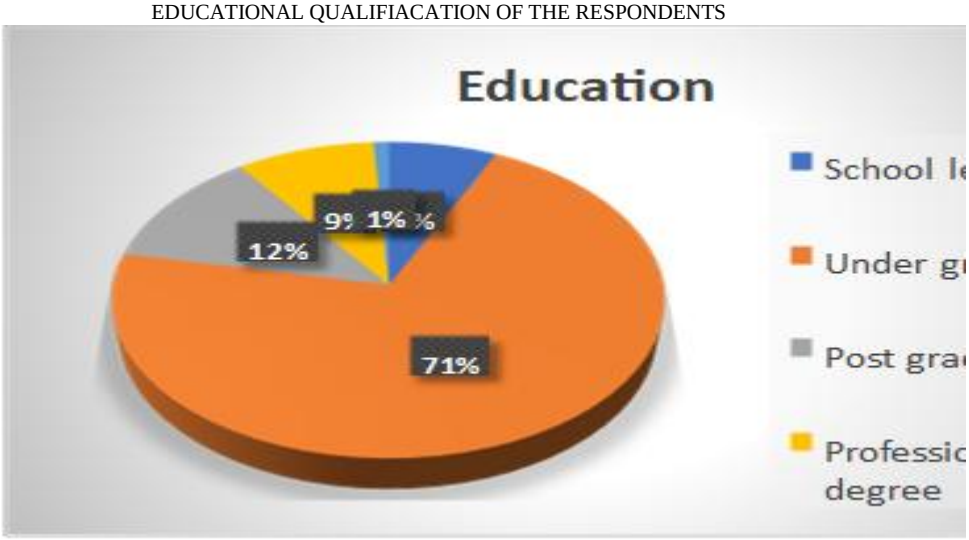
EDUCATIONAL QUALIFICATION	FREQUENCY	PERCENTAGE
School level	10	7%
Under graduation	108	72%
Post graduation	18	12%
Professional degree	13	9%
Others	1	1%
Total	150	100%

INTERPRETATION:

The above table explains that 72% of the respondents are under graduates,12% of them belong to post graduation, 9% belong to professional degree, 7% of them belong to School level and 1% belong to others.

In this majority of the respondents are under graduate with the percentage of 72%.

EDUCATIONAL QUALIFIACATION OF THE RESPONDENTS



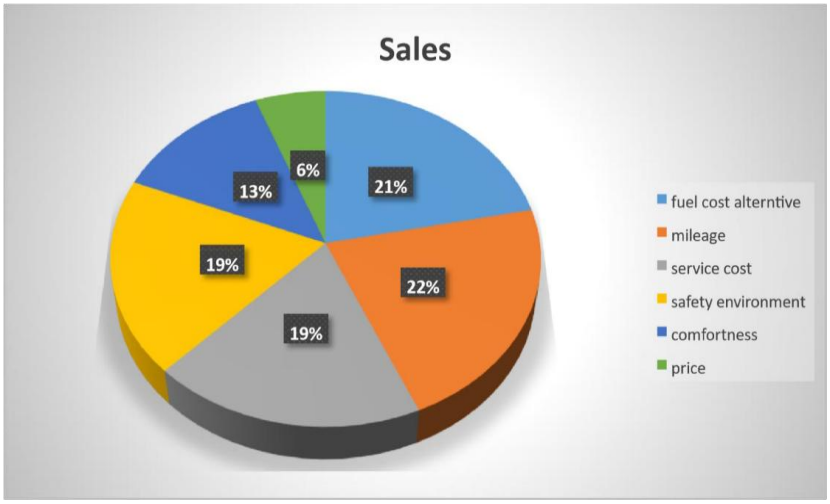
FACTORS INGLUENCING TO SELECT E CARS

FACTORS	FREQUENCY	PERCENTAGE
Fuel cost alternative	69	46%
Mileage	23	15%
Service cost	19	13%
Safety environment	19	13%
Comfortness	14	9%
Price	6	4%
Total	150	100%

INTERPRETATION:

The above table shows that 46% of the respondents are influenced by fuel cost alternative, 15% of the respondents are influenced by service cost, 13% of them are influenced by safety environment,9% of them are influenced by comfortness and 4% of the respondents are influenced by price.

FACTORS INFLUENCING TO SELECT E CARS



WEIGHTED AVERAGE METHOD:

Weighted average is also known as weighted mean is helpful to make a decision when there are many factors to consider and evaluate. The weighted average is a measure that takes into consideration the different degrees of the number in a data set. When calculating a weighted average, before the final calculation is completed, each number in the data set is multipied by a predetermined weight.

TABLE SHOWING THE AWARENESS OF ELECTRIC CARS

FACTORS	Highly aware	Aware	Not aware	Neutral	Total	Weighted average	Rank
Battery	71	41	14	24	459	3.06	1
Charging facilities	38	74	25	13	437	2.19	3
Mileage	52	54	28	16	442	2.95	2
Service cost	28	60	26	36	380	2.53	7
Revalue	35	32	59	24	378	2.52	8
Spare parts	31	64	26	29	397	2.65	6
Service center	40	54	38	18	416	2.77	4
Charging cost	37	57	24	32	399	2.66	5

INTERPRETATION:

The above table depicts that the battery of the electric cars is the factor that the respondents are highly aware of followed by Mileage, Charging facilities, Service center, charging cost, spare parts, service cost and finally revalue.

FINDINGS:

The Results also sometimes called as Finding section in an empirical research paper describes what the researchers found when they analyzed their data. Its primary purpose is to use the data collected to answer the research questions posed in the introduction, even if the findings challenge the hypothesis. The results section should also describe other pertinent discoveries, trends or insights revealed by analysis of the raw data. This study has analyzed using the techniques of Percentage analysis, Weighted average score analysis and Chi- square analysis.

PERCENTAGE ANALYSIS:

- 70% of the respondents are Male.
- 88% of the respondents are under the age of 15-25 years.
- 72% of the respondents are UG.
- 46% of the respondents are influenced by fuel cost alternative.

WEIGHTED AVERAGE SCORE ANALYSIS:

- The battery of the electric cars is the factor that the respondents are highly aware of followed by Mileage, charging facilities, Service center, charging cost, spare parts, service cost and finally revalue.
- The respondents are highly satisfied with battery factor followed by charging center. Mileage, Revalue, Service cost, Service center, Charging facilities, spare parts and cost of vehicle.

SUGGESTIONS:

- The extension of charge capacity is suggestible.
- The Government can provide some facilities in the implementation and awareness of electric vehicle.
- If there is a reduction in cost it might be helpful for the lower-class people to buy electric vehicle.
- Because of safety purpose, it might be helpful if there is a little bit of noise while driving the vehicle.

CONCLUSION:

As a result of this study, We came to know that the people are aware of the electric vehicle and are ready to accept it regarding to environmental friendly, trying new methodology, future thinking of saving petroleum for upcoming generation and hoping for a pollution free environment.

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