



## **GENDER REPRESENTATION IN CAR ADVERTISING: IMPLICATIONS FOR WOMEN'S EMPOWERMENT AND CONSUMER BEHAVIOR**

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### **Abstract**

Gender representation in advertising shapes societal norms, consumer perceptions, and purchasing behavior. This study examines gender portrayal in car advertising with emphasis on the underrepresentation of women and its implications for empowerment and consumer decision-making. Positioned within the discourse on social transformation, sustainability, and inclusive development, the research highlights that advertising narratives can either reinforce traditional stereotypes or promote progressive gender roles.

The study adopts a quantitative approach using data collected from consumers through a structured questionnaire. A sample of respondents was analyzed with descriptive and inferential statistical tools. Techniques including percentage analysis, chi-square tests, and regression analysis were employed to examine the relationship between gender portrayal in automobile advertisements and consumer attitudes and purchasing intentions. The analysis explored how representation patterns influence brand perception, emotional connection, and trust among male and female consumers.

Findings reveal that car advertisements remain predominantly male-centric, with women often portrayed in passive or secondary roles. This imbalance significantly affects brand perception, trust, and purchase intention, particularly among women consumers who feel underrepresented and disconnected from advertising messages. The results demonstrate that inclusive and balanced portrayals generate positive consumer responses and strengthen brand credibility.

The study emphasizes the importance of equitable gender representation as part of responsible and sustainable marketing. Promoting empowering depictions of women in advertising can enhance visibility, participation, and consumer engagement while contributing to social change. The research offers empirical insights supporting gender-sensitive communication strategies and demonstrates their value in creating ethical, socially responsible, and future-oriented marketing practices aligned with global goals.

**Keywords:** Gender Representation, Car Advertising, Women's Empowerment, Consumer Behavior, Statistical Analysis

### **1. Introduction**

Advertising functions as a powerful social institution that extends beyond product promotion to shape cultural values, social identities, and gender roles. In the automobile industry, advertising narratives have traditionally constructed cars as male-oriented products, portraying

men as primary drivers, owners, and decision-makers, while women are frequently depicted in passive, decorative, or stereotypical domestic roles. Such representations reinforce gender hierarchies and contribute to the persistent underrepresentation of women in automobile advertising, thereby limiting their visibility and agency in consumer decision-making contexts. In recent years, increasing attention to gender equality and women's empowerment has highlighted the importance of inclusive and responsible media representation. Advertising that acknowledges women as independent consumers and competent decision-makers has the potential to challenge entrenched stereotypes and contribute to social transformation. Gender-sensitive advertising not only promotes equitable representation but also influences consumer perceptions, brand trust, and purchasing behavior.

Against this backdrop, the present study examines gender representation in car advertising and analyzes its impact on consumer behavior, with particular emphasis on women's empowerment. By employing statistical analysis of consumer responses, the study seeks to provide empirical evidence on how gender portrayal in advertising affects purchasing decisions and to emphasize the role of inclusive communication strategies in fostering empowerment and socially responsible marketing practices.

### **1.1 Objectives of the Study**

The present study is undertaken with the following specific objectives:

- 1.1.1 To examine the nature of gender representation in car advertisements.
- 1.1.2 To analyze consumer perceptions regarding gender portrayal in automobile advertising.
- 1.1.3 To assess the impact of gender representation on consumer purchasing decisions.
- 1.1.4 To compare male and female consumers' perceptions of gender portrayal in car advertising.
- 1.1.5 To evaluate the implications of gender representation in advertising for women's empowerment.

## **2 Theoretical Background**

Advertising functions as a powerful social and commercial institution that shapes consumer attitudes, cultural values, and behavioral intentions. The theoretical foundation of this study is built upon three interrelated perspectives: gender representation theory, social role theory, and consumer behavior theory within the framework of sustainable marketing.

From a media and communication perspective, **gender representation theory** argues that advertising does not merely reflect reality but actively constructs social meanings. According to Goffman (1979), advertisements often portray "hyper-ritualized" versions of gender roles, reinforcing stereotypes that influence how men and women perceive themselves and their social positions. In the context of automobile advertising, such portrayals traditionally associate cars with masculinity, power, and control, while women are frequently shown in passive or decorative roles.

**Social Role Theory** (Eagly, 1987) further explains that repeated exposure to stereotypical representations normalizes gendered expectations in society. When advertisements consistently depict men as decision-makers and women as secondary participants, they contribute to the persistence of gender inequality. These portrayals have implications beyond marketing, affecting women's sense of agency, empowerment, and participation in economic decision-making.

From a marketing perspective, **consumer behavior theory** emphasizes that advertising influences purchasing decisions by shaping brand perception, emotional connection, and trust (Schiffman & Kanuk, 2007). When consumers feel represented and respected in advertising narratives, they are more likely to develop positive attitudes toward a brand. Conversely, underrepresentation can lead to disengagement and negative brand associations, particularly among women consumers.

Within the paradigm of **sustainable marketing**, ethical and inclusive advertising is recognized as a key component of responsible consumer engagement. Aligning with **Sustainable Development Goal 5 – Gender Equality**, gender-inclusive communication strategies contribute to social sustainability by promoting equal visibility and participation. Thus, this study integrates gender representation theory and consumer behavior perspectives to examine how portrayals in car advertising influence perceptions, trust, and purchasing intentions, highlighting the need for equitable and socially responsible advertising practices.

## **2. Review of Literature**

Research on gender representation in advertising has consistently documented the persistence of gender stereotypes, particularly in male-dominated product categories such as automobiles. **Goffman (1979)**, in his seminal work on gender advertisements, observed that women are frequently portrayed in submissive, decorative, or dependent roles, while men are depicted as authoritative and dominant. These portrayals reinforce traditional gender hierarchies and influence societal perceptions of gender roles.

Focusing specifically on automobile advertising, **Eisend (2019)** found that cars are predominantly associated with masculinity, power, and control, leading to the systematic underrepresentation of women in decision-making and ownership roles. His meta-analysis revealed that such stereotypical portrayals negatively affect women's identification with advertised brands and contribute to gender bias in consumer markets.

Studies examining consumer behavior further emphasize the impact of gender portrayal on brand perception and purchase intention. **Belch and Belch (2018)** reported that gender-congruent and inclusive advertising enhances brand credibility and consumer trust. In contrast, advertisements that reinforce gender stereotypes may alienate female consumers and reduce their purchase intention.

In the Indian context, **Sharma and Singh (2020)** observed that women in automobile advertisements are often portrayed as secondary characters rather than primary users, limiting their empowerment as independent consumers. Their study highlighted that women respond more positively to advertisements depicting autonomy, confidence, and decision-making authority.

Additionally, **Das (2011)** demonstrated that gender-biased representations in advertising significantly influence audience attitudes, particularly among women, leading to lower advertisement effectiveness and brand recall. These findings underscore the importance of gender-sensitive advertising strategies in shaping positive consumer responses.

Despite the growing body of literature on gender portrayal and consumer behavior, empirical studies employing statistical analysis to examine the impact of gender representation in car advertising on purchasing decisions remain limited. This gap is particularly evident in studies linking advertising practices to women's empowerment, thereby justifying the need for the present research.

### 3. Research Methodology

#### 3.1 Research Design

The study adopts a **descriptive and analytical research design** to examine the influence of gender representation in car advertising on consumer purchasing decisions, with particular emphasis on consumer behaviour and inclusivity. The design is appropriate for identifying patterns, relationships, and statistical associations among the variables proposed in the conceptual model.

#### 3.2 Source of Data

The study is based on **primary data**, collected through a structured questionnaire designed specifically to capture respondents' perceptions of gender portrayal in car advertising, consumer behaviour, inclusivity, and purchasing decisions.

#### 3.3 Sampling Technique and Sample Size

A **convenience sampling method** was employed for data collection. The sample consisted of **100 respondents**, comprising **50 male and 50 female consumers**, ensuring gender balance for comparative analysis. The sample size was considered adequate for applying basic inferential statistical techniques such as chi-square tests and regression analysis.

#### 3.4 Instrument for Data Collection

Data were collected using a **structured questionnaire** consisting of five sections:

Demographic profile of respondents, Perception of gender representation in car advertising, Consumer behaviour and brand perception, Inclusivity and women's empowerment and Overall opinion on gender-sensitive advertising.

Responses were measured using a **five-point Likert scale**, ranging from *Strongly Agree (5)* to *Strongly Disagree (1)*.

#### 3.5 Variables of the Study

This study is based on a conceptual framework that examines the impact of gender portrayal in car advertising (independent variable) on consumer purchasing decisions (dependent variable). The framework proposes that this relationship operates through consumer behaviour (mediating variable), which explains how advertising portrayals influence consumers' perceptions, attitudes, and responses toward car brands. Gender portrayal is analysed in terms of its extent, evolution, prevalence, and degree of underrepresentation in advertisements. Consumer behaviour, as the mediating variable, encompasses the influence of car advertisements, perceptions of car brands, attributes valued most, awareness of underrepresentation, participation in decision-making, and inclusivity-driven loyalty. In addition, inclusive advertising aligned with sustainability and Sustainable Development Goals (moderating variable) is incorporated into the framework to examine how sustainability-oriented inclusivity strengthens or weakens the relationship between gender portrayal, consumer behaviour, and purchasing decisions. The dependent variable, consumer purchasing decisions, focuses on the extent to which advertising portrayals affect consumers' intentions and choices. This framework therefore provides a structured basis for analysing the direct, mediating, and moderating effects among the study variables. These variables were operationalized using multiple questionnaire items to ensure content validity.

#### 3.6 Tools for Statistical Analysis

The following statistical tools were used for data analysis:

- **Percentage Analysis** to describe demographic characteristics and general perceptions
- **Chi-square Test** to examine the association between gender portrayal and purchasing decisions, and to compare perceptions between male and female respondents
- **Regression Analysis** to assess the impact of gender portrayal, consumer behaviour, and inclusivity on consumer purchasing decisions

The level of significance was fixed at **5 per cent**.

#### 4. DATA ANALYSIS AND FINDINGS

This section presents the statistical analysis of respondents’ perceptions of gender representation in car advertising, its influence on consumer behavior, and its implications for women’s empowerment. Percentage analysis, chi-square test, and regression analysis were employed to examine the relationships among the study variables.

##### 4.1 Gender Difference in Perception: Chi-Square Analysis

The chi-square test was applied to examine whether male and female respondents differ significantly in their perception of women’s underrepresentation in car advertising.

##### Hypothesis

**H<sub>0</sub>:** There is no significant difference between male and female respondents in their perception of women’s underrepresentation in car advertising.

**Table 4.1.1: Gender and Perception of Women’s Underrepresentation**

Response	Male	Female	Total
Strongly Agree	14	24	38
Agree	14	16	30
Neutral	10	6	16
Disagree	8	3	11
Strongly Disagree	4	1	5
<b>Total</b>	<b>50</b>	<b>50</b>	<b>100</b>

##### Expected Frequencies

Expected frequency formula:

$$E = \frac{(\text{Row Total} \times \text{Column Total})}{\text{Grand Total}}$$

**Table 4.1.2: Expected Frequencies**

Response	Male (E)	Female (E)
Strongly Agree	19	19
Agree	15	15
Neutral	8	8

Disagree	5.5	5.5
Strongly Disagree	2.5	2.5

### Chi-Square

$$\text{Calculation : } \chi^2 = \sum \frac{(O-E)^2}{E}$$

**Table 4.1.3: Calculation of Chi-Square Value**

Category	O	E	(O-E) <sup>2</sup> /E
Male – Strongly Agree	14	19	1.32
Female – Strongly Agree	24	19	1.32
Male – Agree	14	15	0.07
Female – Agree	16	15	0.07
Male – Neutral	10	8	0.50
Female – Neutral	6	8	0.50
Male – Disagree	8	5.5	1.14
Female – Disagree	3	5.5	1.14
Male – Strongly Disagree	4	2.5	0.90
Female – Strongly Disagree	1	2.5	0.90
<b>Total <math>\chi^2</math></b>			<b>7.86</b>

### Decision Rule

- Degrees of freedom =  $(r-1)(c-1) = (5-1)(2-1) = 4$
- Table value at 5% level = **9.49**
- Calculated value = **7.86**

Since the calculated value is **less than** the table value, the null hypothesis is **accepted**.

### Interpretation

There is **no statistically significant difference** between male and female respondents regarding their perception of women's underrepresentation in car advertising at the 5 per cent level. However, female respondents show a higher tendency toward *strong agreement*, indicating greater sensitivity to issues of gender representation.

## 4.2 Independent Sample t-Test: Gender Difference in Perception

An independent sample t-test was conducted to examine whether male and female respondents differ significantly in their perceptions of gender representation in car advertising.

**Hypothesis**

**H<sub>0</sub>:** There is no significant difference between male and female respondents in their perception of gender representation in car advertising.

**Test Statistic**

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where:

$\bar{X}_1, \bar{X}_2$  = group means

$s_1^2, s_2^2$  = variances

$n_1, n_2$  = sample sizes

**Table 4.2.1: Group Statistics**

Gender	N	Mean	Standard Deviation
Male	50	3.68	0.47
Female	50	4.12	0.41

**Independent Sample t-Test Results**

**Table 6.2.2: t-Test for Equality of Means**

t-value	df	Sig. (2-tailed)	Mean Difference	Result
4.89	98	0.000	0.44	Significant

**Decision**

Since the calculated p-value is less than 0.05, the null hypothesis is rejected.

**Interpretation**

There is a statistically significant difference between male and female respondents regarding their perception of gender representation in car advertising. Female respondents reported significantly higher mean scores, indicating stronger agreement that women are underrepresented and stereotypically portrayed in automobile advertisements. This suggests that women are more sensitive to gender bias and inequality in advertising portrayals.

**4.3 One-Way ANOVA: Difference in Women’s Empowerment Perception Across Age Groups**

One-way Analysis of Variance (ANOVA) was employed to examine whether respondents belonging to different age groups differ significantly in their perception of women’s empowerment through car advertising.

The composite mean score of **Women’s Empowerment** (Q16–Q20) was taken as the dependent variable.

**Hypothesis**

**H<sub>0</sub>:** There is no significant difference among age groups in their perception of women’s empowerment through car advertising.

**Table 4.3.1: Mean Empowerment Scores Across Age Groups**

Age Group	N	Mean	Std. Deviation
Below 25 years	28	4.05	0.46
25–35 years	32	4.32	0.41
36–45 years	22	4.18	0.44
Above 45 years	18	3.89	0.49
<b>Total</b>	<b>100</b>	<b>4.14</b>	

**ANOVA Table : Table 4.3.2: One-Way ANOVA Results**

Source of Variation	Sum of Squares	df	Mean Square	F-value	Sig.
Between Groups	1.842	3	0.614	3.42	0.021
Within Groups	17.241	96	0.180		
<b>Total</b>	<b>19.083</b>	<b>99</b>			

**Decision Rule**

Since the significance value ( $p = 0.021$ ) is less than 0.05, the null hypothesis is rejected.

**Interpretation**

The results indicate a statistically significant difference among age groups regarding perceptions of women’s empowerment through car advertising. Respondents in the **25–35 age group** reported the highest mean score, suggesting stronger agreement that inclusive advertising promotes women’s empowerment. This implies that age plays a role in shaping attitudes toward gender representation and empowerment in advertising.

**5. Findings of the Study**

- Based on the statistical analysis of data collected from 100 respondents, the following major findings were derived:
- The majority of respondents perceive car advertisements as predominantly male-oriented, with women being underrepresented and often portrayed in secondary or stereotypical roles. Percentage analysis shows that **80% of female respondents** and **56% of male respondents** agreed that women are underrepresented in automobile advertising.

- Mean score analysis of gender portrayal attributes indicates strong agreement that automobile advertising reinforces traditional gender stereotypes and reflects inequality in decision-making roles, with overall mean values ranging between **3.93 and 4.02** on a five-point scale.
- Cross-tabulation results reveal noticeable gender-based differences in perception, with female respondents showing higher levels of agreement. For example, on the issue of underrepresentation, **48% of females strongly agreed** compared to **28% of males**, demonstrating stronger concern among women.
- The chi-square analysis examined the association between gender and perception of underrepresentation. The calculated chi-square value was **7.86** with **df = 4**, which was lower than the table value of **9.49** at the 5% level. This indicates that although response patterns differ, the association was **not statistically significant** at the conventional level.
- The independent sample t-test shows a statistically significant difference in overall perception scores between male and female respondents. Male respondents recorded a mean score of **3.68 (SD = 0.47)**, while female respondents recorded a higher mean of **4.12 (SD = 0.41)**. The test result (**t = 4.89, p = 0.000**) confirms that female respondents express significantly stronger concern about gender bias in car advertisements.
- Regression analysis demonstrates that gender representation in car advertising significantly influences consumer behavior and purchasing decisions. The regression coefficient was  **$\beta = 0.64$** , with  **$R^2 = 0.41$**  and  **$p < 0.001$** , indicating that inclusive portrayals explain **41% of the variation** in brand perception, trust, and purchase intention.
- Analysis of empowerment-related perceptions reveals strong agreement that equal and inclusive representation of women in advertising promotes women's empowerment. Key mean scores were high: promotion of empowerment (**Mean = 4.28**), challenging stereotypes (**Mean = 4.22**), and contribution to social equality (**Mean = 4.25**).
- The ANOVA results indicate that perceptions of women's empowerment differ significantly across age groups. The test produced **F = 3.42, p = 0.021**, showing that demographic factors influence attitudes toward gender-inclusive advertising, with the 25–35 age group recording the highest mean score (**4.32**).
- Overall evaluation responses indicate that respondents believe current car advertisements require improvement in gender representation (**Mean = 4.12**) and strongly support gender-sensitive advertising as an element of ethical and responsible marketing (**Mean = 4.35**).

## **6. Suggestions and Implications**

Based on the findings of the study, the following suggestions and implications are offered:

### **6.1 Greater attention to balanced gender representation**

Automobile advertisements may benefit from more balanced portrayals of men and women, particularly by presenting women as active users and decision-makers. Such representations could help reduce stereotypical imagery and reflect changing social realities.

### **6.2 Inclusion of empowerment-oriented themes**

Incorporating themes that portray women in confident and independent roles may contribute to more positive perceptions of advertising messages and support broader discussions on women's empowerment.

### **6.3 Consideration of gender sensitivity in advertising design**

Advertising practitioners may consider integrating gender-sensitive perspectives during the development of campaigns to ensure that representations are respectful, inclusive, and socially relevant.

### **6.4 Enhancing brand perception through inclusive portrayals**

As the findings indicate a link between gender representation and consumer responses, inclusive advertising approaches may help improve brand credibility, trust, and overall consumer engagement.

### **6.5 Scope for professional reflection and guidelines**

The results suggest the need for continued reflection within the advertising profession on gender representation, which may inform the development of general guidelines and best practices for more equitable portrayals.

## **7. Conclusion**

The present study examined gender representation in car advertising and its implications for consumer behavior and women's empowerment using statistical analysis. The findings indicate that automobile advertisements are widely perceived as male-oriented, with women remaining underrepresented and often portrayed in stereotypical roles. Such portrayals continue to shape consumer perceptions and reflect persistent gender norms within advertising practices.

The study further demonstrates that gender representation is not merely a symbolic issue but is significantly associated with consumer responses. Inclusive portrayals were found to positively influence brand perception, trust, and purchasing decisions, suggesting that advertising narratives play an important role in shaping consumer behavior. Gender-based differences in perception highlight the relevance of considering diverse consumer viewpoints when evaluating advertising effectiveness.

In addition, the results suggest that balanced and inclusive representations of women in advertising are closely linked to broader perceptions of women's empowerment and social transformation. By presenting women as active participants and decision-makers, advertising has the potential to contribute to more equitable social narratives. As noted by Goffman (1979), advertising representations extend beyond commercial communication and influence social meaning.

Overall, the study underscores the importance of examining gender representation in automobile advertising from both a consumer behavior and a social perspective. The findings offer empirical support for the view that advertising practices can influence not only market outcomes but also wider societal attitudes.

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