



A STUDY ON CUSTOMER SATISFACTION OF WOMEN COMMUTERS USING RIDE-HAILING APPS

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ABSTRACT :

Ride-hailing applications have become a familiar part of urban travel, offering users a convenient way to book, track and pay for trips. For women commuters, however, a positive experience also depends on whether they feel safe, are treated respectfully, can use the application easily and consider the fare reasonable. This study examines customer satisfaction among ride-hailing app users in Chennai, with particular attention to women commuters and four service dimensions: safety and security, driver behaviour, ease of use, and fare and affordability. A descriptive, cross-sectional survey was conducted using a structured questionnaire and convenience sampling. The dataset comprised 80 respondents, whose five-point Likert-scale responses were analysed in SPSS using percentage analysis, Pearson correlation and one-way analysis of variance (ANOVA). All respondents agreed or strongly agreed with the overall satisfaction statement. Positive responses across the four service dimensions ranged from 60.3% for fare and affordability to 66.5% for ease of use. Pearson correlations between satisfaction and the four dimensions were weak and statistically non-significant. In contrast, satisfaction differed significantly across age groups ($F = 4.06$, $p = .010$), with the 26–30 group reporting higher satisfaction than the 20–25 group in the post-hoc comparison ($p = .043$). The findings suggest that high reported satisfaction can coexist with concerns about pricing and driver conduct. Because the sample is small, unevenly distributed and includes male respondents, the results should be interpreted cautiously. The study recommends clearer fare communication, more consistent driver training and visible, accessible safety features.

Keywords: customer satisfaction; ride-hailing apps; women commuters; safety and security; driver behaviour; affordability; Chennai.

1. Introduction

Digital platforms have changed how people arrange everyday journeys. Through a mobile application, passengers can request a ride, view driver and vehicle details, follow the trip and make digital payments. These features can reduce the effort involved in arranging transport, particularly for students and working people travelling across a city such as Chennai. Yet convenience alone does not define a good journey. Passengers also consider the conduct of the driver, the reliability of the route, the clarity of the fare and the extent to which they feel secure.

These considerations can be especially important for women travelling alone or at less familiar times of day. Safety is not limited to the presence of an emergency button; it also involves confidence in driver verification, respect for privacy, route discipline and the ability to obtain support when needed. Similarly, a service may be easy to book but still feel poor value if fares change unexpectedly or are difficult to understand.

This study examines satisfaction with ride-hailing applications through four dimensions—Safety and Security, Driver Behaviour, Ease of Use, and Fare and Affordability—and considers whether satisfaction differs across age groups. The research uses a sample of 60 female ride-hailing app users in and around Chennai. Only responses from female participants were included in the analysis, as the study focuses on women commuters.

2. Review of Literature

Research on women's ride-hailing experiences highlights the importance of perceived safety and the travel situation. Hu and Yang (2024) examined safety perceptions and prevention among female ride-hailing passengers, showing the relevance of drivers' actions and passengers' circumstances to safety judgements. Yang et al. (2022) likewise explored factors shaping female passengers' safety perceptions in China. These studies provide a direct rationale for including safety and driver behaviour in the present analysis.

Evidence from India also points to the role of comfort and context. Meshram, Choudhary, and Velaga (2020) studied women's perceived safety and comfort during ridesharing and considered issues such as travelling at night, privacy and cost. This suggests that a ride is assessed not only as a transport transaction but also as a personal experience in which the passenger's circumstances matter.

Studies of broader ride-hailing populations connect satisfaction with perceived service quality and value. Ahmed et al. (2021) examined satisfaction and loyalty in app-based ride-sharing, including perceived quality and value for money. Ricardianto et al. (2024) investigated perceived safety and attitudinal loyalty among Indonesian ride-hailing consumers. Research on booking-app and post-booking service quality has also considered usability, information, reliability and the overall journey experience (Nguyen-Phuoc et al., 2021). Together, this literature supports examining safety, driver

conduct, usability and affordability alongside overall satisfaction.

A gap remains in understanding how these dimensions appear together in the experiences of app users in Chennai, particularly in a study focused on women commuters. The present study addresses this local question descriptively. It does not assume that the relationships reported in other countries will necessarily be reproduced in this sample.

The literature also indicates that ride-hailing quality is experienced across the full journey rather than at the moment of booking alone. The app interface shapes expectations before pickup, while communication, route choices and support options shape the actual trip. For this reason, the present study treats ease of use, driver behaviour, safety and affordability as related parts of the passenger experience instead of viewing satisfaction as a single technical feature.

The current study is local and exploratory in scope. Its purpose is not to claim that the responses represent every woman commuter in Chennai, but to describe the views of the people who participated and identify practical areas that deserve closer attention. This distinction is important because travel experiences can differ by age, income, trip purpose, time of travel and the platform used.

3. Objectives of the Study

The primary objective is to study the level of customer satisfaction among women commuters using ride-hailing apps. The secondary objectives are: (1) to examine the relationship between Safety and Security, Driver Behaviour, Ease of Use, Fare and Affordability, and Customer Satisfaction; (2) to analyse differences in customer satisfaction across respondents' age groups; and (3) to describe the overall satisfaction level reported by respondents.

4. Research Methodology

The study adopted a descriptive research design and a quantitative, cross-sectional survey approach. Primary data were collected through a structured questionnaire. The questionnaire recorded demographic and usage details and included 25 statements across five areas: Safety and Security, Driver Behaviour, Ease of Use, Fare and Affordability, and Customer Satisfaction. Each statement used a five-point Likert scale from strongly disagree to strongly agree.

Convenience sampling was used to recruit 80 respondents who were accessible and willing to participate. Secondary information was drawn from relevant research articles and other sources listed in the project report. The collected responses were analysed using PSPP. Percentage analysis summarised respondent characteristics and response patterns; Pearson correlation assessed the linear relationships between the four service dimensions and satisfaction; and one-way ANOVA tested differences in satisfaction across age groups. Games–Howell post-hoc comparisons were used after ANOVA.

For the descriptive analysis, response categories were summarised as percentages to make the overall pattern easy to interpret. Pearson correlation was applied to examine whether each service dimension moved linearly with the customer-satisfaction measure. One-way analysis of variance (ANOVA) was used to test whether the mean satisfaction score differed across age groups. Where the ANOVA result was significant, Games–Howell post-hoc comparisons were considered, as this procedure can be useful when group sizes and variances may not be equal.

The questionnaire-based design made it possible to collect comparable answers from all participants, but it also limits the depth of explanation. A rating can show that a respondent is uncertain about safety or price, for example, but it cannot fully explain the particular journey or incident behind that response. The statistical results are therefore interpreted together with the descriptive response pattern and the limitations of the sample.

The significance threshold was .05. The study is observational and cross-sectional, so the results describe associations and group differences rather than causal effects. Since sampling was based on convenience and the sample was concentrated in younger respondents, findings should not be generalised to all ride-hailing users.

5. Results

5.1 Respondent profile and usage

The sample consisted of 60 female respondents (75.0%) and 20 male respondents (25.0%). Most participants were aged 20–25 years (72.5%). Students represented 70.0% of the sample, and 58.8% reported having no personal income. More than half lived in Chennai South (57.5%). College or education was the main purpose of using ride-hailing apps for 48.8% of respondents. Rapido was the most frequently used app, reported by 62.5%, followed by Ola (18.8%) and Uber (8.8%). These characteristics indicate that the results largely reflect younger, student users rather than a balanced cross-section of all commuters.

The profile suggests that the responses largely reflect younger, student users. The fact that nearly half used ride-hailing mainly for college or education also places everyday, routine travel at the centre of the findings. These characteristics help explain the context of the results, but they also mean that the experiences of older commuters, full-time employees and users from other parts of Chennai may be less visible in this sample.

Table 1. Respondent Profile and Ride-Hailing App Usage

Profile / usage indicator	Largest category	Percentage
Gender	Female	75.0%
Age	20–25 years	72.5%
Occupation	Student	70.0%
Personal income	No income	58.8%
Area of residence	Chennai South	57.5%

Main trip purpose	College / education	48.8%
Most-used app	Rapido	62.5%

5.2 Response patterns across service dimensions

Across the five overall satisfaction statements, all respondents selected either agree or strongly agree. For the overall statement “I am satisfied with ride-hailing services,” 56.3% agreed and 43.8% strongly agreed. This is a uniformly positive result within the sample, although it leaves little variation for statistical relationships with satisfaction to be detected.

When the four service dimensions were considered, the combined share of agree and strongly agree responses was highest for Ease of Use (66.5%) and Safety and Security (65.5%). Driver Behaviour recorded 61.8% positive responses, while Fare and Affordability recorded 60.3%. The share of disagreement was highest for Fare and Affordability (15.5%), followed by Driver Behaviour (13.3%).

Table 2. Summary of Responses Across the Four Service Dimensions

Dimension	Agree + strongly agree	Neutral	Disagree + strongly disagree
Safety and Security	65.5%	25.5%	9.0%
Driver Behaviour	61.8%	25.0%	13.3%
Ease of Use	66.5%	23.3%	10.3%
Fare and Affordability	60.3%	24.3%	15.5%

At item level, affordability was a clear concern: 18.8% disagreed or strongly disagreed that fares were affordable. Driver politeness also drew concern, with 16.3% disagreeing or strongly disagreeing that drivers behaved politely. For safety, 28.8% were neutral about the safety of their personal information and the same share were neutral about feeling safe when travelling alone. These responses point to opportunities for improvement even when overall satisfaction is high.

5.3 Pearson correlation analysis

Pearson correlation was used to examine the association between customer satisfaction and each of the four service dimensions. All coefficients were weak and all p-values exceeded .05. Therefore, this sample does not provide statistical evidence of a linear relationship between any one dimension and the satisfaction score. This should not be interpreted as proof that these aspects do not matter to passengers: the uniformly positive satisfaction responses and the limited sample may restrict the analysis' ability to detect relationships.

The coefficient for Fare and Affordability was the largest of the four correlations ($r = .103$), but it remained weak and statistically non-significant ($p = .362$). Ease of Use showed a similarly small positive coefficient ($r = .072$, $p = .527$). Safety and Security was almost unrelated to the satisfaction measure in this sample ($r = .043$, $p = .703$), while Driver Behaviour had a very small negative coefficient ($r = -.046$, $p = .683$). These values should not be read as proof that the service dimensions do not matter; rather, the present data do not provide sufficient evidence of linear relationships.

Table 3. Pearson Correlation Between Service Dimensions and Customer Satisfaction

Service dimension and satisfaction	Pearson r	p-value	Interpretation
Safety and Security	0.043	.703	Very weak; not significant
Driver Behaviour	-.046	.683	Very weak; not significant
Ease of Use	0.072	.527	Very weak; not significant
Fare and Affordability	0.103	.362	Weak; not significant

The project's additional inter-correlation analysis showed strong associations among the four service dimensions ($r = .709$ to $.853$, reported $p < .001$). In other words, respondents who rated one aspect positively tended to rate other aspects positively as well. This pattern is consistent with passengers experiencing safety, driver conduct, usability and price as connected parts of one service encounter.

5.4 Age differences in satisfaction

The one-way ANOVA indicated a statistically significant difference in customer satisfaction across age groups, $F = 4.06$, $p = .010$. Games–Howell post-hoc testing identified a significant difference between respondents aged 20–25 and those aged 26–30 (mean difference = -0.25 , $p = .043$), with the 26–30 group reporting higher satisfaction. The other pairwise comparisons were not statistically significant.

Table 4. One-Way ANOVA of Customer Satisfaction by Age Group

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.56	3	0.19	4.06	0.010
Within Groups	3.50	76	0.05		
Total	4.06	79			

Note: The ANOVA was statistically significant at the 5% level ($F = 4.06$, $p = .010$). Games–Howell post-hoc testing found a significant difference between the 20–25 and 26–30 age groups (mean difference = -0.25 , $p = .043$).

This result requires caution. The 20–25 group contained 58 respondents, compared with nine in the 26–30 group and only three in the 36–45 group. The

imbalance and small size of some groups mean that the age difference should be treated as an indication for further research, not a firm conclusion about all age groups.

In practical terms, the result is a reason to ask more detailed questions about how travel needs change across life stages, rather than to conclude that age itself causes a difference in satisfaction. A larger study could compare age groups with more balanced numbers and consider other factors, such as frequency of use, trip purpose and income, that may also shape the ratings.

6. Discussion

The results present a useful contrast: reported overall satisfaction was exceptionally high, yet respondents still identified practical weaknesses in fares and driver behaviour. The finding that all 80 respondents agreed or strongly agreed with the overall satisfaction statement may reflect the usefulness and convenience of ride-hailing in daily life. However, high satisfaction does not necessarily mean that every service element performs equally well. Fare and Affordability had the lowest combined positive response and the highest disagreement. This is relevant because most participants were students and more than half reported no personal income. For these users, price transparency and predictable fares may be particularly important. The finding supports the emphasis on value for money in earlier ride-hailing research (Ahmed et al., 2021).

Driver Behaviour was the second area of concern. Courtesy, privacy and route discipline are part of the passenger's direct experience and may influence whether a trip feels respectful and safe. This aligns with literature that highlights driver actions and perceived safety in women's ride-hailing experiences (Hu & Yang, 2024; Meshram et al., 2020). Ease of Use received relatively positive ratings, but navigation and ride cancellation/modification still attracted some disagreement, suggesting that app usability should be maintained and refined.

The non-significant correlations between each dimension and satisfaction should be interpreted in light of the data distribution. Because all respondents reported satisfaction, there is little variation in the outcome variable. This restricted variation can make correlations small even when passengers care about the service dimensions. Future research should use a larger and more diverse sample and ensure that the satisfaction measure captures a wider range of experiences.

A further point is that high overall satisfaction and specific service concerns can exist at the same time. Respondents may value the convenience of booking a ride quickly and still want more predictable fares or more consistent driver conduct. In other words, satisfaction does not necessarily mean that every part of the service is problem-free. The descriptive percentages are useful here because they show where respondents were more hesitant even though their overall rating was positive.

The results also suggest that service providers should avoid relying on a single satisfaction score to evaluate the passenger experience. Monitoring separate indicators—such as fare clarity, driver courtesy, confidence in safety features and ease of completing a booking—may give a more actionable picture. These indicators could be tracked over time and reviewed alongside complaints, cancellations and repeat-use patterns, where such operational data are available.

7. Practical Implications

First, operators should make fare information easier to understand. The estimated total, taxes, surge pricing and other charges should be displayed clearly before confirmation. Where feasible, student passes, discounts or off-peak options could help price-sensitive users.

Second, driver training should emphasise courteous communication, respect for passenger privacy, safe driving and adherence to the selected route. Complaint reporting should be easy to access, and recurring concerns should lead to timely review.

Third, safety features should be visible and easy to use. Driver and vehicle verification, live trip sharing, emergency assistance and explanations of personal-data protection should be presented in simple language within the app. Finally, the booking interface should make navigation, cancellation and ride modification straightforward.

Operators could also make feedback easier to submit immediately after a trip and communicate what happens after a complaint is filed. A clear response process may help passengers feel that concerns are taken seriously. For women commuters in particular, safety information should be practical and visible at the point when it is needed, rather than hidden within several screens or presented only during onboarding.

8. Limitations and Future Research

The study has several limitations. The sample includes only 80 respondents and was selected through convenience sampling. It is concentrated among 20–25-year-olds, students and residents of Chennai South. Although the research focuses on women commuters, 25.0% of respondents were male; consequently, the findings describe the full sample rather than women alone. The age groups are unequal in size, and the satisfaction responses show almost no variation. The study also relies on self-reported perceptions collected at one point in time.

Future studies could recruit a larger women-only sample or report results separately by gender, include a more balanced range of ages and occupations, and compare different ride-hailing platforms. Additional qualitative interviews could help explain why passengers report high overall satisfaction while expressing concerns about fares or driver conduct. Researchers could also use a broader satisfaction scale to reduce ceiling effects and test the results in other cities.

Future research could also distinguish between daytime and night-time trips, solo and shared travel, and short and long journeys. Interviews or open-ended questionnaire items would help explain neutral responses, especially on personal safety and affordability. Researchers should report the number of respondents in each subgroup and use methods suited to the measurement scale and distribution of the data. Such steps would help establish whether the patterns observed here are repeated in a broader population.

9. Conclusion

This study examined ride-hailing app satisfaction among 80 users in Chennai, with attention to safety and security, driver behaviour, ease of use, and fare and affordability. Overall satisfaction was high: all respondents agreed or strongly agreed that they were satisfied with ride-hailing services. However, the service dimensions were not rated equally. Ease of Use and Safety and Security received the strongest positive response patterns, while Fare and Affordability and Driver Behaviour presented the clearest areas for improvement.

Pearson correlations between the four dimensions and satisfaction were weak and non-significant, while satisfaction differed significantly across age groups in the ANOVA. Both findings need to be interpreted carefully because satisfaction responses were uniformly positive and the sample was small and uneven. The practical message is straightforward: operators should preserve the convenience that users value while making fares clearer, improving driver courtesy and maintaining accessible safety features. A larger, more representative study would help determine whether these patterns hold for women commuters more broadly.

For the project's practical purpose, the main message is balanced: participants generally viewed ride-hailing positively, while fare transparency and consistent driver behaviour remain areas for attention. The findings are best treated as an initial picture of this respondent group and as a basis for more detailed research, not as a final statement about all women commuters or all ride-hailing platforms.

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